

Figure 1: Site Location and Study Intersection

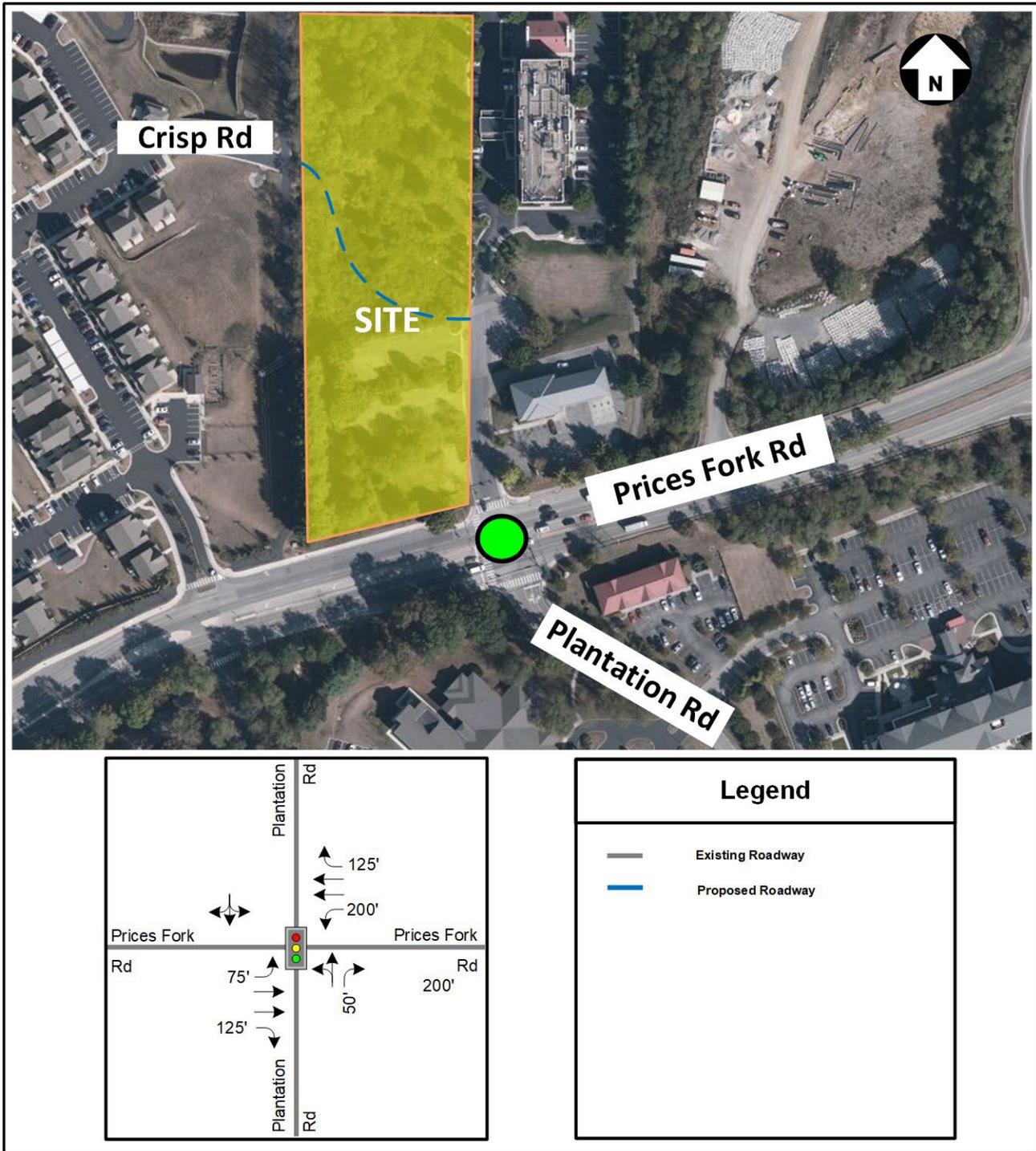


Figure 2: Existing Lane Configuration

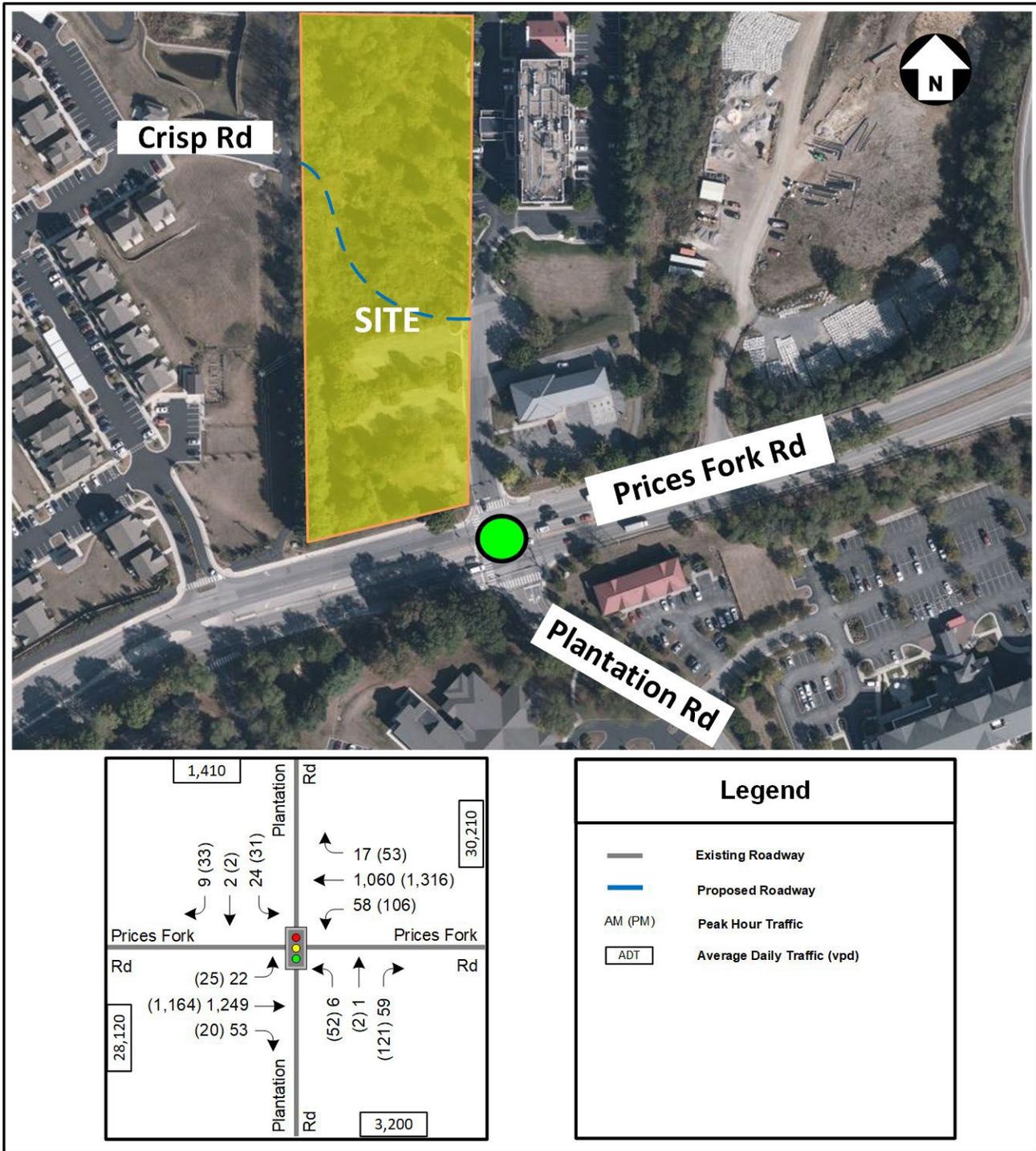


Figure 3: Existing (2022) Peak Hour Traffic Volumes

Future (2024) Conditions

Background Traffic Growth

The anticipated project build-out year is 2024. Regional growth was added to the existing traffic volumes to estimate the future without development (2024) traffic volumes.

Table 3 shows the total approach volume at the study intersection based on the 2013 traffic counts that were performed for The Retreat TIA, and the traffic counts we performed in September 2022. The volumes at the study intersection have increased by just 2.4% since 2013. This is an annual growth rate of just 0.3%, and this includes the trips generated by The Retreat neighborhood. To be conservative, this analysis assumes an annual growth rate of 1.0% per year.

Table 3: Traffic Volume Comparison

Traffic Count Date	AM Total Intersection Approach Volume	PM Total Intersection Approach Volume	Total AM + PM Intersection Approach Volume
April 2013	2,410	2,993	5,403
September 2022	2,560	2,925	5,485

Figure 4 shows the projected 2024 no-build traffic volumes at the study intersection with the 1.0% annual growth rate.

