

Existing Intersection Traffic Counts

A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Bascomb Carmel Rd
7-9 am | 4-6 pm

File Name : 20210253

Site Code : 20210253

Start Date : 8/17/2021

Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound					O'Reilly Auto Parts Drwy Eastbound				Bascomb Carmel Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	93	1	94	31	208	2	0	241	1	0	1	2	0	0	11	11	348
07:15 AM	0	128	5	133	29	254	3	0	286	1	0	0	1	4	0	11	15	435
07:30 AM	2	141	3	146	53	270	0	1	324	2	0	1	3	2	0	12	14	487
07:45 AM	2	133	4	139	46	306	1	0	353	1	0	4	5	4	1	15	20	517
Total	4	495	13	512	159	1038	6	1	1204	5	0	6	11	10	1	49	60	1787
08:00 AM	0	135	3	138	36	256	2	0	294	0	0	1	1	2	0	13	15	448
08:15 AM	5	130	1	136	26	244	0	1	271	0	1	1	2	1	1	13	15	424
08:30 AM	1	121	2	124	38	212	2	0	252	2	1	2	5	4	0	16	20	401
08:45 AM	4	130	0	134	31	213	1	3	248	3	0	0	3	4	0	13	17	402
Total	10	516	6	532	131	925	5	4	1065	5	2	4	11	11	1	55	67	1675
*** BREAK ***																		
04:00 PM	5	234	0	239	31	222	3	4	260	6	2	3	11	3	0	5	8	518
04:15 PM	2	249	7	258	24	231	3	0	258	2	0	5	7	8	0	0	8	531
04:30 PM	2	253	3	258	41	215	6	2	264	2	0	1	3	1	0	0	1	526
04:45 PM	4	298	3	305	24	220	2	2	248	1	1	4	6	1	2	2	5	564
Total	13	1034	13	1060	120	888	14	8	1030	11	3	13	27	13	2	7	22	2139
05:00 PM	5	252	4	261	30	242	4	5	281	5	1	5	11	3	0	57	60	613
05:15 PM	2	257	2	261	35	236	1	2	274	2	1	3	6	3	0	50	53	594
05:30 PM	2	291	2	295	31	238	4	2	275	1	0	1	2	1	0	53	54	626
05:45 PM	2	289	1	292	31	180	10	1	222	2	0	3	5	0	1	52	53	572
Total	11	1089	9	1109	127	896	19	10	1052	10	2	12	24	7	1	212	220	2405
Grand Total	38	3134	41	3213	537	3747	44	23	4351	31	7	35	73	41	5	323	369	8006
Apprch %	1.2	97.5	1.3		12.3	86.1	1	0.5		42.5	9.6	47.9		11.1	1.4	87.5		
Total %	0.5	39.1	0.5	40.1	6.7	46.8	0.5	0.3	54.3	0.4	0.1	0.4	0.9	0.5	0.1	4	4.6	

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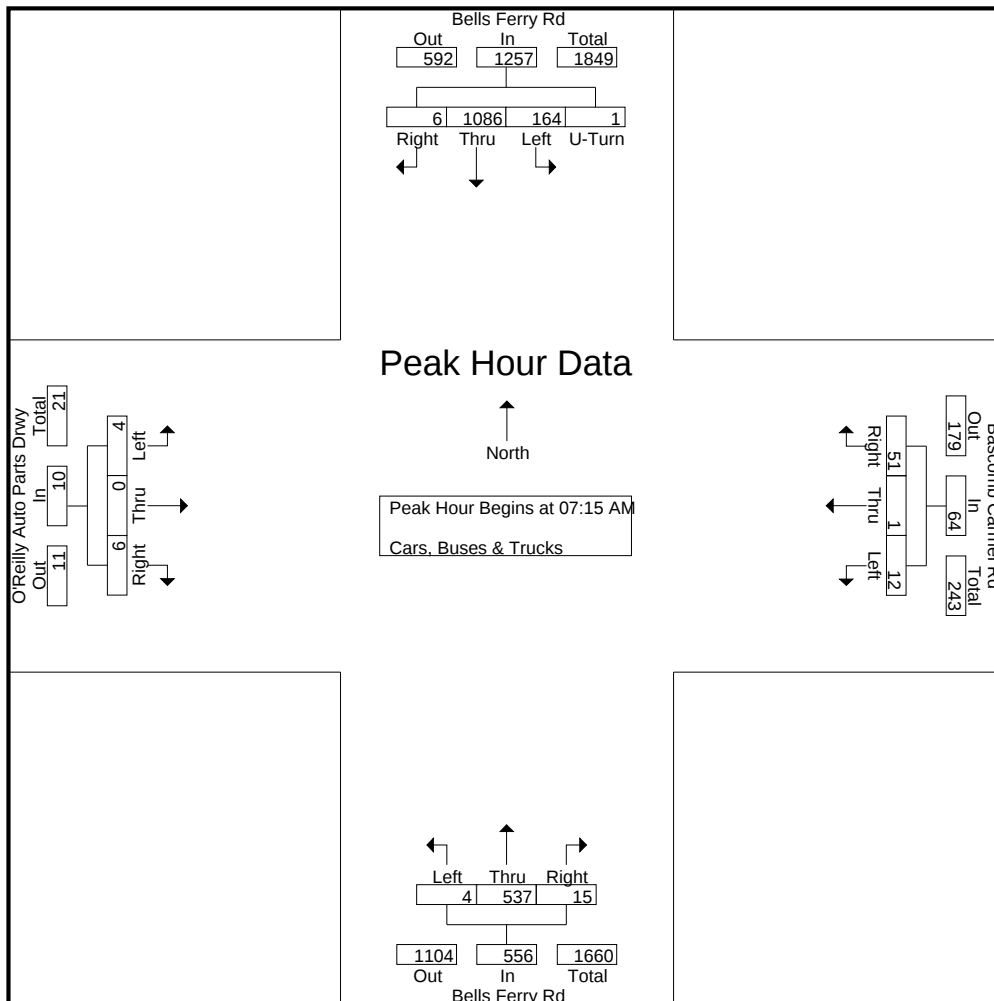
File Name : 20210253

Site Code : 20210253

Start Date : 8/17/2021

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	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound					O'Reilly Auto Parts Drwy Eastbound				Bascomb Carmel Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	128	5	133	29	254	3	0	286	1	0	0	1	4	0	11	15	435
07:30 AM	2	141	3	146	53	270	0	1	324	2	0	1	3	2	0	12	14	487
07:45 AM	2	133	4	139	46	306	1	0	353	1	0	4	5	4	1	15	20	517
08:00 AM	0	135	3	138	36	256	2	0	294	0	0	1	1	2	0	13	15	448
Total Volume	4	537	15	556	164	1086	6	1	1257	4	0	6	10	12	1	51	64	1887
% App. Total	0.7	96.6	2.7		13	86.4	0.5	0.1		40	0	60		18.8	1.6	79.7		
PHF	.500	.952	.750	.952	.774	.887	.500	.250	.890	.500	.000	.375	.500	.750	.250	.850	.800	.912



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7-9 am | 4-6 pm

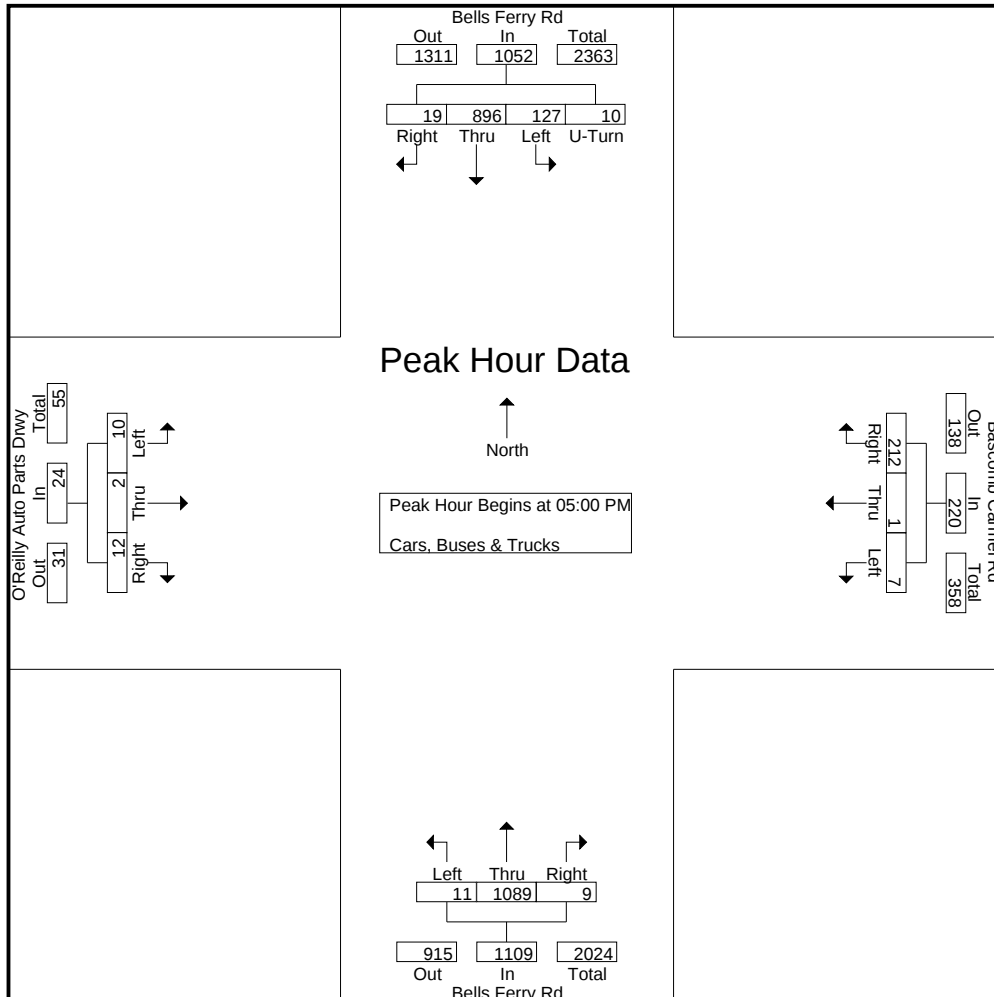
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	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound					O'Reilly Auto Parts Drwy Eastbound				Bascomb Carmel Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 05:00 PM																		
05:00 PM	5	252	4	261	30	242	4	5	281	5	1	5	11	3	0	57	60	613
05:15 PM	2	257	2	261	35	236	1	2	274	2	1	3	6	3	0	50	53	594
05:30 PM	2	291	2	295	31	238	4	2	275	1	0	1	2	1	0	53	54	626
05:45 PM	2	289	1	292	31	180	10	1	222	2	0	3	5	0	1	52	53	572
Total Volume	11	1089	9	1109	127	896	19	10	1052	10	2	12	24	7	1	212	220	2405
% App. Total	1	98.2	0.8		12.1	85.2	1.8	1		41.7	8.3	50		3.2	0.5	96.4		
PHF	.550	.936	.563	.940	.907	.926	.475	.500	.936	.500	.500	.600	.545	.583	.250	.930	.917	.960



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TMC DATA

Bells Ferry Rd @ Buice Lake Pkwy
7-9 am | 4-6 pm

File Name : 20210254

Site Code : 20210254

Start Date : 8/17/2021

Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Buice Lake Pkwy Eastbound				Old Bascomb Ct Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	91	28	5	125	3	310	1	0	314	5	1	15	21	29	0	0	29	489
07:15 AM	3	108	46	13	170	3	270	0	0	273	3	1	17	21	46	0	2	48	512
07:30 AM	4	158	40	3	205	6	293	2	1	302	10	1	18	29	34	2	2	38	574
07:45 AM	4	146	58	2	210	14	262	4	1	281	7	4	43	54	41	1	1	43	588
Total	12	503	172	23	710	26	1135	7	2	1170	25	7	93	125	150	3	5	158	2163
08:00 AM	2	149	44	4	199	8	274	1	2	285	2	2	17	21	25	0	1	26	531
08:15 AM	3	118	26	5	152	11	282	1	2	296	3	2	13	18	24	0	3	27	493
08:30 AM	4	126	24	4	158	2	247	2	1	252	3	0	11	14	29	0	3	32	456
08:45 AM	6	143	18	3	170	3	234	3	0	240	3	1	6	10	25	0	2	27	447
Total	15	536	112	16	679	24	1037	7	5	1073	11	5	47	63	103	0	9	112	1927
*** BREAK ***																			
04:00 PM	8	241	30	6	285	8	225	5	3	241	1	0	7	8	26	0	6	32	566
04:15 PM	12	251	29	9	301	7	251	5	3	266	7	4	8	19	29	1	2	32	618
04:30 PM	14	282	33	4	333	6	222	4	3	235	0	1	7	8	24	1	7	32	608
04:45 PM	16	245	35	8	304	11	277	6	6	300	1	0	4	5	36	2	7	45	654
Total	50	1019	127	27	1223	32	975	20	15	1042	9	5	26	40	115	4	22	141	2446
05:00 PM	14	268	33	8	323	3	296	3	0	302	3	2	10	15	30	2	0	32	672
05:15 PM	14	298	32	6	350	10	285	4	5	304	4	1	4	9	28	2	2	32	695
05:30 PM	18	250	29	7	304	16	278	7	2	303	2	2	7	11	23	26	5	54	672
05:45 PM	21	263	35	9	328	7	246	5	1	259	1	1	12	14	23	0	1	24	625
Total	67	1079	129	30	1305	36	1105	19	8	1168	10	6	33	49	104	30	8	142	2664
Grand Total	144	3137	540	96	3917	118	4252	53	30	4453	55	23	199	277	472	37	44	553	9200
Apprch %	3.7	80.1	13.8	2.5		2.6	95.5	1.2	0.7		19.9	8.3	71.8		85.4	6.7	8		
Total %	1.6	34.1	5.9	1	42.6	1.3	46.2	0.6	0.3	48.4	0.6	0.2	2.2	3	5.1	0.4	0.5	6	

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TMC DATA

Bells Ferry Rd @ Buice Lake Pkwy
7-9 am | 4-6 pm

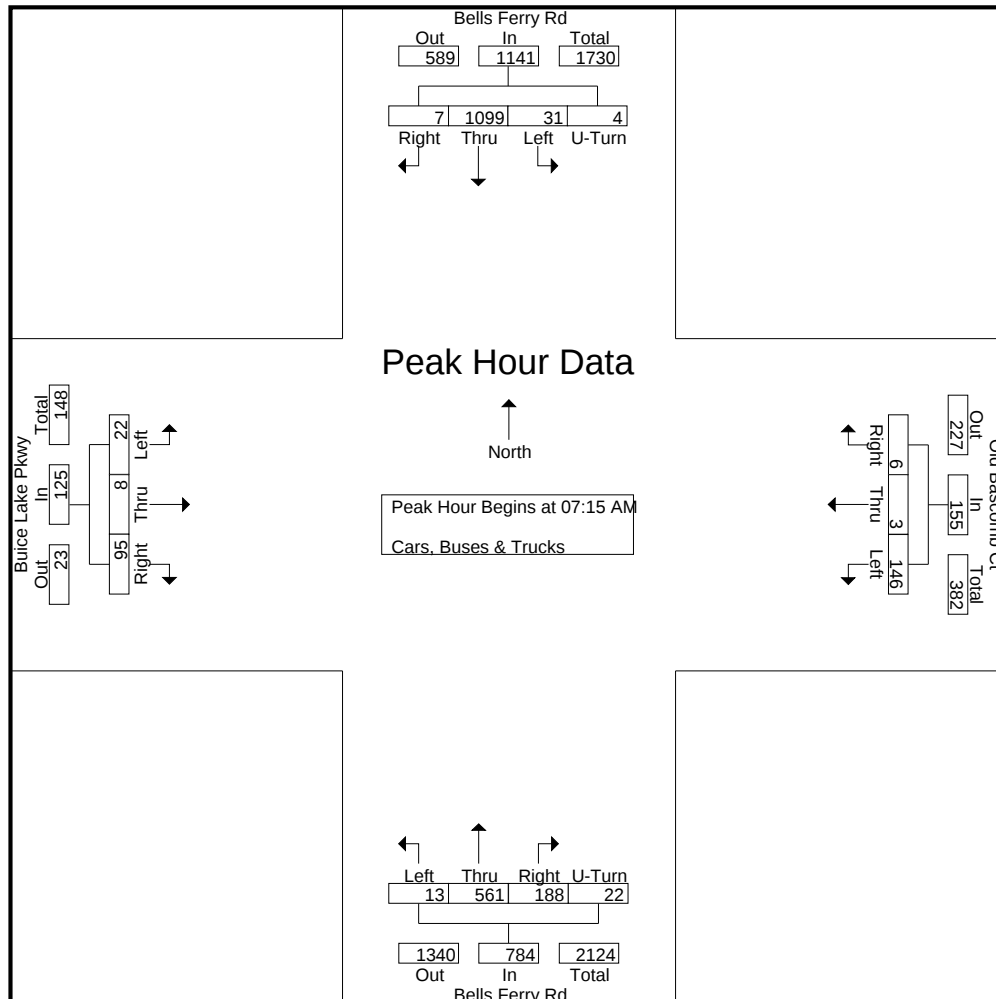
File Name : 20210254

Site Code : 20210254

Start Date : 8/17/2021

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	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Buice Lake Pkwy Eastbound				Old Bascomb Ct Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	3	108	46	13	170	3	270	0	0	273	3	1	17	21	46	0	2	48	512
07:30 AM	4	158	40	3	205	6	293	2	1	302	10	1	18	29	34	2	2	38	574
07:45 AM	4	146	58	2	210	14	262	4	1	281	7	4	43	54	41	1	1	43	588
08:00 AM	2	149	44	4	199	8	274	1	2	285	2	2	17	21	25	0	1	26	531
Total Volume	13	561	188	22	784	31	1099	7	4	1141	22	8	95	125	146	3	6	155	2205
% App. Total	1.7	71.6	24	2.8		2.7	96.3	0.6	0.4		17.6	6.4	76		94.2	1.9	3.9		
PHF	.813	.888	.810	.423	.933	.554	.938	.438	.500	.945	.550	.500	.552	.579	.793	.375	.750	.807	.938



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7-9 am | 4-6 pm

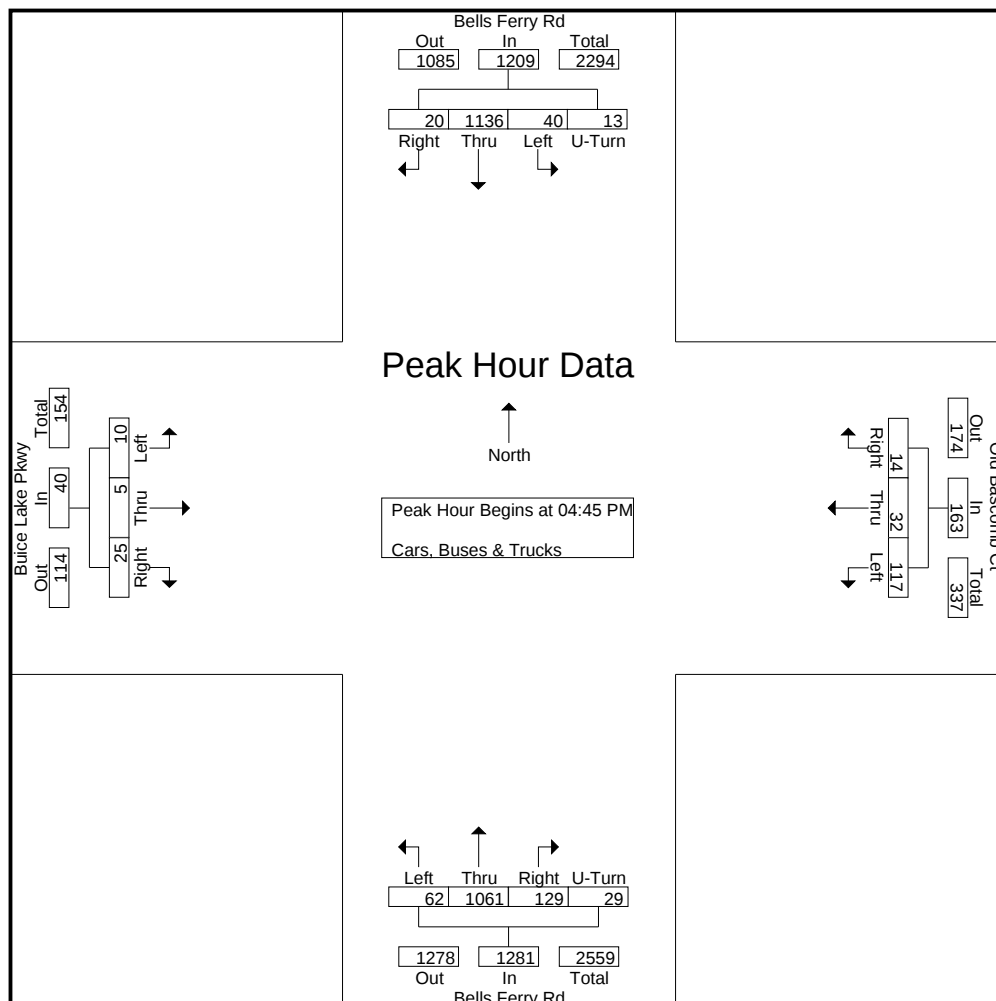
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	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Buice Lake Pkwy Eastbound				Old Bascomb Ct Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	16	245	35	8	304	11	277	6	6	300	1	0	4	5	36	2	7	45	654
05:00 PM	14	268	33	8	323	3	296	3	0	302	3	2	10	15	30	2	0	32	672
05:15 PM	14	298	32	6	350	10	285	4	5	304	4	1	4	9	28	2	2	32	695
05:30 PM	18	250	29	7	304	16	278	7	2	303	2	2	7	11	23	26	5	54	672
Total Volume	62	1061	129	29	1281	40	1136	20	13	1209	10	5	25	40	117	32	14	163	2693
% App. Total	4.8	82.8	10.1	2.3		3.3	94	1.7	1.1		25	12.5	62.5		71.8	19.6	8.6		
PHF	.861	.890	.921	.906	.915	.625	.959	.714	.542	.994	.625	.625	.625	.667	.813	.308	.500	.755	.969



A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Eagle Dr
7-9 am | 4-6 pm

File Name : 20210255

Site Code : 20210255

Start Date : 8/17/2021

Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound				Eagle Dr Eastbound				Eagle Dr Westbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	13	42	49	2	106	64	192	2	258	6	7	23	36	44	7	19	0	70	470
07:15 AM	9	46	54	1	110	98	242	3	343	4	9	23	36	52	6	35	2	95	584
07:30 AM	12	52	85	1	150	119	242	8	369	6	13	19	38	68	6	27	2	103	660
07:45 AM	16	46	95	3	160	144	249	1	394	5	11	18	34	76	8	36	0	120	708
Total	50	186	283	7	526	425	925	14	1364	21	40	83	144	240	27	117	4	388	2422
08:00 AM	12	65	82	1	160	119	206	5	330	6	16	23	45	84	12	54	0	150	685
08:15 AM	21	53	73	1	148	93	196	0	289	6	17	12	35	96	8	61	3	168	640
08:30 AM	8	53	82	0	143	120	204	5	329	6	10	12	28	67	16	57	0	140	640
08:45 AM	13	75	60	3	151	97	172	5	274	4	16	11	31	81	14	52	2	149	605
Total	54	246	297	5	602	429	778	15	1222	22	59	58	139	328	50	224	5	607	2570
*** BREAK ***																			
04:00 PM	47	128	66	0	241	69	93	7	169	6	19	21	46	83	37	65	1	186	642
04:15 PM	53	129	89	0	271	88	122	6	216	8	18	24	50	104	26	81	0	211	748
04:30 PM	51	151	119	0	321	105	110	5	220	15	31	42	88	73	32	103	2	210	839
04:45 PM	41	142	84	2	269	85	148	8	241	17	24	32	73	95	40	78	0	213	796
Total	192	550	358	2	1102	347	473	26	846	46	92	119	257	355	135	327	3	820	3025
05:00 PM	48	196	102	0	346	94	111	5	210	13	24	37	74	81	28	83	1	193	823
05:15 PM	40	149	84	2	275	110	152	4	266	6	31	27	64	117	45	87	0	249	854
05:30 PM	44	141	98	2	285	118	123	5	246	11	29	39	79	94	30	86	1	211	821
05:45 PM	57	180	108	7	352	86	130	10	226	11	28	38	77	72	28	81	3	184	839
Total	189	666	392	11	1258	408	516	24	948	41	112	141	294	364	131	337	5	837	3337
Grand Total	485	1648	1330	25	3488	1609	2692	79	4380	130	303	401	834	1287	343	1005	17	2652	11354
Apprch %	13.9	47.2	38.1	0.7		36.7	61.5	1.8		15.6	36.3	48.1		48.5	12.9	37.9	0.6		
Total %	4.3	14.5	11.7	0.2	30.7	14.2	23.7	0.7	38.6	1.1	2.7	3.5	7.3	11.3	3	8.9	0.1	23.4	

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TMC DATA

Bells Ferry Rd @ Eagle Dr
7-9 am | 4-6 pm

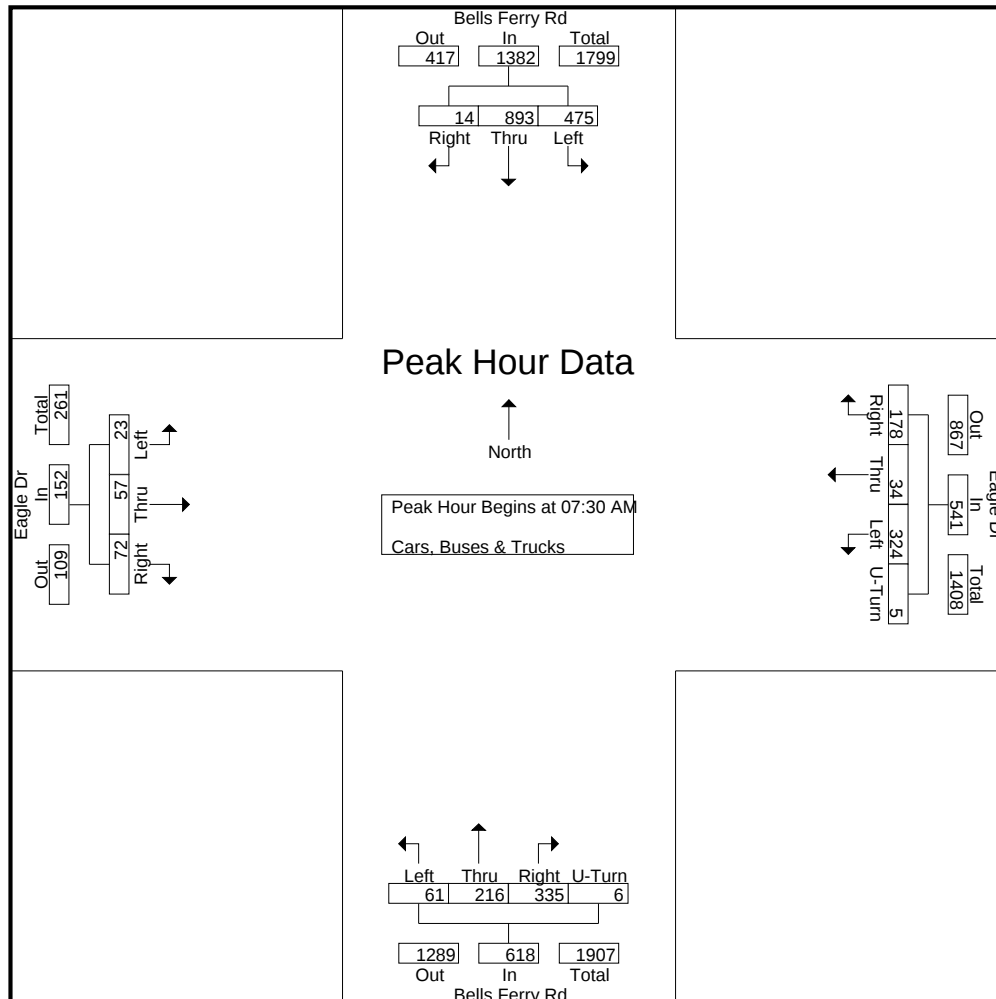
File Name : 20210255

Site Code : 20210255

Start Date : 8/17/2021

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	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound				Eagle Dr Eastbound				Eagle Dr Westbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	12	52	85	1	150	119	242	8	369	6	13	19	38	68	6	27	2	103	660
07:45 AM	16	46	95	3	160	144	249	1	394	5	11	18	34	76	8	36	0	120	708
08:00 AM	12	65	82	1	160	119	206	5	330	6	16	23	45	84	12	54	0	150	685
08:15 AM	21	53	73	1	148	93	196	0	289	6	17	12	35	96	8	61	3	168	640
Total Volume	61	216	335	6	618	475	893	14	1382	23	57	72	152	324	34	178	5	541	2693
% App. Total	9.9	35	54.2	1		34.4	64.6	1		15.1	37.5	47.4		59.9	6.3	32.9	0.9		
PHF	.726	.831	.882	.500	.966	.825	.897	.438	.877	.958	.838	.783	.844	.844	.708	.730	.417	.805	.951



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Bells Ferry Rd @ Eagle Dr
7-9 am | 4-6 pm

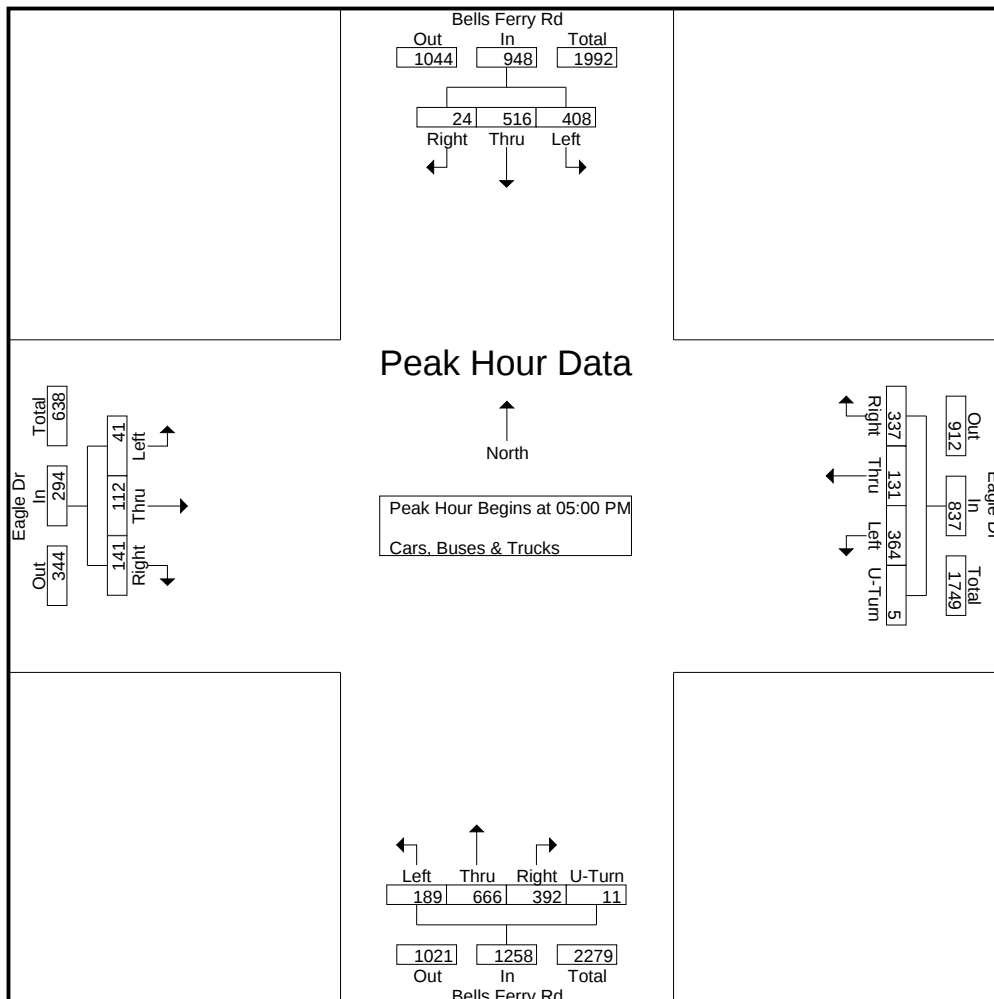
File Name : 20210255

Site Code : 20210255

Start Date : 8/17/2021

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	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound				Eagle Dr Eastbound				Eagle Dr Westbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	48	196	102	0	346	94	111	5	210	13	24	37	74	81	28	83	1	193	823
05:15 PM	40	149	84	2	275	110	152	4	266	6	31	27	64	117	45	87	0	249	854
05:30 PM	44	141	98	2	285	118	123	5	246	11	29	39	79	94	30	86	1	211	821
05:45 PM	57	180	108	7	352	86	130	10	226	11	28	38	77	72	28	81	3	184	839
Total Volume	189	666	392	11	1258	408	516	24	948	41	112	141	294	364	131	337	5	837	3337
% App. Total	15	52.9	31.2	0.9		43	54.4	2.5		13.9	38.1	48		43.5	15.7	40.3	0.6		
PHF	.829	.849	.907	.393	.893	.864	.849	.600	.891	.788	.903	.904	.930	.778	.728	.968	.417	.840	.977



A & R Engineering, Inc

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Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	114	2	1	118	4	333	2	0	339	1	0	3	4	22	1	7	30	491
07:15 AM	2	159	4	1	166	6	356	3	1	366	1	0	0	1	18	0	10	28	561
07:30 AM	2	190	7	1	200	6	411	0	0	417	0	0	2	2	21	0	10	31	650
07:45 AM	1	183	8	2	194	5	356	2	3	366	1	0	1	2	17	0	7	24	586
Total	6	646	21	5	678	21	1456	7	4	1488	3	0	6	9	78	1	34	113	2288
08:00 AM	0	177	13	0	190	4	336	1	1	342	1	0	1	2	8	0	4	12	546
08:15 AM	2	143	5	0	150	6	299	0	1	306	0	0	0	0	12	0	5	17	473
08:30 AM	1	129	5	0	135	2	300	2	1	305	0	0	2	2	12	0	8	20	462
08:45 AM	2	153	9	1	165	3	259	0	1	263	0	0	0	0	9	0	6	15	443
Total	5	602	32	1	640	15	1194	3	4	1216	1	0	3	4	41	0	23	64	1924
*** BREAK ***																			
04:00 PM	0	284	18	1	303	7	220	4	4	235	1	0	3	4	10	0	2	12	554
04:15 PM	0	308	15	0	323	10	312	2	6	330	0	0	0	0	10	0	8	18	671
04:30 PM	0	336	24	0	360	9	245	1	5	260	1	0	0	1	13	0	6	19	640
04:45 PM	2	324	12	2	340	10	312	1	5	328	0	0	0	0	12	0	6	18	686
Total	2	1252	69	3	1326	36	1089	8	20	1153	2	0	3	5	45	0	22	67	2551
05:00 PM	0	350	16	0	366	5	290	0	3	298	0	0	1	1	5	0	5	10	675
05:15 PM	3	324	15	0	342	9	287	3	2	301	2	0	0	2	8	0	5	13	658
05:30 PM	0	329	18	1	348	2	262	0	7	271	0	0	1	1	13	0	3	16	636
05:45 PM	2	421	21	0	444	6	257	3	3	269	3	0	3	6	13	0	4	17	736
Total	5	1424	70	1	1500	22	1096	6	15	1139	5	0	5	10	39	0	17	56	2705
Grand Total	18	3924	192	10	4144	94	4835	24	43	4996	11	0	17	28	203	1	96	300	9468
Apprch %	0.4	94.7	4.6	0.2		1.9	96.8	0.5	0.9		39.3	0	60.7		67.7	0.3	32		
Total %	0.2	41.4	2	0.1	43.8	1	51.1	0.3	0.5	52.8	0.1	0	0.2	0.3	2.1	0	1	3.2	

A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

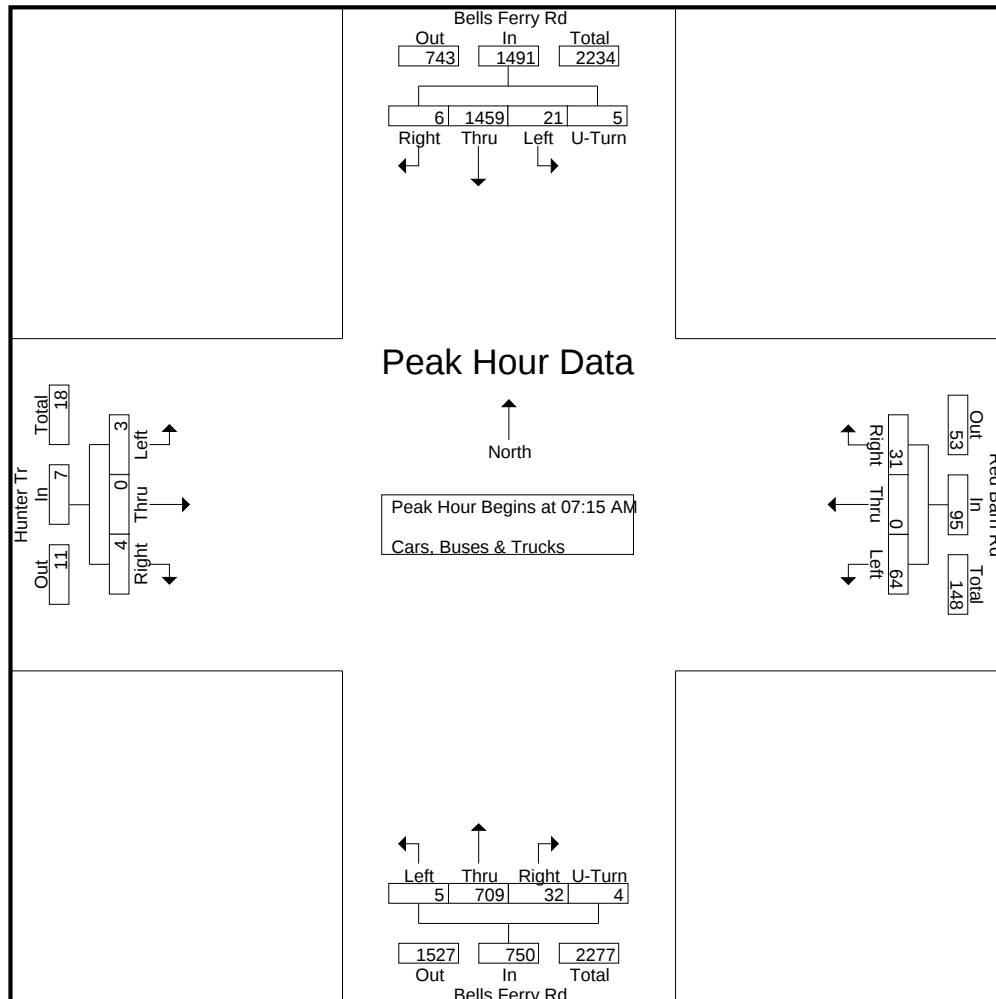
File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 2

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	2	159	4	1	166	6	356	3	1	366	1	0	0	1	18	0	10	28	561
07:30 AM	2	190	7	1	200	6	411	0	0	417	0	0	2	2	21	0	10	31	650
07:45 AM	1	183	8	2	194	5	356	2	3	366	1	0	1	2	17	0	7	24	586
08:00 AM	0	177	13	0	190	4	336	1	1	342	1	0	1	2	8	0	4	12	546
Total Volume	5	709	32	4	750	21	1459	6	5	1491	3	0	4	7	64	0	31	95	2343
% App. Total	0.7	94.5	4.3	0.5		1.4	97.9	0.4	0.3		42.9	0	57.1		67.4	0	32.6		
PHF	.625	.933	.615	.500	.938	.875	.887	.500	.417	.894	.750	.000	.500	.875	.762	.000	.775	.766	.901



A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

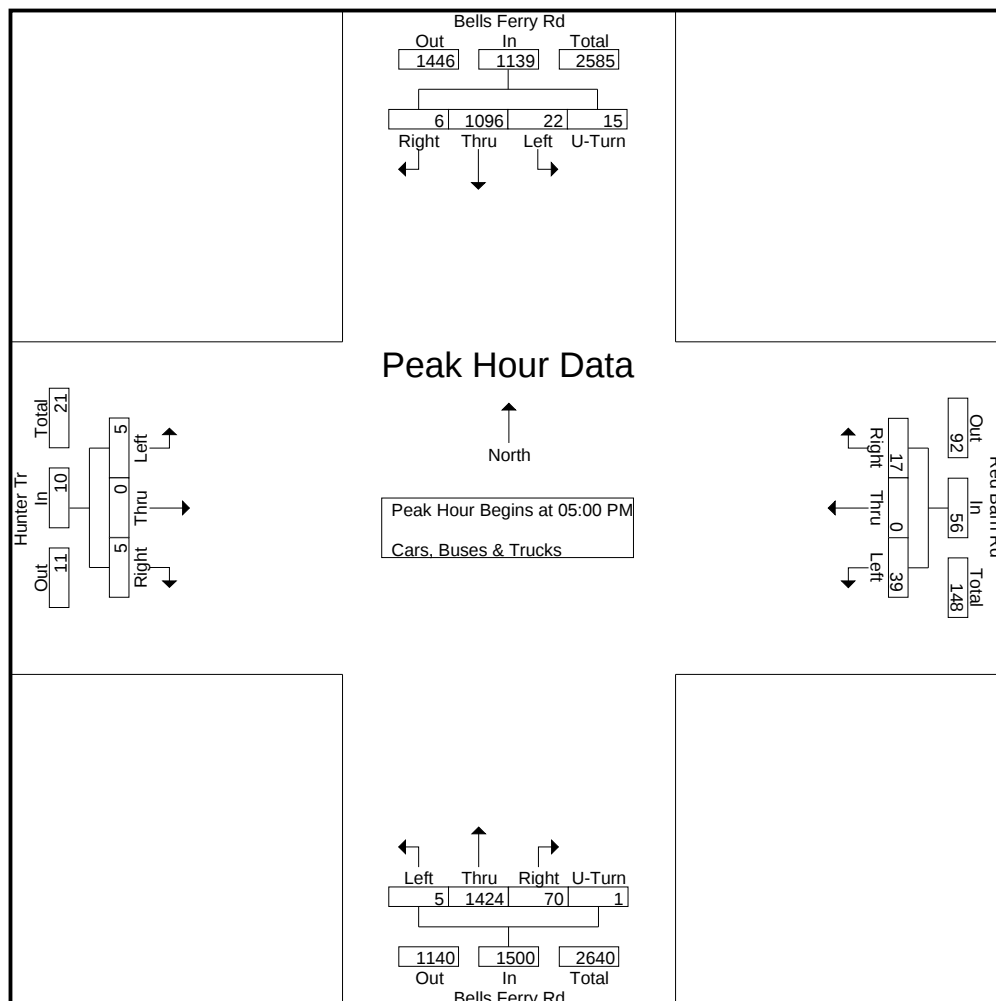
File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 3

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	350	16	0	366	5	290	0	3	298	0	0	1	1	5	0	5	10	675
05:15 PM	3	324	15	0	342	9	287	3	2	301	2	0	0	2	8	0	5	13	658
05:30 PM	0	329	18	1	348	2	262	0	7	271	0	0	1	1	13	0	3	16	636
05:45 PM	2	421	21	0	444	6	257	3	3	269	3	0	3	6	13	0	4	17	736
Total Volume	5	1424	70	1	1500	22	1096	6	15	1139	5	0	5	10	39	0	17	56	2705
% App. Total	0.3	94.9	4.7	0.1		1.9	96.2	0.5	1.3		50	0	50		69.6	0	30.4		
PHF	.417	.846	.833	.250	.845	.611	.945	.500	.536	.946	.417	.000	.417	.417	.750	.000	.850	.824	.919



A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	114	2	1	118	4	333	2	0	339	1	0	3	4	22	1	7	30	491
07:15 AM	2	159	4	1	166	6	356	3	1	366	1	0	0	1	18	0	10	28	561
07:30 AM	2	190	7	1	200	6	411	0	0	417	0	0	2	2	21	0	10	31	650
07:45 AM	1	183	8	2	194	5	356	2	3	366	1	0	1	2	17	0	7	24	586
Total	6	646	21	5	678	21	1456	7	4	1488	3	0	6	9	78	1	34	113	2288
08:00 AM	0	177	13	0	190	4	336	1	1	342	1	0	1	2	8	0	4	12	546
08:15 AM	2	143	5	0	150	6	299	0	1	306	0	0	0	0	12	0	5	17	473
08:30 AM	1	129	5	0	135	2	300	2	1	305	0	0	2	2	12	0	8	20	462
08:45 AM	2	153	9	1	165	3	259	0	1	263	0	0	0	0	9	0	6	15	443
Total	5	602	32	1	640	15	1194	3	4	1216	1	0	3	4	41	0	23	64	1924
*** BREAK ***																			
04:00 PM	0	284	18	1	303	7	220	4	4	235	1	0	3	4	10	0	2	12	554
04:15 PM	0	308	15	0	323	10	312	2	6	330	0	0	0	0	10	0	8	18	671
04:30 PM	0	336	24	0	360	9	245	1	5	260	1	0	0	1	13	0	6	19	640
04:45 PM	2	324	12	2	340	10	312	1	5	328	0	0	0	0	12	0	6	18	686
Total	2	1252	69	3	1326	36	1089	8	20	1153	2	0	3	5	45	0	22	67	2551
05:00 PM	0	350	16	0	366	5	290	0	3	298	0	0	1	1	5	0	5	10	675
05:15 PM	3	324	15	0	342	9	287	3	2	301	2	0	0	2	8	0	5	13	658
05:30 PM	0	329	18	1	348	2	262	0	7	271	0	0	1	1	13	0	3	16	636
05:45 PM	2	421	21	0	444	6	257	3	3	269	3	0	3	6	13	0	4	17	736
Total	5	1424	70	1	1500	22	1096	6	15	1139	5	0	5	10	39	0	17	56	2705
Grand Total	18	3924	192	10	4144	94	4835	24	43	4996	11	0	17	28	203	1	96	300	9468
Apprch %	0.4	94.7	4.6	0.2		1.9	96.8	0.5	0.9		39.3	0	60.7		67.7	0.3	32		
Total %	0.2	41.4	2	0.1	43.8	1	51.1	0.3	0.5	52.8	0.1	0	0.2	0.3	2.1	0	1	3.2	

A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

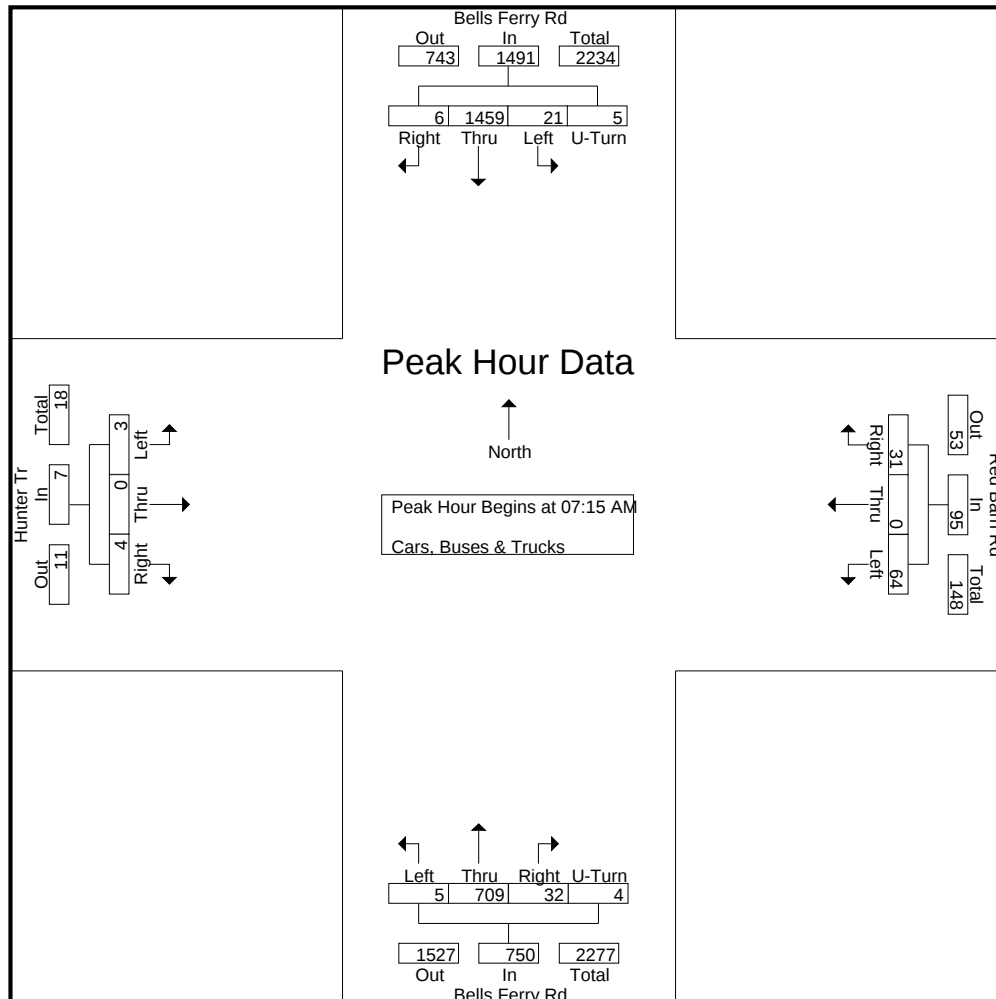
File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 2

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	2	159	4	1	166	6	356	3	1	366	1	0	0	1	18	0	10	28	561
07:30 AM	2	190	7	1	200	6	411	0	0	417	0	0	2	2	21	0	10	31	650
07:45 AM	1	183	8	2	194	5	356	2	3	366	1	0	1	2	17	0	7	24	586
08:00 AM	0	177	13	0	190	4	336	1	1	342	1	0	1	2	8	0	4	12	546
Total Volume	5	709	32	4	750	21	1459	6	5	1491	3	0	4	7	64	0	31	95	2343
% App. Total	0.7	94.5	4.3	0.5		1.4	97.9	0.4	0.3		42.9	0	57.1		67.4	0	32.6		
PHF	.625	.933	.615	.500	.938	.875	.887	.500	.417	.894	.750	.000	.500	.875	.762	.000	.775	.766	.901



A & R Engineering, Inc

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Red Barn Rd / Hunter Tr
7-9 am | 4-6 pm

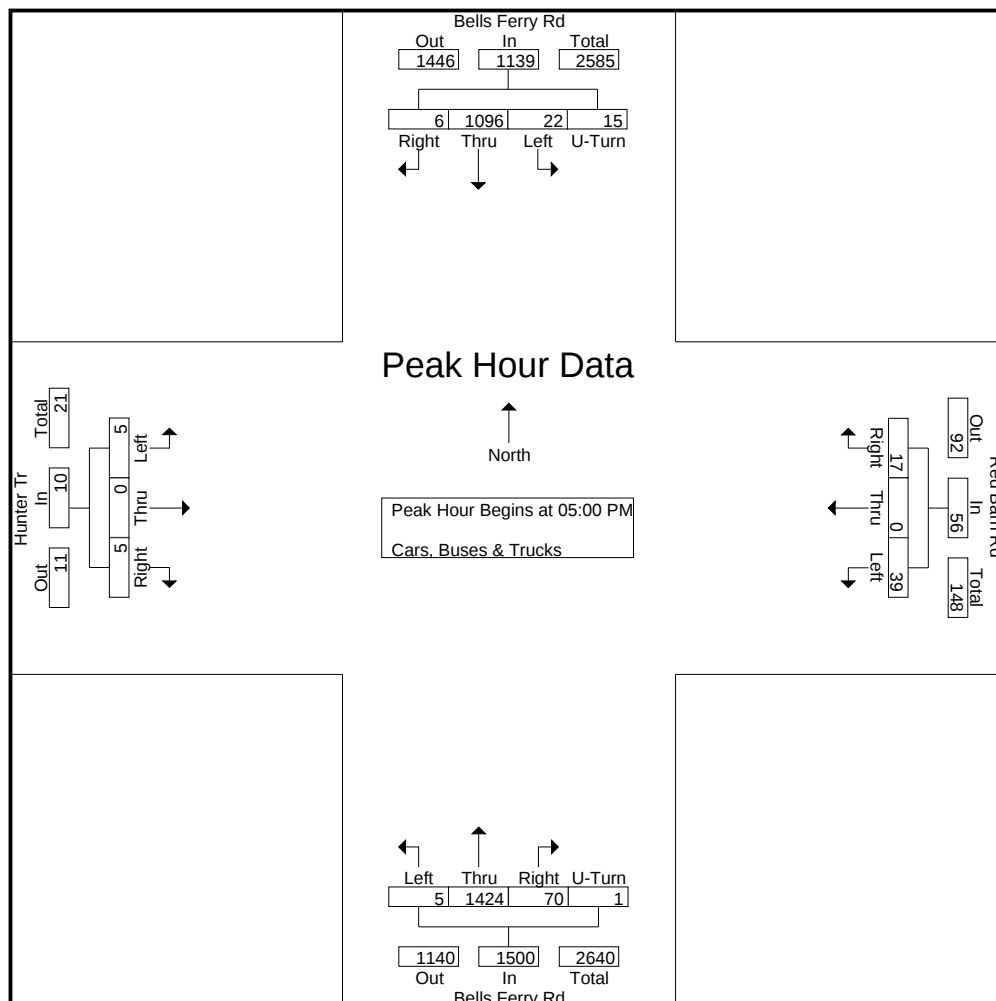
File Name : 20210256

Site Code : 20210256

Start Date : 8/17/2021

Page No : 3

	Bells Ferry Rd Northbound					Bells Ferry Rd Southbound					Hunter Tr Eastbound				Red Barn Rd Westbound				
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	350	16	0	366	5	290	0	3	298	0	0	1	1	5	0	5	10	675
05:15 PM	3	324	15	0	342	9	287	3	2	301	2	0	0	2	8	0	5	13	658
05:30 PM	0	329	18	1	348	2	262	0	7	271	0	0	1	1	13	0	3	16	636
05:45 PM	2	421	21	0	444	6	257	3	3	269	3	0	3	6	13	0	4	17	736
Total Volume	5	1424	70	1	1500	22	1096	6	15	1139	5	0	5	10	39	0	17	56	2705
% App. Total	0.3	94.9	4.7	0.1		1.9	96.2	0.5	1.3		50	0	50		69.6	0	30.4		
PHF	.417	.846	.833	.250	.845	.611	.945	.500	.536	.946	.417	.000	.417	.417	.750	.000	.850	.824	.919



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA
SR 92 @ Bells Ferry Rd
7-9 am | 4-6 pm

File Name : 20210257
Site Code : 20210257
Start Date : 08-17-2021
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				SR 92 Eastbound					SR 92 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total
07:00 AM	15	39	9	63	56	181	2	239	15	314	69	1	399	20	135	15	0	170	871
07:15 AM	14	49	17	80	41	198	5	244	46	400	71	0	517	29	112	14	2	157	998
07:30 AM	30	57	19	106	68	206	2	276	57	448	89	3	597	27	131	18	1	177	1156
07:45 AM	44	59	34	137	66	172	3	241	48	514	93	2	657	25	146	23	4	198	1233
Total	103	204	79	386	231	757	12	1000	166	1676	322	6	2170	101	524	70	7	702	4258
08:00 AM	27	70	17	114	66	186	5	257	45	413	70	2	530	17	182	18	6	223	1124
08:15 AM	41	69	17	127	51	182	5	238	39	315	61	3	418	26	143	16	5	190	973
08:30 AM	56	47	21	124	47	146	7	200	28	365	54	2	449	28	177	20	0	225	998
08:45 AM	32	76	22	130	35	171	8	214	47	445	39	4	535	26	135	23	2	186	1065
Total	156	262	77	495	199	685	25	909	159	1538	224	11	1932	97	637	77	13	824	4160
*** BREAK ***																			
04:00 PM	55	123	18	196	40	95	6	141	87	309	45	4	445	25	238	46	1	310	1092
04:15 PM	77	170	7	254	62	126	11	199	100	300	52	4	456	39	278	53	4	374	1283
04:30 PM	71	175	23	269	64	102	12	178	113	264	80	4	461	28	246	50	9	333	1241
04:45 PM	28	82	4	114	58	105	16	179	93	317	53	5	468	10	127	18	3	158	919
Total	231	550	52	833	224	428	45	697	393	1190	230	17	1830	102	889	167	17	1175	4535
05:00 PM	78	166	12	256	49	113	15	177	56	209	40	8	313	28	248	42	2	320	1066
05:15 PM	76	153	7	236	43	95	13	151	69	238	38	6	351	22	307	41	8	378	1116
05:30 PM	51	160	9	220	33	93	12	138	59	224	46	10	339	38	303	50	5	396	1093
05:45 PM	70	238	13	321	43	101	24	168	86	183	45	14	328	22	242	45	9	318	1135
Total	275	717	41	1033	168	402	64	634	270	854	169	38	1331	110	1100	178	24	1412	4410
Grand Total	765	1733	249	2747	822	2272	146	3240	988	5258	945	72	7263	410	3150	492	61	4113	17363
Apprch %	27.8	63.1	9.1		25.4	70.1	4.5		13.6	72.4	13	1		10	76.6	12	1.5		
Total %	4.4	10	1.4	15.8	4.7	13.1	0.8	18.7	5.7	30.3	5.4	0.4	41.8	2.4	18.1	2.8	0.4	23.7	

A & R Engineering, Inc.

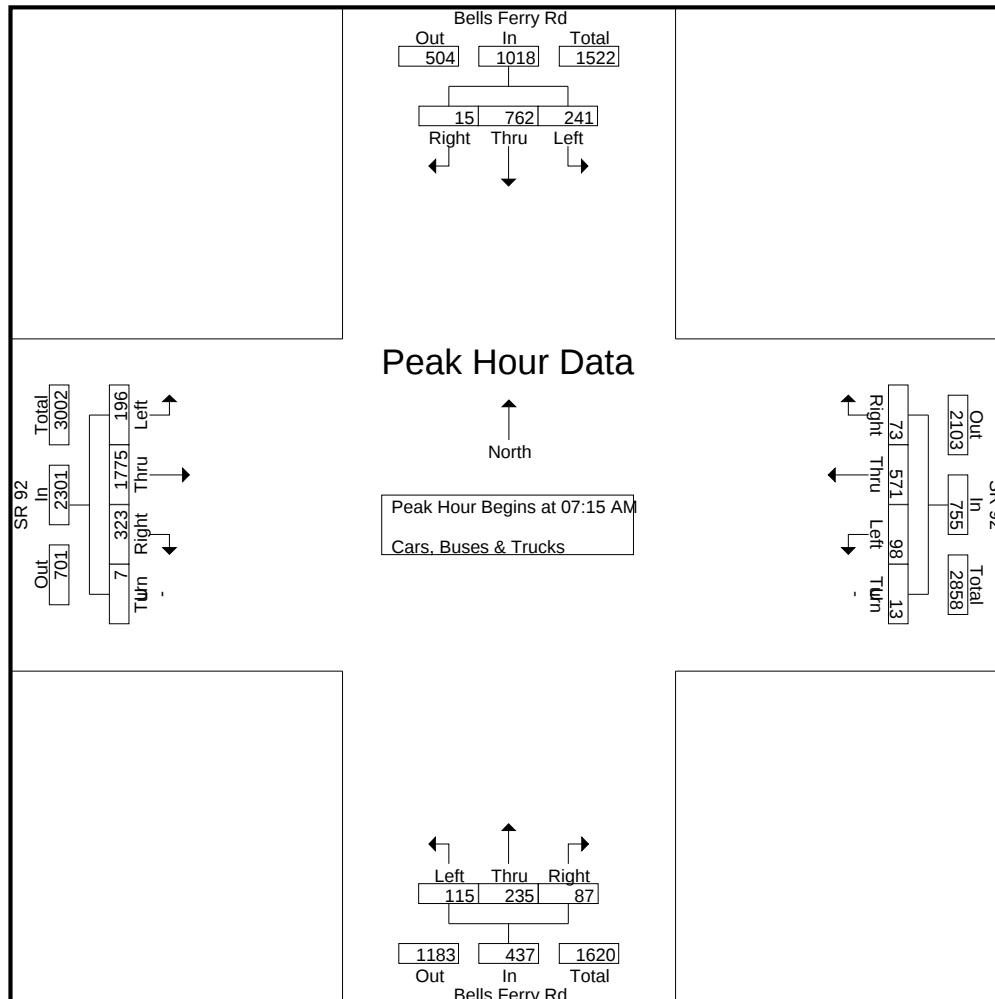
2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

SR 92 @ Bells Ferry Rd
7-9 am | 4-6 pm

File Name : 20210257
Site Code : 20210257
Start Date : 08-17-2021
Page No : 2

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				SR 92 Eastbound					SR 92 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	14	49	17	80	41	198	5	244	46	400	71	0	517	29	112	14	2	157	998
07:30 AM	30	57	19	106	68	206	2	276	57	448	89	3	597	27	131	18	1	177	1156
07:45 AM	44	59	34	137	66	172	3	241	48	514	93	2	657	25	146	23	4	198	1233
08:00 AM	27	70	17	114	66	186	5	257	45	413	70	2	530	17	182	18	6	223	1124
Total Volume	115	235	87	437	241	762	15	1018	196	1775	323	7	2301	98	571	73	13	755	4511
% App. Total	26.3	53.8	19.9		23.7	74.9	1.5		8.5	77.1	14	0.3		13	75.6	9.7	1.7		
PHF	.653	.839	.640	.797	.886	.925	.750	.922	.860	.863	.868	.583	.876	.845	.784	.793	.542	.846	.915



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

SR 92 @ Bells Ferry Rd

7-9 am | 4-6 pm

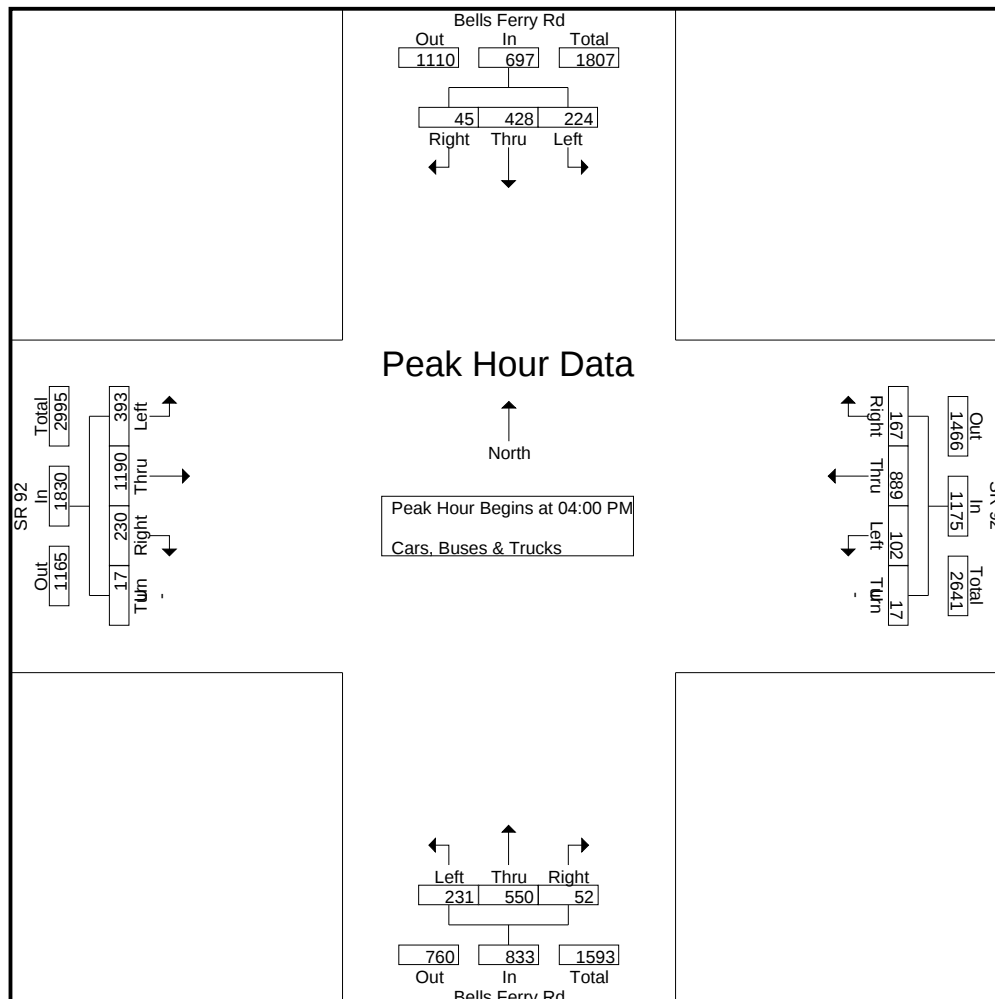
File Name : 20210257

Site Code : 20210257

Start Date : 08-17-2021

Page No : 3

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				SR 92 Eastbound					SR 92 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:00 PM																			
04:00 PM	55	123	18	196	40	95	6	141	87	309	45	4	445	25	238	46	1	310	1092
04:15 PM	77	170	7	254	62	126	11	199	100	300	52	4	456	39	278	53	4	374	1283
04:30 PM	71	175	23	269	64	102	12	178	113	264	80	4	461	28	246	50	9	333	1241
04:45 PM	28	82	4	114	58	105	16	179	93	317	53	5	468	10	127	18	3	158	919
Total Volume	231	550	52	833	224	428	45	697	393	1190	230	17	1830	102	889	167	17	1175	4535
% App. Total	27.7	66	6.2		32.1	61.4	6.5		21.5	65	12.6	0.9		8.7	75.7	14.2	1.4		
PHF	.750	.786	.565	.774	.875	.849	.703	.876	.869	.938	.719	.850	.978	.654	.799	.788	.472	.785	.884



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA
SR 92 @ Robin Rd
7-9 am | 4-6 pm

File Name : 20210258
Site Code : 20210258
Start Date : 08-17-2021
Page No : 1

Groups Printed- Cars,Buses & Trucks

	Robin Rd Ext Northbound				Robin Rd Southbound				SR 92 Eastbound				SR 92 Westbound						
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total	
07:00 AM	4	0	1	5	4	4	78	86	63	254	13	330	5	142	1	2	150	571	
07:15 AM	5	2	1	8	11	5	110	126	87	359	14	460	4	175	5	7	191	785	
07:30 AM	4	4	1	9	11	2	102	115	86	409	17	512	7	173	0	1	181	817	
07:45 AM	5	0	3	8	19	6	100	125	70	408	18	496	6	180	1	5	192	821	
Total	18	6	6	30	45	17	390	452	306	1430	62	1798	22	670	7	15	714	2994	
08:00 AM	8	4	0	12	14	3	91	108	61	311	15	387	5	224	6	3	238	745	
08:15 AM	7	4	0	11	19	7	89	115	44	271	9	324	11	214	3	6	234	684	
08:30 AM	13	1	0	14	4	4	90	98	44	319	22	385	6	204	4	4	218	715	
08:45 AM	9	2	1	12	14	3	76	93	49	282	13	344	8	200	2	5	215	664	
Total	37	11	1	49	51	17	346	414	198	1183	59	1440	30	842	15	18	905	2808	
*** BREAK ***																			
04:00 PM	5	6	5	16	16	6	63	85	64	267	8	339	14	402	12	13	441	881	
04:15 PM	13	3	5	21	26	7	120	153	72	254	15	341	18	373	17	6	414	929	
04:30 PM	13	3	5	21	17	6	86	109	57	266	9	332	10	422	11	10	453	915	
04:45 PM	14	2	3	19	34	5	120	159	55	280	13	348	15	415	11	8	449	975	
Total	45	14	18	77	93	24	389	506	248	1067	45	1360	57	1612	51	37	1757	3700	
05:00 PM	9	3	4	16	19	1	97	117	67	259	16	342	17	411	9	10	447	922	
05:15 PM	17	3	6	26	18	2	113	133	55	364	19	438	6	464	10	12	492	1089	
05:30 PM	19	3	12	34	25	10	110	145	62	297	18	377	14	364	10	8	396	952	
05:45 PM	12	3	7	22	32	3	85	120	79	279	12	370	11	437	20	14	482	994	
Total	57	12	29	98	94	16	405	515	263	1199	65	1527	48	1676	49	44	1817	3957	
Grand Total	157	43	54	254	283	74	1530	1887	1015	4879	231	6125	157	4800	122	114	5193	13459	
Apprch %	61.8	16.9	21.3		15	3.9	81.1		16.6	79.7	3.8		3	92.4	2.3	2.2			
Total %	1.2	0.3	0.4	1.9	2.1	0.5	11.4	14	7.5	36.3	1.7	45.5	1.2	35.7	0.9	0.8	38.6		

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2160 Kingston Court, Suite 'O',
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TMC DATA

SR 92 @ Robin Rd

7-9 am | 4-6 pm

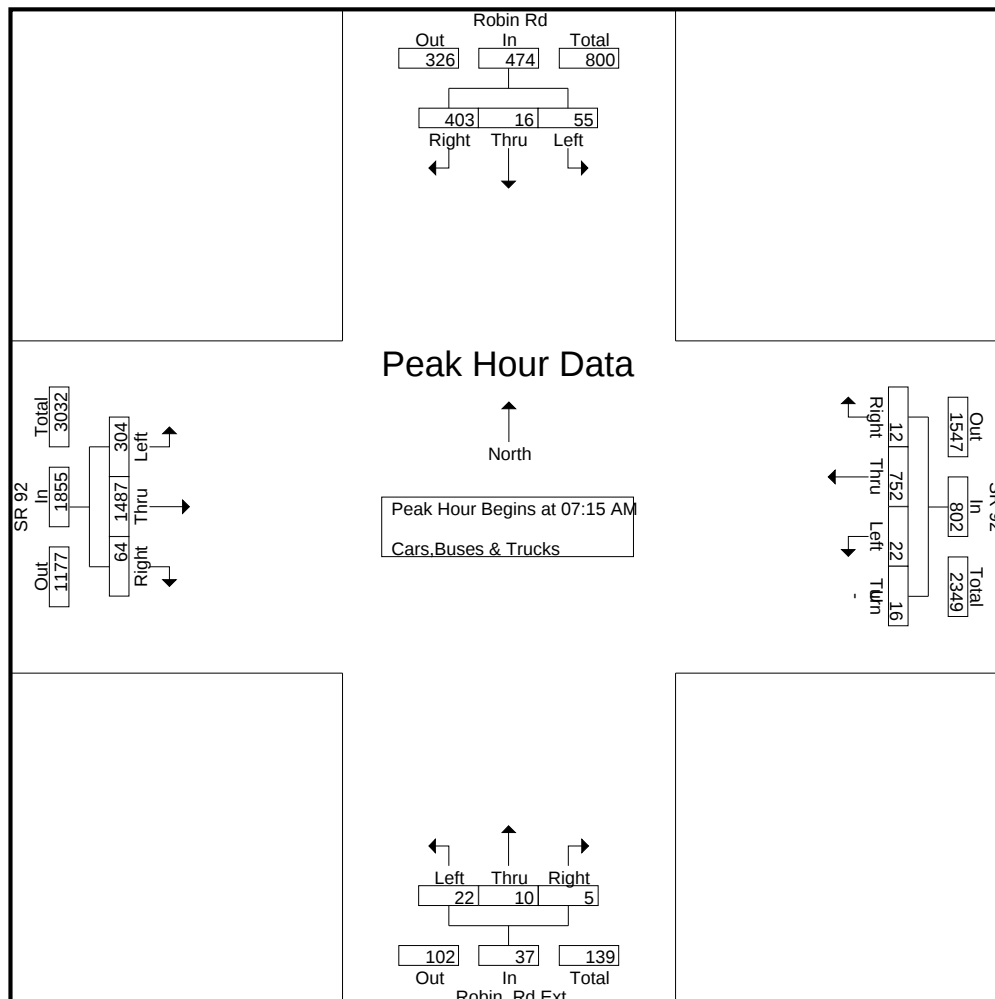
File Name : 20210258

Site Code : 20210258

Start Date : 08-17-2021

Page No : 2

	Robin Rd Ext Northbound				Robin Rd Southbound				SR 92 Eastbound				SR 92 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	5	2	1	8	11	5	110	126	87	359	14	460	4	175	5	7	191	785
07:30 AM	4	4	1	9	11	2	102	115	86	409	17	512	7	173	0	1	181	817
07:45 AM	5	0	3	8	19	6	100	125	70	408	18	496	6	180	1	5	192	821
08:00 AM	8	4	0	12	14	3	91	108	61	311	15	387	5	224	6	3	238	745
Total Volume	22	10	5	37	55	16	403	474	304	1487	64	1855	22	752	12	16	802	3168
% App. Total	59.5	27	13.5		11.6	3.4	85		16.4	80.2	3.5		2.7	93.8	1.5	2		
PHF	.688	.625	.417	.771	.724	.667	.916	.940	.874	.909	.889	.906	.786	.839	.500	.571	.842	.965