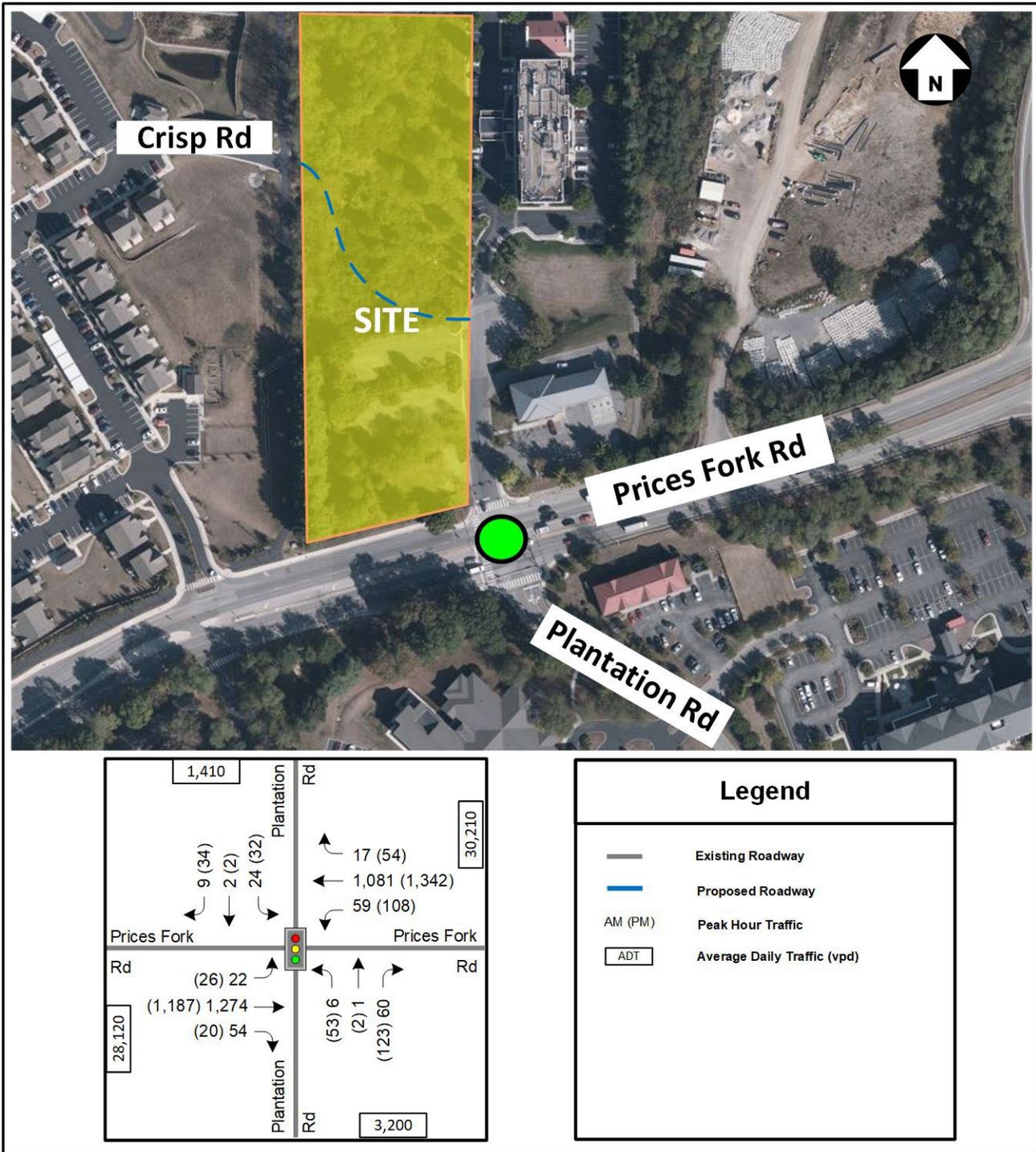


Figure 4: No-Build 2024 Volumes

Diverted Traffic Volumes from The Retreat

The Retreat neighborhood currently has two access points on Prices Fork Road – one full-movement signalized driveway and one right-in / right-out driveway. As part of the proposed self-storage facility, Crisp Road will be extended to connect to Plantation Road. Therefore, it was assumed that a portion of residents living in The Retreat will use this connection to access Plantation Road. Figure 5 shows the revised trip distribution based in The Retreat TIA.

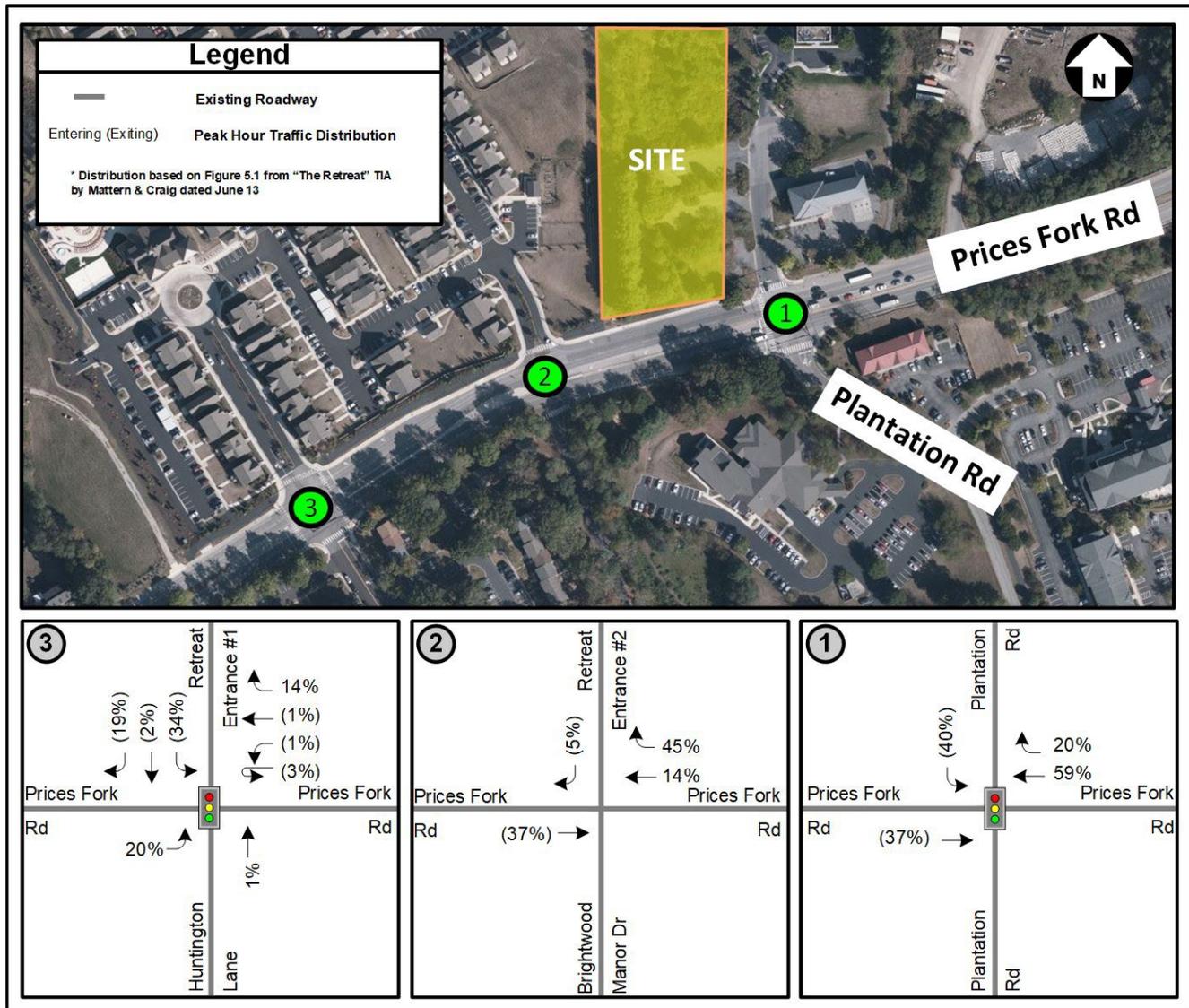


Figure 5: The Retreat – New Trip Distribution

Based on discussion with the Town, it was assumed that 20% of The Retreat trips will enter on Plantation Road, and 40% of The Retreat trips will exit on Plantation Road. Figure 6 shows the anticipated redistribution of The Retreat trips.