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TMC DATA

SR 92 @ Robin Rd

7-9 am | 4-6 pm

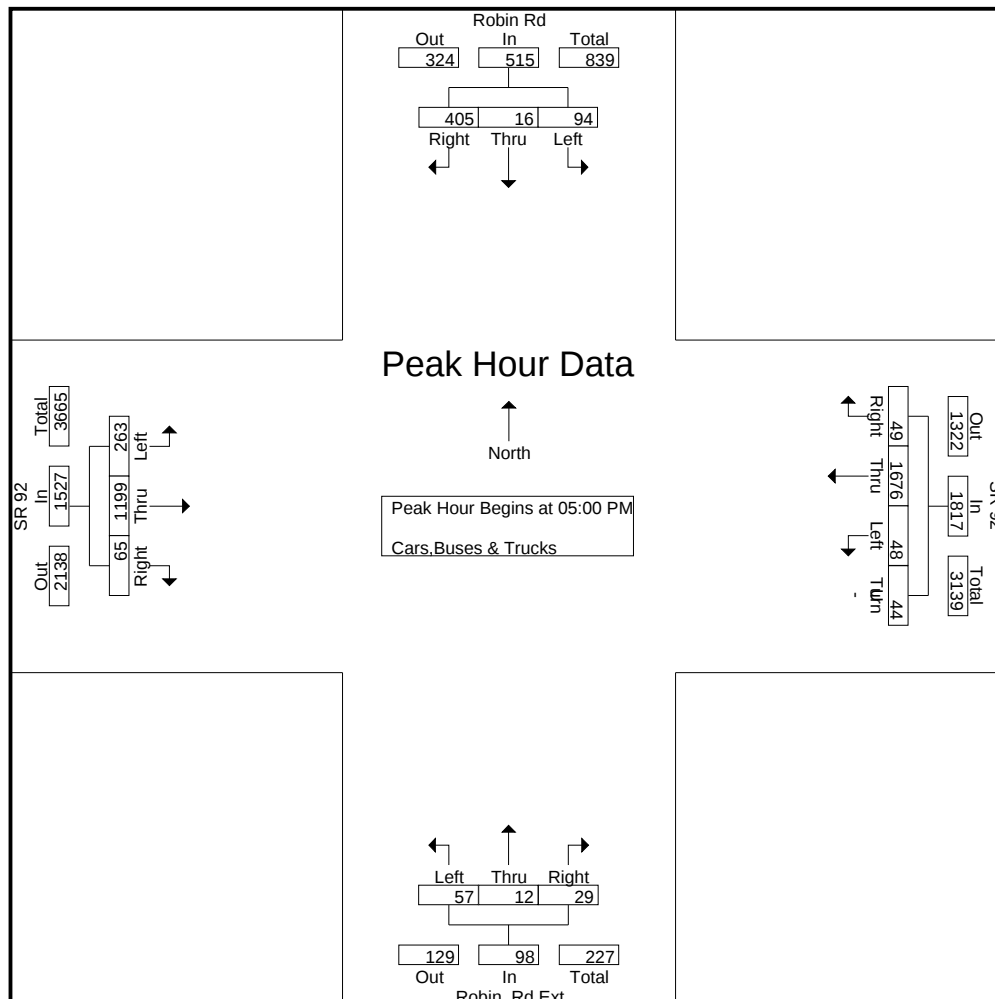
File Name : 20210258

Site Code : 20210258

Start Date : 08-17-2021

Page No : 3

	Robin Rd Ext Northbound				Robin Rd Southbound				SR 92 Eastbound				SR 92 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U - Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 05:00 PM																		
05:00 PM	9	3	4	16	19	1	97	117	67	259	16	342	17	411	9	10	447	922
05:15 PM	17	3	6	26	18	2	113	133	55	364	19	438	6	464	10	12	492	1089
05:30 PM	19	3	12	34	25	10	110	145	62	297	18	377	14	364	10	8	396	952
05:45 PM	12	3	7	22	32	3	85	120	79	279	12	370	11	437	20	14	482	994
Total Volume	57	12	29	98	94	16	405	515	263	1199	65	1527	48	1676	49	44	1817	3957
% App. Total	58.2	12.2	29.6		18.3	3.1	78.6		17.2	78.5	4.3		2.6	92.2	2.7	2.4		
PHF	.750	1.00	.604	.721	.734	.400	.896	.888	.832	.823	.855	.872	.706	.903	.613	.786	.923	.908



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2160 Kingston Court, Suite 'O',
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TMC DATA

Bells Ferry Rd @ Robin Rd
7-9 am | 4-6 pm

File Name : 20210259
Site Code : 20210259
Start Date : 08-17-2021
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				Robin Rd Eastbound				Tyson Woods Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	75	3	80	0	257	99	356	72	0	4	76	4	1	6	11	523
07:15 AM	0	135	0	135	1	319	172	492	99	0	2	101	8	2	4	14	742
07:30 AM	1	123	2	126	2	345	141	488	95	2	0	97	10	2	2	14	725
07:45 AM	3	146	1	150	0	279	113	392	71	1	2	74	2	2	3	7	623
Total	6	479	6	491	3	1200	525	1728	337	3	8	348	24	7	15	46	2613
08:00 AM	1	97	1	99	0	339	171	510	81	1	6	88	3	4	0	7	704
08:15 AM	1	101	2	104	0	258	91	349	62	0	5	67	7	2	1	10	530
08:30 AM	0	133	2	135	3	249	134	386	58	1	0	59	3	0	6	9	589
08:45 AM	0	115	2	117	1	209	136	346	75	0	2	77	1	0	4	5	545
Total	2	446	7	455	4	1055	532	1591	276	2	13	291	14	6	11	31	2368
09:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
04:00 PM	1	253	4	258	1	140	126	267	90	0	3	93	3	0	1	4	622
04:15 PM	5	236	3	244	5	167	145	317	90	0	6	96	4	1	2	7	664
04:30 PM	4	310	3	317	8	160	134	302	89	1	0	90	3	1	4	8	717
04:45 PM	2	265	8	275	7	180	124	311	75	1	6	82	3	0	2	5	673
Total	12	1064	18	1094	21	647	529	1197	344	2	15	361	13	2	9	24	2676
05:00 PM	2	254	6	262	4	206	156	366	99	3	3	105	5	2	0	7	740
05:15 PM	4	269	4	277	7	165	166	338	85	1	2	88	3	1	1	5	708
05:30 PM	1	293	4	298	1	185	148	334	96	0	1	97	4	0	4	8	737
05:45 PM	1	275	8	284	1	191	131	323	97	3	3	103	4	2	2	8	718
Total	8	1091	22	1121	13	747	601	1361	377	7	9	393	16	5	7	28	2903
Grand Total	28	3080	53	3161	41	3650	2187	5878	1334	14	45	1393	67	20	42	129	10561
Apprch %	0.9	97.4	1.7		0.7	62.1	37.2		95.8	1	3.2		51.9	15.5	32.6		
Total %	0.3	29.2	0.5	29.9	0.4	34.6	20.7	55.7	12.6	0.1	0.4	13.2	0.6	0.2	0.4	1.2	

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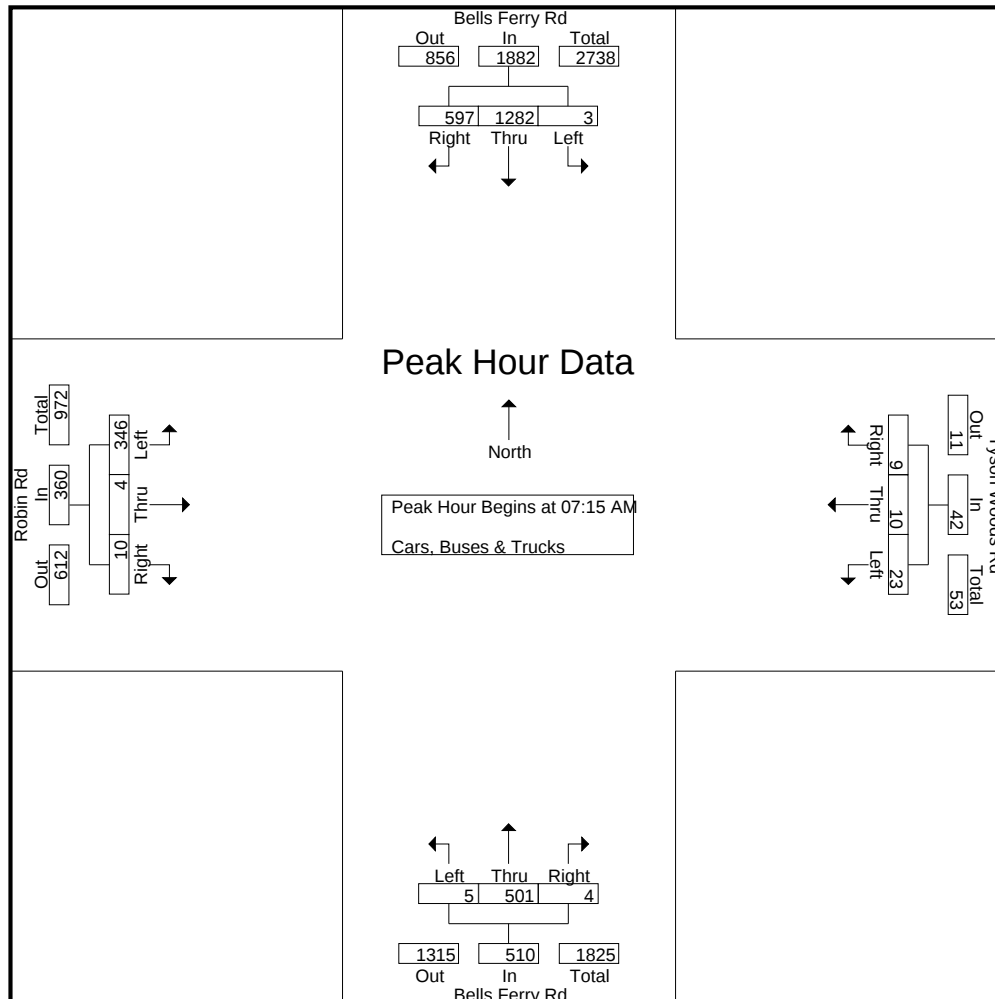
2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

Bells Ferry Rd @ Robin Rd
7-9 am | 4-6 pm

File Name : 20210259
Site Code : 20210259
Start Date : 08-17-2021
Page No : 2

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				Robin Rd Eastbound				Tyson Woods Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	135	0	135	1	319	172	492	99	0	2	101	8	2	4	14	742
07:30 AM	1	123	2	126	2	345	141	488	95	2	0	97	10	2	2	14	725
07:45 AM	3	146	1	150	0	279	113	392	71	1	2	74	2	2	3	7	623
08:00 AM	1	97	1	99	0	339	171	510	81	1	6	88	3	4	0	7	704
Total Volume	5	501	4	510	3	1282	597	1882	346	4	10	360	23	10	9	42	2794
% App. Total	1	98.2	0.8		0.2	68.1	31.7		96.1	1.1	2.8		54.8	23.8	21.4		
PHF	.417	.858	.500	.850	.375	.929	.868	.923	.874	.500	.417	.891	.575	.625	.563	.750	.941



A & R Engineering, Inc.

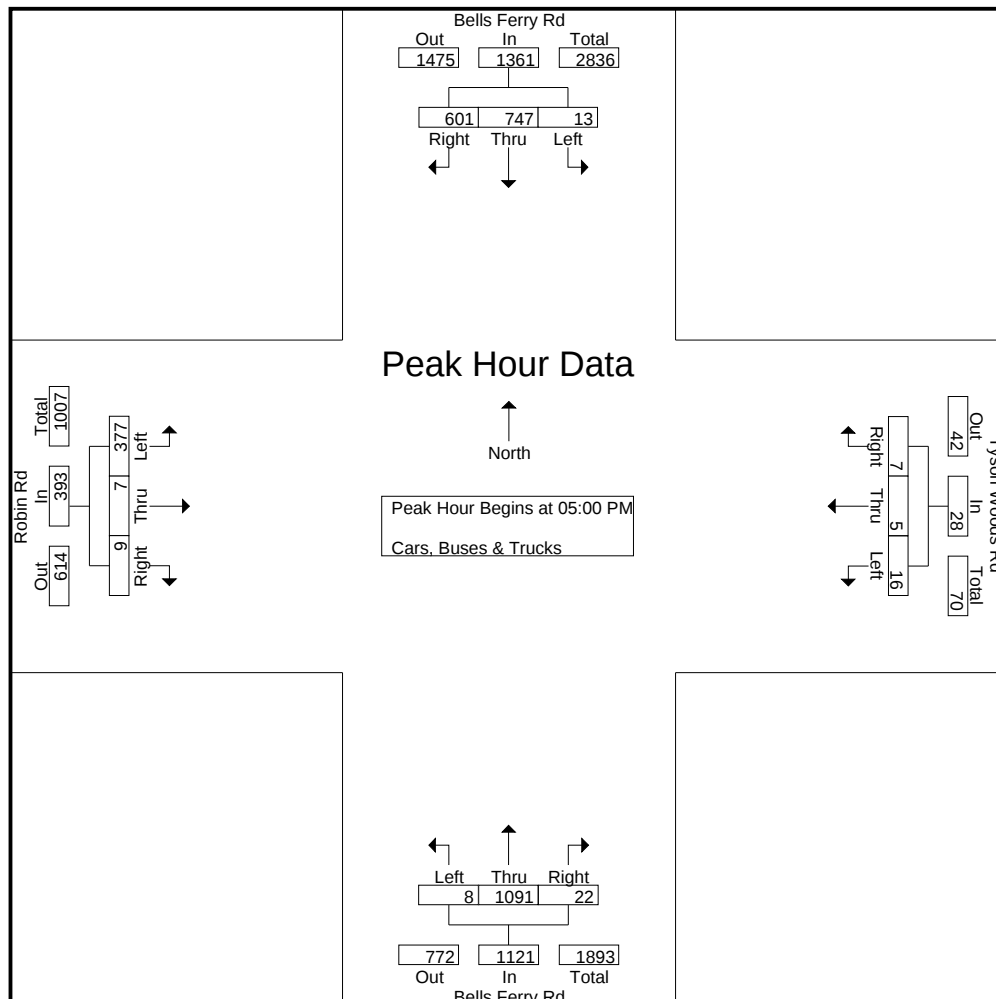
2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA

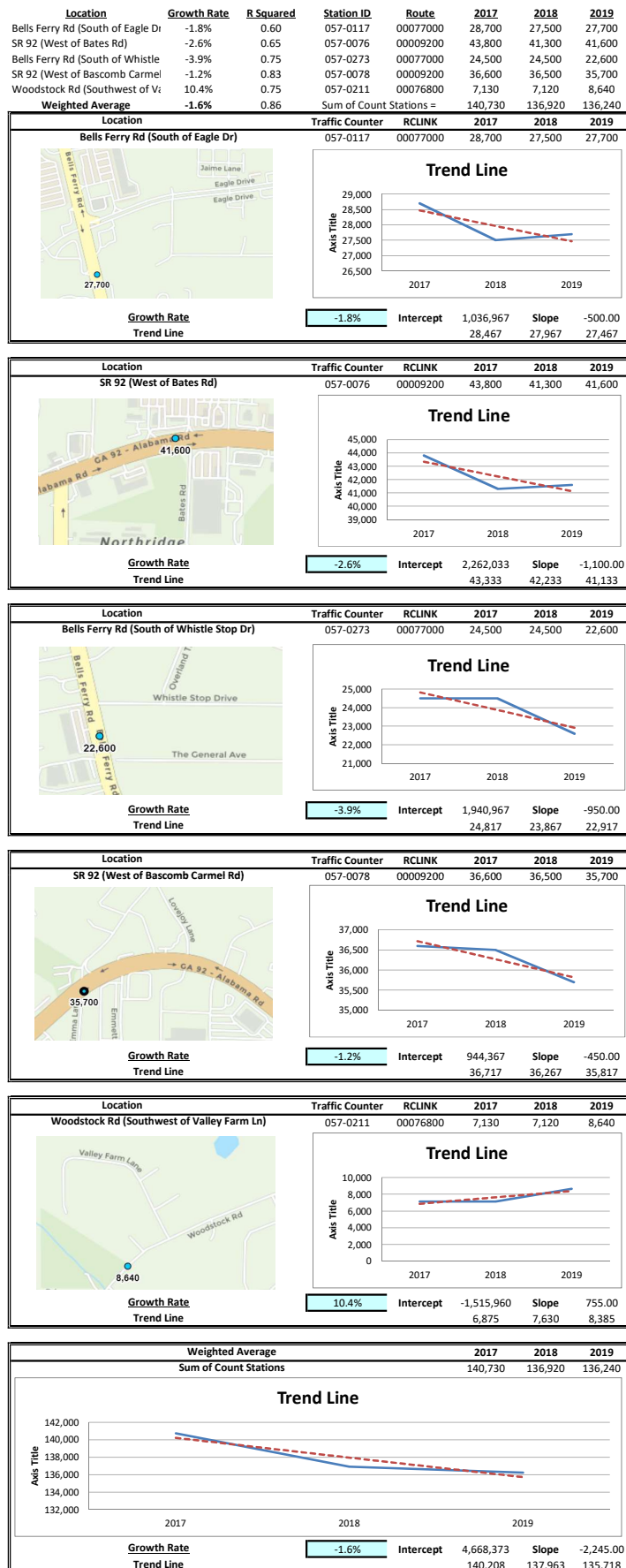
Bells Ferry Rd @ Robin Rd
7-9 am | 4-6 pm

File Name : 20210259
Site Code : 20210259
Start Date : 08-17-2021
Page No : 3

	Bells Ferry Rd Northbound				Bells Ferry Rd Southbound				Robin Rd Eastbound				Tyson Woods Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	254	6	262	4	206	156	366	99	3	3	105	5	2	0	7	740
05:15 PM	4	269	4	277	7	165	166	338	85	1	2	88	3	1	1	5	708
05:30 PM	1	293	4	298	1	185	148	334	96	0	1	97	4	0	4	8	737
05:45 PM	1	275	8	284	1	191	131	323	97	3	3	103	4	2	2	8	718
Total Volume	8	1091	22	1121	13	747	601	1361	377	7	9	393	16	5	7	28	2903
% App. Total	0.7	97.3	2		1	54.9	44.2		95.9	1.8	2.3		57.1	17.9	25		
PHF	.500	.931	.688	.940	.464	.907	.905	.930	.952	.583	.750	.936	.800	.625	.438	.875	.981



Linear Regression of Daily Traffic



Existing Intersection Analysis

Timings
1: Bells Ferry Rd & Eagle Dr

Existing AM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	57	72	329	34	178	67	216	335	475	893	14
Future Volume (vph)	23	57	72	329	34	178	67	216	335	475	893	14
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	17.0	60.5	60.5	15.0	43.5	43.5	16.0	44.5	44.5
Total Split (%)	36.3%	36.3%	36.3%	14.2%	50.4%	50.4%	12.5%	36.3%	36.3%	13.3%	37.1%	37.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	9.3	9.3	9.3	11.5	24.0	24.0	54.7	47.4	47.4	85.0	74.4	74.4
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.20	0.20	0.46	0.40	0.40	0.71	0.62	0.62
v/c Ratio	0.23	0.42	0.32	1.05	0.10	0.40	0.23	0.17	0.44	0.57	0.45	0.02
Control Delay	55.9	60.6	5.4	116.7	36.9	7.8	12.2	12.0	7.9	11.0	14.7	0.0
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	55.9	60.6	5.4	116.7	36.9	7.8	12.2	12.0	7.9	11.0	14.7	0.0
LOS	E	E	A	F	D	A	B	B	A	B	B	A
Approach Delay		33.7			75.9			9.8			13.3	
Approach LOS		C			E			A			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 68 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 26.2

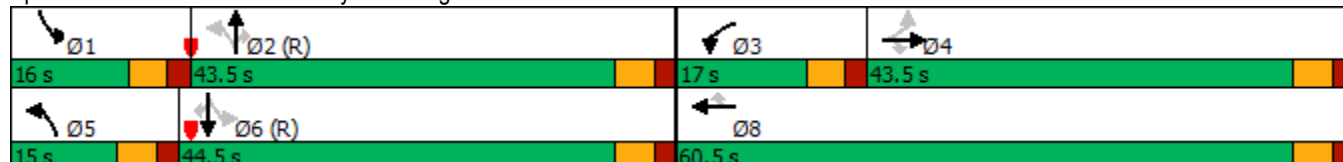
Intersection LOS: C

Intersection Capacity Utilization 68.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

1: Bells Ferry Rd & Eagle Dr

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	57	72	329	34	178	67	216	335	475	893	14
Future Volume (veh/h)	23	57	72	329	34	178	67	216	335	475	893	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	24	60	0	346	36	0	71	227	353	500	940	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	93		331	358		403	1991	888	653	2161	964
Arrive On Green	0.05	0.05	0.00	0.10	0.19	0.00	0.04	0.58	0.58	0.09	0.63	0.63
Sat Flow, veh/h	1372	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	24	60	0	346	36	0	71	227	353	500	940	15
Grp Sat Flow(s),veh/h/ln	1372	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	2.0	3.8	0.0	11.5	1.9	0.0	2.0	3.6	15.1	10.5	16.7	0.4
Cycle Q Clear(g_c), s	2.0	3.8	0.0	11.5	1.9	0.0	2.0	3.6	15.1	10.5	16.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	93		331	358		403	1991	888	653	2161	964
V/C Ratio(X)	0.19	0.64		1.04	0.10		0.18	0.11	0.40	0.77	0.44	0.02
Avail Cap(c_a), veh/h	495	592		331	857		474	1991	888	653	2161	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	56.0	0.0	54.3	40.0	0.0	9.5	11.2	13.6	10.9	11.1	8.2
Incr Delay (d2), s/veh	0.7	7.2	0.0	61.6	0.1	0.0	0.2	0.1	1.3	5.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.9	0.0	7.7	0.9	0.0	0.7	1.3	5.2	5.8	5.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	63.1	0.0	115.9	40.1	0.0	9.7	11.3	14.9	16.3	11.8	8.2
LnGrp LOS	E	E		F	D		A	B	B	B	B	A
Approach Vol, veh/h	84		A	382		A	651		1455			
Approach Delay, s/veh	61.0			108.7			13.1				13.3	
Approach LOS	E			F			B				B	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	16.0	75.5	17.0	11.5	10.0	81.5	28.5					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	10.5	38.0	11.5	38.0	9.5	39.0	55.0					
Max Q Clear Time (g_c+I1), s	12.5	17.1	13.5	5.8	4.0	18.7	3.9					
Green Ext Time (p_c), s	0.0	5.2	0.0	0.3	0.1	10.6	0.2					

Intersection Summary

HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Existing AM

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	22	8	95	146	3	35	561	188	35	1099	7
Future Volume (vph)	22	8	95	146	3	35	561	188	35	1099	7
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	44.0	44.0	29.0	29.0	15.0	61.0	61.0	15.0	61.0	61.0
Total Split (%)	12.5%	36.7%	36.7%	24.2%	24.2%	12.5%	50.8%	50.8%	12.5%	50.8%	50.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	27.0	27.0	27.0		18.9	78.7	74.4	74.4	78.7	74.4	74.4
Actuated g/C Ratio	0.22	0.22	0.22		0.16	0.66	0.62	0.62	0.66	0.62	0.62
v/c Ratio	0.06	0.02	0.23		0.77	0.14	0.29	0.20	0.07	0.56	0.01
Control Delay	31.2	29.4	7.1		70.2	8.1	8.6	1.7	8.9	15.0	0.0
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	29.4	7.1		70.2	8.1	8.6	1.7	8.9	15.0	0.0
LOS	C	C	A		E	A	A	A	A	B	A
Approach Delay		12.7			70.2		6.9			14.7	
Approach LOS		B			E		A			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



HCM 6th Signalized Intersection Summary

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	8	95	146	3	6	35	561	188	35	1099	7
Future Volume (veh/h)	22	8	95	146	3	6	35	561	188	35	1099	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	23	9	101	155	3	6	37	597	200	37	1169	7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	377	397	336	235	3	7	304	2119	945	517	2119	945
Arrive On Green	0.02	0.21	0.21	0.14	0.14	0.14	0.06	1.00	1.00	0.03	0.62	0.62
Sat Flow, veh/h	1781	1870	1585	1228	24	48	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	23	9	101	164	0	0	37	597	200	37	1169	7
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1300	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	1.3	0.5	6.4	14.8	0.0	0.0	0.9	0.0	0.0	0.9	23.7	0.2
Cycle Q Clear(g_c), s	1.3	0.5	6.4	14.8	0.0	0.0	0.9	0.0	0.0	0.9	23.7	0.2
Prop In Lane	1.00		1.00	0.95		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	377	397	336	246	0	0	304	2119	945	517	2119	945
V/C Ratio(X)	0.06	0.02	0.30	0.67	0.00	0.00	0.12	0.28	0.21	0.07	0.55	0.01
Avail Cap(c_a), veh/h	478	600	509	313	0	0	389	2119	945	602	2119	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	37.4	39.8	50.3	0.0	0.0	9.7	0.0	0.0	7.5	13.1	8.7
Incr Delay (d2), s/veh	0.1	0.0	0.5	3.6	0.0	0.0	0.2	0.3	0.5	0.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	2.6	5.1	0.0	0.0	0.3	0.1	0.1	0.3	8.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	37.4	40.3	54.0	0.0	0.0	9.9	0.3	0.5	7.6	14.2	8.7
LnGrp LOS	D	D	D	D	A	A	A	A	A	A	B	A
Approach Vol, veh/h	133				164				834			
Approach Delay, s/veh	40.1				54.0				0.8			
Approach LOS	D				D				A			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	80.0		31.0	9.0	80.0	8.2	22.8				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	55.5		38.5	9.5	55.5	9.5	23.5				
Max Q Clear Time (g_c+I1), s	2.9	2.0		8.4	2.9	25.7	3.3	16.8				
Green Ext Time (p_c), s	0.0	11.0		0.4	0.0	16.7	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	13.5											
HCM 6th LOS	B											

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Existing AM
09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	3	0	64	0	9	709	32	26	1459	6
Future Volume (vph)	3	0	64	0	9	709	32	26	1459	6
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		9.1		9.1	96.4	93.0	93.0	98.9	97.6	97.6
Actuated g/C Ratio		0.08		0.08	0.80	0.78	0.78	0.82	0.81	0.81
v/c Ratio		0.04		0.60	0.04	0.30	0.03	0.05	0.59	0.01
Control Delay		0.3		34.2	1.9	2.8	0.1	2.8	6.0	0.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.3		34.2	1.9	2.8	0.1	2.8	6.0	0.0
LOS		A		C	A	A	A	A	A	A
Approach Delay		0.3		34.2		2.7			6.0	
Approach LOS		A		C		A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 105 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 6.0

Intersection LOS: A

Intersection Capacity Utilization 58.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd



HCM 6th Signalized Intersection Summary

3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↕	↕	↔	↕	↕
Traffic Volume (veh/h)	3	0	4	64	0	31	9	709	32	26	1459	6
Future Volume (veh/h)	3	0	4	64	0	31	9	709	32	26	1459	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	3	0	0	71	0	0	10	788	0	29	1621	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	167	0		150	0		312	2641		570	2689	
Arrive On Green	0.06	0.00	0.00	0.06	0.00	0.00	0.01	0.77	0.00	0.05	1.00	0.00
Sat Flow, veh/h	1701	0	0	1427	0	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	3	0	0	71	0	0	10	788	0	29	1621	0
Grp Sat Flow(s),veh/h/ln	1701	0	0	1427	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.0	0.0	5.7	0.0	0.0	0.2	8.1	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	5.9	0.0	0.0	0.2	8.1	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	0		150	0		312	2641		570	2689	
V/C Ratio(X)	0.02	0.00		0.47	0.00		0.03	0.30		0.05	0.60	
Avail Cap(c_a), veh/h	574	0		557	0		427	2641		661	2689	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.8	0.0	0.0	55.4	0.0	0.0	2.8	4.0	0.0	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.3	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	2.2	0.0	0.0	0.0	2.1	0.0	0.1	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	0.0	57.7	0.0	0.0	2.8	4.3	0.0	2.7	1.0	0.0
LnGrp LOS	D	A		E	A		A	A		A	A	
Approach Vol, veh/h		3	A		71	A		798	A		1650	A
Approach Delay, s/veh		52.8			57.7			4.3			1.0	
Approach LOS		D			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	98.4		13.0	6.9	100.0		13.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.4	10.1		2.2	2.2	2.0		7.9				
Green Ext Time (p_c), s	0.0	11.8		0.0	0.0	33.8		0.4				

Intersection Summary

HCM 6th Ctrl Delay	3.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Existing AM

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	346	4	10	23	10	5	501	4	3	1282	597
Future Volume (vph)	346	4	10	23	10	5	501	4	3	1282	597
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	43.5	43.5	43.5	43.5	43.5	15.0	61.5	61.5	15.0	61.5	61.5
Total Split (%)	36.3%	36.3%	36.3%	36.3%	36.3%	12.5%	51.3%	51.3%	12.5%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		36.5	36.5		36.5	71.4	70.2	70.2	71.4	70.2	70.2
Actuated g/C Ratio		0.30	0.30		0.30	0.60	0.58	0.58	0.60	0.58	0.58
v/c Ratio		0.94	0.02		0.12	0.03	0.27	0.00	0.01	0.69	0.59
Control Delay		74.6	0.1		24.9	10.4	13.6	0.0	6.3	13.6	4.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		74.6	0.1		24.9	10.4	13.6	0.0	6.3	13.6	4.9
LOS		E	A		C	B	B	A	A	B	A
Approach Delay		72.4			24.9		13.4			10.8	
Approach LOS		E			C		B			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 19.5
Intersection Capacity Utilization 70.7%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service C

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

					
Ø1	Ø2 (R)		Ø4		
15 s	61.5 s		43.5 s		
					
Ø5	Ø6 (R)		Ø8		
15 s	61.5 s		43.5 s		

HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	346	4	10	23	10	9	5	501	4	3	1282	597
Future Volume (veh/h)	346	4	10	23	10	9	5	501	4	3	1282	597
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	368	4	0	24	11	10	5	533	4	3	1364	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	454	4		301	137	112	291	1973	880	483	1964	
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.01	0.58	0.58	0.01	1.00	0.00
Sat Flow, veh/h	1405	15	1585	907	489	399	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	372	0	0	45	0	0	5	533	4	3	1364	0
Grp Sat Flow(s),veh/h/ln	1420	0	1585	1795	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	28.4	0.0	0.0	0.0	0.0	0.0	0.1	9.4	0.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	30.6	0.0	0.0	2.2	0.0	0.0	0.1	9.4	0.1	0.1	0.0	0.0
Prop In Lane	0.99		1.00	0.53		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	0		549	0	0	291	1973	880	483	1964	
V/C Ratio(X)	0.81	0.00		0.08	0.00	0.00	0.02	0.27	0.00	0.01	0.69	
Avail Cap(c_a), veh/h	508	0		605	0	0	416	1973	880	612	1964	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.8	0.0	0.0	31.9	0.0	0.0	10.5	12.7	10.7	10.9	0.0	0.0
Incr Delay (d2), s/veh	8.9	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	0.0	1.0	0.0	0.0	0.1	3.4	0.0	0.0	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.0	0.0	31.9	0.0	0.0	10.5	13.0	10.7	10.9	2.1	0.0
LnGrp LOS	D	A		C	A	A	B	B	B	B	A	
Approach Vol, veh/h		372	A		45			542			1367	A
Approach Delay, s/veh		50.7			31.9			13.0			2.1	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	74.9		39.2	6.3	74.6		39.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	56.0		38.0	9.5	56.0		38.0				
Max Q Clear Time (g_c+I1), s	2.1	11.4		32.6	2.1	2.0		4.2				
Green Ext Time (p_c), s	0.0	7.4		1.1	0.0	28.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
5: Bells Ferry Rd & SR 92

Existing AM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	1775	323	111	571	73	115	235	87	241	762	15
Future Volume (vph)	203	1775	323	111	571	73	115	235	87	241	762	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	9.5	9.5	5.0	9.5	9.5	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	31.0	101.0	101.0	17.0	87.0	87.0	15.0	29.0	29.0	33.0	47.0	47.0
Total Split (%)	17.2%	56.1%	56.1%	9.4%	48.3%	48.3%	8.3%	16.1%	16.1%	18.3%	26.1%	26.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effect Green (s)	17.2	96.3	96.3	10.7	89.8	89.8	9.4	31.6	31.6	19.4	41.6	41.6
Actuated g/C Ratio	0.10	0.54	0.54	0.06	0.50	0.50	0.05	0.18	0.18	0.11	0.23	0.23
v/c Ratio	0.69	1.05	0.39	0.61	0.36	0.09	0.72	0.42	0.24	0.73	1.04	0.04
Control Delay	96.6	68.2	6.4	96.0	28.7	0.2	106.7	69.4	1.5	89.8	108.1	0.1
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	96.6	68.2	6.4	96.0	28.7	0.2	106.7	69.4	1.5	89.8	108.1	0.1
LOS	F	E	A	F	C	A	F	E	A	F	F	A
Approach Delay		62.0			35.9			65.6			102.2	
Approach LOS		E			D			E			F	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 67.1

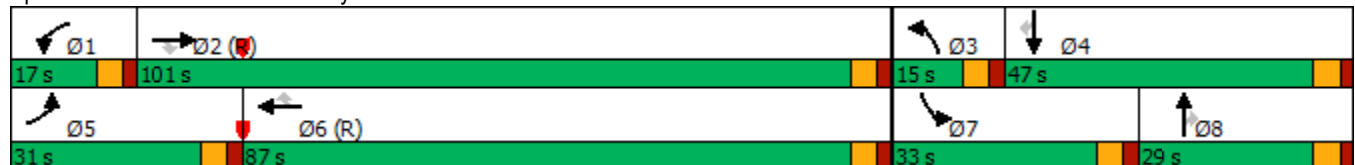
Intersection LOS: E

Intersection Capacity Utilization 96.8%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary

5: Bells Ferry Rd & SR 92

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1775	323	111	571	73	115	235	87	241	762	15
Future Volume (veh/h)	203	1775	323	111	571	73	115	235	87	241	762	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	216	1888	344	118	607	78	122	250	0	256	811	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	260	1888	842	155	1779	793	158	640		301	787	
Arrive On Green	0.05	0.37	0.37	0.05	0.52	0.52	0.05	0.19	0.00	0.09	0.23	0.00
Sat Flow, veh/h	3319	3413	1522	3319	3413	1522	3319	3413	1522	3319	3413	1522
Grp Volume(v), veh/h	216	1888	344	118	607	78	122	250	0	256	811	0
Grp Sat Flow(s),veh/h/ln	1659	1706	1522	1659	1706	1522	1659	1706	1522	1659	1706	1522
Q Serve(g_s), s	11.6	99.6	30.2	6.3	18.6	4.7	6.5	11.6	0.0	13.7	41.5	0.0
Cycle Q Clear(g_c), s	11.6	99.6	30.2	6.3	18.6	4.7	6.5	11.6	0.0	13.7	41.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	1888	842	155	1779	793	158	640		301	787	
V/C Ratio(X)	0.83	1.00	0.41	0.76	0.34	0.10	0.77	0.39		0.85	1.03	
Avail Cap(c_a), veh/h	470	1888	842	212	1779	793	175	640		507	787	
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	84.1	56.6	34.8	84.8	25.1	21.7	84.8	64.1	0.0	80.6	69.2	0.0
Incr Delay (d2), s/veh	5.2	18.2	1.1	10.4	0.5	0.2	17.5	0.4	0.0	6.9	40.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	48.4	12.1	2.9	7.6	1.7	3.2	5.0	0.0	6.1	22.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.3	74.9	35.9	95.2	25.6	22.0	102.2	64.5	0.0	87.6	109.4	0.0
LnGrp LOS	F	F	D	F	C	C	F	E		F	F	
Approach Vol, veh/h	2448				803				372			
Approach Delay, s/veh	70.7				35.5				76.9			
Approach LOS	E				D				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	105.1	14.1	47.0	19.6	99.3	21.8	39.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	11.5	95.5	9.5	41.5	25.5	81.5	27.5	23.5				
Max Q Clear Time (g_c+I1), s	8.3	101.6	8.5	43.5	13.6	20.6	15.7	13.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.5	9.8	0.6	0.9				

Intersection Summary

HCM 6th Ctrl Delay 72.8
HCM 6th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Robin Rd Ext/Robin Rd & SR 92

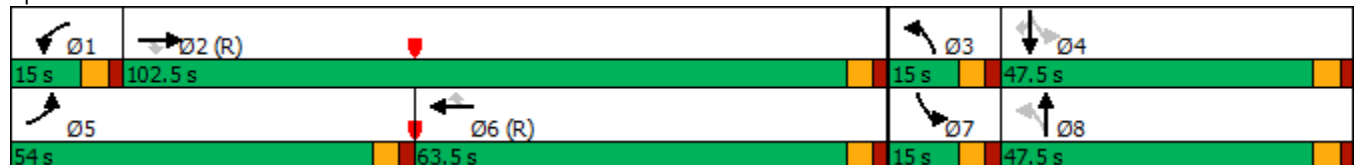
Existing AM
09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	304	1487	64	38	752	12	22	10	55	16	403
Future Volume (vph)	304	1487	64	38	752	12	22	10	55	16	403
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	29.5	29.5	15.0	33.5	33.5	15.0	47.5	15.0	44.5	44.5
Total Split (s)	54.0	102.5	102.5	15.0	63.5	63.5	15.0	47.5	15.0	47.5	47.5
Total Split (%)	30.0%	56.9%	56.9%	8.3%	35.3%	35.3%	8.3%	26.4%	8.3%	26.4%	26.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effect Green (s)	39.1	135.3	135.3	9.6	103.6	103.6	16.4	11.1	18.2	12.4	12.4
Actuated g/C Ratio	0.22	0.75	0.75	0.05	0.58	0.58	0.09	0.06	0.10	0.07	0.07
v/c Ratio	0.87	0.61	0.06	0.44	0.40	0.01	0.16	0.13	0.39	0.13	0.84
Control Delay	90.2	14.7	1.5	86.1	20.6	0.0	67.1	58.6	75.8	77.1	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.2	14.7	1.5	86.1	20.6	0.0	67.1	58.6	75.8	77.1	21.7
LOS	F	B	A	F	C	A	E	E	E	E	C
Approach Delay		26.6			23.4			63.8		29.8	
Approach LOS		C			C			E		C	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 26.7
Intersection Capacity Utilization 68.7%
Analysis Period (min) 15
Intersection LOS: C
ICU Level of Service C

Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92



HCM 6th Signalized Intersection Summary

6: Robin Rd Ext/Robin Rd & SR 92

Existing AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	1487	64	38	752	12	22	10	5	55	16	403
Future Volume (veh/h)	304	1487	64	38	752	12	22	10	5	55	16	403
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	317	1549	0	40	783	12	23	10	5	57	17	420
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	338	2034		51	1460	651	282	257	128	396	436	370
Arrive On Green	0.20	0.60	0.00	0.06	0.86	0.86	0.02	0.22	0.22	0.03	0.23	0.23
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	1781	1176	588	1781	1870	1585
Grp Volume(v), veh/h	317	1549	0	40	783	12	23	0	15	57	17	420
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1781	0	1764	1781	1870	1585
Q Serve(g_s), s	32.8	60.5	0.0	4.2	11.0	0.2	1.8	0.0	1.2	4.4	1.3	42.0
Cycle Q Clear(g_c), s	32.8	60.5	0.0	4.2	11.0	0.2	1.8	0.0	1.2	4.4	1.3	42.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	338	2034		51	1460	651	282	0	385	396	436	370
V/C Ratio(X)	0.94	0.76		0.79	0.54	0.02	0.08	0.00	0.04	0.14	0.04	1.14
Avail Cap(c_a), veh/h	461	2034		90	1460	651	342	0	412	430	436	370
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	26.9	0.0	84.1	8.3	7.5	53.0	0.0	55.4	52.0	53.4	69.0
Incr Delay (d2), s/veh	22.5	2.8	0.0	21.6	1.3	0.0	0.1	0.0	0.0	0.2	0.0	89.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	24.4	0.0	2.1	2.9	0.1	0.8	0.0	0.6	2.0	0.6	26.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.6	29.7	0.0	105.7	9.6	7.5	53.1	0.0	55.5	52.1	53.4	158.0
LnGrp LOS	F	C		F	A	A	D	A	E	D	D	F
Approach Vol, veh/h	1866		A	835				38		494		
Approach Delay, s/veh	40.5			14.1				54.1		142.2		
Approach LOS	D			B				D		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	112.8	8.9	47.5	41.1	82.5	11.6	44.8				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	97.0	9.5	42.0	48.5	58.0	9.5	42.0				
Max Q Clear Time (g_c+I1), s	6.2	62.5	3.8	44.0	34.8	13.0	6.4	3.2				
Green Ext Time (p_c), s	0.0	24.8	0.0	0.0	0.8	12.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 49.4
HCM 6th LOS D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings

1: Bells Ferry Rd & Eagle Dr

Existing PM

09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	112	141	369	131	337	200	666	392	408	516	24
Future Volume (vph)	41	112	141	369	131	337	200	666	392	408	516	24
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	16.0	59.5	59.5	22.0	43.5	43.5	17.0	38.5	38.5
Total Split (%)	36.3%	36.3%	36.3%	13.3%	49.6%	49.6%	18.3%	36.3%	36.3%	14.2%	32.1%	32.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	12.7	12.7	12.7	10.5	28.7	28.7	50.3	39.0	39.0	80.3	63.5	63.5
Actuated g/C Ratio	0.11	0.11	0.11	0.09	0.24	0.24	0.42	0.32	0.32	0.67	0.53	0.53
v/c Ratio	0.32	0.58	0.49	1.26	0.30	0.55	0.48	0.62	0.58	0.64	0.30	0.03
Control Delay	54.6	62.1	13.3	184.2	38.5	8.1	16.1	23.5	8.9	19.0	17.3	0.0
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	54.6	62.1	13.3	184.2	38.5	8.1	16.1	23.5	8.9	19.0	17.3	0.0
LOS	D	E	B	F	D	A	B	C	A	B	B	A
Approach Delay		37.6			90.5			17.7			17.6	
Approach LOS		D			F			B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.26

Intersection Signal Delay: 37.7

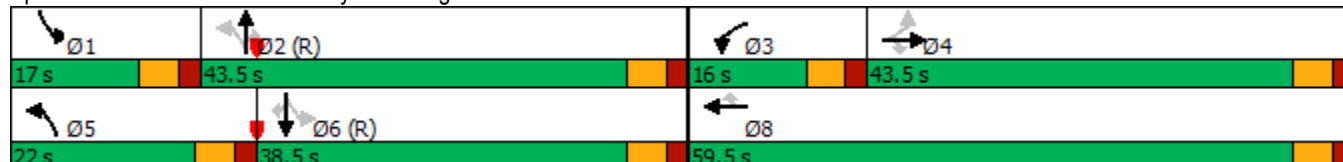
Intersection LOS: D

Intersection Capacity Utilization 75.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

1: Bells Ferry Rd & Eagle Dr

Existing PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	112	141	369	131	337	200	666	392	408	516	24
Future Volume (veh/h)	41	112	141	369	131	337	200	666	392	408	516	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	42	114	0	377	134	0	204	680	400	416	527	24
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	163	153		302	403		592	1882	839	445	1968	878
Arrive On Green	0.08	0.08	0.00	0.09	0.22	0.00	0.07	0.55	0.55	0.10	0.58	0.58
Sat Flow, veh/h	1256	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	42	114	0	377	134	0	204	680	400	416	527	24
Grp Sat Flow(s),veh/h/ln	1256	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	3.8	7.2	0.0	10.5	7.3	0.0	6.1	13.4	19.2	11.5	9.3	0.8
Cycle Q Clear(g_c), s	3.8	7.2	0.0	10.5	7.3	0.0	6.1	13.4	19.2	11.5	9.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	153		302	403		592	1882	839	445	1968	878
V/C Ratio(X)	0.26	0.74		1.25	0.33		0.34	0.36	0.48	0.94	0.27	0.03
Avail Cap(c_a), veh/h	458	592		302	842		706	1882	839	445	1968	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	53.9	0.0	54.8	39.8	0.0	10.0	15.1	16.4	17.7	12.7	10.9
Incr Delay (d2), s/veh	0.8	7.0	0.0	135.7	0.5	0.0	0.3	0.5	1.9	27.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.6	0.0	10.2	3.3	0.0	2.1	5.0	6.8	8.2	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	60.8	0.0	190.4	40.3	0.0	10.3	15.6	18.3	44.9	13.0	11.0
LnGrp LOS	D	E		F	D		B	B	B	D	B	B
Approach Vol, veh/h		156	A		511	A		1284			967	
Approach Delay, s/veh		58.7			151.1			15.6			26.7	
Approach LOS		E			F			B			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	71.7	16.0	15.3	14.0	74.7		31.3				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	11.5	38.0	10.5	38.0	16.5	33.0		54.0				
Max Q Clear Time (g_c+I1), s	13.5	21.2	12.5	9.2	8.1	11.3		9.3				
Green Ext Time (p_c), s	0.0	9.4	0.0	0.7	0.3	6.0		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			45.3									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

Existing PM

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	10	5	25	117	32	91	1061	129	53	1136	20
Future Volume (vph)	10	5	25	117	32	91	1061	129	53	1136	20
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	43.0	43.0	28.0	28.0	15.0	62.0	62.0	15.0	62.0	62.0
Total Split (%)	12.5%	35.8%	35.8%	23.3%	23.3%	12.5%	51.7%	51.7%	12.5%	51.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	21.1	21.1	21.1		18.5	83.9	77.6	77.6	81.9	75.0	75.0
Actuated g/C Ratio	0.18	0.18	0.18		0.15	0.70	0.65	0.65	0.68	0.62	0.62
v/c Ratio	0.04	0.02	0.08		0.75	0.32	0.50	0.13	0.17	0.56	0.02
Control Delay	35.2	34.0	0.4		66.9	9.0	10.2	2.7	9.5	19.0	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	34.0	0.4		66.9	9.0	10.2	2.7	9.5	19.0	0.6
LOS	D	C	A		E	A	B	A	A	B	A
Approach Delay		13.0			66.9		9.4			18.2	
Approach LOS		B			E		A			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 65.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



HCM 6th Signalized Intersection Summary
2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

Existing PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	25	117	32	14	91	1061	129	53	1136	20
Future Volume (veh/h)	10	5	25	117	32	14	91	1061	129	53	1136	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	10	5	26	121	33	14	94	1094	133	55	1171	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	283	355	301	192	38	16	327	2176	970	396	2159	963
Arrive On Green	0.01	0.19	0.19	0.13	0.13	0.13	0.08	1.00	1.00	0.04	0.63	0.63
Sat Flow, veh/h	1781	1870	1585	1058	290	123	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	10	5	26	168	0	0	94	1094	133	55	1171	21
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1471	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.6	0.3	1.6	13.4	0.0	0.0	2.3	0.0	0.0	1.3	23.0	0.6
Cycle Q Clear(g_c), s	0.6	0.3	1.6	13.4	0.0	0.0	2.3	0.0	0.0	1.3	23.0	0.6
Prop In Lane	1.00		1.00	0.72		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	355	301	246	0	0	327	2176	970	396	2159	963
V/C Ratio(X)	0.04	0.01	0.09	0.68	0.00	0.00	0.29	0.50	0.14	0.14	0.54	0.02
Avail Cap(c_a), veh/h	403	584	495	327	0	0	394	2176	970	472	2159	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	39.5	40.0	51.0	0.0	0.0	9.2	0.0	0.0	6.8	12.3	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	3.6	0.0	0.0	0.5	0.8	0.3	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.7	5.2	0.0	0.0	0.7	0.3	0.1	0.4	8.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	39.5	40.1	54.6	0.0	0.0	9.7	0.8	0.3	7.0	13.3	8.3
LnGrp LOS	D	D	D	D	A	A	A	A	A	A	B	A
Approach Vol, veh/h	41			168			1321			1247		
Approach Delay, s/veh	40.7			54.6			1.4			12.9		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	82.0		28.3	10.3	81.4	6.9	21.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	56.5		37.5	9.5	56.5	9.5	22.5				
Max Q Clear Time (g_c+I1), s	3.3	2.0		3.6	4.3	25.0	2.6	15.4				
Green Ext Time (p_c), s	0.0	22.3		0.1	0.1	17.4	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	10.4											
HCM 6th LOS	B											

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Existing PM
09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	0	39	0	6	1424	70	37	1096	6
Future Volume (vph)	5	0	39	0	6	1424	70	37	1096	6
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		6.6		6.6	99.8	96.4	96.4	103.8	103.5	103.5
Actuated g/C Ratio		0.06		0.06	0.83	0.80	0.80	0.86	0.86	0.86
v/c Ratio		0.07		0.41	0.02	0.57	0.06	0.15	0.41	0.01
Control Delay		0.8		17.3	1.0	3.7	0.3	3.0	3.6	0.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.8		17.3	1.0	3.7	0.3	3.0	3.6	0.0
LOS		A		B	A	A	A	A	A	A
Approach Delay		0.8		17.3		3.5		3.5		
Approach LOS		A		B		A		A		

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 3.8

Intersection LOS: A

Intersection Capacity Utilization 53.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd



HCM 6th Signalized Intersection Summary

3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Existing PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	39	0	17	6	1424	70	37	1096	6
Future Volume (veh/h)	5	0	5	39	0	17	6	1424	70	37	1096	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	5	0	0	42	0	0	7	1548	0	40	1191	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	126	0		117	0		433	2704		311	2779	
Arrive On Green	0.04	0.00	0.00	0.04	0.00	0.00	0.01	0.79	0.00	0.06	1.00	0.00
Sat Flow, veh/h	1681	0	0	1442	0	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	5	0	0	42	0	0	7	1548	0	40	1191	0
Grp Sat Flow(s),veh/h/ln	1681	0	0	1442	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	0.1	20.7	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	3.4	0.0	0.0	0.1	20.7	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	0		117	0		433	2704		311	2779	
V/C Ratio(X)	0.04	0.00		0.36	0.00		0.02	0.57		0.13	0.43	
Avail Cap(c_a), veh/h	567	0		557	0		553	2704		394	2779	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.5	0.0	0.0	57.0	0.0	0.0	2.4	4.7	0.0	3.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.8	0.0	0.0	0.0	0.9	0.0	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.3	0.0	0.0	0.0	5.1	0.0	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.0	0.0	58.8	0.0	0.0	2.4	5.6	0.0	4.0	0.5	0.0
LnGrp LOS	E	A		E	A		A	A		A	A	
Approach Vol, veh/h	5		A	42		A	1555		A	1231		A
Approach Delay, s/veh	55.6			58.8			5.6			0.6		
Approach LOS	E			E			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	100.6		10.2	6.5	103.2		10.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.5	22.7		2.3	2.1	2.0		5.4				
Green Ext Time (p_c), s	0.0	21.8		0.0	0.0	22.3		0.2				

Intersection Summary

HCM 6th Ctrl Delay 4.3
HCM 6th LOS A

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Existing PM

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	377	7	9	16	5	8	1091	22	13	747	601
Future Volume (vph)	377	7	9	16	5	8	1091	22	13	747	601
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	15.0	56.0	56.0	15.0	56.0	56.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	12.5%	46.7%	46.7%	12.5%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		39.2	39.2		39.2	67.5	65.0	65.0	68.8	67.4	67.4
Actuated g/C Ratio		0.33	0.33		0.33	0.56	0.54	0.54	0.57	0.56	0.56
v/c Ratio		0.91	0.02		0.06	0.02	0.61	0.03	0.06	0.40	0.55
Control Delay		64.4	0.0		21.0	12.6	22.6	0.0	17.9	20.5	7.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		64.4	0.0		21.0	12.6	22.6	0.0	17.9	20.5	7.8
LOS		E	A		C	B	C	A	B	C	A
Approach Delay		62.9			21.0		22.1			14.9	
Approach LOS		E			C		C			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 24.2

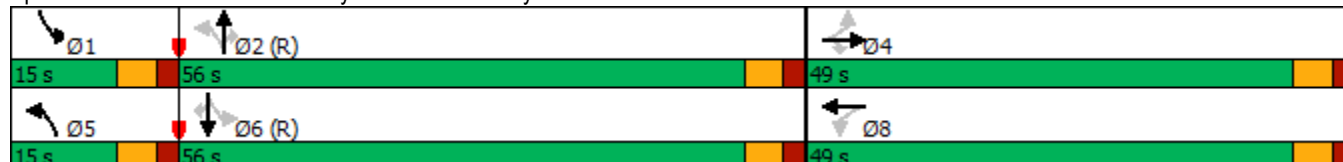
Intersection LOS: C

Intersection Capacity Utilization 67.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd



HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

Existing PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	377	7	9	16	5	7	8	1091	22	13	747	601
Future Volume (veh/h)	377	7	9	16	5	7	8	1091	22	13	747	601
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	385	7	0	16	5	7	8	1113	22	13	762	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	475	8		338	108	133	449	1878	837	243	1894	
Arrive On Green	0.30	0.30	0.00	0.30	0.30	0.30	0.01	0.55	0.55	0.03	1.00	0.00
Sat Flow, veh/h	1397	25	1585	978	362	446	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	392	0	0	28	0	0	8	1113	22	13	762	0
Grp Sat Flow(s),veh/h/ln	1423	0	1585	1786	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	30.7	0.0	0.0	0.0	0.0	0.0	0.2	26.1	0.8	0.4	0.0	0.0
Cycle Q Clear(g_c), s	32.0	0.0	0.0	1.3	0.0	0.0	0.2	26.1	0.8	0.4	0.0	0.0
Prop In Lane	0.98		1.00	0.57		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	0		579	0	0	449	1878	837	243	1894	
V/C Ratio(X)	0.81	0.00		0.05	0.00	0.00	0.02	0.59	0.03	0.05	0.40	
Avail Cap(c_a), veh/h	574	0		677	0	0	568	1878	837	354	1894	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.7	0.0	0.0	30.1	0.0	0.0	11.7	18.0	12.3	14.2	0.0	0.0
Incr Delay (d2), s/veh	7.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	0.0	0.6	0.0	0.0	0.1	9.8	0.3	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	0.0	0.0	30.1	0.0	0.0	11.7	19.4	12.4	14.2	0.6	0.0
LnGrp LOS	D	A		C	A	A	B	B	B	B	A	
Approach Vol, veh/h	392		A		28		1143				775 A	
Approach Delay, s/veh	48.1				30.1		19.2				0.9	
Approach LOS	D				C		B				A	
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	7.3	71.5	41.2		6.7	72.1	41.2					
Change Period (Y+Rc), s	5.5	5.5	5.5		5.5	5.5	5.5					
Max Green Setting (Gmax), s	9.5	50.5	43.5		9.5	50.5	43.5					
Max Q Clear Time (g_c+I1), s	2.4	28.1	34.0		2.2	2.0	3.3					
Green Ext Time (p_c), s	0.0	13.3	1.7		0.0	11.7	0.1					

Intersection Summary

HCM 6th Ctrl Delay 18.1
HCM 6th LOS B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings 5: Bells Ferry Rd & SR 92

Existing PM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	416	1107	217	189	1384	194	325	930	144	186	468	97
Future Volume (vph)	416	1107	217	189	1384	194	325	930	144	186	468	97
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	47.5	47.5	20.0	48.5	48.5	15.0	47.5	47.5	15.0	49.5	49.5
Total Split (s)	34.0	75.5	75.5	29.0	70.5	70.5	26.0	58.5	58.5	17.0	49.5	49.5
Total Split (%)	18.9%	41.9%	41.9%	16.1%	39.2%	39.2%	14.4%	32.5%	32.5%	9.4%	27.5%	27.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effect Green (s)	28.0	76.4	76.4	17.1	65.5	65.5	20.5	53.1	53.1	55.4	44.0	44.0
Actuated g/C Ratio	0.16	0.42	0.42	0.10	0.36	0.36	0.11	0.30	0.30	0.31	0.24	0.24
v/c Ratio	0.93	0.88	0.34	0.69	1.28	0.35	0.99	1.06	0.32	0.75	0.65	0.24
Control Delay	114.4	47.9	10.2	90.4	178.0	21.0	122.2	105.4	23.0	57.1	65.2	8.5
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	114.4	47.9	10.2	90.4	178.0	21.0	122.2	105.4	23.0	57.1	65.2	8.5
LOS	F	D	B	F	F	C	F	F	C	E	E	A
Approach Delay		59.1			151.4			100.8			55.9	
Approach LOS		E			F			F			E	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.28

Intersection Signal Delay: 97.8

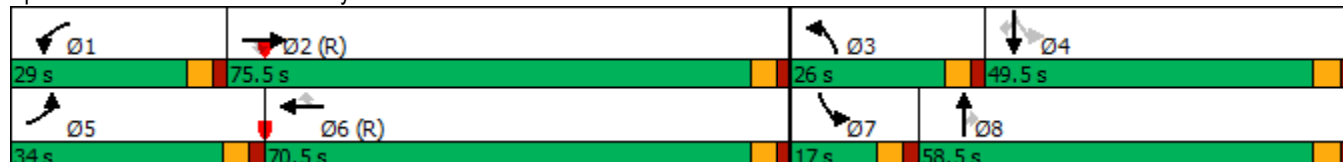
Intersection LOS: F

Intersection Capacity Utilization 99.5%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary 5: Bells Ferry Rd & SR 92

Existing PM
09/20/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	416	1107	217	189	1384	194	325	930	144	186	468	97	
Future Volume (veh/h)	416	1107	217	189	1384	194	325	930	144	186	468	97	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	
Adj Flow Rate, veh/h	473	1258	247	215	1573	220	369	1057	0	211	532	0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7	
Cap, veh/h	508	1524	680	258	1266	565	378	1005		276	818		
Arrive On Green	0.15	0.45	0.45	0.08	0.37	0.37	0.11	0.29	0.00	0.06	0.24	0.00	
Sat Flow, veh/h	3319	3413	1522	3319	3413	1522	3319	3413	1522	3319	3413	1522	
Grp Volume(v), veh/h	473	1258	247	215	1573	220	369	1057	0	211	532	0	
Grp Sat Flow(s),veh/h/ln	1659	1706	1522	1659	1706	1522	1659	1706	1522	1659	1706	1522	
Q Serve(g_s), s	25.3	58.1	19.3	11.5	66.8	19.1	20.0	53.0	0.0	8.6	25.3	0.0	
Cycle Q Clear(g_c), s	25.3	58.1	19.3	11.5	66.8	19.1	20.0	53.0	0.0	8.6	25.3	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	508	1524	680	258	1266	565	378	1005		276	818		
V/C Ratio(X)	0.93	0.83	0.36	0.83	1.24	0.39	0.98	1.05		0.76	0.65		
Avail Cap(c_a), veh/h	525	1524	680	433	1266	565	378	1005		292	834		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	75.3	43.6	32.9	81.9	56.6	41.6	79.5	63.5	0.0	52.4	61.6	0.0	
Incr Delay (d2), s/veh	19.6	4.2	1.2	7.0	115.8	2.0	39.9	43.0	0.0	10.8	1.7	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	12.1	24.9	7.3	5.1	48.5	7.5	10.5	28.6	0.0	4.0	11.1	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	94.9	47.9	34.1	88.9	172.4	43.6	119.4	106.5	0.0	63.3	63.4	0.0	
LnGrp LOS	F	D	C	F	F	D	F	F		E	E		
Approach Vol, veh/h	1978			2008			1426			A	743		A
Approach Delay, s/veh	57.4			149.3			109.9				63.4		
Approach LOS	E			F			F				E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.5	85.9	26.0	48.6	33.1	72.3	16.1	58.5					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	23.5	70.0	20.5	44.0	28.5	65.0	11.5	53.0					
Max Q Clear Time (g_c+I1), s	13.5	60.1	22.0	27.3	27.3	68.8	10.6	55.0					
Green Ext Time (p_c), s	0.5	8.2	0.0	2.9	0.2	0.0	0.1	0.0					

Intersection Summary

HCM 6th Ctrl Delay	100.3
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Robin Rd Ext/Robin Rd & SR 92

Existing PM
09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	263	1199	65	92	1676	49	57	12	94	16	405
Future Volume (vph)	263	1199	65	92	1676	49	57	12	94	16	405
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2		1	6		3	8	7	4	5
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	5.0
Minimum Split (s)	15.0	29.5	29.5	15.0	33.5	33.5	15.0	47.5	15.0	44.5	15.0
Total Split (s)	30.0	93.5	93.5	24.0	87.5	87.5	15.0	47.5	15.0	47.5	30.0
Total Split (%)	16.7%	51.9%	51.9%	13.3%	48.6%	48.6%	8.3%	26.4%	8.3%	26.4%	16.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effect Green (s)	49.7	127.0	127.0	16.1	93.4	93.4	17.2	7.8	14.9	7.8	58.3
Actuated g/C Ratio	0.28	0.71	0.71	0.09	0.52	0.52	0.10	0.04	0.08	0.04	0.32
v/c Ratio	0.62	0.55	0.07	0.67	1.05	0.06	0.44	0.44	0.77	0.23	0.79
Control Delay	64.7	15.1	1.6	53.0	64.6	1.2	81.1	47.4	110.4	88.7	56.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	15.1	1.6	53.0	64.6	1.2	81.1	47.4	110.4	88.7	56.3
LOS	E	B	A	D	E	A	F	D	F	F	E
Approach Delay		23.1			62.3			67.1		67.2	
Approach LOS		C			E			E		E	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 47.9

Intersection LOS: D

Intersection Capacity Utilization 89.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92



HCM 6th Signalized Intersection Summary 6: Robin Rd Ext/Robin Rd & SR 92

Existing PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	1199	65	92	1676	49	57	12	29	94	16	405
Future Volume (veh/h)	263	1199	65	92	1676	49	57	12	29	94	16	405
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	289	1318	0	101	1842	54	63	13	32	103	18	445
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	233	1838		118	1609	718	308	104	256	400	436	586
Arrive On Green	0.14	0.54	0.00	0.14	0.94	0.94	0.04	0.22	0.22	0.05	0.23	0.23
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	1781	479	1179	1781	1870	1585
Grp Volume(v), veh/h	289	1318	0	101	1842	54	63	0	45	103	18	445
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1781	0	1658	1781	1870	1585
Q Serve(g_s), s	24.5	52.3	0.0	10.4	84.9	0.4	4.9	0.0	3.9	8.1	1.3	42.0
Cycle Q Clear(g_c), s	24.5	52.3	0.0	10.4	84.9	0.4	4.9	0.0	3.9	8.1	1.3	42.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	233	1838		118	1609	718	308	0	361	400	436	586
V/C Ratio(X)	1.24	0.72		0.86	1.14	0.08	0.20	0.00	0.12	0.26	0.04	0.76
Avail Cap(c_a), veh/h	233	1838		176	1609	718	336	0	387	400	436	586
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.7	31.2	0.0	76.7	5.1	2.7	51.9	0.0	56.6	50.9	53.4	49.8
Incr Delay (d2), s/veh	139.5	2.4	0.0	2.6	66.0	0.0	0.3	0.0	0.2	0.3	0.0	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	21.6	0.0	4.3	16.8	0.1	2.3	0.0	1.7	3.7	0.6	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	217.2	33.6	0.0	79.4	71.1	2.7	52.2	0.0	56.8	51.3	53.5	55.5
LnGrp LOS	F	C		E	F	A	D	A	E	D	D	E
Approach Vol, veh/h	1607		A		1997		108				566	
Approach Delay, s/veh	66.7				69.7		54.1				54.7	
Approach LOS	E		E		D						D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	102.4	12.1	47.5	30.0	90.4	15.0	44.6				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	18.5	88.0	9.5	42.0	24.5	82.0	9.5	42.0				
Max Q Clear Time (g_c+I1), s	12.4	54.3	6.9	44.0	26.5	86.9	10.1	5.9				
Green Ext Time (p_c), s	0.1	20.6	0.0	0.0	0.0	0.0	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Future “No-Build” Intersection Analysis

Timings
1: Bells Ferry Rd & Eagle Dr

No Build AM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	59	81	354	35	185	90	264	388	494	941	15
Future Volume (vph)	24	59	81	354	35	185	90	264	388	494	941	15
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	17.0	60.5	60.5	15.0	43.5	43.5	16.0	44.5	44.5
Total Split (%)	36.3%	36.3%	36.3%	14.2%	50.4%	50.4%	12.5%	36.3%	36.3%	13.3%	37.1%	37.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	9.4	9.4	9.4	11.5	26.4	26.4	49.0	40.6	40.6	82.6	68.7	68.7
Actuated g/C Ratio	0.08	0.08	0.08	0.10	0.22	0.22	0.41	0.34	0.34	0.69	0.57	0.57
v/c Ratio	0.24	0.42	0.36	1.14	0.09	0.39	0.33	0.24	0.52	0.61	0.51	0.02
Control Delay	56.0	60.8	7.3	140.6	36.7	7.4	18.0	21.4	9.2	12.3	17.4	0.1
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	56.0	60.8	7.3	140.6	36.7	7.4	18.0	21.4	9.2	12.3	17.4	0.1
LOS	E	E	A	F	D	A	B	C	A	B	B	A
Approach Delay		33.7			91.3			14.6			15.5	
Approach LOS		C			F			B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 68 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 31.2

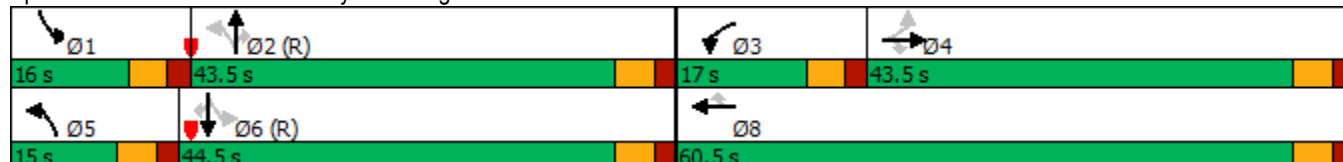
Intersection LOS: C

Intersection Capacity Utilization 70.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

1: Bells Ferry Rd & Eagle Dr

No Build AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	59	81	354	35	185	90	264	388	494	941	15
Future Volume (veh/h)	24	59	81	354	35	185	90	264	388	494	941	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	25	62	0	373	37	0	95	278	408	520	991	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	130	96		331	361		385	1987	886	605	2149	959
Arrive On Green	0.05	0.05	0.00	0.10	0.19	0.00	0.04	0.58	0.58	0.09	0.63	0.63
Sat Flow, veh/h	1371	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	25	62	0	373	37	0	95	278	408	520	991	16
Grp Sat Flow(s),veh/h/ln	1371	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	2.1	3.9	0.0	11.5	2.0	0.0	2.7	4.4	18.4	10.5	18.2	0.5
Cycle Q Clear(g_c), s	2.1	3.9	0.0	11.5	2.0	0.0	2.7	4.4	18.4	10.5	18.2	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	96		331	361		385	1987	886	605	2149	959
V/C Ratio(X)	0.19	0.65		1.13	0.10		0.25	0.14	0.46	0.86	0.46	0.02
Avail Cap(c_a), veh/h	494	592		331	857		452	1987	886	605	2149	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	55.9	0.0	54.3	39.9	0.0	9.9	11.4	14.3	13.3	11.6	8.3
Incr Delay (d2), s/veh	0.7	7.1	0.0	88.1	0.1	0.0	0.3	0.1	1.7	11.9	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.0	0.0	9.0	0.9	0.0	0.9	1.6	6.3	5.7	6.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	63.0	0.0	142.4	40.0	0.0	10.2	11.6	16.0	25.2	12.3	8.3
LnGrp LOS	E	E		F	D		B	B	B	C	B	A
Approach Vol, veh/h		87	A		410	A		781			1527	
Approach Delay, s/veh		60.9			133.1			13.7			16.6	
Approach LOS		E			F			B			B	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	75.4	17.0	11.6	10.3	81.1		28.6				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	10.5	38.0	11.5	38.0	9.5	39.0		55.0				
Max Q Clear Time (g_c+I1), s	12.5	20.4	13.5	5.9	4.7	20.2		4.0				
Green Ext Time (p_c), s	0.0	5.8	0.0	0.3	0.1	10.6		0.2				

Intersection Summary

HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

No Build AM

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	105	23	195	152	8	69	601	197	36	1149	33
Future Volume (vph)	105	23	195	152	8	69	601	197	36	1149	33
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	44.0	44.0	29.0	29.0	15.0	61.0	61.0	15.0	61.0	61.0
Total Split (%)	12.5%	36.7%	36.7%	24.2%	24.2%	12.5%	50.8%	50.8%	12.5%	50.8%	50.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	34.4	34.4	34.4		19.7	72.1	67.0	67.0	69.3	63.8	63.8
Actuated g/C Ratio	0.29	0.29	0.29		0.16	0.60	0.56	0.56	0.58	0.53	0.53
v/c Ratio	0.25	0.05	0.35		0.80	0.32	0.34	0.22	0.09	0.68	0.04
Control Delay	32.9	29.1	7.6		73.0	13.9	9.9	2.2	10.3	20.8	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	29.1	7.6		73.0	13.9	9.9	2.2	10.3	20.8	0.6
LOS	C	C	A		E	B	A	A	B	C	A
Approach Delay		17.4			73.0		8.4			19.9	
Approach LOS		B			E		A			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.2

Intersection LOS: B

Intersection Capacity Utilization 66.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



HCM 6th Signalized Intersection Summary

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

No Build AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	23	195	152	8	6	69	601	197	36	1149	33
Future Volume (veh/h)	105	23	195	152	8	6	69	601	197	36	1149	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	112	24	207	162	9	6	73	639	210	38	1222	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	484	520	440	238	10	7	250	1893	844	452	1866	832
Arrive On Green	0.07	0.28	0.28	0.17	0.17	0.17	0.08	1.00	1.00	0.03	0.55	0.55
Sat Flow, veh/h	1781	1870	1585	1083	60	40	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	112	24	207	177	0	0	73	639	210	38	1222	35
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1184	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	6.0	1.1	13.0	17.6	0.0	0.0	2.2	0.0	0.0	1.2	30.3	1.3
Cycle Q Clear(g_c), s	6.0	1.1	13.0	17.6	0.0	0.0	2.2	0.0	0.0	1.2	30.3	1.3
Prop In Lane	1.00		1.00	0.92		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	484	520	440	254	0	0	250	1893	844	452	1866	832
V/C Ratio(X)	0.23	0.05	0.47	0.70	0.00	0.00	0.29	0.34	0.25	0.08	0.65	0.04
Avail Cap(c_a), veh/h	508	600	509	289	0	0	320	1893	844	536	1866	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	31.7	36.0	49.0	0.0	0.0	14.8	0.0	0.0	11.0	19.2	12.6
Incr Delay (d2), s/veh	0.2	0.0	0.8	6.1	0.0	0.0	0.6	0.5	0.7	0.1	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.5	5.2	5.7	0.0	0.0	0.8	0.1	0.2	0.4	11.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	31.7	36.8	55.1	0.0	0.0	15.4	0.5	0.7	11.1	21.0	12.7
LnGrp LOS	D	C	D	E	A	A	B	A	A	B	C	B
Approach Vol, veh/h	343			177			922			1295		
Approach Delay, s/veh	36.3			55.1			1.7			20.5		
Approach LOS	D			E			A			C		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	72.1		38.8	10.1	71.1	13.4	25.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	55.5		38.5	9.5	55.5	9.5	23.5				
Max Q Clear Time (g_c+I1), s	3.2	2.0		15.0	4.2	32.3	8.0	19.6				
Green Ext Time (p_c), s	0.0	12.0		0.8	0.1	15.0	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	18.4											
HCM 6th LOS	B											

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

No Build AM
09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	21	4	67	1	47	769	33	30	1612	12
Future Volume (vph)	21	4	67	1	47	769	33	30	1612	12
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		13.6		13.6	92.3	88.3	88.3	90.7	85.7	85.7
Actuated g/C Ratio		0.11		0.11	0.77	0.74	0.74	0.76	0.71	0.71
v/c Ratio		0.54		1.01	0.28	0.34	0.03	0.07	0.74	0.01
Control Delay		19.0		128.8	9.1	4.3	0.1	4.8	13.2	0.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.0		128.8	9.1	4.3	0.1	4.8	13.2	0.0
LOS		B		F	A	A	A	A	B	A
Approach Delay		19.0		128.8		4.4			13.0	
Approach LOS		B		F		A			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 105 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 14.9
Intersection Capacity Utilization 72.7%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service C

Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

			
Ø1	Ø2 (R)	Ø4	
15 s	57.5 s	47.5 s	
			
Ø5	Ø6 (R)	Ø8	
15 s	57.5 s	47.5 s	

HCM 6th Signalized Intersection Summary

3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

No Build AM
09/20/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↕	↗	↗	↕	↗
Traffic Volume (veh/h)	21	4	118	67	1	33	47	769	33	30	1612	12
Future Volume (veh/h)	21	4	118	67	1	33	47	769	33	30	1612	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	23	4	0	74	1	0	52	854	0	33	1791	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	147	21		157	1		312	2623		537	2601	
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.00	0.03	0.77	0.00	0.06	1.00	0.00
Sat Flow, veh/h	1387	323	0	1475	20	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	27	0	0	75	0	0	52	854	0	33	1791	0
Grp Sat Flow(s),veh/h/ln	1710	0	0	1495	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.8	9.3	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	5.8	0.0	0.0	0.8	9.3	0.0	0.5	0.0	0.0
Prop In Lane	0.85		0.00	0.99		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	0		158	0		312	2623		537	2601	
V/C Ratio(X)	0.16	0.00		0.47	0.00		0.17	0.33		0.06	0.69	
Avail Cap(c_a), veh/h	586	0		561	0		389	2623		625	2601	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	53.1	0.0	0.0	54.9	0.0	0.0	2.6	4.3	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.2	0.0	0.0	0.2	0.3	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	2.3	0.0	0.0	0.2	2.5	0.0	0.1	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	0.0	0.0	57.1	0.0	0.0	2.8	4.6	0.0	3.0	1.5	0.0
LnGrp LOS	D	A		E	A		A	A		A	A	
Approach Vol, veh/h		27	A		75	A		906	A		1824	A
Approach Delay, s/veh		53.6			57.1			4.5			1.5	
Approach LOS		D			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	97.7		13.4	9.6	97.0		13.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.5	11.3		3.7	2.8	2.0		7.8				
Green Ext Time (p_c), s	0.0	13.0		0.1	0.0	37.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			4.5									
HCM 6th LOS			A									
Notes												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

No Build AM

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	372	4	10	24	10	5	577	4	3	1502	660
Future Volume (vph)	372	4	10	24	10	5	577	4	3	1502	660
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	43.5	43.5	43.5	43.5	43.5	15.0	61.5	61.5	15.0	61.5	61.5
Total Split (%)	36.3%	36.3%	36.3%	36.3%	36.3%	12.5%	51.3%	51.3%	12.5%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		38.0	38.0		38.0	69.9	68.7	68.7	69.9	68.7	68.7
Actuated g/C Ratio		0.32	0.32		0.32	0.58	0.57	0.57	0.58	0.57	0.57
v/c Ratio		0.98	0.02		0.13	0.04	0.32	0.00	0.01	0.83	0.67
Control Delay		80.7	0.1		25.3	10.6	14.5	0.0	6.0	16.2	4.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		80.7	0.1		25.3	10.6	14.5	0.0	6.0	16.2	4.5
LOS		F	A		C	B	B	A	A	B	A
Approach Delay		78.5			25.3		14.4			12.6	
Approach LOS		E			C		B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 21.1

Intersection LOS: C

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd



HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

No Build AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	4	10	24	10	9	5	577	4	3	1502	660
Future Volume (veh/h)	372	4	10	24	10	9	5	577	4	3	1502	660
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	396	4	0	26	11	10	5	614	4	3	1598	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	478	4		329	139	114	242	1913	853	426	1905	
Arrive On Green	0.30	0.30	0.00	0.30	0.30	0.30	0.01	0.56	0.56	0.01	1.00	0.00
Sat Flow, veh/h	1405	14	1585	949	466	382	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	400	0	0	47	0	0	5	614	4	3	1598	0
Grp Sat Flow(s),veh/h/ln	1419	0	1585	1797	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	30.8	0.0	0.0	0.0	0.0	0.0	0.2	11.6	0.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	33.0	0.0	0.0	2.3	0.0	0.0	0.2	11.6	0.1	0.1	0.0	0.0
Prop In Lane	0.99		1.00	0.55		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	482	0		582	0	0	242	1913	853	426	1905	
V/C Ratio(X)	0.83	0.00		0.08	0.00	0.00	0.02	0.32	0.00	0.01	0.84	
Avail Cap(c_a), veh/h	509	0		611	0	0	366	1913	853	554	1905	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.9	0.0	0.0	30.4	0.0	0.0	11.4	14.1	11.6	12.0	0.0	0.0
Incr Delay (d2), s/veh	10.6	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	0.0	0.0	1.0	0.0	0.0	0.1	4.3	0.0	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	0.0	30.4	0.0	0.0	11.4	14.6	11.6	12.0	4.6	0.0
LnGrp LOS	D	A		C	A	A	B	B	B	B	A	
Approach Vol, veh/h	400			A			47			623		
Approach Delay, s/veh	51.5			30.4			14.5			4.6		
Approach LOS	D			C			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	72.8		41.2	6.3	72.5		41.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	56.0		38.0	9.5	56.0		38.0				
Max Q Clear Time (g_c+I1), s	2.1	13.6		35.0	2.2	2.0		4.3				
Green Ext Time (p_c), s	0.0	8.7		0.7	0.0	34.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay 14.4
HCM 6th LOS B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings 5: Bells Ferry Rd & SR 92

No Build AM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	1847	336	116	594	105	120	265	91	334	852	42
Future Volume (vph)	219	1847	336	116	594	105	120	265	91	334	852	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	9.5	9.5	5.0	9.5	9.5	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	31.0	101.0	101.0	17.0	87.0	87.0	15.0	29.0	29.0	33.0	47.0	47.0
Total Split (%)	17.2%	56.1%	56.1%	9.4%	48.3%	48.3%	8.3%	16.1%	16.1%	18.3%	26.1%	26.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effect Green (s)	18.1	96.2	96.2	10.8	88.9	88.9	9.4	26.9	26.9	24.1	41.6	41.6
Actuated g/C Ratio	0.10	0.53	0.53	0.06	0.49	0.49	0.05	0.15	0.15	0.13	0.23	0.23
v/c Ratio	0.71	1.09	0.40	0.63	0.38	0.14	0.75	0.56	0.28	0.81	1.16	0.10
Control Delay	90.3	89.5	13.8	97.1	29.6	1.5	109.3	76.6	2.6	90.6	145.5	0.5
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	90.3	89.5	13.8	97.1	29.6	1.5	109.3	76.6	2.6	90.6	145.5	0.5
LOS	F	F	B	F	C	A	F	E	A	F	F	A
Approach Delay		79.0			35.6			70.7			125.6	
Approach LOS		E			D			E			F	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 82.6

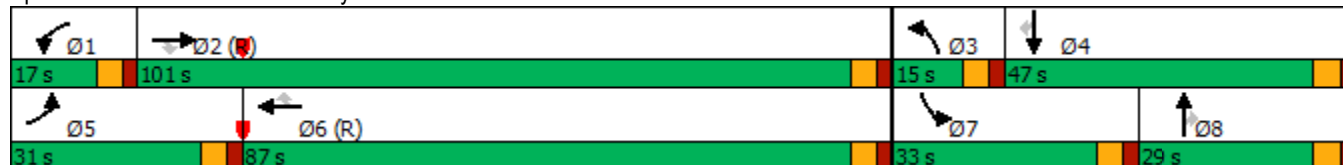
Intersection LOS: F

Intersection Capacity Utilization 101.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary

5: Bells Ferry Rd & SR 92

No Build AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1847	336	116	594	105	120	265	91	334	852	42
Future Volume (veh/h)	219	1847	336	116	594	105	120	265	91	334	852	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	233	1965	357	123	632	112	128	282	0	355	906	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	277	1877	837	160	1756	783	164	545		399	787	
Arrive On Green	0.08	0.55	0.55	0.05	0.51	0.51	0.05	0.16	0.00	0.12	0.23	0.00
Sat Flow, veh/h	3319	3413	1522	3319	3413	1522	3319	3413	1522	3319	3413	1522
Grp Volume(v), veh/h	233	1965	357	123	632	112	128	282	0	355	906	0
Grp Sat Flow(s),veh/h/ln	1659	1706	1522	1659	1706	1522	1659	1706	1522	1659	1706	1522
Q Serve(g_s), s	12.5	99.0	24.8	6.6	19.9	6.9	6.9	13.6	0.0	19.0	41.5	0.0
Cycle Q Clear(g_c), s	12.5	99.0	24.8	6.6	19.9	6.9	6.9	13.6	0.0	19.0	41.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1877	837	160	1756	783	164	545		399	787	
V/C Ratio(X)	0.84	1.05	0.43	0.77	0.36	0.14	0.78	0.52		0.89	1.15	
Avail Cap(c_a), veh/h	470	1877	837	212	1756	783	175	545		507	787	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	81.3	40.5	23.8	84.7	26.0	22.9	84.6	69.3	0.0	78.0	69.2	0.0
Incr Delay (d2), s/veh	5.0	31.5	1.1	11.6	0.6	0.4	19.1	0.9	0.0	14.8	82.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	47.7	9.1	3.1	8.2	2.6	3.4	6.0	0.0	8.9	26.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	72.0	25.0	96.3	26.6	23.3	103.8	70.2	0.0	92.8	151.8	0.0
LnGrp LOS	F	F	C	F	C	C	F	E		F	F	
Approach Vol, veh/h	2555				867				410			
Approach Delay, s/veh	66.8				36.1				80.6			
Approach LOS	E				D				F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	104.5	14.4	47.0	20.5	98.1	27.2	34.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	11.5	95.5	9.5	41.5	25.5	81.5	27.5	23.5				
Max Q Clear Time (g_c+I1), s	8.6	101.0	8.9	43.5	14.5	21.9	21.0	15.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.5	10.7	0.7	0.9				

Intersection Summary

HCM 6th Ctrl Delay	79.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Robin Rd Ext/Robin Rd & SR 92

No Build AM
09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	328	1555	67	40	809	12	23	10	57	17	458
Future Volume (vph)	328	1555	67	40	809	12	23	10	57	17	458
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	29.5	29.5	15.0	33.5	33.5	15.0	47.5	15.0	44.5	44.5
Total Split (s)	46.0	117.5	117.5	15.0	86.5	86.5	15.0	47.5	15.0	47.5	47.5
Total Split (%)	23.6%	60.3%	60.3%	7.7%	44.4%	44.4%	7.7%	24.4%	7.7%	24.4%	24.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	46.6	143.7	143.7	10.2	104.9	104.9	22.3	17.0	24.1	18.4	18.4
Actuated g/C Ratio	0.24	0.74	0.74	0.05	0.54	0.54	0.11	0.09	0.12	0.09	0.09
v/c Ratio	0.85	0.65	0.06	0.48	0.46	0.02	0.14	0.09	0.35	0.10	0.90
Control Delay	89.7	19.1	2.6	106.6	32.0	0.0	66.4	56.0	74.9	75.5	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.7	19.1	2.6	106.6	32.0	0.0	66.4	56.0	74.9	75.5	31.7
LOS	F	B	A	F	C	A	E	E	E	E	C
Approach Delay		30.4			35.0			62.4		37.7	
Approach LOS		C			C			E		D	

Intersection Summary

Cycle Length: 195

Actuated Cycle Length: 195

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 33.1

Intersection LOS: C

Intersection Capacity Utilization 70.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92



HCM 6th Signalized Intersection Summary

6: Robin Rd Ext/Robin Rd & SR 92

No Build AM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	1555	67	40	809	12	23	10	5	57	17	458
Future Volume (veh/h)	328	1555	67	40	809	12	23	10	5	57	17	458
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	1620	0	42	843	12	24	10	5	59	18	477
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	355	2123		53	1520	678	250	234	117	368	403	341
Arrive On Green	0.21	0.62	0.00	0.03	0.45	0.45	0.02	0.20	0.20	0.04	0.22	0.22
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	1781	1176	588	1781	1870	1585
Grp Volume(v), veh/h	342	1620	0	42	843	12	24	0	15	59	18	477
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1781	0	1764	1781	1870	1585
Q Serve(g_s), s	38.6	66.6	0.0	4.8	35.5	0.9	2.1	0.0	1.3	5.1	1.5	42.0
Cycle Q Clear(g_c), s	38.6	66.6	0.0	4.8	35.5	0.9	2.1	0.0	1.3	5.1	1.5	42.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	355	2123		53	1520	678	250	0	351	368	403	341
V/C Ratio(X)	0.96	0.76		0.79	0.55	0.02	0.10	0.00	0.04	0.16	0.04	1.40
Avail Cap(c_a), veh/h	355	2123		83	1520	678	303	0	380	392	403	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.5	26.5	0.0	93.8	39.8	30.2	60.5	0.0	63.1	59.2	60.6	76.5
Incr Delay (d2), s/veh	37.8	2.7	0.0	20.9	1.3	0.0	0.2	0.0	0.0	0.2	0.0	195.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	26.9	0.0	2.4	15.1	0.3	1.0	0.0	0.6	2.4	0.7	35.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.3	29.2	0.0	114.7	41.2	30.3	60.7	0.0	63.2	59.4	60.7	272.2
LnGrp LOS	F	C		F	D	C	E	A	E	E	E	F
Approach Vol, veh/h	1962		A	897				39			554	
Approach Delay, s/veh	44.0			44.5				61.6			242.6	
Approach LOS	D			D				E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	126.8	9.1	47.5	46.0	92.4	12.3	44.3				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	112.0	9.5	42.0	40.5	81.0	9.5	42.0				
Max Q Clear Time (g_c+I1), s	6.8	68.6	4.1	44.0	40.6	37.5	7.1	3.3				
Green Ext Time (p_c), s	0.0	30.6	0.0	0.0	0.0	13.2	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 76.2
HCM 6th LOS E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
1: Bells Ferry Rd & Eagle Dr

No Build PM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	117	147	384	136	351	208	693	408	425	537	25
Future Volume (vph)	43	117	147	384	136	351	208	693	408	425	537	25
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	16.0	59.5	59.5	22.0	43.5	43.5	17.0	38.5	38.5
Total Split (%)	36.3%	36.3%	36.3%	13.3%	49.6%	49.6%	18.3%	36.3%	36.3%	14.2%	32.1%	32.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	13.0	13.0	13.0	10.5	29.0	29.0	49.7	38.0	38.0	80.0	62.7	62.7
Actuated g/C Ratio	0.11	0.11	0.11	0.09	0.24	0.24	0.41	0.32	0.32	0.67	0.52	0.52
v/c Ratio	0.33	0.59	0.49	1.31	0.31	0.57	0.51	0.66	0.61	0.68	0.31	0.03
Control Delay	54.5	62.2	13.0	202.9	38.4	9.6	17.8	24.5	9.8	22.8	18.0	0.1
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	54.5	62.2	13.0	202.9	38.4	9.6	17.8	24.5	9.8	22.8	18.0	0.1
LOS	D	E	B	F	D	A	B	C	A	C	B	A
Approach Delay		37.6			99.3			18.9			19.6	
Approach LOS		D			F			B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.31

Intersection Signal Delay: 40.9

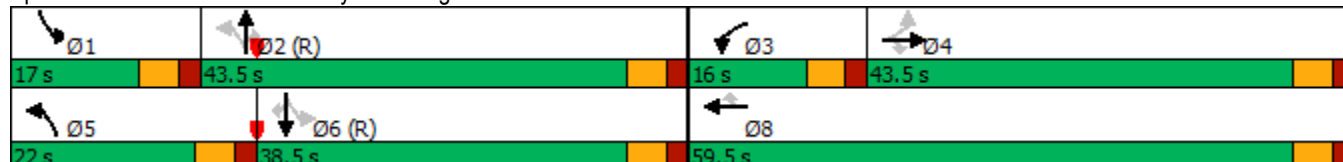
Intersection LOS: D

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

1: Bells Ferry Rd & Eagle Dr

No Build PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	117	147	384	136	351	208	693	408	425	537	25
Future Volume (veh/h)	43	117	147	384	136	351	208	693	408	425	537	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	44	119	0	392	139	0	212	707	416	434	548	26
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	166	159		302	408		579	1872	835	431	1950	870
Arrive On Green	0.08	0.08	0.00	0.09	0.22	0.00	0.07	0.55	0.55	0.10	0.57	0.57
Sat Flow, veh/h	1250	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	44	119	0	392	139	0	212	707	416	434	548	26
Grp Sat Flow(s),veh/h/ln	1250	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	4.0	7.5	0.0	10.5	7.5	0.0	6.4	14.2	20.4	11.5	9.8	0.9
Cycle Q Clear(g_c), s	4.0	7.5	0.0	10.5	7.5	0.0	6.4	14.2	20.4	11.5	9.8	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	159		302	408		579	1872	835	431	1950	870
V/C Ratio(X)	0.27	0.75		1.30	0.34		0.37	0.38	0.50	1.01	0.28	0.03
Avail Cap(c_a), veh/h	456	592		302	842		689	1872	835	431	1950	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	53.7	0.0	54.8	39.6	0.0	10.1	15.4	16.8	20.4	13.1	11.2
Incr Delay (d2), s/veh	0.8	6.9	0.0	155.7	0.5	0.0	0.4	0.6	2.1	44.9	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.8	0.0	11.0	3.5	0.0	2.2	5.3	7.2	12.8	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	60.6	0.0	210.4	40.1	0.0	10.5	16.0	19.0	65.3	13.5	11.3
LnGrp LOS	D	E		F	D		B	B	B	F	B	B
Approach Vol, veh/h		163	A		531	A		1335			1008	
Approach Delay, s/veh		58.5			165.9			16.0			35.7	
Approach LOS		E			F			B			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	71.3	16.0	15.7	14.3	74.1		31.7				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	11.5	38.0	10.5	38.0	16.5	33.0		54.0				
Max Q Clear Time (g_c+I1), s	13.5	22.4	12.5	9.5	8.4	11.8		9.5				
Green Ext Time (p_c), s	0.0	9.2	0.0	0.7	0.3	6.2		0.7				

Intersection Summary

HCM 6th Ctrl Delay 51.1
HCM 6th LOS D

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

No Build PM

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	10	5	26	122	33	95	1104	134	55	1182	21
Future Volume (vph)	10	5	26	122	33	95	1104	134	55	1182	21
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	43.0	43.0	28.0	28.0	15.0	62.0	62.0	15.0	62.0	62.0
Total Split (%)	12.5%	35.8%	35.8%	23.3%	23.3%	12.5%	51.7%	51.7%	12.5%	51.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	21.6	21.6	21.6		19.0	83.5	77.2	77.2	81.4	74.5	74.5
Actuated g/C Ratio	0.18	0.18	0.18		0.16	0.70	0.64	0.64	0.68	0.62	0.62
v/c Ratio	0.04	0.01	0.08		0.76	0.35	0.52	0.14	0.19	0.58	0.02
Control Delay	35.0	33.8	0.5		67.6	10.4	10.9	3.1	9.8	19.5	0.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	33.8	0.5		67.6	10.4	10.9	3.1	9.8	19.5	0.6
LOS	C	C	A		E	B	B	A	A	B	A
Approach Delay		12.7			67.6		10.1			18.8	
Approach LOS		B			E		B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 17.5

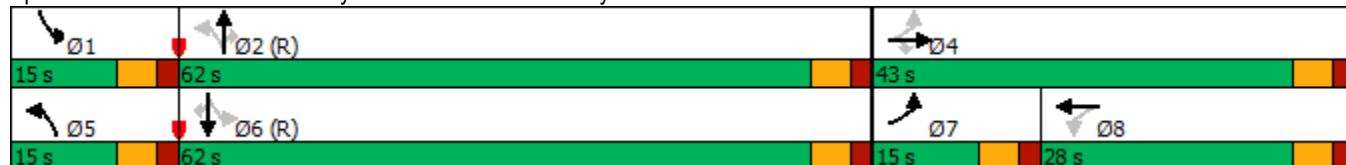
Intersection LOS: B

Intersection Capacity Utilization 67.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



HCM 6th Signalized Intersection Summary

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

No Build PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	26	122	33	15	95	1104	134	55	1182	21
Future Volume (veh/h)	10	5	26	122	33	15	95	1104	134	55	1182	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	10	5	27	126	34	15	98	1138	138	57	1219	22
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	289	364	309	197	39	17	310	2158	963	382	2142	955
Arrive On Green	0.01	0.19	0.19	0.14	0.14	0.14	0.08	1.00	1.00	0.04	0.63	0.63
Sat Flow, veh/h	1781	1870	1585	1058	285	126	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	10	5	27	175	0	0	98	1138	138	57	1219	22
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1469	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.6	0.3	1.7	14.0	0.0	0.0	2.5	0.0	0.0	1.4	24.8	0.7
Cycle Q Clear(g_c), s	0.6	0.3	1.7	14.0	0.0	0.0	2.5	0.0	0.0	1.4	24.8	0.7
Prop In Lane	1.00		1.00	0.72		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	364	309	253	0	0	310	2158	963	382	2142	955
V/C Ratio(X)	0.03	0.01	0.09	0.69	0.00	0.00	0.32	0.53	0.14	0.15	0.57	0.02
Avail Cap(c_a), veh/h	409	584	495	327	0	0	377	2158	963	457	2142	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	39.0	39.6	50.7	0.0	0.0	9.9	0.0	0.0	7.0	12.9	8.4
Incr Delay (d2), s/veh	0.0	0.0	0.1	4.2	0.0	0.0	0.6	0.9	0.3	0.2	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.7	5.5	0.0	0.0	0.8	0.3	0.1	0.5	8.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	39.0	39.7	54.9	0.0	0.0	10.5	0.9	0.3	7.2	14.0	8.5
LnGrp LOS	D	D	D	D	A	A	B	A	A	A	B	A
Approach Vol, veh/h	42				175				1374			
Approach Delay, s/veh	40.2				54.9				1.5			
Approach LOS	D				D				A			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	81.4		28.9	10.3	80.8	6.9	22.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	56.5		37.5	9.5	56.5	9.5	22.5				
Max Q Clear Time (g_c+I1), s	3.4	2.0		3.7	4.5	26.8	2.6	16.0				
Green Ext Time (p_c), s	0.0	23.7		0.1	0.1	17.6	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	10.8											
HCM 6th LOS	B											

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

No Build PM
09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	5	0	41	0	6	1482	73	39	1141	6
Future Volume (vph)	5	0	41	0	6	1482	73	39	1141	6
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		6.9		6.9	99.5	96.1	96.1	103.6	103.3	103.3
Actuated g/C Ratio		0.06		0.06	0.83	0.80	0.80	0.86	0.86	0.86
v/c Ratio		0.06		0.44	0.02	0.60	0.06	0.16	0.43	0.01
Control Delay		0.8		19.5	1.0	3.8	0.3	3.3	3.8	0.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.8		19.5	1.0	3.8	0.3	3.3	3.8	0.0
LOS		A		B	A	A	A	A	A	A
Approach Delay		0.8		19.5		3.6			3.8	
Approach LOS		A		B		A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 4.0

Intersection LOS: A

Intersection Capacity Utilization 55.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd



HCM 6th Signalized Intersection Summary

3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

No Build PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	5	41	0	18	6	1482	73	39	1141	6
Future Volume (veh/h)	5	0	5	41	0	18	6	1482	73	39	1141	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	5	0	0	45	0	0	7	1611	0	42	1240	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	0		118	0		416	2698		296	2776	
Arrive On Green	0.04	0.00	0.00	0.04	0.00	0.00	0.01	0.79	0.00	0.06	1.00	0.00
Sat Flow, veh/h	1693	0	0	1442	0	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	5	0	0	45	0	0	7	1611	0	42	1240	0
Grp Sat Flow(s),veh/h/ln	1693	0	0	1442	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.0	0.0	3.4	0.0	0.0	0.1	22.5	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	3.7	0.0	0.0	0.1	22.5	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	0		118	0		416	2698		296	2776	
V/C Ratio(X)	0.04	0.00		0.38	0.00		0.02	0.60		0.14	0.45	
Avail Cap(c_a), veh/h	567	0		557	0		536	2698		378	2776	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.4	0.0	0.0	57.0	0.0	0.0	2.4	5.0	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.0	0.0	5.6	0.0	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	0.0	0.0	59.0	0.0	0.0	2.4	6.0	0.0	4.5	0.5	0.0
LnGrp LOS	E	A		E	A		A	A		A	A	
Approach Vol, veh/h	5		A	45		A	1618		A	1282		A
Approach Delay, s/veh	55.5			59.0			6.0			0.7		
Approach LOS	E			E			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	100.4		10.4	6.5	103.1		10.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.5	24.5		2.3	2.1	2.0		5.7				
Green Ext Time (p_c), s	0.0	21.5		0.0	0.0	23.6		0.2				

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

No Build PM

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	392	7	9	17	5	8	1135	23	14	777	625
Future Volume (vph)	392	7	9	17	5	8	1135	23	14	777	625
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	15.0	56.0	56.0	15.0	56.0	56.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	12.5%	46.7%	46.7%	12.5%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)		40.1	40.1		40.1	66.5	64.1	64.1	67.9	66.5	66.5
Actuated g/C Ratio		0.33	0.33		0.33	0.55	0.53	0.53	0.57	0.55	0.55
v/c Ratio		0.92	0.02		0.06	0.02	0.64	0.03	0.07	0.42	0.57
Control Delay		65.8	0.0		21.0	12.8	23.9	0.0	18.6	21.3	8.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		65.8	0.0		21.0	12.8	23.9	0.0	18.6	21.3	8.0
LOS		E	A		C	B	C	A	B	C	A
Approach Delay		64.4			21.0		23.4			15.4	
Approach LOS		E			C		C			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 25.1

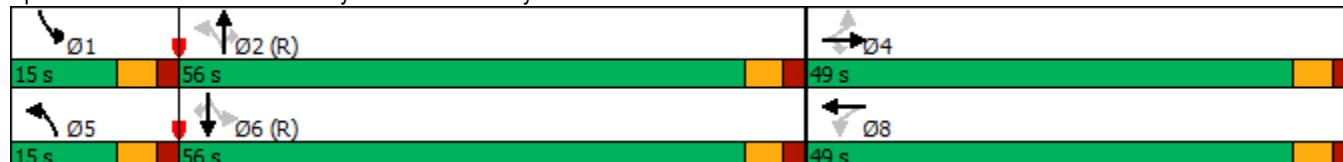
Intersection LOS: C

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd



HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

No Build PM
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (veh/h)	392	7	9	17	5	7	8	1135	23	14	777	625
Future Volume (veh/h)	392	7	9	17	5	7	8	1135	23	14	777	625
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	400	7	0	17	5	7	8	1158	23	14	793	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	489	8		357	107	133	431	1841	821	225	1861	
Arrive On Green	0.31	0.31	0.00	0.31	0.31	0.31	0.01	0.54	0.54	0.03	1.00	0.00
Sat Flow, veh/h	1398	24	1585	1007	348	431	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	407	0	0	29	0	0	8	1158	23	14	793	0
Grp Sat Flow(s),veh/h/ln	1422	0	1585	1786	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	31.9	0.0	0.0	0.0	0.0	0.0	0.3	28.4	0.8	0.4	0.0	0.0
Cycle Q Clear(g_c), s	33.3	0.0	0.0	1.4	0.0	0.0	0.3	28.4	0.8	0.4	0.0	0.0
Prop In Lane	0.98		1.00	0.59		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	0		597	0	0	431	1841	821	225	1861	
V/C Ratio(X)	0.82	0.00		0.05	0.00	0.00	0.02	0.63	0.03	0.06	0.43	
Avail Cap(c_a), veh/h	574	0		680	0	0	550	1841	821	333	1861	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.1	0.0	0.0	29.2	0.0	0.0	12.3	19.3	12.9	15.2	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.1	0.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	0.0	0.6	0.0	0.0	0.1	10.8	0.3	0.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	0.0	0.0	29.3	0.0	0.0	12.3	20.9	13.0	15.3	0.7	0.0
LnGrp LOS	D	A		C	A	A	B	C	B	B	A	
Approach Vol, veh/h		407	A		29			1189			807	A
Approach Delay, s/veh		48.2			29.3			20.7			1.0	
Approach LOS		D			C			C			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	70.2		42.4	6.7	70.9		42.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.5		43.5	9.5	50.5		43.5				
Max Q Clear Time (g_c+I1), s	2.4	30.4		35.3	2.3	2.0		3.4				
Green Ext Time (p_c), s	0.0	12.9		1.6	0.0	12.4		0.1				

Intersection Summary

HCM 6th Ctrl Delay 18.9
HCM 6th LOS B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
5: Bells Ferry Rd & SR 92

No Build PM
09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	433	1152	226	197	1440	202	338	968	150	194	487	101
Future Volume (vph)	433	1152	226	197	1440	202	338	968	150	194	487	101
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	47.5	47.5	20.0	48.5	48.5	15.0	47.5	47.5	15.0	49.5	49.5
Total Split (s)	34.0	75.5	75.5	29.0	70.5	70.5	26.0	58.5	58.5	17.0	49.5	49.5
Total Split (%)	18.9%	41.9%	41.9%	16.1%	39.2%	39.2%	14.4%	32.5%	32.5%	9.4%	27.5%	27.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
Act Effect Green (s)	28.4	75.9	75.9	17.6	65.1	65.1	20.5	53.0	53.0	55.5	44.0	44.0
Actuated g/C Ratio	0.16	0.42	0.42	0.10	0.36	0.36	0.11	0.29	0.29	0.31	0.24	0.24
v/c Ratio	0.95	0.92	0.36	0.70	1.34	0.37	1.03	1.11	0.33	0.77	0.67	0.25
Control Delay	117.6	51.6	10.9	90.4	202.4	22.2	130.0	119.2	24.1	59.8	66.2	9.3
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	117.6	51.6	10.9	90.4	202.4	22.2	130.0	119.2	24.1	59.8	66.2	9.3
LOS	F	D	B	F	F	C	F	F	C	E	E	A
Approach Delay		62.3			170.6			111.9			57.2	
Approach LOS		E			F			F			E	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.34

Intersection Signal Delay: 107.7

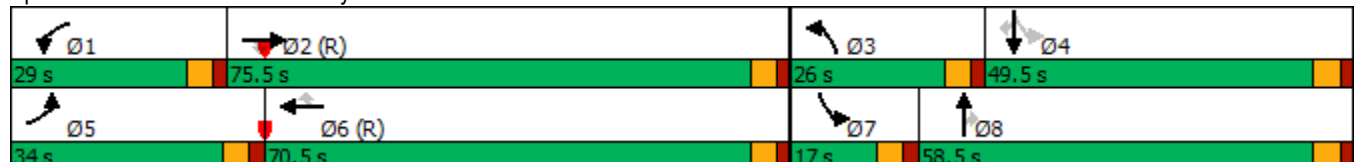
Intersection LOS: F

Intersection Capacity Utilization 102.8%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary

5: Bells Ferry Rd & SR 92

No Build PM
09/20/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	433	1152	226	197	1440	202	338	968	150	194	487	101	
Future Volume (veh/h)	433	1152	226	197	1440	202	338	968	150	194	487	101	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	
Adj Flow Rate, veh/h	492	1309	257	224	1636	230	384	1100	0	220	553	0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7	
Cap, veh/h	524	1509	673	267	1244	555	378	1005		282	824		
Arrive On Green	0.16	0.44	0.44	0.08	0.36	0.36	0.11	0.29	0.00	0.06	0.24	0.00	
Sat Flow, veh/h	3319	3413	1522	3319	3413	1522	3319	3413	1522	3319	3413	1522	
Grp Volume(v), veh/h	492	1309	257	224	1636	230	384	1100	0	220	553	0	
Grp Sat Flow(s),veh/h/ln	1659	1706	1522	1659	1706	1522	1659	1706	1522	1659	1706	1522	
Q Serve(g_s), s	26.4	62.5	20.4	12.0	65.6	20.4	20.5	53.0	0.0	8.9	26.4	0.0	
Cycle Q Clear(g_c), s	26.4	62.5	20.4	12.0	65.6	20.4	20.5	53.0	0.0	8.9	26.4	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	524	1509	673	267	1244	555	378	1005		282	824		
V/C Ratio(X)	0.94	0.87	0.38	0.84	1.31	0.41	1.02	1.09		0.78	0.67		
Avail Cap(c_a), veh/h	525	1509	673	433	1244	555	378	1005		292	834		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	74.9	45.4	33.7	81.6	57.2	42.8	79.8	63.5	0.0	52.2	61.8	0.0	
Incr Delay (d2), s/veh	20.9	5.5	1.3	7.8	147.4	2.3	50.4	57.8	0.0	12.3	2.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	12.6	27.0	7.8	5.4	53.1	8.0	11.3	30.7	0.0	4.2	11.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	95.8	50.9	35.0	89.4	204.6	45.1	130.1	121.3	0.0	64.5	63.9	0.0	
LnGrp LOS	F	D	C	F	F	D	F	F		E	E		
Approach Vol, veh/h	2058			2090			1484			A			A
Approach Delay, s/veh	59.7			174.7			123.6			64.1			
Approach LOS	E			F			F			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	20.0	85.1	26.0	49.0	33.9	71.1	16.5	58.5					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	23.5	70.0	20.5	44.0	28.5	65.0	11.5	53.0					
Max Q Clear Time (g_c+I1), s	14.0	64.5	22.5	28.4	28.4	67.6	10.9	55.0					
Green Ext Time (p_c), s	0.5	4.9	0.0	3.0	0.0	0.0	0.0	0.0					

Intersection Summary

HCM 6th Ctrl Delay 112.6
HCM 6th LOS F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Robin Rd Ext/Robin Rd & SR 92

No Build PM
09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	274	1248	68	96	1744	51	59	12	98	17	421
Future Volume (vph)	274	1248	68	96	1744	51	59	12	98	17	421
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	5	2		1	6		3	8	7	4	5
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	5.0
Minimum Split (s)	15.0	29.5	29.5	15.0	33.5	33.5	15.0	47.5	15.0	44.5	15.0
Total Split (s)	31.0	97.5	97.5	20.0	86.5	86.5	15.0	47.5	15.0	47.5	31.0
Total Split (%)	17.2%	54.2%	54.2%	11.1%	48.1%	48.1%	8.3%	26.4%	8.3%	26.4%	17.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
Act Effect Green (s)	52.0	125.9	125.9	17.1	91.0	91.0	17.2	7.8	14.9	7.9	60.7
Actuated g/C Ratio	0.29	0.70	0.70	0.10	0.51	0.51	0.10	0.04	0.08	0.04	0.34
v/c Ratio	0.62	0.58	0.07	0.66	1.12	0.07	0.45	0.45	0.81	0.23	0.79
Control Delay	62.6	16.1	1.9	51.8	95.4	1.5	81.7	47.0	115.4	89.1	55.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	16.1	1.9	51.8	95.4	1.5	81.7	47.0	115.4	89.1	55.5
LOS	E	B	A	D	F	A	F	D	F	F	E
Approach Delay		23.5			90.7			67.3		67.5	
Approach LOS		C			F			E		E	

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.12

Intersection Signal Delay: 61.2

Intersection LOS: E

Intersection Capacity Utilization 92.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92



HCM 6th Signalized Intersection Summary

6: Robin Rd Ext/Robin Rd & SR 92

No Build PM
09/20/2021

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	274	1248	68	96	1744	51	59	12	30	98	17	421		
Future Volume (veh/h)	274	1248	68	96	1744	51	59	12	30	98	17	421		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870		
Adj Flow Rate, veh/h	301	1371	0	105	1916	56	65	13	33	108	19	463		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2		
Cap, veh/h	242	1828		121	1587	708	307	102	260	401	436	594		
Arrive On Green	0.14	0.54	0.00	0.14	0.93	0.93	0.04	0.22	0.22	0.05	0.23	0.23		
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	1781	468	1188	1781	1870	1585		
Grp Volume(v), veh/h	301	1371	0	105	1916	56	65	0	46	108	19	463		
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1781	0	1656	1781	1870	1585		
Q Serve(g_s), s	25.5	56.1	0.0	10.8	83.7	0.5	5.1	0.0	4.0	8.5	1.4	42.0		
Cycle Q Clear(g_c), s	25.5	56.1	0.0	10.8	83.7	0.5	5.1	0.0	4.0	8.5	1.4	42.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00		
Lane Grp Cap(c), veh/h	242	1828		121	1587	708	307	0	362	401	436	594		
V/C Ratio(X)	1.24	0.75		0.86	1.21	0.08	0.21	0.00	0.13	0.27	0.04	0.78		
Avail Cap(c_a), veh/h	242	1828		138	1587	708	333	0	387	401	436	594		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	77.3	32.4	0.0	76.4	6.3	3.4	51.7	0.0	56.5	50.9	53.4	49.7		
Incr Delay (d2), s/veh	138.8	2.9	0.0	5.0	94.0	0.0	0.3	0.0	0.2	0.4	0.0	6.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	20.4	23.2	0.0	4.6	23.3	0.2	2.4	0.0	1.7	3.9	0.7	19.8		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	216.1	35.3	0.0	81.3	100.3	3.4	52.0	0.0	56.7	51.3	53.5	56.2		
LnGrp LOS	F	D		F	F	A	D	A	E	D	D	E		
Approach Vol, veh/h	1672		A	2077			111			590				
Approach Delay, s/veh	67.9			96.7			54.0			55.2				
Approach LOS	E			F			D			E				
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	18.3	101.9	12.3	47.5	31.0	89.2	15.0	44.8						
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5						
Max Green Setting (Gmax), s	14.5	92.0	9.5	42.0	25.5	81.0	9.5	42.0						
Max Q Clear Time (g_c+I1), s	12.8	58.1	7.1	44.0	27.5	85.7	10.5	6.0						
Green Ext Time (p_c), s	0.0	21.5	0.0	0.0	0.0	0.0	0.0	0.2						