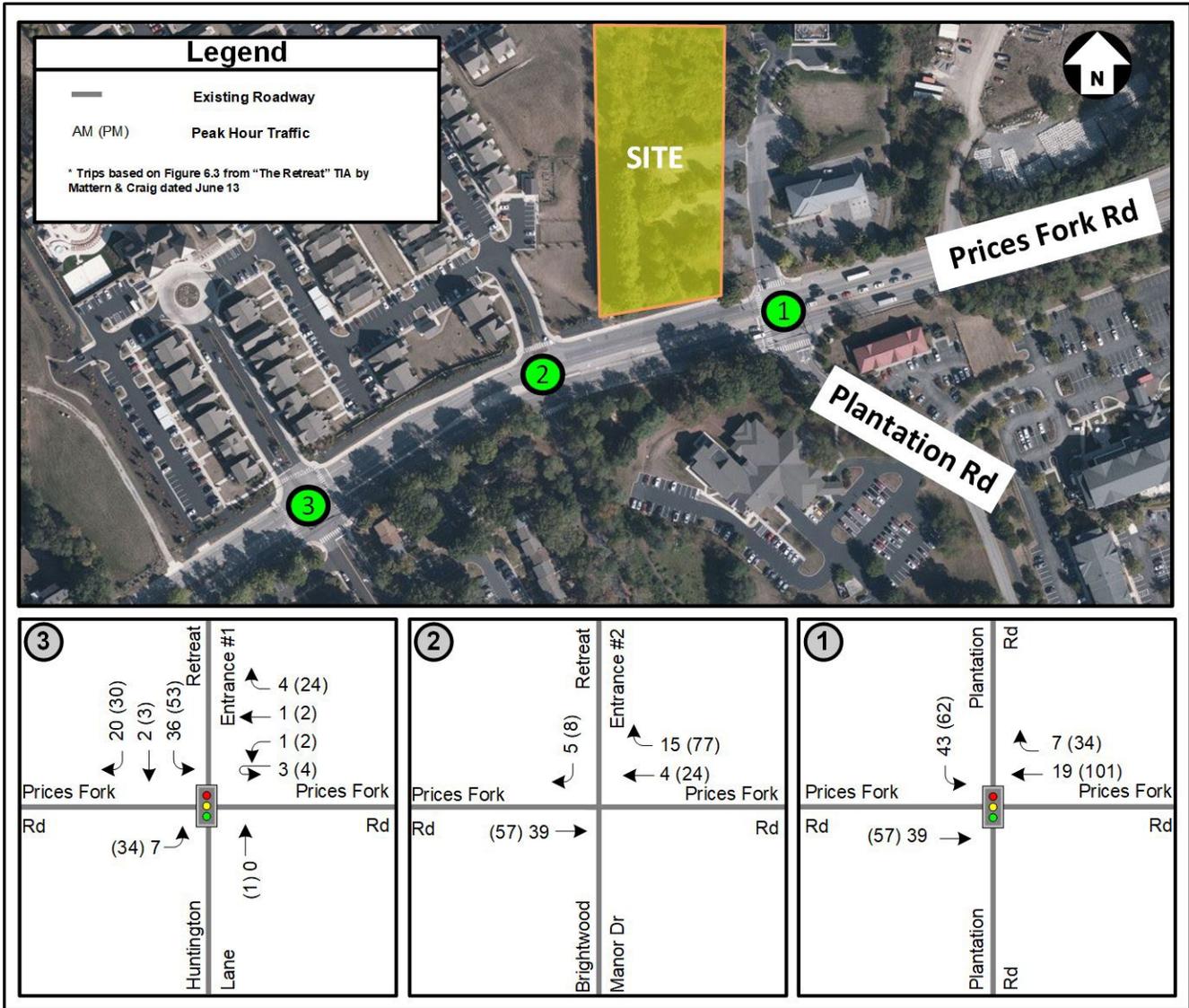


Figure 6: The Retreat – New Trip Assignment

Site Generated Trips

The proposed self-storage facility consists of 100,000 s.f. of mini-warehouse space. The trip generation potential of the proposed facility is shown in Table 2 and the proposed site trip distribution and assignment are shown in Figure 7.

Table 2: ITE Trip Generation – Typical Weekday – 11th Edition

Land Use (ITE Land Use Code)	Size	Average Daily Traffic (vpd)		AM Peak Hour (vph)		PM Peak Hour (vph)	
		Enter	Exit	Enter	Exit	Enter	Exit
Mini-Warehouse (151)	100,000 s.f.	73	73	5	4	7	8

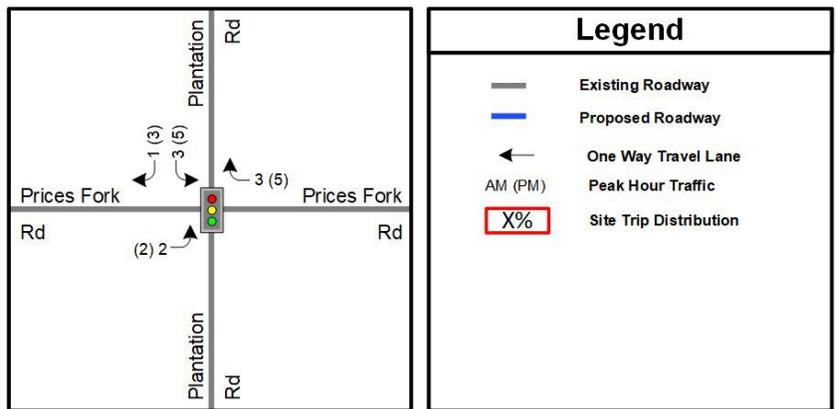


Figure 7: Site Trip Distribution and Assignment

Figure 8 shows the estimated traffic volumes for 2024 including The Retreat’s diverted trips and the proposed self-storage trips.