Intersection Summary

HCM 6th Ctrl Delay 79.3
HCM 6th LOS E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

**Future “Build-Site & System Improvement”
Intersections Analysis**

Timings

1: Bells Ferry Rd & Eagle Dr

Future AM - Improvements

09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	59	87	366	35	185	104	291	415	494	953	15
Future Volume (vph)	24	59	87	366	35	185	104	291	415	494	953	15
Lane Group Flow (vph)	25	62	92	385	37	195	109	306	437	520	1003	16
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	22.0	65.5	65.5	15.0	43.5	43.5	31.0	59.5	59.5
Total Split (%)	31.1%	31.1%	31.1%	15.7%	46.8%	46.8%	10.7%	31.1%	31.1%	22.1%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.26	0.47	0.37	0.95	0.09	0.38	0.36	0.23	0.50	0.64	0.50	0.02
Control Delay	66.5	72.8	4.9	95.3	41.9	7.6	15.8	29.0	4.8	14.1	18.2	0.1
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	66.5	72.8	4.9	95.3	41.9	7.6	15.8	29.0	4.8	14.1	18.2	0.1
Queue Length 50th (ft)	22	55	0	182	27	0	30	97	0	193	265	0
Queue Length 95th (ft)	52	102	6	#284	56	61	56	140	74	292	361	0
Internal Link Dist (ft)		319			707			1335			666	
Turn Bay Length (ft)	195		100	525		450	165		130	285		
Base Capacity (vph)	370	505	537	404	798	789	322	1358	868	807	1998	936
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	0.07	0.12	0.17	0.95	0.05	0.25	0.34	0.23	0.50	0.64	0.50	0.02

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

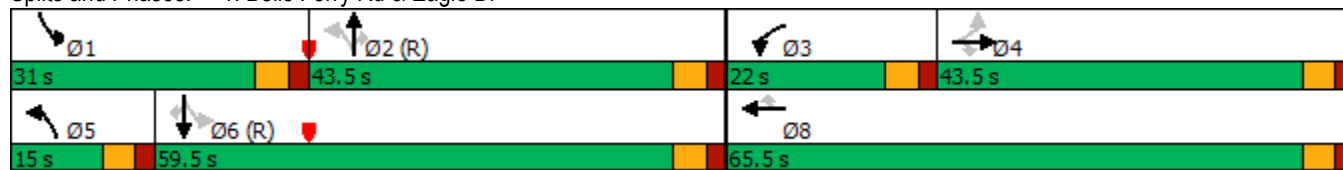
Natural Cycle: 130

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

1: Bells Ferry Rd & Eagle Dr

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	59	87	366	35	185	104	291	415	494	953	15
Future Volume (veh/h)	24	59	87	366	35	185	104	291	415	494	953	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	25	62	0	385	37	0	109	306	437	520	1003	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	118	91		407	385		381	1778	793	643	2158	963
Arrive On Green	0.05	0.05	0.00	0.12	0.21	0.00	0.04	0.52	0.52	0.16	0.63	0.63
Sat Flow, veh/h	1371	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	25	62	0	385	37	0	109	306	437	520	1003	16
Grp Sat Flow(s),veh/h/ln	1371	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	2.5	4.6	0.0	15.5	2.2	0.0	4.1	6.6	27.0	18.9	21.4	0.5
Cycle Q Clear(g_c), s	2.5	4.6	0.0	15.5	2.2	0.0	4.1	6.6	27.0	18.9	21.4	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	91		407	385		381	1778	793	643	2158	963
V/C Ratio(X)	0.21	0.68		0.95	0.10		0.29	0.17	0.55	0.81	0.46	0.02
Avail Cap(c_a), veh/h	424	508		407	802		422	1778	793	689	2158	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.5	65.5	0.0	61.3	45.0	0.0	14.3	17.6	22.5	10.7	13.4	9.6
Incr Delay (d2), s/veh	0.9	8.5	0.0	30.9	0.1	0.0	0.4	0.2	2.7	6.8	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.4	0.0	8.5	1.1	0.0	1.6	2.6	10.0	7.5	7.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	74.0	0.0	92.2	45.1	0.0	14.7	17.9	25.3	17.5	14.1	9.6
LnGrp LOS	E	E		F	D		B	B	C	B	B	A
Approach Vol, veh/h	87		A	422		A	852				1539	
Approach Delay, s/veh	71.5			88.1			21.3				15.2	
Approach LOS	E			F			C				B	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	27.2	78.4	22.0	12.3	11.6	94.0	34.3					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	25.5	38.0	16.5	38.0	9.5	54.0	60.0					
Max Q Clear Time (g_c+I1), s	20.9	29.0	17.5	6.6	6.1	23.4	4.2					
Green Ext Time (p_c), s	0.8	4.1	0.0	0.3	0.1	14.3	0.2					

Intersection Summary

HCM 6th Ctrl Delay 29.3

HCM 6th LOS C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Future AM - Improvements

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	150	31	195	153	12	69	624	201	36	1165	47
Future Volume (vph)	150	31	195	153	12	69	624	201	36	1165	47
Lane Group Flow (vph)	160	33	207	0	182	73	664	214	38	1239	50
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	44.0	44.0	29.0	29.0	15.0	61.0	61.0	15.0	61.0	61.0
Total Split (%)	12.5%	36.7%	36.7%	24.2%	24.2%	12.5%	50.8%	50.8%	12.5%	50.8%	50.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.35	0.06	0.35		0.81	0.33	0.36	0.23	0.09	0.70	0.06
Control Delay	34.6	29.3	7.7		74.0	14.6	11.0	2.5	10.8	25.7	0.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	29.3	7.7		74.0	14.6	11.0	2.5	10.8	25.7	0.1
Queue Length 50th (ft)	95	18	13		134	13	63	0	11	392	0
Queue Length 95th (ft)	151	42	68		#229	m45	134	m28	27	512	0
Internal Link Dist (ft)		268			480		769			939	
Turn Bay Length (ft)	75		100			190		175	180		175
Base Capacity (vph)	458	597	632		263	245	1866	930	461	1774	852
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.06	0.33		0.69	0.30	0.36	0.23	0.08	0.70	0.06

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

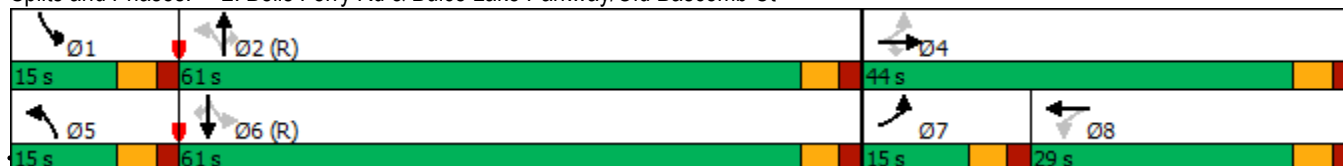
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



Future AM - Improvements 11:19 am 08/27/2021 Baseline

Synchro 11 Report

Page 3

HCM 6th Signalized Intersection Summary

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	31	195	153	12	6	69	624	201	36	1165	47
Future Volume (veh/h)	150	31	195	153	12	6	69	624	201	36	1165	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	160	33	207	163	13	6	73	664	214	38	1239	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	508	552	468	237	14	7	232	1834	818	432	1807	806
Arrive On Green	0.08	0.30	0.30	0.17	0.17	0.17	0.08	1.00	1.00	0.03	0.53	0.53
Sat Flow, veh/h	1781	1870	1585	1060	85	39	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	160	33	207	182	0	0	73	664	214	38	1239	50
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1184	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	8.7	1.5	12.7	18.1	0.0	0.0	2.3	0.0	0.0	1.2	32.2	1.9
Cycle Q Clear(g_c), s	8.7	1.5	12.7	18.1	0.0	0.0	2.3	0.0	0.0	1.2	32.2	1.9
Prop In Lane	1.00		1.00	0.90		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	508	552	468	258	0	0	232	1834	818	432	1807	806
V/C Ratio(X)	0.31	0.06	0.44	0.70	0.00	0.00	0.31	0.36	0.26	0.09	0.69	0.06
Avail Cap(c_a), veh/h	508	600	509	289	0	0	303	1834	818	517	1807	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	30.3	34.3	48.8	0.0	0.0	16.3	0.0	0.0	11.9	20.9	13.7
Incr Delay (d2), s/veh	0.4	0.0	0.7	6.6	0.0	0.0	0.8	0.6	0.8	0.1	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.7	5.0	5.9	0.0	0.0	0.8	0.1	0.2	0.4	12.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	30.4	34.9	55.5	0.0	0.0	17.0	0.6	0.8	12.0	23.0	13.9
LnGrp LOS	D	C	C	E	A	A	B	A	A	B	C	B
Approach Vol, veh/h	400				182				951			
Approach Delay, s/veh	34.9				55.5				1.9			
Approach LOS	C				E				A			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	70.0		40.9	10.1	69.0	15.0	25.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	55.5		38.5	9.5	55.5	9.5	23.5				
Max Q Clear Time (g_c+I1), s	3.2	2.0		14.7	4.3	34.2	10.7	20.1				
Green Ext Time (p_c), s	0.0	12.6		0.9	0.1	14.4	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	19.4											
HCM 6th LOS	B											

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Future AM - Improvements

09/20/2021



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	8	67	3	112	769	33	32	1663	18
Future Volume (vph)	48	8	67	3	112	769	33	32	1663	18
Lane Group Flow (vph)	53	231	0	114	124	854	37	36	1848	20
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.34	0.66		1.65	0.65	0.35	0.03	0.08	0.82	0.02
Control Delay	51.3	23.4		376.2	39.6	4.9	0.2	5.6	17.6	0.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	23.4		376.2	39.6	4.9	0.2	5.6	17.6	0.2
Queue Length 50th (ft)	38	43		~113	40	74	0	5	308	0
Queue Length 95th (ft)	74	119		#216	m77	m143	m1	m15	#885	m0
Internal Link Dist (ft)		189		1223		480			645	
Turn Bay Length (ft)					155		315	190		175
Base Capacity (vph)	442	669		155	212	2441	1112	517	2243	1027
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	0.12	0.35		0.74	0.58	0.35	0.03	0.07	0.82	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 105 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

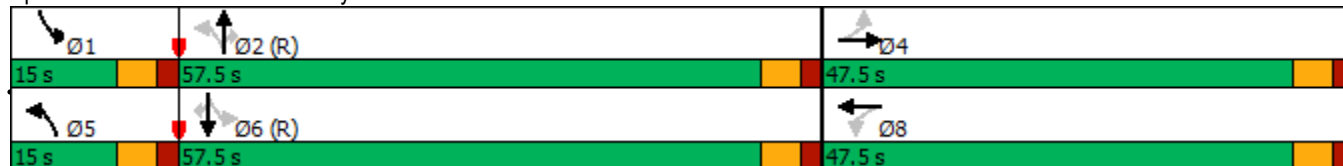
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

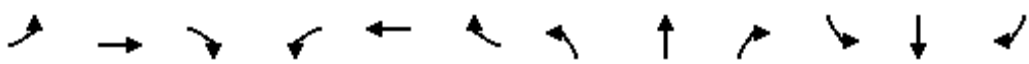
Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd



HCM 6th Signalized Intersection Summary 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	8	200	67	3	33	112	769	33	32	1663	18
Future Volume (veh/h)	48	8	200	67	3	33	112	769	33	32	1663	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	53	9	0	74	3	0	124	854	0	36	1848	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	190	144		157	4		309	2582		529	2542	
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.00	0.04	0.76	0.00	0.06	1.00	0.00
Sat Flow, veh/h	1414	1870	0	1285	56	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	53	9	0	77	0	0	124	854	0	36	1848	0
Grp Sat Flow(s), veh/h/ln	1414	1870	0	1341	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.5	0.0	6.4	0.0	0.0	2.0	9.7	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.5	0.0	6.9	0.0	0.0	2.0	9.7	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.00	0.96		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	144		162	0		309	2582		529	2542	
V/C Ratio(X)	0.28	0.06		0.48	0.00		0.40	0.33		0.07	0.73	
Avail Cap(c_a), veh/h	576	655		550	0		374	2582		615	2542	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.7	51.4	0.0	54.6	0.0	0.0	3.0	4.7	0.0	3.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.2	0.0	2.2	0.0	0.0	0.8	0.3	0.0	0.1	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.3	0.0	2.4	0.0	0.0	0.5	2.7	0.0	0.1	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	51.6	0.0	56.7	0.0	0.0	3.8	5.1	0.0	3.4	1.9	0.0
LnGrp LOS	D	D		E	A		A	A		A	A	
Approach Vol, veh/h	62		A	77		A	978		A	1884		A
Approach Delay, s/veh	53.2			56.7			4.9			1.9		
Approach LOS	D			E			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	96.3		14.7	10.4	94.9		14.7				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.6	11.7		5.4	4.0	2.0		8.9				
Green Ext Time (p_c), s	0.0	13.0		0.2	0.1	39.0		0.4				

Intersection Summary

HCM 6th Ctrl Delay 5.3

HCM 6th LOS A

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Future AM - Improvements

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	384	4	10	24	10	5	629	4	3	1618	687
Future Volume (vph)	384	4	10	24	10	5	629	4	3	1618	687
Lane Group Flow (vph)	0	413	11	0	47	5	669	4	3	1721	731
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	43.5	43.5	43.5	43.5	43.5	15.0	61.5	61.5	15.0	61.5	61.5
Total Split (%)	36.3%	36.3%	36.3%	36.3%	36.3%	12.5%	51.3%	51.3%	12.5%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio		1.01	0.02		0.13	0.04	0.35	0.00	0.01	0.89	0.70
Control Delay		88.4	0.1		25.4	10.6	14.9	0.0	6.3	18.8	4.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		88.4	0.1		25.4	10.6	14.9	0.0	6.3	18.8	4.5
Queue Length 50th (ft)		~324	0		20	2	131	0	0	401	0
Queue Length 95th (ft)		#534	0		50	7	212	0	m1	#882	25
Internal Link Dist (ft)		426			188		904			347	
Turn Bay Length (ft)			135			195		100	165		200
Base Capacity (vph)		409	551		363	189	1932	895	448	1931	1038
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		1.01	0.02		0.13	0.03	0.35	0.00	0.01	0.89	0.70

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd



HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	4	10	24	10	9	5	629	4	3	1618	687
Future Volume (veh/h)	384	4	10	24	10	9	5	629	4	3	1618	687
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	409	4	0	26	11	10	5	669	4	3	1721	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	489	4		337	142	117	220	1887	842	393	1879	
Arrive On Green	0.31	0.31	0.00	0.31	0.31	0.31	0.01	0.55	0.55	0.01	1.00	0.00
Sat Flow, veh/h	1404	14	1585	952	465	383	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	413	0	0	47	0	0	5	669	4	3	1721	0
Grp Sat Flow(s),veh/h/ln	1418	0	1585	1800	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	32.0	0.0	0.0	0.0	0.0	0.0	0.2	13.1	0.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	34.2	0.0	0.0	2.2	0.0	0.0	0.2	13.1	0.1	0.1	0.0	0.0
Prop In Lane	0.99		1.00	0.55		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	0		597	0	0	220	1887	842	393	1879	
V/C Ratio(X)	0.84	0.00		0.08	0.00	0.00	0.02	0.35	0.00	0.01	0.92	
Avail Cap(c_a), veh/h	508	0		614	0	0	345	1887	842	522	1879	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	29.7	0.0	0.0	11.8	14.9	12.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	8.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	0.0	0.0	1.0	0.0	0.0	0.1	4.8	0.0	0.0	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	0.0	0.0	29.8	0.0	0.0	11.9	15.4	12.0	12.6	8.5	0.0
LnGrp LOS	D	A		C	A	A	B	B	B	B	A	
Approach Vol, veh/h		413	A		47			678			1724	A
Approach Delay, s/veh		52.0			29.8			15.4			8.5	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	71.8		42.2	6.3	71.6		42.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	56.0		38.0	9.5	56.0		38.0				
Max Q Clear Time (g_c+I1), s	2.1	15.1		36.2	2.2	2.0		4.2				
Green Ext Time (p_c), s	0.0	9.6		0.5	0.0	38.3		0.2				

Intersection Summary

HCM 6th Ctrl Delay 16.8

HCM 6th LOS B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings 5: Bells Ferry Rd & SR 92

Future AM - Improvements

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	227	1847	336	116	594	131	120	283	391	893	60
Future Volume (vph)	227	1847	336	116	594	131	120	283	391	893	60
Lane Group Flow (vph)	241	2001	321	123	632	139	128	398	416	950	64
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6					4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	9.5	9.5	5.0	9.5	9.5	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	26.0	86.0	86.0	20.0	80.0	80.0	15.0	37.0	37.0	59.0	59.0
Total Split (%)	14.4%	47.8%	47.8%	11.1%	44.4%	44.4%	8.3%	20.6%	20.6%	32.8%	32.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.74	0.97	0.47	0.91	0.30	0.19	0.75	0.43	0.83	0.96	0.12
Control Delay	88.7	58.7	13.2	136.0	34.3	4.2	109.3	59.4	88.9	82.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.7	58.7	13.2	136.0	34.3	4.2	109.3	59.4	88.9	82.1	0.5
Queue Length 50th (ft)	144	898	137	147	180	0	78	138	248	582	0
Queue Length 95th (ft)	181	#1020	245	#286	219	39	#130	182	307	#717	0
Internal Link Dist (ft)		2014			1129			1131		1589	
Turn Bay Length (ft)	500		260	480		180	285		510		250
Base Capacity (vph)	372	2062	683	135	2094	736	172	935	572	1002	529
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.97	0.47	0.91	0.30	0.19	0.74	0.43	0.73	0.95	0.12

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

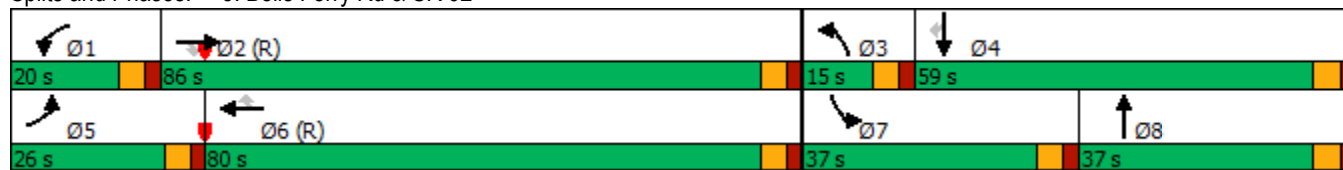
Natural Cycle: 140

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary

5: Bells Ferry Rd & SR 92

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	1847	336	116	594	131	120	283	91	391	893	60
Future Volume (veh/h)	227	1847	336	116	594	131	120	283	91	391	893	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	241	1965	357	123	632	139	128	301	0	416	950	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	283	2459	695	138	2227	691	164	988		463	995	
Arrive On Green	0.08	0.46	0.46	0.08	0.45	0.45	0.05	0.20	0.00	0.14	0.29	0.00
Sat Flow, veh/h	3421	5389	1522	1711	4904	1522	3319	5065	0	3319	3413	1522
Grp Volume(v), veh/h	241	1965	357	123	632	139	128	301	0	416	950	0
Grp Sat Flow(s),veh/h/ln	1711	1796	1522	1711	1635	1522	1659	1635	0	1659	1706	1522
Q Serve(g_s), s	12.5	56.2	30.0	12.8	14.5	9.9	6.9	9.4	0.0	22.2	49.2	0.0
Cycle Q Clear(g_c), s	12.5	56.2	30.0	12.8	14.5	9.9	6.9	9.4	0.0	22.2	49.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	2459	695	138	2227	691	164	988		463	995	
V/C Ratio(X)	0.85	0.80	0.51	0.89	0.28	0.20	0.78	0.30		0.90	0.95	
Avail Cap(c_a), veh/h	390	2459	695	138	2227	691	175	988		581	1014	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	81.5	41.9	34.8	82.0	30.8	29.5	84.6	61.1	0.0	76.2	62.6	0.0
Incr Delay (d2), s/veh	11.1	2.5	2.4	46.2	0.3	0.7	19.1	0.2	0.0	14.6	18.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	24.9	11.5	7.4	5.8	3.8	3.4	3.9	0.0	10.3	23.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.6	44.4	37.2	128.1	31.1	30.2	103.8	61.3	0.0	90.8	80.7	0.0
LnGrp LOS	F	D	D	F	C	C	F	E		F	F	
Approach Vol, veh/h	2563				894				429			
Approach Delay, s/veh	47.9				44.3				74.0			
Approach LOS	D				D				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	87.6	14.4	58.0	20.4	87.2	30.6	41.8				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	14.5	80.5	9.5	53.5	20.5	74.5	31.5	31.5				
Max Q Clear Time (g_c+I1), s	14.8	58.2	8.9	51.2	14.5	16.5	24.2	11.4				
Green Ext Time (p_c), s	0.0	20.6	0.0	1.3	0.4	11.0	0.9	1.7				

Intersection Summary

HCM 6th Ctrl Delay 58.8

HCM 6th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings
6: Robin Rd Ext/Robin Rd & SR 92

Future AM - Improvements

09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	340	1563	40	827	12	23	10	57	17	485
Future Volume (vph)	340	1563	40	827	12	23	10	57	17	485
Lane Group Flow (vph)	354	1698	42	861	13	24	15	59	18	505
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	pm+ov
Protected Phases	5	2	1	6			8		4	5
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	5
Switch Phase										
Minimum Initial (s)	5.0	15.0	5.0	15.0	15.0	6.0	6.0	6.0	6.0	5.0
Minimum Split (s)	15.0	29.5	15.0	33.5	33.5	47.5	47.5	44.5	44.5	15.0
Total Split (s)	60.0	117.5	15.0	72.5	72.5	47.5	47.5	47.5	47.5	60.0
Total Split (%)	33.3%	65.3%	8.3%	40.3%	40.3%	26.4%	26.4%	26.4%	26.4%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.80	0.44	0.46	0.31	0.01	0.24	0.11	0.59	0.13	0.83
Control Delay	75.1	7.2	85.7	18.5	0.1	82.5	58.6	102.8	78.1	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.1	7.2	85.7	18.5	0.1	82.5	58.6	102.8	78.1	57.8
Queue Length 50th (ft)	392	221	49	145	0	27	11	69	20	496
Queue Length 95th (ft)	495	312	m94	170	m1	61	37	121	49	583
Internal Link Dist (ft)		1477		2014			245		1168	
Turn Bay Length (ft)	720		355		310			85		515
Base Capacity (vph)	512	3827	101	2774	898	324	416	325	434	672
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.44	0.42	0.31	0.01	0.07	0.04	0.18	0.04	0.75

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

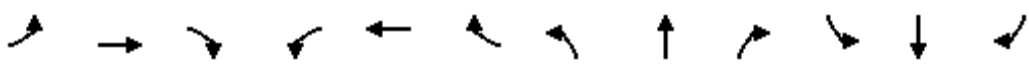
Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92

			
Ø1	Ø2 (R)		Ø4
15 s	117.5 s		47.5 s
			
Ø5		Ø6 (R)	Ø8
60 s		72.5 s	47.5 s

HCM 6th Signalized Intersection Summary 6: Robin Rd Ext/Robin Rd & SR 92

Future AM - Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1563	67	40	827	12	23	10	5	57	17	485
Future Volume (veh/h)	340	1563	67	40	827	12	23	10	5	57	17	485
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	354	1628	0	42	861	12	24	10	5	59	18	505
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	376	3158		53	2232	693	239	274	137	357	436	718
Arrive On Green	0.22	0.64	0.00	0.06	0.91	0.91	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1711	5065	0	1711	4904	1522	879	1176	588	1398	1870	1585
Grp Volume(v), veh/h	354	1628	0	42	861	12	24	0	15	59	18	505
Grp Sat Flow(s),veh/h/ln	1711	1635	0	1711	1635	1522	879	0	1764	1398	1870	1585
Q Serve(g_s), s	36.6	31.9	0.0	4.4	4.4	0.1	3.9	0.0	1.2	6.1	1.3	42.0
Cycle Q Clear(g_c), s	36.6	31.9	0.0	4.4	4.4	0.1	5.3	0.0	1.2	7.3	1.3	42.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	376	3158		53	2232	693	239	0	412	357	436	718
V/C Ratio(X)	0.94	0.52		0.79	0.39	0.02	0.10	0.00	0.04	0.17	0.04	0.70
Avail Cap(c_a), veh/h	518	3158		90	2232	693	239	0	412	357	436	718
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.1	17.1	0.0	83.8	4.6	4.4	55.4	0.0	53.4	56.2	53.4	39.5
Incr Delay (d2), s/veh	21.4	0.6	0.0	21.2	0.5	0.0	0.2	0.0	0.0	0.2	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	11.7	0.0	2.2	1.2	0.1	0.9	0.0	0.5	2.2	0.6	18.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.5	17.7	0.0	105.0	5.1	4.4	55.6	0.0	53.4	56.4	53.5	42.6
LnGrp LOS	F	B		F	A	A	E	A	D	E	D	D
Approach Vol, veh/h	1982		A	915			39			582		
Approach Delay, s/veh	30.7			9.6			54.8			44.3		
Approach LOS	C			A			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	121.4		47.5	45.1	87.4		47.5				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	112.0		42.0	54.5	67.0		42.0				
Max Q Clear Time (g_c+I1), s	6.4	33.9		44.0	38.6	6.4		7.3				
Green Ext Time (p_c), s	0.0	41.1		0.0	0.9	14.3		0.2				

Intersection Summary

HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	15	0	1025	2294	3
Future Vol, veh/h	0	15	0	1025	2294	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Free
Storage Length	-	0	-	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	0	1114	2493	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1247	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	165	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	165	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.2	0		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 165		-			
HCM Lane V/C Ratio	- 0.099		-			
HCM Control Delay (s)	- 29.2		-			
HCM Lane LOS	- D		-			
HCM 95th %tile Q(veh)	- 0.3		-			

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↗↗	↗		↗↗	↗
Traffic Vol, veh/h	0	0	49	0	0	0	0	851	0	0	1662	9
Future Vol, veh/h	0	0	49	0	0	0	0	851	0	0	1662	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	0	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	53	0	0	0	0	925	0	0	1807	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	904	-	-	463	-	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	280	0	0	546	0	-	0	0	-	0
Stage 1	0	0	-	0	0	-	0	-	0	0	-	0
Stage 2	0	0	-	0	0	-	0	-	0	0	-	0
Platoon blocked, %												
Mov Cap-1 Maneuver	-	-	280	-	-	546	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.9		0		0		0					
HCM LOS	C		A									
Minor Lane/Major Mvmt	NBT EBLn1WBLn1		SBT									
Capacity (veh/h)	- 280		-									
HCM Lane V/C Ratio	- 0.19		-									
HCM Control Delay (s)	- 20.9		0									
HCM Lane LOS	- C		A									
HCM 95th %tile Q(veh)	- 0.7		-									

HCM 6th TWSC
9: Site Drwy 2/The Quincy E Drwy & Buice Lake Parkway

Future AM - Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	339	0	11	114	4	0	0	32	5	0	0
Future Vol, veh/h	0	339	0	11	114	4	0	0	32	5	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	368	0	12	124	4	0	0	35	5	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	128	0	0	368	0	0	518	520	368	536	518	126
Stage 1	-	-	-	-	-	-	368	368	-	150	150	-
Stage 2	-	-	-	-	-	-	150	152	-	386	368	-
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	1458	-	-	1191	-	-	468	461	677	455	462	924
Stage 1	-	-	-	-	-	-	652	621	-	853	773	-
Stage 2	-	-	-	-	-	-	853	772	-	637	621	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1458	-	-	1191	-	-	464	456	677	428	457	924
Mov Cap-2 Maneuver	-	-	-	-	-	-	464	456	-	428	457	-
Stage 1	-	-	-	-	-	-	652	621	-	853	764	-
Stage 2	-	-	-	-	-	-	844	764	-	604	621	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.7			10.6			13.5		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	677	1458	-	-	1191	-	-	428				
HCM Lane V/C Ratio	0.051	-	-	-	0.01	-	-	0.013				
HCM Control Delay (s)	10.6	0	-	-	8.1	0	-	13.5				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0				

HCM 6th TWSC
10: Future Owl Creek Pkwy & Buice Lake Parkway

Future AM - Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	293	0	7	100	5	0	0	21	19	0	0
Future Vol, veh/h	0	293	0	7	100	5	0	0	21	19	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	318	0	8	109	5	0	0	23	21	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	114	0	0	318	0	0	446	448	318	458	446	112
Stage 1	-	-	-	-	-	-	318	318	-	128	128	-
Stage 2	-	-	-	-	-	-	128	130	-	330	318	-
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	1475	-	-	1242	-	-	523	506	723	513	507	941
Stage 1	-	-	-	-	-	-	693	654	-	876	790	-
Stage 2	-	-	-	-	-	-	876	789	-	683	654	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1475	-	-	1242	-	-	520	502	723	494	503	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	520	502	-	494	503	-
Stage 1	-	-	-	-	-	-	693	654	-	876	784	-
Stage 2	-	-	-	-	-	-	870	783	-	661	654	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.5			10.1			12.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	723	1475	-	-	1242	-	-	494				
HCM Lane V/C Ratio	0.032	-	-	-	0.006	-	-	0.042				
HCM Control Delay (s)	10.1	0	-	-	7.9	0	-	12.6				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	233	128	5	20	0
Future Vol, veh/h	0	233	128	5	20	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	253	139	5	22	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	144	0	-	0	395	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	253	-
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	1438	-	-	-	610	906
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1438	-	-	-	610	906
Mov Cap-2 Maneuver	-	-	-	-	610	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	789	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		11.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1438	-	-	-	610	
HCM Lane V/C Ratio	-	-	-	-	0.036	
HCM Control Delay (s)	0	-	-	-	11.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

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	0	181	0	7	73	48	0	0	16	37	0	0
Future Vol, veh/h	0	181	0	7	73	48	0	0	16	37	0	0
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	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	197	0	8	79	52	0	0	17	40	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	131	0	0	197	0	0	318	344	197	327	318	105
Stage 1	-	-	-	-	-	-	197	197	-	121	121	-
Stage 2	-	-	-	-	-	-	121	147	-	206	197	-
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	1454	-	-	1376	-	-	635	579	844	626	598	949
Stage 1	-	-	-	-	-	-	805	738	-	883	796	-
Stage 2	-	-	-	-	-	-	883	775	-	796	738	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1454	-	-	1376	-	-	632	576	844	610	594	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	632	576	-	610	594	-
Stage 1	-	-	-	-	-	-	805	738	-	883	791	-
Stage 2	-	-	-	-	-	-	878	770	-	780	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			9.4			11.3		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	844	1454	-	-	1376	-	-	610				
HCM Lane V/C Ratio	0.021	-	-	-	0.006	-	-	0.066				
HCM Control Delay (s)	9.4	0	-	-	7.6	-	-	11.3				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	157	0	5	66	2	0	0	15	8	0	0
Future Vol, veh/h	0	157	0	5	66	2	0	0	15	8	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	171	0	5	72	2	0	0	16	9	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	171	0	0	254	255	171	262	254	73
Stage 1	-	-	-	-	-	-	171	171	-	83	83	-
Stage 2	-	-	-	-	-	-	83	84	-	179	171	-
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	1526	-	-	1406	-	-	699	649	873	691	650	989
Stage 1	-	-	-	-	-	-	831	757	-	925	826	-
Stage 2	-	-	-	-	-	-	925	825	-	823	757	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	1406	-	-	697	646	873	676	647	989
Mov Cap-2 Maneuver	-	-	-	-	-	-	697	646	-	676	647	-
Stage 1	-	-	-	-	-	-	831	757	-	925	823	-
Stage 2	-	-	-	-	-	-	921	822	-	808	757	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.5			9.2			10.4		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	873	1526	-	-	1406	-	-	676				
HCM Lane V/C Ratio	0.019	-	-	-	0.004	-	-	0.013				
HCM Control Delay (s)	9.2	0	-	-	7.6	0	-	10.4				
HCM Lane LOS	A	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	0	5	61	0	15
Future Vol, veh/h	142	0	5	61	0	15
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	154	0	5	66	0	16
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	154	0	230	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	76	-
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	-	-	1426	-	758	892
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1426	-	755	892
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	943	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		9.1	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	892	-	-	1426	-	
HCM Lane V/C Ratio	0.018	-	-	0.004	-	
HCM Control Delay (s)	9.1	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	16	5	46	6	0
Future Vol, veh/h	29	16	5	46	6	0
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	-	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	17	5	50	7	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	19	5	0	0	55	0
Stage 1	5	-	-	-	-	-
Stage 2	14	-	-	-	-	-
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	998	1078	-	-	1550	-
Stage 1	1018	-	-	-	-	-
Stage 2	1009	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	993	1078	-	-	1550	-
Mov Cap-2 Maneuver	993	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.7	0	7.3			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1022	1550	-	
HCM Lane V/C Ratio	-	-	0.048	0.004	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

HCM 6th TWSC
16: Future Owl Creek Pkwy & Site Drwy 11/Site Drwy 8

Future AM - Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	8	0	0	5	2	46	0	0	29	0
Future Vol, veh/h	0	0	8	0	0	5	2	46	0	0	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	9	0	0	5	2	50	0	0	32	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	89	86	32	91	86	50	32	0	0	50	0	0
Stage 1	32	32	-	54	54	-	-	-	-	-	-	-
Stage 2	57	54	-	37	32	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	896	804	1042	893	804	1018	1580	-	-	1557	-	-
Stage 1	984	868	-	958	850	-	-	-	-	-	-	-
Stage 2	955	850	-	978	868	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	891	803	1042	885	803	1018	1580	-	-	1557	-	-
Mov Cap-2 Maneuver	891	803	-	885	803	-	-	-	-	-	-	-
Stage 1	983	868	-	957	849	-	-	-	-	-	-	-
Stage 2	949	849	-	970	868	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	8.5		8.6		0.3		0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1580	-	-	1042 1018	1557	-	-					
HCM Lane V/C Ratio	0.001	-	-	0.008 0.005	-	-	-					
HCM Control Delay (s)	7.3	0	-	8.5 8.6	0	-	-					
HCM Lane LOS	A	A	-	A A	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0 0	0	-	-					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	16	3	4
Future Vol, veh/h	0	0	0	16	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	17	3	4
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	3	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	1081	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	1081	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		-			
HCM Lane V/C Ratio	-		-			
HCM Control Delay (s)	-		0			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		-			

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	15	0	0	3	0	0	0	0	0	0	3
Future Vol, veh/h	16	15	0	0	3	0	0	0	0	0	0	3
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	16	0	0	3	0	0	0	0	0	0	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	16	0	0	55	53	16	53	53	3
Stage 1	-	-	-	-	-	-	50	50	-	3	3	-
Stage 2	-	-	-	-	-	-	5	3	-	50	50	-
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	1619	-	-	1602	-	-	943	838	1063	946	838	1081
Stage 1	-	-	-	-	-	-	963	853	-	1020	893	-
Stage 2	-	-	-	-	-	-	1017	893	-	963	853	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1619	-	-	1602	-	-	933	829	1063	938	829	1081
Mov Cap-2 Maneuver	-	-	-	-	-	-	933	829	-	938	829	-
Stage 1	-	-	-	-	-	-	952	844	-	1009	893	-
Stage 2	-	-	-	-	-	-	1014	893	-	952	844	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0			0			8.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1619	-	-	1602	-	-	1081				
HCM Lane V/C Ratio	-	0.011	-	-	-	-	-	0.003				
HCM Control Delay (s)	0	7.2	0	-	0	-	-	8.3				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0				

Timings

1: Bells Ferry Rd & Eagle Dr

Future PM- Improvements

09/20/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	117	162	413	136	351	219	714	429	425	566	25
Future Volume (vph)	43	117	162	413	136	351	219	714	429	425	566	25
Lane Group Flow (vph)	44	119	165	421	139	358	223	729	438	434	578	26
Turn Type	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	43.5	43.5	43.5	15.0	23.5	23.5	15.0	42.5	42.5	15.0	31.5	31.5
Total Split (s)	43.5	43.5	43.5	22.0	65.5	65.5	23.0	42.5	42.5	32.0	51.5	51.5
Total Split (%)	31.1%	31.1%	31.1%	15.7%	46.8%	46.8%	16.4%	30.4%	30.4%	22.9%	36.8%	36.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (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
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.35	0.63	0.53	1.04	0.29	0.53	0.56	0.69	0.68	0.69	0.32	0.03
Control Delay	64.5	74.0	14.3	114.8	42.3	6.7	21.9	46.8	24.2	27.0	20.3	0.1
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	64.5	74.0	14.3	114.8	42.3	6.7	21.9	46.8	24.2	27.0	20.3	0.1
Queue Length 50th (ft)	38	106	0	~212	102	0	74	296	149	227	151	0
Queue Length 95th (ft)	76	167	67	#322	154	75	125	408	308	365	226	0
Internal Link Dist (ft)		319			707			1335			666	
Turn Bay Length (ft)	195		100	525		450	165		130	285		
Base Capacity (vph)	337	505	549	404	798	883	452	1052	640	633	1788	849
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	0.13	0.24	0.30	1.04	0.17	0.41	0.49	0.69	0.68	0.69	0.32	0.03

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

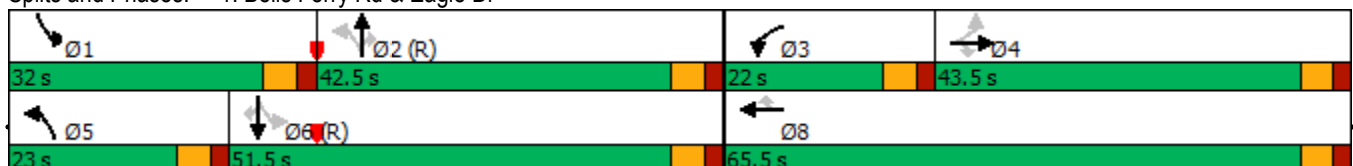
~ Volume exceeds capacity, queue is theoretically infinite.

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: 1: Bells Ferry Rd & Eagle Dr



HCM 6th Signalized Intersection Summary

Future PM- Improvements

1: Bells Ferry Rd & Eagle Dr

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	117	162	413	136	351	219	714	429	425	566	25
Future Volume (veh/h)	43	117	162	413	136	351	219	714	429	425	566	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	44	119	0	421	139	0	223	729	438	434	578	26
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	154	153		407	447		559	1720	767	460	1925	859
Arrive On Green	0.08	0.08	0.00	0.12	0.24	0.00	0.08	0.50	0.50	0.14	0.56	0.56
Sat Flow, veh/h	1250	1870	1585	3456	1870	1585	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	44	119	0	421	139	0	223	729	438	434	578	26
Grp Sat Flow(s),veh/h/ln	1250	1870	1585	1728	1870	1585	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	4.7	8.7	0.0	16.5	8.6	0.0	8.7	18.9	28.1	16.6	12.4	1.1
Cycle Q Clear(g_c), s	4.7	8.7	0.0	16.5	8.6	0.0	8.7	18.9	28.1	16.6	12.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	153		407	447		559	1720	767	460	1925	859
V/C Ratio(X)	0.29	0.78		1.03	0.31		0.40	0.42	0.57	0.94	0.30	0.03
Avail Cap(c_a), veh/h	391	508		407	802		638	1720	767	546	1925	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	63.0	0.0	61.7	43.8	0.0	14.1	21.9	24.2	20.1	16.0	13.5
Incr Delay (d2), s/veh	1.0	8.3	0.0	53.5	0.4	0.0	0.5	0.8	3.1	23.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.5	0.0	10.2	4.0	0.0	3.3	7.5	10.5	10.1	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	71.3	0.0	115.3	44.2	0.0	14.5	22.7	27.3	43.2	16.4	13.6
LnGrp LOS	E	E		F	D		B	C	C	D	B	B
Approach Vol, veh/h	163		A		560		A		1390		1038	
Approach Delay, s/veh	68.8				97.7				22.8		27.5	
Approach LOS	E		F		C		C		C			
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	25.0	76.1	22.0	16.9	16.6	84.5	38.9					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	26.5	37.0	16.5	38.0	17.5	46.0	60.0					
Max Q Clear Time (g_c+I1), s	18.6	30.1	18.5	10.7	10.7	14.4	10.6					
Green Ext Time (p_c), s	0.9	5.0	0.0	0.7	0.3	7.7	0.8					

Intersection Summary

HCM 6th Ctrl Delay 40.0

HCM 6th LOS D

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Future PM- Improvements

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	12	26	126	41	95	1117	136	55	1225	51
Future Volume (vph)	50	12	26	126	41	95	1117	136	55	1225	51
Lane Group Flow (vph)	52	12	27	0	187	98	1152	140	57	1263	53
Turn Type	pm+pt	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	7	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	23.5	23.5	23.5	23.5	15.0	23.5	23.5	15.0	23.5	23.5
Total Split (s)	15.0	43.0	43.0	28.0	28.0	15.0	62.0	62.0	15.0	62.0	62.0
Total Split (%)	12.5%	35.8%	35.8%	23.3%	23.3%	12.5%	51.7%	51.7%	12.5%	51.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.15	0.03	0.06		0.80	0.42	0.60	0.15	0.22	0.69	0.06
Control Delay	31.5	29.3	0.2		72.1	16.5	15.2	3.5	11.8	24.9	0.1
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	29.3	0.2		72.1	16.5	15.2	3.5	11.8	24.9	0.1
Queue Length 50th (ft)	29	7	0		137	13	215	0	16	396	0
Queue Length 95th (ft)	59	21	0		#227	m49	356	29	36	518	0
Internal Link Dist (ft)		268			480		769			939	
Turn Bay Length (ft)	75		100			190		175	180		175
Base Capacity (vph)	362	582	544		273	251	1909	907	295	1821	871
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.02	0.05		0.68	0.39	0.60	0.15	0.19	0.69	0.06

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

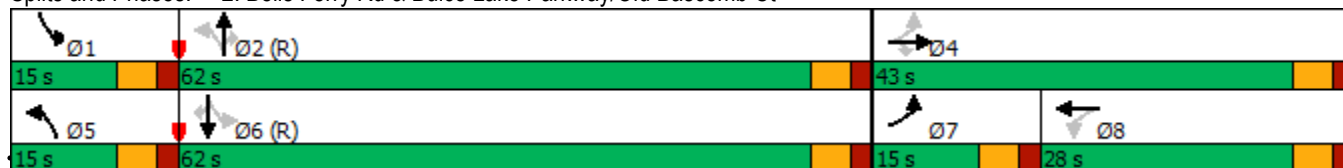
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct



Future PM- Improvements 3:35 pm 09/01/2021

Synchro 11 Report

Page 3

HCM 6th Signalized Intersection Summary

2: Bells Ferry Rd & Buice Lake Parkway/Old Bascomb Ct

Future PM- Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	12	26	126	41	15	95	1117	136	55	1225	51
Future Volume (veh/h)	50	12	26	126	41	15	95	1117	136	55	1225	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	52	12	27	130	42	15	98	1152	140	57	1263	53
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	333	421	356	199	48	17	273	2055	917	366	2039	910
Arrive On Green	0.03	0.22	0.22	0.14	0.14	0.14	0.08	1.00	1.00	0.04	0.60	0.60
Sat Flow, veh/h	1781	1870	1585	1024	331	118	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	52	12	27	187	0	0	98	1152	140	57	1263	53
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1473	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	2.9	0.6	1.6	14.9	0.0	0.0	2.7	0.0	0.0	1.5	28.4	1.7
Cycle Q Clear(g_c), s	2.9	0.6	1.6	14.9	0.0	0.0	2.7	0.0	0.0	1.5	28.4	1.7
Prop In Lane	1.00		1.00	0.70		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	421	356	264	0	0	273	2055	917	366	2039	910
V/C Ratio(X)	0.16	0.03	0.08	0.71	0.00	0.00	0.36	0.56	0.15	0.16	0.62	0.06
Avail Cap(c_a), veh/h	412	584	495	327	0	0	340	2055	917	441	2039	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	36.3	36.7	50.3	0.0	0.0	12.2	0.0	0.0	8.4	15.4	10.1
Incr Delay (d2), s/veh	0.2	0.0	0.1	5.2	0.0	0.0	0.8	1.1	0.4	0.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.3	0.6	5.9	0.0	0.0	0.9	0.3	0.1	0.5	10.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	36.3	36.8	55.5	0.0	0.0	13.0	1.1	0.4	8.6	16.8	10.2
LnGrp LOS	D	D	D	E	A	A	B	A	A	A	B	B
Approach Vol, veh/h	91			187			1390			1373		
Approach Delay, s/veh	38.7			55.5			1.9			16.2		
Approach LOS	D			E			A			B		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	77.8		32.5	10.3	77.2	9.6	22.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	56.5		37.5	9.5	56.5	9.5	22.5				
Max Q Clear Time (g_c+I1), s	3.5	2.0		3.6	4.7	30.4	4.9	16.9				
Green Ext Time (p_c), s	0.0	24.1		0.1	0.1	17.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay				12.8								
HCM 6th LOS				B								

Timings 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Future PM- Improvements

09/20/2021

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	20	2	41	5	159	1482	73	40	1191	24
Future Volume (vph)	20	2	41	5	159	1482	73	40	1191	24
Lane Group Flow (vph)	22	74	0	70	173	1611	79	43	1295	26
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	47.5	47.5	42.5	42.5	15.0	27.5	27.5	15.0	27.5	27.5
Total Split (s)	47.5	47.5	47.5	47.5	15.0	57.5	57.5	15.0	57.5	57.5
Total Split (%)	39.6%	39.6%	39.6%	39.6%	12.5%	47.9%	47.9%	12.5%	47.9%	47.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.19	0.37		0.54	0.45	0.62	0.07	0.18	0.55	0.02
Control Delay	53.2	17.2		54.4	10.4	4.9	0.6	5.5	11.3	1.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	17.2		54.4	10.4	4.9	0.6	5.5	11.3	1.5
Queue Length 50th (ft)	16	2		39	10	155	0	5	132	0
Queue Length 95th (ft)	42	47		85	m60	m240	m0	m19	313	m1
Internal Link Dist (ft)		189		1223		480			645	
Turn Bay Length (ft)					155		315	190		175
Base Capacity (vph)	483	603		488	384	2612	1184	291	2346	1071
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	0.05	0.12		0.14	0.45	0.62	0.07	0.15	0.55	0.02

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

			
Ø1	Ø2 (R)		Ø4
15 s	57.5 s		47.5 s
			
Ø5	Ø6 (R)		Ø8
15 s	57.5 s		47.5 s

HCM 6th Signalized Intersection Summary

3: Bells Ferry Rd & Hunter Trl/Red Barn Rd

Future PM- Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	2	66	41	5	18	159	1482	73	40	1191	24
Future Volume (veh/h)	20	2	66	41	5	18	159	1482	73	40	1191	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	22	2	0	45	5	0	173	1611	0	43	1295	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	142	92		120	7		447	2668		291	2634	
Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.00	0.04	0.78	0.00	0.06	1.00	0.00
Sat Flow, veh/h	1411	1870	0	1278	142	0	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	22	2	0	50	0	0	173	1611	0	43	1295	0
Grp Sat Flow(s),veh/h/ln	1411	1870	0	1420	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	0.0	0.1	0.0	4.1	0.0	0.0	2.5	23.4	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.1	0.0	4.2	0.0	0.0	2.5	23.4	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.00	0.90		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	92		127	0		447	2668		291	2634	
V/C Ratio(X)	0.15	0.02		0.39	0.00		0.39	0.60		0.15	0.49	
Avail Cap(c_a), veh/h	567	655		563	0		511	2668		373	2634	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.9	54.3	0.0	56.3	0.0	0.0	2.3	5.4	0.0	4.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.1	0.0	2.0	0.0	0.0	0.5	1.0	0.0	0.2	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.0	1.6	0.0	0.0	0.6	6.1	0.0	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	54.4	0.0	58.3	0.0	0.0	2.9	6.4	0.0	4.8	0.7	0.0
LnGrp LOS	E	D		E	A		A	A		A	A	
Approach Vol, veh/h	24		A	50		A	1784		A	1338		A
Approach Delay, s/veh	55.3			58.3			6.1			0.8		
Approach LOS	E			E			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	99.3		11.4	10.5	98.1		11.4				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	52.0		42.0	9.5	52.0		42.0				
Max Q Clear Time (g_c+I1), s	2.6	25.4		3.4	4.5	2.0		6.2				
Green Ext Time (p_c), s	0.0	20.9		0.0	0.2	25.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings

Future PM- Improvements

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

09/20/2021

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔	↖	↗	↗	↖	↗	↖
Traffic Volume (vph)	421	7	9	17	5	8	1259	23	14	867	646
Future Volume (vph)	421	7	9	17	5	8	1259	23	14	867	646
Lane Group Flow (vph)	0	437	9	0	29	8	1285	23	14	885	659
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8		2		2	6		6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	42.5	42.5	42.5	43.5	43.5	15.0	36.5	36.5	15.0	23.5	23.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	15.0	56.0	56.0	15.0	56.0	56.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	12.5%	46.7%	46.7%	12.5%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio		0.95	0.02		0.06	0.03	0.73	0.03	0.08	0.49	0.59
Control Delay		69.9	0.0		20.9	12.9	27.2	0.0	19.2	23.4	8.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		69.9	0.0		20.9	12.9	27.2	0.0	19.2	23.4	8.0
Queue Length 50th (ft)		320	0		11	3	367	0	6	211	134
Queue Length 95th (ft)		#522	0		32	10	563	0	m12	290	152
Internal Link Dist (ft)		426			188		904			347	
Turn Bay Length (ft)			135			195		100	165		200
Base Capacity (vph)		478	620		482	338	1753	819	218	1821	1117
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		0.91	0.01		0.06	0.02	0.73	0.03	0.06	0.49	0.59

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

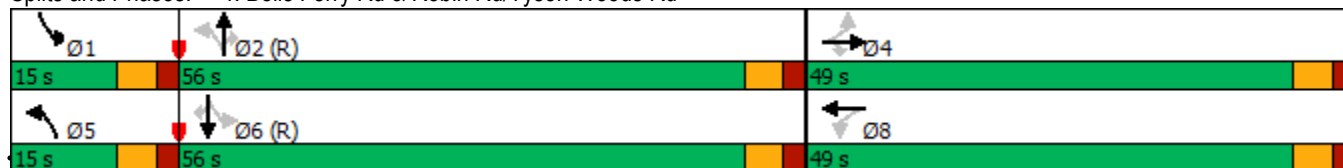
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd



Future PM- Improvements 3:35 pm 09/01/2021

Synchro 11 Report

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HCM 6th Signalized Intersection Summary

4: Bells Ferry Rd & Robin Rd/Tyson Woods Rd

Future PM- Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	421	7	9	17	5	7	8	1259	23	14	867	646
Future Volume (veh/h)	421	7	9	17	5	7	8	1259	23	14	867	646
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	430	7	0	17	5	7	8	1285	23	14	885	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	516	7		378	113	141	390	1775	792	180	1795	
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.01	0.52	0.52	0.03	1.00	0.00
Sat Flow, veh/h	1398	23	1585	1012	346	432	1711	3413	1522	1711	3413	1522
Grp Volume(v), veh/h	437	0	0	29	0	0	8	1285	23	14	885	0
Grp Sat Flow(s),veh/h/ln	1421	0	1585	1790	0	0	1711	1706	1522	1711	1706	1522
Q Serve(g_s), s	34.5	0.0	0.0	0.0	0.0	0.0	0.3	34.8	0.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	35.8	0.0	0.0	1.3	0.0	0.0	0.3	34.8	0.9	0.5	0.0	0.0
Prop In Lane	0.98		1.00	0.59		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	524	0		633	0	0	390	1775	792	180	1795	
V/C Ratio(X)	0.83	0.00		0.05	0.00	0.00	0.02	0.72	0.03	0.08	0.49	
Avail Cap(c_a), veh/h	574	0		687	0	0	509	1775	792	288	1795	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.1	0.0	0.0	27.6	0.0	0.0	13.3	22.2	14.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	9.6	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.1	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	0.0	0.6	0.0	0.0	0.1	13.4	0.3	0.2	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	0.0	0.0	27.7	0.0	0.0	13.3	24.8	14.1	18.2	1.0	0.0
LnGrp LOS	D	A		C	A	A	B	C	B	B	A	
Approach Vol, veh/h		437	A		29			1316			899	A
Approach Delay, s/veh		48.7			27.7			24.5			1.2	
Approach LOS		D			C			C			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	67.9		44.7	6.7	68.6		44.7				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	9.5	50.5		43.5	9.5	50.5		43.5				
Max Q Clear Time (g_c+I1), s	2.5	36.8		37.8	2.3	2.0		3.3				
Green Ext Time (p_c), s	0.0	10.4		1.4	0.0	14.4		0.1				

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings 5: Bells Ferry Rd & SR 92

Future PM- Improvements

09/20/2021

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	452	1152	226	197	1440	263	338	1012	239	519	115
Future Volume (vph)	452	1152	226	197	1440	263	338	1012	239	519	115
Lane Group Flow (vph)	514	1335	231	224	1636	299	384	1320	272	590	131
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6			4		4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	6.0	5.0	6.0	6.0
Minimum Split (s)	15.0	47.5	47.5	20.0	48.5	48.5	15.0	47.5	15.0	49.5	49.5
Total Split (s)	34.0	75.5	75.5	29.0	70.5	70.5	26.0	58.5	17.0	49.5	49.5
Total Split (%)	18.9%	41.9%	41.9%	16.1%	39.2%	39.2%	14.4%	32.5%	9.4%	27.5%	27.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.98	0.75	0.38	1.00	0.93	0.48	1.03	0.94	0.95	0.72	0.29
Control Delay	122.6	43.6	7.1	135.6	66.1	27.2	130.0	75.0	87.4	68.4	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.6	43.6	7.1	135.6	66.1	27.2	130.0	75.0	87.4	68.4	11.1
Queue Length 50th (ft)	327	536	19	~279	684	155	~248	555	117	340	7
Queue Length 95th (ft)	#438	450	55	#450	727	242	#351	601	#206	402	62
Internal Link Dist (ft)		2014			1129			1131		1589	
Turn Bay Length (ft)	500		260	480		180	285		510		250
Base Capacity (vph)	525	1777	612	224	1750	626	372	1410	285	824	461
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.75	0.38	1.00	0.93	0.48	1.03	0.94	0.95	0.72	0.28

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

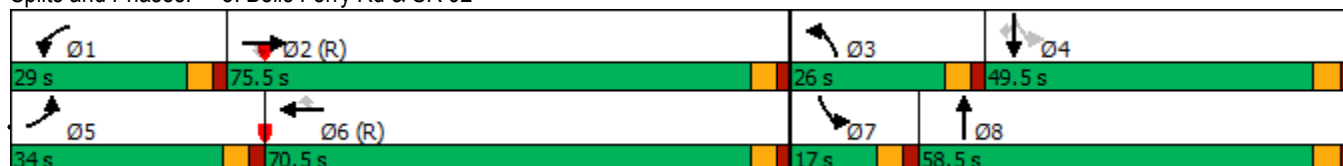
~ Volume exceeds capacity, queue is theoretically infinite.

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: 5: Bells Ferry Rd & SR 92



HCM 6th Signalized Intersection Summary

5: Bells Ferry Rd & SR 92

Future PM- Improvements

09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	1152	226	197	1440	263	338	1012	150	239	519	115
Future Volume (veh/h)	452	1152	226	197	1440	263	338	1012	150	239	519	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	514	1309	257	224	1636	299	384	1150	0	272	590	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	542	2252	636	223	1913	594	378	1301		329	735	
Arrive On Green	0.21	0.56	0.56	0.13	0.39	0.39	0.11	0.27	0.00	0.06	0.22	0.00
Sat Flow, veh/h	3421	5389	1522	1711	4904	1522	3319	5065	0	3319	3413	1522
Grp Volume(v), veh/h	514	1309	257	224	1636	299	384	1150	0	272	590	0
Grp Sat Flow(s),veh/h/ln	1711	1796	1522	1711	1635	1522	1659	1635	0	1659	1706	1522
Q Serve(g_s), s	26.7	28.7	17.4	23.5	55.0	26.8	20.5	40.5	0.0	11.5	29.5	0.0
Cycle Q Clear(g_c), s	26.7	28.7	17.4	23.5	55.0	26.8	20.5	40.5	0.0	11.5	29.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	542	2252	636	223	1913	594	378	1301		329	735	
V/C Ratio(X)	0.95	0.58	0.40	1.00	0.86	0.50	1.02	0.88		0.83	0.80	
Avail Cap(c_a), veh/h	542	2252	636	223	1913	594	378	1444		329	834	
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	70.3	29.6	27.1	78.3	50.2	41.7	79.8	63.4	0.0	54.8	67.0	0.0
Incr Delay (d2), s/veh	24.5	1.0	1.7	61.0	5.1	3.0	50.4	6.4	0.0	15.9	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	11.5	6.1	14.0	23.0	10.5	11.3	17.4	0.0	5.5	13.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.8	30.6	28.8	139.2	55.4	44.7	130.1	69.8	0.0	70.7	72.1	0.0
LnGrp LOS	F	C	C	F	E	D	F	E		E	E	
Approach Vol, veh/h	2080			2159			1534			A		
Approach Delay, s/veh	46.3			62.6			84.9			71.6		
Approach LOS	D			E			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	80.7	26.0	44.3	34.0	75.7	17.0	53.3				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	23.5	70.0	20.5	44.0	28.5	65.0	11.5	53.0				
Max Q Clear Time (g_c+I1), s	25.5	30.7	22.5	31.5	28.7	57.0	13.5	42.5				
Green Ext Time (p_c), s	0.0	24.4	0.0	2.9	0.0	7.4	0.0	5.3				

Intersection Summary

HCM 6th Ctrl Delay 63.8

HCM 6th LOS E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings 6: Robin Rd Ext/Robin Rd & SR 92

Future PM- Improvements
09/20/2021



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	303	1267	96	1758	51	59	12	98	17	442
Future Volume (vph)	303	1267	96	1758	51	59	12	98	17	442
Lane Group Flow (vph)	333	1467	105	1932	56	65	46	108	19	486
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	NA	pm+ov
Protected Phases	5	2	1	6			8		4	5
Permitted Phases					6	8		4		4
Detector Phase	5	2	1	6	6	8	8	4	4	5
Switch Phase										
Minimum Initial (s)	5.0	15.0	5.0	15.0	15.0	6.0	6.0	6.0	6.0	5.0
Minimum Split (s)	15.0	29.5	15.0	33.5	33.5	47.5	47.5	44.5	44.5	15.0
Total Split (s)	36.0	107.5	25.0	96.5	96.5	47.5	47.5	47.5	47.5	36.0
Total Split (%)	20.0%	59.7%	13.9%	53.6%	53.6%	26.4%	26.4%	26.4%	26.4%	20.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag					Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes
Recall Mode	None	C-Min	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.70	0.43	0.68	0.77	0.07	0.43	0.22	0.73	0.09	0.72
Control Delay	67.6	12.5	68.2	20.2	1.5	81.9	30.3	103.4	69.8	48.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.6	12.5	68.2	20.2	1.5	81.9	30.3	103.4	69.8	48.6
Queue Length 50th (ft)	361	249	130	209	1	73	14	126	21	471
Queue Length 95th (ft)	#502	360	m140	m266	m2	124	56	192	48	599
Internal Link Dist (ft)		1477		2014			245		1168	
Turn Bay Length (ft)	720		355		310			85		515
Base Capacity (vph)	477	3403	188	2499	817	323	413	315	434	678
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.43	0.56	0.77	0.07	0.20	0.11	0.34	0.04	0.72

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Robin Rd Ext/Robin Rd & SR 92



Future PM- Improvements 3:35 pm 09/01/2021

Synchro 11 Report
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HCM 6th Signalized Intersection Summary 6: Robin Rd Ext/Robin Rd & SR 92

Future PM- Improvements
09/20/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	303	1267	68	96	1758	51	59	12	30	98	17	442
Future Volume (veh/h)	303	1267	68	96	1758	51	59	12	30	98	17	442
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	333	1392	0	105	1932	56	65	13	33	108	19	486
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	290	2960		122	2479	770	242	109	277	328	436	638
Arrive On Green	0.17	0.60	0.00	0.14	1.00	1.00	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1711	5065	0	1711	4904	1522	894	468	1188	1360	1870	1585
Grp Volume(v), veh/h	333	1392	0	105	1932	56	65	0	46	108	19	486
Grp Sat Flow(s),veh/h/ln	1711	1635	0	1711	1635	1522	894	0	1656	1360	1870	1585
Q Serve(g_s), s	30.5	28.3	0.0	10.8	0.0	0.0	10.9	0.0	3.9	12.2	1.4	42.0
Cycle Q Clear(g_c), s	30.5	28.3	0.0	10.8	0.0	0.0	12.3	0.0	3.9	16.2	1.4	42.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	290	2960		122	2479	770	242	0	387	328	436	638
V/C Ratio(X)	1.15	0.47		0.86	0.78	0.07	0.27	0.00	0.12	0.33	0.04	0.76
Avail Cap(c_a), veh/h	290	2960		185	2479	770	242	0	387	328	436	638
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.29	0.29	0.29	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.8	19.7	0.0	76.3	0.0	0.0	58.2	0.0	54.4	60.8	53.4	46.3
Incr Delay (d2), s/veh	99.3	0.5	0.0	7.5	0.7	0.1	0.6	0.0	0.1	0.6	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	10.7	0.0	4.7	0.2	0.0	2.6	0.0	1.7	4.3	0.7	20.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	174.0	20.3	0.0	83.8	0.7	0.1	58.8	0.0	54.5	61.4	53.5	51.7
LnGrp LOS	F	C		F	A	A	E	A	D	E	D	D
Approach Vol, veh/h	1725		A	2093			111			613		
Approach Delay, s/veh	50.0			4.9			57.0			53.4		
Approach LOS	D			A			E			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.3	114.2		47.5	36.0	96.5		47.5				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	19.5	102.0		42.0	30.5	91.0		42.0				
Max Q Clear Time (g_c+I1), s	12.8	30.3		44.0	32.5	2.0		14.3				
Green Ext Time (p_c), s	0.1	30.7		0.0	0.0	59.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	0	1688	1513	14
Future Vol, veh/h	0	14	0	1688	1513	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Free
Storage Length	-	0	-	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	0	1835	1645	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	823	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	317	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	317	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.9	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 317		-			
HCM Lane V/C Ratio	- 0.048		-			
HCM Control Delay (s)	- 16.9		-			
HCM Lane LOS	- C		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↗↗	↗		↗↗	↗
Traffic Vol, veh/h	0	0	50	0	0	0	0	1520	0	0	1205	26
Future Vol, veh/h	0	0	50	0	0	0	0	1520	0	0	1205	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Free	-	-	Free
Storage Length	-	-	0	-	-	0	-	-	0	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	54	0	0	0	0	1652	0	0	1310	28

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	655	-	-	826	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	-	-
Pot Cap-1 Maneuver	0	0	409	0	0	315	0	0
Stage 1	0	0	-	0	0	-	0	0
Stage 2	0	0	-	0	0	-	0	0
Platoon blocked, %								
Mov Cap-1 Maneuver	-	-	409	-	-	315	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	0	0	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBT	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	409	-	-
HCM Lane V/C Ratio	-	0.133	-	-
HCM Control Delay (s)	-	15.1	0	-
HCM Lane LOS	-	C	A	-
HCM 95th %tile Q(veh)	-	0.5	-	-

HCM 6th TWSC
9: Site Drwy 2/The Quincy E Drwy & Buice Lake Parkway

Future PM- Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	61	0	25	162	0	1	0	28	0	0	0
Future Vol, veh/h	0	61	0	25	162	0	1	0	28	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	66	0	27	176	0	1	0	30	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	176	0	0	66	0	0	296	296	66	311	296	176
Stage 1	-	-	-	-	-	-	66	66	-	230	230	-
Stage 2	-	-	-	-	-	-	230	230	-	81	66	-
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	1400	-	-	1536	-	-	656	616	998	642	616	867
Stage 1	-	-	-	-	-	-	945	840	-	773	714	-
Stage 2	-	-	-	-	-	-	773	714	-	927	840	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1400	-	-	1536	-	-	647	604	998	613	604	867
Mov Cap-2 Maneuver	-	-	-	-	-	-	647	604	-	613	604	-
Stage 1	-	-	-	-	-	-	945	840	-	773	700	-
Stage 2	-	-	-	-	-	-	758	700	-	899	840	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1			8.8			0		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	980	1400	-	-	1536	-	-	-				
HCM Lane V/C Ratio	0.032	-	-	-	0.018	-	-	-				
HCM Control Delay (s)	8.8	0	-	-	7.4	0	-	0				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	-				

HCM 6th TWSC
10: Future Owl Creek Pkwy & Buice Lake Parkway

Future PM- Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	42	0	15	148	0	1	0	19	0	0	0
Future Vol, veh/h	0	42	0	15	148	0	1	0	19	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	0	16	161	0	1	0	21	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	161	0	0	46	0	0	239	239	46	250	239	161
Stage 1	-	-	-	-	-	-	46	46	-	193	193	-
Stage 2	-	-	-	-	-	-	193	193	-	57	46	-
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	1418	-	-	1562	-	-	715	662	1023	703	662	884
Stage 1	-	-	-	-	-	-	968	857	-	809	741	-
Stage 2	-	-	-	-	-	-	809	741	-	955	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1418	-	-	1562	-	-	709	655	1023	683	655	884
Mov Cap-2 Maneuver	-	-	-	-	-	-	709	655	-	683	655	-
Stage 1	-	-	-	-	-	-	968	857	-	809	733	-
Stage 2	-	-	-	-	-	-	800	733	-	936	857	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.7			8.7			0		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1001	1418	-	-	1562	-	-	-				
HCM Lane V/C Ratio	0.022	-	-	-	0.01	-	-	-				
HCM Control Delay (s)	8.7	0	-	-	7.3	0	-	0				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-				

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	71	177	11	17	0
Future Vol, veh/h	0	71	177	11	17	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	77	192	12	18	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	204	0	-	0	275	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	77	-
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	1368	-	-	-	715	843
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	946	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1368	-	-	-	715	843
Mov Cap-2 Maneuver	-	-	-	-	715	-
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	946	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1368	-	-	-	715	
HCM Lane V/C Ratio	-	-	-	-	0.026	
HCM Control Delay (s)	0	-	-	-	10.2	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

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	0	32	0	22	50	106	0	0	9	30	0	0
Future Vol, veh/h	0	32	0	22	50	106	0	0	9	30	0	0
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	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	35	0	24	54	115	0	0	10	33	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	169	0	0	35	0	0	195	252	35	200	195	112
Stage 1	-	-	-	-	-	-	35	35	-	160	160	-
Stage 2	-	-	-	-	-	-	160	217	-	40	35	-
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	1409	-	-	1576	-	-	764	651	1038	759	700	941
Stage 1	-	-	-	-	-	-	981	866	-	842	766	-
Stage 2	-	-	-	-	-	-	842	723	-	975	866	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1409	-	-	1576	-	-	755	641	1038	743	690	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	755	641	-	743	690	-
Stage 1	-	-	-	-	-	-	981	866	-	842	755	-
Stage 2	-	-	-	-	-	-	829	712	-	966	866	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.9			8.5			10.1		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1038	1409	-	-	1576	-	-	743				
HCM Lane V/C Ratio	0.009	-	-	-	0.015	-	-	0.044				
HCM Control Delay (s)	8.5	0	-	-	7.3	-	-	10.1				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	19	0	15	27	8	0	0	9	4	0	0
Future Vol, veh/h	0	19	0	15	27	8	0	0	9	4	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	0	16	29	9	0	0	10	4	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	21	0	0	87	91	21	92	87	34
Stage 1	-	-	-	-	-	-	21	21	-	66	66	-
Stage 2	-	-	-	-	-	-	66	70	-	26	21	-
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	1572	-	-	1595	-	-	899	799	1056	892	803	1039
Stage 1	-	-	-	-	-	-	998	878	-	945	840	-
Stage 2	-	-	-	-	-	-	945	837	-	992	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1595	-	-	892	791	1056	877	795	1039
Mov Cap-2 Maneuver	-	-	-	-	-	-	892	791	-	877	795	-
Stage 1	-	-	-	-	-	-	998	878	-	945	832	-
Stage 2	-	-	-	-	-	-	936	829	-	983	878	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.2			8.4			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1056	1572	-	-	1595	-	-	877				
HCM Lane V/C Ratio	0.009	-	-	-	0.01	-	-	0.005				
HCM Control Delay (s)	8.4	0	-	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection

Int Delay, s/veh 4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	15	12	0	9
Future Vol, veh/h	10	0	15	12	0	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	16	13	0	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	11
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1608	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1608	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1070	-	-	1608	-
HCM Lane V/C Ratio	0.009	-	-	0.01	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th TWSC
15: Future Owl Creek Pkwy & Site Drwy 7

Future PM- Improvements
09/20/2021

Intersection

Int Delay, s/veh 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	14	5	98	13	1
Future Vol, veh/h	26	14	5	98	13	1
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	-	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	15	5	107	14	1

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	34	5	0
Stage 1	5	-	-
Stage 2	29	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	979	1078	-
Stage 1	1018	-	-
Stage 2	994	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	970	1078	-
Mov Cap-2 Maneuver	970	-	-
Stage 1	1018	-	-
Stage 2	985	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1005	1478
HCM Lane V/C Ratio	-	-	0.043	0.01
HCM Control Delay (s)	-	-	8.7	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
16: Future Owl Creek Pkwy & Site Drwy 11/Site Drwy 8

Future PM- Improvements

09/20/2021

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	4	0	0	5	8	98	0	1	26	0
Future Vol, veh/h	0	0	4	0	0	5	8	98	0	1	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	0	0	5	9	107	0	1	28	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	158	155	28	157	155	107	28	0	0	107	0	0
Stage 1	30	30	-	125	125	-	-	-	-	-	-	-
Stage 2	128	125	-	32	30	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	808	737	1047	809	737	947	1585	-	-	1484	-	-
Stage 1	987	870	-	879	792	-	-	-	-	-	-	-
Stage 2	876	792	-	984	870	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	799	732	1047	802	732	947	1585	-	-	1484	-	-
Mov Cap-2 Maneuver	799	732	-	802	732	-	-	-	-	-	-	-
Stage 1	981	869	-	874	787	-	-	-	-	-	-	-
Stage 2	866	787	-	979	869	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	8.5		8.8		0.5		0.3					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1585	-	-	1047	947	1484	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.004	0.006	0.001	-	-				
HCM Control Delay (s)	7.3	0	-	8.5	8.8	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-				

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	9	10	12
Future Vol, veh/h	0	0	0	9	10	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	10	11	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	11	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	1070	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	1070	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		-			
HCM Lane V/C Ratio	-		-			
HCM Control Delay (s)	-		0			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		-			

HCM 6th TWSC
18: Future Owl Creek Pkwy & Site Drwy 10/W Pine Ridge Dr

Future PM- Improvements

09/20/2021

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	8	0	0	8	0	0	0	0	0	0	10
Future Vol, veh/h	9	8	0	0	8	0	0	0	0	0	0	10
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	9	0	0	9	0	0	0	0	0	0	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	9	0	0	9	0	0	44	38	9	38	38	9
Stage 1	-	-	-	-	-	-	29	29	-	9	9	-
Stage 2	-	-	-	-	-	-	15	9	-	29	29	-
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	1611	-	-	1611	-	-	958	854	1073	967	854	1073
Stage 1	-	-	-	-	-	-	988	871	-	1012	888	-
Stage 2	-	-	-	-	-	-	1005	888	-	988	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1611	-	-	1611	-	-	944	849	1073	962	849	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	944	849	-	962	849	-
Stage 1	-	-	-	-	-	-	982	866	-	1006	888	-
Stage 2	-	-	-	-	-	-	995	888	-	982	866	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.8			0			0			8.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1611	-	-	1611	-	-	1073				
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.01				
HCM Control Delay (s)	0	7.2	0	-	0	-	-	8.4				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0				