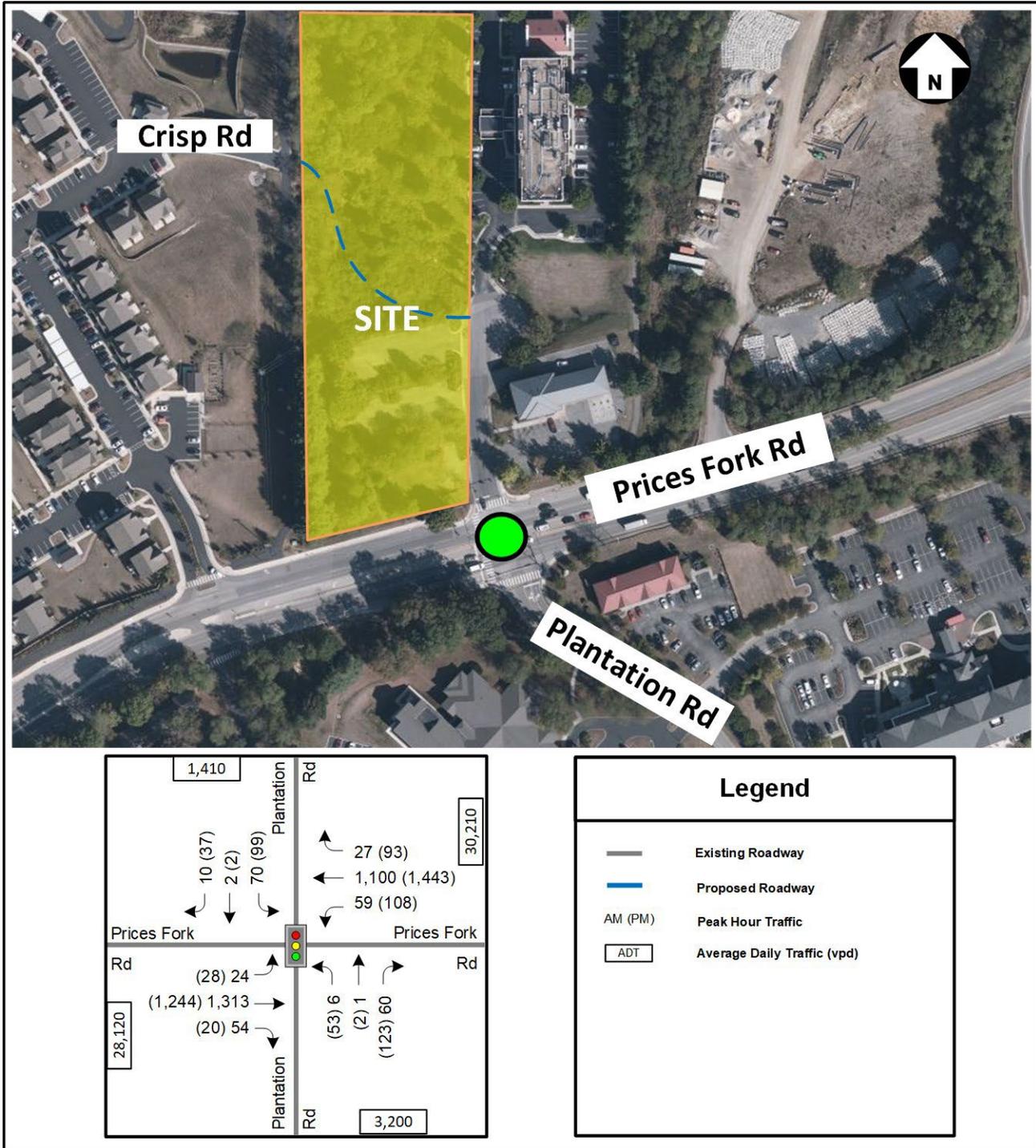


Figure 8: Build 2024 Volumes

Traffic Capacity Analysis

Capacity analysis was performed at the study intersection during the weekday morning and evening peak hours under existing conditions. Synchro Version 11 was used to analyze the study intersections based on the Highway Capacity Manual (HCM) 6th methodology and includes level of service (LOS), delay, and queue length comparisons for the turning movements analyzed. HCM 2000 methodology was used to generate capacity and queuing results if HCM 6th was not applicable at a study intersection.

Signal timings provided by the Town were used as a base for the existing analysis. Existing peak hour factors found in the field were used, except where the field peak hour factor was lower than 0.85, in which case a minimum value of 0.85 was used consistent with VDOT analysis guidelines. Heavy vehicle percentages determined by existing traffic counts were used for analysis. Pedestrian volumes were also collected during the intersection traffic counts and were included in the analysis.

The results of the intersection analysis are presented in Table 4, and are expressed in LOS and delay (seconds per vehicle) per lane group. The 95th percentile queue results for each intersection are also presented in Table 4 and are expressed in feet. The detailed analysis worksheets are included in the Appendix.

Table 4: Capacity Analysis Results – Prices Fork Road / Plantation Road

Condition	Lane Group	Lane Storage (ft.)	AM Peak Hour				PM Peak Hour			
			LOS	Delay (sec)	Queue (ft.)	Overall LOS	LOS	Delay (sec)	Queue (ft.)	Overall LOS
Existing (2022) Traffic Conditions	EBL	75	A	4.8	13	B (15.5 sec)	A	7.0	19	B (19.8 sec)
	EBT	-	B	16.4	502		B	18.5	512	
	EBR	125	A	0.1	0		A	0.1	0	
	WBL	200	A	7.6	27		B	10.2	58	
	WBT	-	B	14.8	418		B	19.5	613	
	WBR	-	A	0.1	0		A	0.1	0	
	NBL/T	-	E	70.8	24		E	77.5	104	
	NBR	50	A	4.4	0		B	14.4	51	
SBL/T/R	-	E	63.1	65	E	55.6	95			
No-Build (2024) Traffic Conditions	EBL	75	A	4.8	13	B (15.8 sec)	A	7.1	19	C (21.5 sec)
	EBT	-	B	16.8	521		C	21.1	580	
	EBR	125	A	0.1	0		A	0.1	0	
	WBL	200	A	7.8	28		A	9.7	60	
	WBT	-	B	15.0	430		C	20.9	687	
	WBR	-	A	0.1	0		A	0.1	0	
	NBL/T	-	E	70.8	24		E	77.5	105	
	NBR	50	A	4.5	0		B	14.9	52	
SBL/T/R	-	E	63.1	65	D	54.0	95			
Build (2024) Traffic Conditions	EBL	75	A	6.6	17	C (21.5 sec)	B	10.4	25	C (29.3 sec)
	EBT	-	C	22.5	621		C	28.3	714	
	EBR	125	A	0.1	0		A	0.1	0	
	WBL	200	B	11.1	34		B	14.6	74	
	WBT	-	B	19.3	497		C	28.8	943	
	WBR	-	A	0.0	0		A	1.5	15	
	NBL/T	-	E	70.8	24		E	77.5	105	
	NBR	50	A	4.5	0		B	14.9	52	
SBL/T/R	-	E	75.9	135	E	74.3	202			