Traffic Volume Worksheets

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

1. Eagle Dr @ Bells Ferry

A.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Eagle Drive Eastbound				Eagle Drive Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	67	216	335	618	475	893	14	1382	23	57	72	152	329	34	178	541
Existing 2021 Counts:	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Growth Factor (%):	9	18	18	45	0	6	0	6	0	0	3	3	6	0	0	6
Madison Homes Trips:	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	4	7	7	18	0	2	0	2	0	0	1	1	2	0	0	2
Waverly Trips:	2	5	5	12	0	1	0	1	0	0	1	1	1	0	0	1
Hunter Trail Trips:	4	8	8	20	0	3	0	3	0	0	1	1	3	0	0	3
Southwest Pod Trips:	90	264	388	742	494	941	15	1430	24	59	81	164	354	35	185	574
No-Build 2025 Volumes:	5	9	9	23	0	3	0	3	0	0	1	1	3	0	0	3
Total New Trips (South Parcel):	9	18	18	45	0	9	0	9	0	0	5	5	9	0	0	9
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	104	291	415	810	494	953	15	1462	24	59	87	170	366	35	185	586
Future 2025 Traffic Volumes:																

P.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Eagle Drive Eastbound				Eagle Drive Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	200	666	392	1258	408	516	24	948	41	112	141	294	369	131	337	837
Existing 2021 Counts:	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Growth Factor (%):	6	12	12	30	0	21	0	21	0	0	10	10	21	0	0	21
Madison Homes Trips:	0	1	1	2	0	1	0	1	0	0	1	1	1	0	0	1
The Quincy Apartment Trips:	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	2	4	4	10	0	7	0	7	0	0	4	4	7	0	0	7
Waverly Trips:	1	3	3	7	0	5	0	5	0	0	2	2	5	0	0	5
Hunter Trail Trips:	3	5	5	13	0	9	0	9	0	0	4	4	9	0	0	9
Southwest Pod Trips:	208	693	408	1309	425	537	25	987	43	117	147	307	384	136	351	871
No-Build 2025 Volumes:	3	5	5	13	0	9	0	9	0	0	5	5	9	0	0	9
Total New Trips (South Parcel):	8	16	16	40	0	20	0	20	0	0	10	10	20	0	0	20
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	219	714	429	1362	425	566	25	1016	43	117	162	322	413	136	351	900
Future 2025 Traffic Volumes:																

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

2. Bells Ferry @ Old Bascomb

A.M. Peak Hour

Condition	Bells Ferry Road				Bells Ferry Road				Buice Lake Parkway				Old Bascomb Court			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	35	561	188	784	35	1099	7	1141	22	8	95	125	146	3	6	155
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	17	0	0	17	0	0	15	15	45	8	49	102	0	3	0	3
The Quincy Apartment Trips:	2	0	0	2	0	0	1	1	3	0	6	9	0	0	0	0
The Quincy Retail & Office Trips:	2	0	0	2	0	0	0	0	1	0	1	2	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	12	0	0	12	0	0	5	5	19	3	40	62	0	1	0	1
Hunter Trail Trips:	0	11	1	12	0	3	0	3	0	1	0	1	0	0	0	0
Southwest Pod Trips:	0	6	0	6	0	2	5	7	14	3	0	17	0	1	0	1
No-Build 2025 Volumes:	69	601	197	867	36	1149	33	1218	105	23	195	323	152	8	6	166
Total New Trips (South Parcel):	0	23	4	27	0	7	0	7	0	0	0	0	1	0	0	1
Total New Trips (North Parcel):	0	0	0	0	0	9	14	23	45	8	0	53	0	4	0	4
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	69	624	201	894	36	1165	47	1248	150	31	195	376	153	12	6	171

P.M. Peak Hour

Condition	Bells Ferry Road				Bells Ferry Road				Buice Lake Parkway				Old Bascomb Court			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	91	1061	129	1281	53	1136	20	1209	10	5	25	40	117	32	14	163
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	56	0	0	56	0	0	51	51	30	5	33	68	0	9	0	9
The Quincy Apartment Trips:	7	0	0	7	0	0	3	3	2	0	4	6	0	1	0	1
The Quincy Retail & Office Trips:	2	0	0	2	0	1	0	1	2	0	3	5	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	39	0	0	39	0	0	18	18	11	2	23	36	0	3	0	3
Hunter Trail Trips:	0	7	1	8	0	12	0	12	0	1	0	1	1	1	0	2
Southwest Pod Trips:	0	4	0	4	0	7	16	23	9	2	0	11	0	4	0	4
No-Build 2025 Volumes:	95	1104	134	1333	55	1182	21	1258	10	5	26	41	122	33	15	170
Total New Trips (South Parcel):	0	13	2	15	0	23	0	23	0	0	0	0	4	0	0	4
Total New Trips (North Parcel):	0	0	0	0	0	20	30	50	40	7	0	47	0	8	0	8
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	95	1117	136	1348	55	1225	51	1331	50	12	26	88	126	41	15	182

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

3. Bells Ferry @ Hunter Trl

A.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Hunter Trail Eastbound				Red Barn Road Westbound			
	L		R		L		R		L		R		L		R	
	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot
Existing 2021 Counts:	9	709	32	750	26	1459	6	1491	3	0	4	7	64	0	31	95
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	16	16	0	32	2	48	0	50	0	2	48	50	0	1	1	2
The Quincy Apartment Trips:	0	2	0	2	0	6	0	6	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	11	0	11	1	39	0	40	0	0	0	0	0	0	0	0
Hunter Trail Trips:	8	0	0	8	0	0	4	4	12	1	25	38	0	0	0	0
Southwest Pod Trips:	14	0	0	14	0	0	2	2	6	1	41	48	0	0	0	0
No-Build 2025 Volumes:	47	769	33	849	30	1612	12	1654	21	4	118	143	67	1	33	101
Total New Trips (South Parcel):	15	0	0	15	0	3	6	9	27	2	34	63	0	0	0	0
Total New Trips (North Parcel):	50	0	0	50	2	48	0	50	0	2	48	50	0	2	0	2
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	112	769	33	914	32	1663	18	1713	48	8	200	256	67	3	33	103

P.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Hunter Trail Eastbound				Red Barn Road Westbound			
	L		R		L		R		L		R		L		R	
	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot
Existing 2021 Counts:	6	1424	70	1500	37	1096	6	1139	5	0	5	10	39	0	17	56
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	54	54	0	108	1	32	0	33	0	1	32	33	0	2	2	4
The Quincy Apartment Trips:	0	6	0	6	0	4	0	4	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	38	0	38	1	23	0	24	0	0	0	0	0	0	1	1
Hunter Trail Trips:	25	0	0	25	0	0	13	13	7	0	14	21	0	1	0	1
Southwest Pod Trips:	47	0	0	47	0	0	7	7	4	1	27	32	0	1	0	1
No-Build 2025 Volumes:	6	1482	73	1561	39	1141	6	1186	5	0	5	10	41	0	18	59
Total New Trips (South Parcel):	47	0	0	47	0	8	18	26	15	1	19	35	0	2	0	2
Total New Trips (North Parcel):	106	0	0	106	1	42	0	43	0	1	42	43	0	3	0	3
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	159	1482	73	1714	40	1191	24	1255	20	2	66	88	41	5	18	64

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

4. Bells Ferry @ Robin Rd

A.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Robin Road Eastbound				Tyson Woods Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	5	501	4	510	3	1282	597	1882	346	4	10	360	23	10	9	42
Existing 2021 Counts:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Growth Factor (%):	0	26	0	26	0	77	18	95	6	0	0	6	0	0	0	0
Madison Homes Trips:	0	2	0	2	0	5	1	6	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	9	0	9	0	32	7	39	2	0	0	2	0	0	0	0
Waverly Trips:	0	6	0	6	0	20	5	25	1	0	0	1	0	0	0	0
Hunter Trail Trips:	0	11	0	11	0	33	8	41	3	0	0	3	0	0	0	0
Southwest Pod Trips:	5	577	4	586	3	1502	660	2165	372	4	10	386	24	10	9	43
No-Build 2025 Volumes:	0	12	0	12	0	39	9	48	3	0	0	3	0	0	0	0
Total New Trips (South Parcel):	0	40	0	40	0	77	18	95	9	0	0	9	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	5	629	4	638	3	1618	687	2308	384	4	10	398	24	10	9	43

P.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				Robin Road Eastbound				Tyson Woods Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	8	1091	22	1121	13	747	601	1361	377	7	9	393	16	5	7	28
Existing 2021 Counts:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Growth Factor (%):	0	87	0	87	0	51	12	63	21	0	0	21	0	0	0	0
Madison Homes Trips:	0	5	0	5	0	3	1	4	1	0	0	1	0	0	0	0
The Quincy Apartment Trips:	0	2	0	2	0	3	1	4	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	31	0	31	0	18	4	22	7	0	0	7	0	0	0	0
Waverly Trips:	0	20	0	20	0	12	3	15	5	0	0	5	0	0	0	0
Hunter Trail Trips:	0	38	0	38	0	22	5	27	9	0	0	9	0	0	0	0
Southwest Pod Trips:	8	1135	23	1166	14	777	625	1416	392	7	9	408	17	5	7	29
No-Build 2025 Volumes:	0	38	0	38	0	22	5	27	9	0	0	9	0	0	0	0
Total New Trips (South Parcel):	0	86	0	86	0	68	16	84	20	0	0	20	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	8	1259	23	1290	14	867	646	1527	421	7	9	437	17	5	7	29

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
September 2021

5. Bells Ferry @ SR 92

A.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				SR 92 (Albama Road) Eastbound				SR 92 (Albama Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Existing 2021 Counts:	115	235	87	437	241	762	15	1018	203	1775	323	2301	111	571	73	755
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	9	0	9	38	27	12	77	4	0	0	4	0	0	13	13
The Quincy Apartment Trips:	0	1	0	1	2	2	1	5	0	0	0	0	0	0	1	1
The Quincy Retail & Office Trips:	0	1	0	1	1	0	0	1	0	0	0	0	0	0	1	1
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	3	0	3	16	11	5	32	1	0	0	1	0	0	5	5
Hunter Trail Trips:	0	2	0	2	10	7	3	20	1	0	0	1	0	0	3	3
Southwest Pod Trips:	0	4	0	4	16	12	5	33	2	0	0	2	0	0	6	6
No-Build 2025 Volumes:	120	265	91	476	334	852	42	1228	219	1847	336	2402	116	594	105	815
Total New Trips (South Parcel):	0	4	0	4	19	14	6	39	2	0	0	2	0	0	6	6
Total New Trips (North Parcel):	0	14	0	14	38	27	12	77	6	0	0	6	0	0	20	20
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	120	283	91	494	391	893	60	1344	227	1847	336	2410	116	594	131	841

P.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				SR 92 (Albama Road) Eastbound				SR 92 (Albama Road) Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Existing 2021 Counts:	325	930	144	1399	186	468	97	751	416	1107	217	1740	189	1384	194	1767
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	31	0	31	25	18	8	51	14	0	0	14	0	0	43	43
The Quincy Apartment Trips:	0	2	0	2	2	1	0	3	1	0	0	1	0	0	3	3
The Quincy Retail & Office Trips:	0	1	0	1	2	1	0	3	0	0	0	0	0	0	1	1
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	11	0	11	9	6	3	18	5	0	0	5	0	0	15	15
Hunter Trail Trips:	0	7	0	7	6	4	2	12	3	0	0	3	0	0	10	10
Southwest Pod Trips:	0	13	0	13	11	8	3	22	6	0	0	6	0	0	19	19
No-Build 2025 Volumes:	338	968	150	1456	194	487	101	782	433	1152	226	1811	197	1440	202	1839
Total New Trips (South Parcel):	0	14	0	14	11	8	3	22	6	0	0	6	0	0	19	19
Total New Trips (North Parcel):	0	30	0	30	34	24	11	69	13	0	0	13	0	0	42	42
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	338	1012	150	1500	239	519	115	873	452	1152	226	1830	197	1440	263	1900

Number of Years = 4
Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

6. SR 92 @ Robin Rd

A.M. Peak Hour

Condition	Robin Road Extension					Robin Road					SR 92 (Albama Road)					SR 92 (Albama Road)				
	Northbound					Southbound					Eastbound					Westbound				
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot	
Existing 2021 Counts:	22	10	5	37		55	16	403	474		304	1487	64	1855		38	752	12	802	
Growth Factor (%):	1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0		
Madison Homes Trips:	0	0	0	0		0	0	18	18		6	4	0	10		0	12	0	12	
The Quincy Apartment Trips:	0	0	0	0		0	0	1	1		0	0	0	0		0	1	0	1	
The Quincy Retail & Office Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
The Quincy Pass-by's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Waverly Trips:	0	0	0	0		0	0	7	7		2	1	0	3		0	5	0	5	
Hunter Trail Trips:	0	0	0	0		0	0	5	5		1	1	0	2		0	3	0	3	
Southwest Pod Trips:	0	0	0	0		0	0	8	8		3	2	0	5		0	5	0	5	
No-Build 2025 Volumes:	23	10	5	38		57	17	458	532		328	1555	67	1950		40	809	12	861	
Total New Trips (South Parcel):	0	0	0	0		0	0	9	9		3	2	0	5		0	6	0	6	
Total New Trips (North Parcel):	0	0	0	0		0	0	18	18		9	6	0	15		0	12	0	12	
Pass By's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Future 2025 Traffic Volumes:	23	10	5	38		57	17	485	559		340	1563	67	1970		40	827	12	879	

P.M. Peak Hour

Condition	Robin Road Extension					Robin Road					SR 92 (Albama Road)					SR 92 (Albama Road)				
	Northbound					Southbound					Eastbound					Westbound				
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot	
Existing 2021 Counts:	57	12	29	98		94	16	405	515		263	1199	65	1527		92	1676	49	1817	
Growth Factor (%):	1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0		
Madison Homes Trips:	0	0	0	0		0	0	12	12		21	14	0	35		0	8	0	8	
The Quincy Apartment Trips:	0	0	0	0		0	0	1	1		1	1	0	2		0	0	0	0	
The Quincy Retail & Office Trips:	0	0	0	0		0	0	1	1		0	0	0	0		0	0	0	0	
The Quincy Pass-by's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Waverly Trips:	0	0	0	0		0	0	4	4		7	5	0	12		0	3	0	3	
Hunter Trail Trips:	0	0	0	0		0	0	3	3		5	3	0	8		0	2	0	2	
Southwest Pod Trips:	0	0	0	0		0	0	5	5		9	6	0	15		0	3	0	3	
No-Build 2025 Volumes:	59	12	30	101		98	17	421	536		274	1248	68	1590		96	1744	51	1891	
Total New Trips (South Parcel):	0	0	0	0		0	0	5	5		9	6	0	15		0	3	0	3	
Total New Trips (North Parcel):	0	0	0	0		0	0	16	16		20	13	0	33		0	11	0	11	
Pass By's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Future 2025 Traffic Volumes:	59	12	30	101		98	17	442	557		303	1267	68	1638		96	1758	51	1905	

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

7. Bells Ferry @ W Pine Ridge

A.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				West Pine Ridge Drive Eastbound				Westbound			
	Northbound		Tot		Southbound		Tot		Eastbound		Tot		Westbound		Tot	
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
Existing 2021 Counts:	0	856	0	856	0	1882	0	1882	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	32	0	32	0	95	0	95	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	2	0	2	0	6	0	6	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	11	0	11	0	39	0	39	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	8	0	8	0	25	0	25	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	14	0	14	0	41	0	41	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	960	0	960	0	2165	0	2165	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	15	0	15	0	34	3	37	0	0	15	15	0	0	0	0
Total New Trips (North Parcel):	0	50	0	50	0	95	0	95	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	1025	0	1025	0	2294	3	2297	0	0	15	15	0	0	0	0

P.M. Peak Hour

Condition	Bells Ferry Road Northbound				Bells Ferry Road Southbound				West Pine Ridge Drive Eastbound				Westbound			
	Northbound		Tot		Southbound		Tot		Eastbound		Tot		Westbound		Tot	
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
Existing 2021 Counts:	0	1475	0	1475	0	1361	0	1361	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	108	0	108	0	63	0	63	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	6	0	6	0	4	0	4	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	38	0	38	0	23	0	23	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	25	0	25	0	14	0	14	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	47	0	47	0	27	0	27	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	1535	0	1535	0	1416	0	1416	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	47	0	47	0	19	8	27	0	0	8	8	0	0	0	0
Total New Trips (North Parcel):	0	106	0	106	0	84	0	84	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	-6	6	0	0	0	6	6	0	0	0	0
Future 2025 Traffic Volumes:	0	1688	0	1688	0	1513	14	1527	0	0	14	14	0	0	0	0

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
September 2021

8.Bells Ferry@Site Drwy 1(RIRO)

A.M. Peak Hour

Condition	Bells Ferry Road Northbound			Bells Ferry Road Southbound			Northern Parcel Site Driveway 1 (Right-In/Right-Out) Eastbound			Old Bascomb Road Westbound		
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	743	0	743	0	1491	0	1491	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	17	0	17	0	49	0	49	0	0	0	0
The Quincy Apartment Trips:	0	2	0	2	0	6	0	6	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	1	0	1	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	12	0	12	0	40	0	40	0	0	0	0
Hunter Trail Trips:	0	12	0	12	0	4	0	4	0	0	0	0
Southwest Pod Trips:	0	6	0	6	0	2	0	2	0	0	0	0
No-Build 2025 Volumes:	0	824	0	824	0	1654	0	1654	0	0	0	0
Total New Trips (South Parcel):	0	27	0	27	0	8	0	8	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	9	9	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	851	0	851	0	1662	9	1671	0	0	0	0

P.M. Peak Hour

Condition	Bells Ferry Road Northbound			Bells Ferry Road Southbound			Northern Parcel Site Driveway 1 (Right-In/Right-Out) Eastbound			Old Bascomb Road Westbound		
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	1446	0	1446	0	1139	0	1139	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	56	0	56	0	33	0	33	0	0	0	0
The Quincy Apartment Trips:	0	7	0	7	0	4	0	4	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	4	0	4	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	39	0	39	0	23	0	23	0	0	0	0
Hunter Trail Trips:	0	7	0	7	0	13	0	13	0	0	0	0
Southwest Pod Trips:	0	4	0	4	0	7	0	7	0	0	0	0
No-Build 2025 Volumes:	0	1505	0	1505	0	1185	0	1185	0	0	0	0
Total New Trips (South Parcel):	0	15	0	15	0	26	0	26	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	20	20	0	0	0	0
Pass By's Trips:	0	0	0	0	0	-6	6	0	0	0	0	0
Future 2025 Traffic Volumes:	0	1520	0	1520	0	1205	26	1231	0	0	0	0

Number of Years = 4
Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

9. Buice Lake @ Site Drwy 2

A.M. Peak Hour

Condition	2			Driveway 2			Buice Lake Parkway			Buice Lake Parkway		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	125	0	125	0	45
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	102	0	102	0	34
The Quincy Apartment Trips:	0	0	0	3	0	0	0	6	0	6	0	2
The Quincy Retail & Office Trips:	0	0	0	2	0	0	0	0	0	0	0	3
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	62	0	62	0	18
Hunter Trail Trips:	0	0	0	0	0	0	0	1	0	1	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	17	0	17	0	6
No-Build 2025 Volumes:	0	0	0	5	0	0	0	318	0	318	0	107
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	32	0	0	0	0	21	0	21	7	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	32	5	0	0	0	339	0	339	11	114

P.M. Peak Hour

Condition	Northern Parcel Site Driveway			The Quincy (Eastern)			Buice Lake Parkway			Buice Lake Parkway		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	40	0	40	0	143
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	68	0	68	0	115
The Quincy Apartment Trips:	0	0	0	2	0	0	0	4	0	4	0	7
The Quincy Retail & Office Trips:	0	0	0	5	0	0	0	0	0	0	0	3
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	36	0	36	0	60
Hunter Trail Trips:	0	0	0	0	0	0	0	1	0	1	0	1
Southwest Pod Trips:	0	0	0	0	0	0	0	11	0	11	0	19
No-Build 2025 Volumes:	0	0	0	0	0	0	0	42	0	42	0	149
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	28	0	0	0	0	19	0	19	14	0
Pass By's Trips:	1	0	0	0	0	0	0	0	0	0	1	-1
Future 2025 Traffic Volumes:	1	0	28	0	0	0	0	61	0	61	25	162

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

10. Buice Lake @ Future Owl Creek

A.M. Peak Hour

Condition	Future Owl Creek Parkway			Bells Ferry Parkway			Buice Lake Parkway			Buice Lake Parkway		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	125	0	125	0	45
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	102	0	102	0	34
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	19	0	0	0	43	0	43	0	13
Southwest Pod Trips:	0	0	0	0	0	0	0	1	0	1	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	17	0	17	0	6
Total New Trips (South Parcel):	0	0	0	19	0	0	19	293	0	293	0	100
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	21	0	0	0	0	0	0	0	7	0
Future 2025 Traffic Volumes:	0	0	21	19	0	0	19	293	0	293	7	100

P.M. Peak Hour

Condition	Future Owl Creek Parkway			Bells Ferry Parkway			Buice Lake Parkway			Buice Lake Parkway		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	40	0	40	0	143
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	68	0	68	0	115
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	11	0	0	11	0	25	0	42	18
Hunter Trail Trips:	0	0	0	0	0	0	0	1	0	1	0	1
Southwest Pod Trips:	0	0	0	0	0	0	0	11	0	11	0	19
No-Build 2025 Volumes:	0	0	0	0	0	0	0	42	0	42	0	149
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	19	0	0	0	0	0	0	0	14	0
Pass By's Trips:	1	0	0	0	0	0	0	0	0	0	1	-1
Future 2025 Traffic Volumes:	1	0	19	0	0	0	0	42	0	42	15	148

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

II. Hunter Trl @ Site Dwy 3
A.M. Peak Hour

Condition	Northbound				Northern Parcel Site Driveway				Hunter Trail Eastbound				Hunter Trail Westbound			
	L	T	R	Tot	Southbound				L	T	R	Tot	L	T	R	Tot
					L	T	R	Tot								
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	7	0	7	0	15	0	15
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	49	0	49	0	17	0	17
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	38	0	38	0	12	0	12
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	48	0	48	0	16	0	16
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	142	0	142	0	61	0	61
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	62	0	62	0	21	0	21
Total New Trips (North Parcel):	0	0	0	0	20	0	0	20	0	29	0	29	0	46	5	51
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	20	0	0	20	0	233	0	233	0	128	5	133

P.M. Peak Hour

Condition	Northbound				Northern Parcel Site Driveway				Hunter Trail Eastbound				Hunter Trail Westbound			
	L	T	R	Tot	Southbound			Tot	L	T	R	Tot	L	T	R	Tot
					L	T	R									
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	10	0	10	0	12	0	12
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0			1.0	1.0	1.0		1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	33	0	33	0	56	0	56
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	22	0	22	0	39	0	39
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	32	0	32	0	55	0	55
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	10	0	10	0	12	0	12
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	35	0	35	0	67	0	67
Total New Trips (North Parcel):	0	0	0	0	17	0	0	17	0	26	0	26	0	98	11	109
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	17	0	0	17	0	71	0	71	0	177	11	188

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

12 Hunter Trl@Future Owl Creek

A.M. Peak Hour

Condition	Future Owl Creek Parkway					Future Owl Creek Parkway					Hunter Trail					Hunter Trail				
	Northbound					Southbound					Eastbound					Westbound				
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot	
Existing 2021 Counts:	0	0	0	0		0	0	0	0		0	7	0	7		0	15	0	15	
Growth Factor (%):	1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0		
Madison Homes Trips:	0	0	0	0		0	0	0	0		0	49	0	49		0	17	0	17	
The Quincy Apartment Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
The Quincy Retail & Office Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
The Quincy Pass-by's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Waverly Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Hunter Trail Trips:	0	0	0	0		0	0	0	0		0	38	0	38		0	12	0	12	
Southwest Pod Trips:	0	0	0	0		0	0	0	0		0	48	0	48		0	16	0	16	
No-Build 2025 Volumes:	0	0	0	0		0	0	0	0		0	142	0	142		0	61	0	61	
Total New Trips (South Parcel):	0	0	16	16		8	0	0	8		0	39	0	39		7	12	2	21	
Total New Trips (North Parcel):	0	0	0	0		29	0	0	29		0	0	0	0		0	0	0	0	
Pass By's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Future 2025 Traffic Volumes:	0	0	16	16		37	0	0	37		0	181	0	181		7	73	48	128	

P.M. Peak Hour

Condition	Future Owl Creek Parkway					Future Owl Creek Parkway					Hunter Trail					Hunter Trail				
	Northbound					Southbound					Eastbound					Westbound				
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot	
Existing 2021 Counts:	0	0	0	0		0	0	0	0		0	10	0	10		0	12	0	12	
Growth Factor (%):	1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0			1.0	1.0	1.0		
Madison Homes Trips:	0	0	0	0		0	0	0	0		0	33	0	33		0	56	0	56	
The Quincy Apartment Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
The Quincy Retail & Office Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
The Quincy Pass-by's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Waverly Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Hunter Trail Trips:	0	0	0	0		0	0	0	0		0	22	0	22		0	39	0	39	
Southwest Pod Trips:	0	0	0	0		0	0	0	0		0	32	0	32		0	55	0	55	
No-Build 2025 Volumes:	0	0	0	0		0	0	0	0		0	10	0	10		0	12	0	12	
Total New Trips (South Parcel):	0	0	9	9		4	0	0	4		0	22	0	22		22	38	8	68	
Total New Trips (North Parcel):	0	0	0	0		26	0	0	26		0	0	0	0		0	0	0	0	
Pass By's Trips:	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
Future 2025 Traffic Volumes:	0	0	9	9		30	0	0	30		0	32	0	32		22	50	106	178	

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

13. Hunter Trl @ Site Drwy 4-5

A.M. Peak Hour

Condition	5			4			Hunter Trail Eastbound			Hunter Trail Westbound		
	Northbound			Southbound			L T R			L T R		
	L	T	Tot	L	T	Tot	L	T	R	L	T	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	7	0	7	0	15
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	49	0	49	0	17
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	38	0	38	0	12
Southwest Pod Trips:	0	0	0	0	0	0	0	48	0	48	0	16
No-Build 2025 Volumes:	0	0	0	0	0	0	0	142	0	142	0	61
Total New Trips (South Parcel):	0	0	15	8	0	8	0	15	0	15	5	2
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	15	8	0	8	0	157	0	157	5	73

P.M. Peak Hour

Condition	Southern Parcel Site Driveway			Northern Parcel Site Driveway			Hunter Trail Eastbound			Hunter Trail Westbound		
	Northbound			Southbound			L T R			L T R		
	L	T	Tot	L	T	Tot	L	T	R	L	T	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	10	0	0	12	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	33	0	33	0	56
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	22	0	22	0	39
Southwest Pod Trips:	0	0	0	0	0	0	0	32	0	32	0	55
No-Build 2025 Volumes:	0	0	0	0	0	0	0	10	0	10	0	12
Total New Trips (South Parcel):	0	0	9	4	0	4	0	9	0	9	15	8
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	9	4	0	4	0	19	0	19	15	50

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

14. Hunter Trl @ Site Drwy 6

A.M. Peak Hour

Condition	6				-				-				-				-			
	Northbound				Southbound				Hunter Trail Eastbound				Hunter Trail Westbound							
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot				
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	7	0	7	0	15	0	15				
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0					
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	49	0	49	0	17	0	17				
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	38	0	38	0	12	0	12				
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	48	0	48	0	16	0	16				
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	142	0	142	0	61	0	61				
Total New Trips (South Parcel):	0	0	15	15	0	0	0	0	0	0	0	0	5	0	0	5				
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Future 2025 Traffic Volumes:	0	0	15	15	0	0	0	0	0	142	0	142	5	61	0	66				

P.M. Peak Hour

Condition	Southern Parcel Site Driveway				-				-				Hunter Trail				Hunter Trail			
	Northbound		Tot		Southbound		Tot		Eastbound		Tot		Westbound		Tot					
	L	R	T	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot				
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	10	0	10	0	12	0	12				
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0					
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	33	0	33	0	56	0	56				
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	22	0	22	0	39	0	39				
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	32	0	32	0	55	0	55				
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	10	0	10	0	12	0	12				
Total New Trips (South Parcel):	0	0	9	9	0	0	0	0	0	0	0	0	15	0	0	15				
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Future 2025 Traffic Volumes:	0	0	9	9	0	0	0	0	0	10	0	10	15	12	0	27				

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

15.Future Owl Creek@Site Drwy 7

A.M. Peak Hour

Condition	Future Owl Creek Parkway			Future Owl Creek Parkway			Future Owl Creek Parkway			Site Driveway 7		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	5	46	6	0	0	0	0	0	29	0	16
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	5	46	6	0	0	0	0	0	29	0	16

P.M. Peak Hour

Condition	Future Owl Creek Parkway			Future Owl Creek Parkway			Future Owl Creek Parkway			Site Driveway 7		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	5	98	13	1	0	0	0	0	26	0	14
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	5	98	13	1	0	0	0	0	26	0	14

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

16.Future Owl Creek@Site Drwy 8

A.M. Peak Hour

Condition	Future Owl Creek Parkway			Future Owl Creek Parkway			Site Driveway 11			Site Driveway 8		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	2	0	0	2	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	46	0	46	0	29	0	29	0	0	0	5
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	2	46	0	48	0	29	0	29	0	0	0	5

P.M. Peak Hour

Condition	Future Owl Creek Parkway			Future Owl Creek Parkway			Site Driveway 11			Site Driveway 8		
	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	8	0	0	8	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	98	0	98	1	26	0	27	0	0	0	5
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	8	98	0	106	1	26	0	27	0	0	0	5

Number of Years = 4
 Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
September 2021

17 Future Owl Creek@Site Drwy 9

A.M. Peak Hour

Condition	Future Owl Creek Parkway Northbound				Future Owl Creek Parkway Southbound				Site Driveway 9 (Right- In/Right-Out) Eastbound				Westbound			
	L		R		L		R		L		R		L		R	
	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	16	0	16	0	3	4	7	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	16	0	16	0	3	4	7	0	0	0	0	0	0	0	0

P.M. Peak Hour

Condition	Future Owl Creek Parkway Northbound				Future Owl Creek Parkway Southbound				Site Driveway 9 (Right- In/Right-Out) Eastbound				Westbound			
	L		R		L		R		L		R		L		R	
	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot	T	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	9	0	9	0	10	12	22	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	9	0	9	0	10	12	22	0	0	0	0	0	0	0	0

Number of Years = 4
Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
September 2021

18.Future Owl Creek@Site Drwy10

A.M. Peak Hour

Condition	Future Owl Creek Parkway				Future Owl Creek Parkway				Site Driveway 10				West Fine Ridge Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	0	0	0	0	0	3	3	16	15	0	31	0	3	0	3
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	3	3	16	15	0	31	0	3	0	3

P.M. Peak Hour

Condition	Future Owl Creek Parkway				Future Owl Creek Parkway				Site Driveway 10				West Fine Ridge Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0	
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (South Parcel):	0	0	0	0	0	0	10	10	9	8	0	17	0	8	0	8
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	10	10	9	8	0	17	0	8	0	8

Number of Years = 4
Growth Factor (%) = 1

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

Bells Ferry@Quincy RIRODrwy
 A.M. Peak Hour

Condition	Bells Ferry Road Northbound			Bells Ferry Road Southbound			Out Driveway Eastbound			t Gate Right-In/Right-Out Drive Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	Tot			Tot			Tot			Tot		
Existing 2021 Counts:	0	589	0	589	0	1141	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	45	0	45	0	15	0	0	0	0	0	0
The Quincy Apartment Trips:	0	3	0	3	0	1	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	1	0	1	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	19	0	19	0	5	0	0	0	0	0	0
Hunter Trail Trips:	0	12	0	12	0	4	0	0	0	0	0	0
Southwest Pod Trips:	0	20	0	20	0	7	0	0	0	0	0	0
No-Build 2025 Volumes:	0	713	0	713	0	1219	0	0	0	0	0	0
Total New Trips (South Parcel):	0	23	0	23	0	7	0	0	0	0	0	0
Total New Trips (North Parcel):	0	45	0	45	0	24	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	781	0	781	0	1250	0	0	0	0	0	0

P.M. Peak Hour

Condition	Bells Ferry Road Northbound			Bells Ferry Road Southbound			The Quincy Right-In/Right-Out Driveway Eastbound			t Gate Right-In/Right-Out Drive Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	Tot			Tot			Tot			Tot		
Existing 2021 Counts:	0	1085	0	1085	0	1209	0	0	0	0	0	0
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	30	0	30	0	51	0	0	0	0	0	0
The Quincy Apartment Trips:	0	2	0	2	0	3	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	2	0	2	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	-1	1	0	2	0	0	0
Waverly Trips:	0	11	0	11	0	18	0	0	0	0	0	0
Hunter Trail Trips:	0	7	0	7	0	12	0	0	0	0	0	0
Southwest Pod Trips:	0	13	0	13	0	22	0	0	0	0	0	0
No-Build 2025 Volumes:	0	1129	0	1129	0	1258	0	0	0	0	0	0
Total New Trips (South Parcel):	0	13	0	13	0	23	0	0	0	0	0	0
Total New Trips (North Parcel):	0	40	0	40	0	50	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	1182	0	1182	0	1331	0	0	0	0	0	0

A&R Engineering
September 2021

A.M. Peak Hour

P.M. Peak Hour

Condition	Northbound			The Quincy (Western)			Buice Lake Parkway			Buice Lake Parkway		
	L	T	Tot	L	T	Tot	L	T	Tot	L	T	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	40	0	143	0	143
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	68	0	115	0	115
The Quincy Apartment Trips:	0	0	0	4	0	0	6	0	0	0	0	7
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	36	0	60	0	60
Southwest Pod Trips:	0	0	0	0	0	0	0	1	0	1	0	1
No-Build 2025 Volumes:	0	0	0	0	0	0	0	11	0	19	0	19
Total New Trips (South Parcel):	0	0	0	0	0	0	0	42	0	149	0	149
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	19	0	14	0	14
Future 2025 Traffic Volumes:	0	0	0	0	0	0	0	61	0	163	0	163

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
 September 2021

Buice Lake @Waverly Drwy 1

A.M. Peak Hour

Condition	Northbound				Waverly (Eastern) Driveway 1				Buice Lake Parkway				Buice Lake Parkway			
	-				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	125	0	125	0	45	0	45
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	102	0	102	0	34	0	34
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	31	0	0	31	0	12	0	12	0	4	9	13
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	17	0	17	0	6	0	6
No-Build 2025 Volumes:	0	0	0	0	31	0	0	31	0	262	0	262	0	91	9	100
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	31	0	0	31	0	262	0	262	0	91	9	100

P.M. Peak Hour

Condition	Northbound				Waverly (Eastern) Driveway 1				Buice Lake Parkway				Buice Lake Parkway			
	-				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2021 Counts:	0	0	0	0	0	0	0	0	0	40	0	40	0	143	0	143
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	0	0	68	0	68	0	115	0	115
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	18	0	0	18	0	7	0	7	0	12	30	42
Hunter Trail Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Southwest Pod Trips:	0	0	0	0	0	0	0	0	0	11	0	11	0	19	0	19
No-Build 2025 Volumes:	0	0	0	0	0	0	0	0	0	42	0	42	0	149	0	149
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	0	0	0	42	0	42	0	149	0	149

21-077 - Mixed Use Development - Buice Lake
Traffic Volumes

A&R Engineering
September 2021

Buice Lake @Waverly Drwy 2
A.M. Peak Hour

Condition	Northbound			Waverly (Western) Driveway 2			Buice Lake Parkway Eastbound			Buice Lake Parkway Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	Tot			Tot			Tot			Tot		
Existing 2021 Counts:	0	0	0	0	0	0	0	125	0	125	0	45
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	102	0	102	0	34
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	1	0	1	0	0
Southwest Pod Trips:	0	0	0	0	0	0	0	17	0	17	0	6
No-Build 2025 Volumes:	0	0	0	0	0	0	0	250	0	250	0	87
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	0	250	0	250	0	87

P.M. Peak Hour

Condition	Northbound			Waverly (Western) Driveway 2			Buice Lake Parkway Eastbound			Buice Lake Parkway Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	Tot			Tot			Tot			Tot		
Existing 2021 Counts:	0	0	0	0	0	0	0	40	0	40	0	143
Growth Factor (%):	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Madison Homes Trips:	0	0	0	0	0	0	0	68	0	68	0	115
The Quincy Apartment Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Retail & Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0
The Quincy Pass-by's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Waverly Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Hunter Trail Trips:	0	0	0	0	0	0	0	1	0	1	0	1
Southwest Pod Trips:	0	0	0	0	0	0	0	11	0	11	0	19
No-Build 2025 Volumes:	0	0	0	0	0	0	0	42	0	42	0	149
Total New Trips (South Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips (North Parcel):	0	0	0	0	0	0	0	0	0	0	0	0
Pass By's Trips:	0	0	0	0	0	0	0	0	0	0	0	0
Future 2025 Traffic Volumes:	0	0	0	0	0	0	0	42	0	42	0	149