The analysis shows that the study intersection currently operates at LOS B during the AM and PM peak hours. In the no-build condition, the intersection is projected to operate at LOS B during the AM peak hour and LOS C during the PM peak hour. For the build condition, the intersection is projected to operate at LOS C during the AM and PM peak hours with all movements operating at LOS E or better.

Note that The Retreat is expected to add 50 vehicles to Plantation Road in the AM peak hour and 96 vehicles in the PM peak hour. The proposed self-storage facility will add just 9 vehicles to Plantation Road in the AM peak hour (one every 7 minutes) and only 15 vehicles in the PM peak hour (one every 4 minutes).

No improvements are warranted or recommended at build-out of the project.

APPENDIX

Traffic Count Data

Traffic Signal Timing Plans

Synchro Output



TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-06-22
 Site Code :
 Start Date : 9/6/2022
 Page No : 1

Groups Printed- Cars + - Trucks

Start Time	Plantation Rd Southbound						Price Fork Rd Westbound						Plantation Rd Northbound						Price Fork Rd Eastbound						Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	
07:00 AM	4	0	1	0	0	5	4	107	6	0	0	117	8	0	1	0	0	9	0	141	2	0	0	143	274
07:15 AM	1	0	4	0	0	5	4	233	7	0	0	244	9	0	2	0	0	11	9	220	1	0	1	231	491
07:30 AM	2	0	6	0	0	8	3	386	13	0	0	402	9	0	5	0	0	14	12	331	4	0	3	350	774
07:45 AM	4	0	6	0	0	10	5	287	31	3	0	326	21	0	2	0	0	23	14	434	4	0	0	452	811
Total	11	0	17	0	0	28	16	1013	57	3	0	1089	47	0	10	0	0	57	35	1126	11	0	4	1176	2350
08:00 AM	2	0	3	0	0	5	2	127	19	0	0	148	19	1	0	0	0	20	7	290	2	0	0	299	472
08:15 AM	0	0	5	0	1	6	1	155	10	0	0	166	18	0	3	0	0	21	4	207	6	0	1	218	411
08:30 AM	1	0	8	0	0	9	6	187	10	0	0	203	20	0	4	0	0	24	6	230	1	0	3	240	476
08:45 AM	3	2	7	0	0	12	4	161	13	1	0	179	11	1	1	0	2	15	13	355	3	0	1	372	578
Total	6	2	23	0	1	32	13	630	52	1	0	696	68	2	8	0	2	80	30	1082	12	0	5	1129	1937
09:00 AM	7	3	7	0	0	17	10	116	18	2	0	146	31	0	6	0	2	39	24	289	4	0	3	320	522
09:15 AM	3	0	3	0	0	6	2	138	22	1	0	163	16	1	4	0	2	23	5	205	3	0	2	215	407
09:30 AM	4	1	3	0	0	8	7	141	12	0	0	160	13	0	3	0	1	17	5	161	5	0	10	181	366
09:45 AM	3	1	5	0	0	9	7	121	9	0	0	137	13	0	5	0	0	18	2	189	4	0	1	196	360
Total	17	5	18	0	0	40	26	516	61	3	0	606	73	1	18	0	5	97	36	844	16	0	16	912	1655
10:00 AM	3	0	8	0	1	12	2	100	12	0	0	114	9	0	4	0	0	13	4	142	6	0	3	155	294
10:15 AM	2	1	1	0	2	6	3	109	11	0	0	123	11	0	6	0	0	17	9	165	0	0	1	175	321
10:30 AM	3	0	5	0	0	8	5	109	12	0	0	126	19	0	2	0	2	23	11	164	3	0	1	179	336
10:45 AM	1	1	2	0	1	5	6	144	9	1	0	160	17	0	5	0	2	24	8	152	0	0	3	163	352
Total	9	2	16	0	4	31	16	462	44	1	0	523	56	0	17	0	4	77	32	623	9	0	8	672	1303
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11:15 AM	2	0	5	0	0	7	3	148	12	1	0	164	18	1	6	0	1	26	4	108	1	0	1	114	311
11:30 AM	6	0	3	0	1	10	2	125	9	0	2	138	16	1	1	0	4	22	3	137	4	0	1	145	315
11:45 AM	4	0	3	0	0	7	8	130	19	1	0	158	20	0	6	0	0	26	6	183	2	0	2	193	384
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12:45 PM	9	0	7	0	0	16	13	189	28	2	0	232	19	0	2	0	1	22	7	185	8	0	3	203	473
Total	23	1	18	0	2	44	34	704	91	4	0	833	88	0	25	0	8	121	25	711	14	0	14	764	1762
01:00 PM	8	1	9	0	0	18	8	163	14	1	0	186	19	0	3	0	0	22	6	143	5	0	1	155	381
01:15 PM	3	3	3	0	2	11	7	150	11	0	0	168	15	2	1	0	2	20	8	182	2	0	1	193	392
01:30 PM	2	0	8	0	0	10	4	151	17	1	0	173	20	2	3	0	1	26	8	204	4	0	1	217	426
01:45 PM	3	1	6	0	2	12	9	184	12	0	0	205	22	2	10	0	0	34	5	173	3	0	6	187	438
Total	16	5	26	0	4	51	28	648	54	2	0	732	76	6	17	0	3	102	27	702	14	0	9	752	1637



TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-06-22

Site Code :

Start Date : 9/6/2022

Page No : 2

Groups Printed- Cars + - Trucks

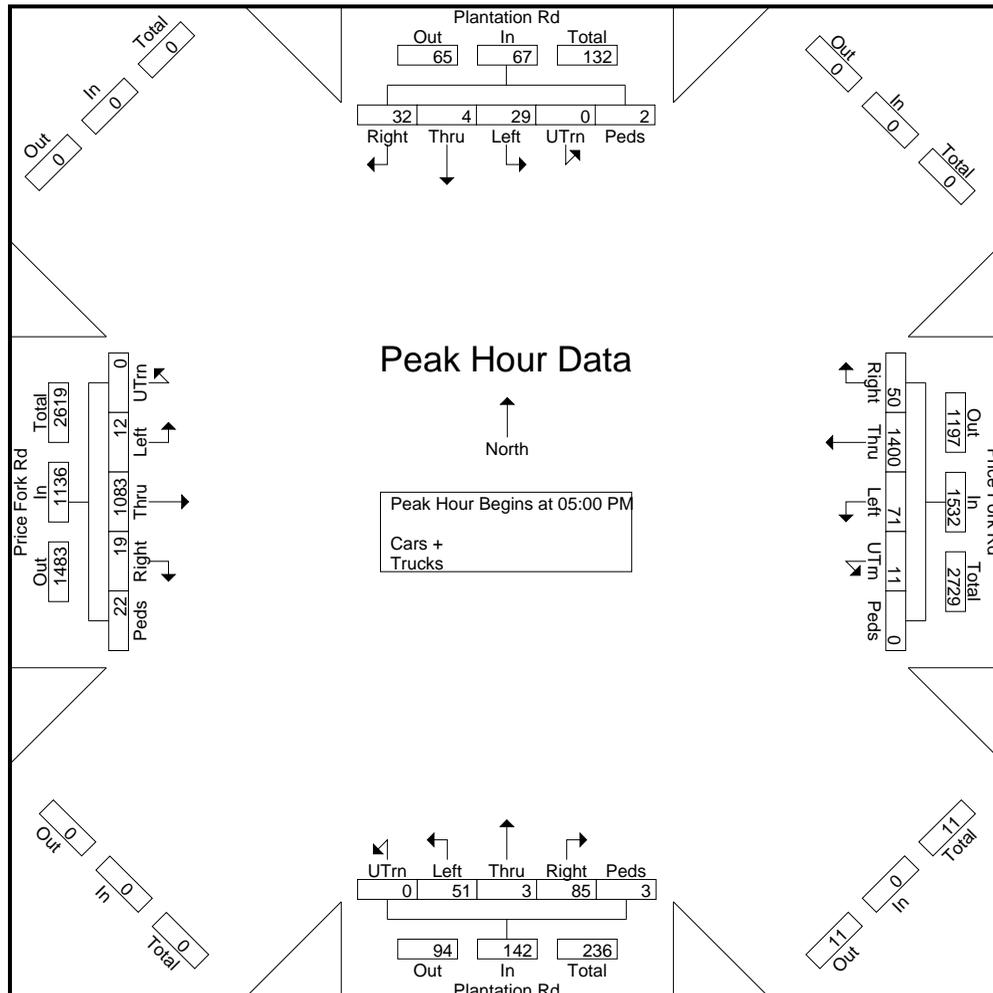
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02:15 PM	2	0	4	0	0	6	5	194	14	2	0	215	12	0	6	0	1	19	4	154	1	0	3	162	402
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03:15 PM	0	1	9	0	1	11	6	227	10	0	0	243	14	0	13	0	1	28	9	245	2	0	6	262	544
03:30 PM	6	1	8	0	3	18	9	291	23	0	0	323	23	1	15	0	3	42	2	199	5	0	12	218	601
03:45 PM	5	1	5	0	0	11	8	217	12	3	0	240	12	0	4	0	2	18	5	246	5	0	7	263	532
Total	13	3	32	0	4	52	24	894	65	5	0	988	74	2	40	0	9	125	25	1099	19	0	25	1168	2333
04:00 PM	9	1	9	0	2	21	14	245	13	0	0	272	18	2	5	0	1	26	4	212	3	0	1	220	539
04:15 PM	7	0	8	0	0	15	8	251	12	2	0	273	24	0	7	0	1	32	1	259	3	0	2	265	585
04:30 PM	14	0	0	0	0	14	11	261	13	3	0	288	19	0	11	0	0	30	3	270	2	0	3	278	610
04:45 PM	6	0	3	0	4	13	13	247	20	2	0	282	20	1	15	0	0	36	3	295	1	0	6	305	636
Total	36	1	20	0	6	63	46	1004	58	7	0	1115	81	3	38	0	2	124	11	1036	9	0	12	1068	2370
05:00 PM	10	3	14	0	1	28	16	369	22	4	0	411	27	1	23	0	2	53	5	250	4	0	6	265	757
05:15 PM	9	1	5	0	0	15	11	397	20	4	0	432	22	0	10	0	0	32	5	217	3	0	8	233	712
05:30 PM	8	0	6	0	1	15	13	361	18	1	0	393	21	1	10	0	0	32	7	306	3	0	2	318	758
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Total	32	4	29	0	2	67	50	1400	71	11	0	1532	85	3	51	0	3	142	19	1083	12	0	22	1136	2877
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06:30 PM	8	0	4	0	1	13	10	242	21	2	0	275	19	0	13	0	0	32	4	218	7	0	0	229	549
06:45 PM	4	2	4	0	0	10	7	237	32	5	0	281	11	0	7	0	2	20	1	227	4	0	9	241	552
Total	25	4	16	0	2	47	32	1024	88	8	0	1152	57	1	37	0	6	101	15	889	15	0	15	934	2234
Grand Total	214	31	252	0	30	527	328	9677	777	50	2	10834	850	22	313	0	49	1234	295	10415	153	0	158	11021	23616
Apprch %	40.6	5.9	47.8	0	5.7		3	89.3	7.2	0.5	0		68.9	1.8	25.4	0	4		2.7	94.5	1.4	0	1.4		
Total %	0.9	0.1	1.1	0	0.1	2.2	1.4	41	3.3	0.2	0	45.9	3.6	0.1	1.3	0	0.2	5.2	1.2	44.1	0.6	0	0.7	46.7	
Cars +	212	28	248	0	23	511	322	9418	772	50	2	10564	846	22	309	0	31	1208	292	10142	151	0	155	10740	23023
% Cars +	99.1	90.3	98.4	0	76.7	97	98.2	97.3	99.4	100	100	97.5	99.5	100	98.7	0	63.3	97.9	99	97.4	98.7	0	98.1	97.5	97.5
Trucks	2	3	4	0	7	16	6	259	5	0	0	270	4	0	4	0	18	26	3	273	2	0	3	281	593
% Trucks	0.9	9.7	1.6	0	23.3	3	1.8	2.7	0.6	0	0	2.5	0.5	0	1.3	0	36.7	2.1	1	2.6	1.3	0	1.9	2.5	2.5



TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-06-22
 Site Code :
 Start Date : 9/6/2022
 Page No : 3

Start Time	Plantation Rd Southbound						Price Fork Rd Westbound						Plantation Rd Northbound						Price Fork Rd Eastbound						Int. Total
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Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	10	3	14	0	1	28	16	369	22	4	0	411	27	1	23	0	2	53	5	250	4	0	6	265	757
05:15 PM	9	1	5	0	0	15	11	397	20	4	0	432	22	0	10	0	0	32	5	217	3	0	8	233	712
05:30 PM	8	0	6	0	1	15	13	361	18	1	0	393	21	1	10	0	0	32	7	306	3	0	2	318	758
05:45 PM	5	0	4	0	0	9	10	273	11	2	0	296	15	1	8	0	1	25	2	310	2	0	6	320	650
Total Volume	32	4	29	0	2	67	50	1400	71	11	0	1532	85	3	51	0	3	142	19	1083	12	0	22	1136	2877
% App. Total	47.8	6	43.3	0	3		3.3	91.4	4.6	0.7	0		59.9	2.1	35.9	0	2.1		1.7	95.3	1.1	0	1.9		
PHF	.800	.333	.518	.000	.500	.598	.781	.882	.807	.688	.000	.887	.787	.750	.554	.000	.375	.670	.679	.873	.750	.000	.688	.888	.949





TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-07-22
 Site Code :
 Start Date : 9/7/2022
 Page No : 1

Groups Printed- Cars + - Trucks

Start Time	Plantation Rd Southbound						Price Fork Rd Westbound						Plantation Rd Northbound						Price Fork Rd Eastbound						Int. Total
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07:00 AM	2	2	7	0	0	11	9	114	8	0	0	131	6	0	1	0	1	8	1	167	2	0	0	170	320
07:15 AM	2	0	9	0	0	11	6	235	11	1	0	253	8	0	0	0	0	8	6	191	2	0	0	199	471
07:30 AM	1	2	9	0	2	14	4	386	7	0	0	397	15	0	5	0	0	20	21	332	8	0	2	363	794
07:45 AM	6	0	3	0	0	9	4	307	27	2	0	340	23	1	0	0	1	25	16	388	3	0	1	408	782
Total	11	4	28	0	2	45	23	1042	53	3	0	1121	52	1	6	0	2	61	44	1078	15	0	3	1140	2367
08:00 AM	0	0	3	0	1	4	3	132	13	1	0	149	13	0	1	0	2	16	10	338	9	0	0	357	526
08:15 AM	4	0	8	0	0	12	3	145	16	0	0	164	22	0	5	0	0	27	10	213	3	0	1	227	430
08:30 AM	1	0	7	0	1	9	4	163	15	0	0	182	13	1	2	0	0	16	13	271	5	1	1	291	498
08:45 AM	4	1	5	0	0	10	6	180	29	0	0	215	22	0	2	0	3	27	7	335	3	0	1	346	598
Total	9	1	23	0	2	35	16	620	73	1	0	710	70	1	10	0	5	86	40	1157	20	1	3	1221	2052
09:00 AM	3	0	4	0	0	7	3	145	15	2	0	165	24	0	9	0	2	35	4	195	3	0	3	205	412
09:15 AM	3	1	4	0	0	8	6	124	9	0	0	139	11	1	4	0	0	16	8	182	4	0	0	194	357
09:30 AM	3	1	9	0	0	13	3	112	17	0	0	132	31	0	1	0	0	32	15	200	2	0	0	217	394
09:45 AM	3	1	5	0	0	9	5	121	15	1	0	142	18	2	5	0	0	25	19	220	1	0	3	243	419
Total	12	3	22	0	0	37	17	502	56	3	0	578	84	3	19	0	2	108	46	797	10	0	6	859	1582
10:00 AM	1	1	6	0	1	9	3	136	14	2	0	155	17	0	6	0	0	23	4	129	5	0	3	141	328
10:15 AM	2	0	5	0	0	7	0	143	16	0	0	159	18	0	6	0	0	24	3	152	4	0	2	161	351
10:30 AM	0	0	4	0	0	4	0	129	20	0	0	149	16	1	8	0	0	25	6	152	3	0	2	163	341
10:45 AM	1	0	9	0	0	10	8	109	13	4	0	134	15	0	2	0	1	18	2	200	4	1	3	210	372
Total	4	1	24	0	1	30	11	517	63	6	0	597	66	1	22	0	1	90	15	633	16	1	10	675	1392
11:00 AM	5	1	7	0	2	15	12	103	14	0	0	129	15	1	10	0	2	28	3	147	4	0	2	156	328
11:15 AM	2	3	2	0	0	7	4	153	17	1	0	175	19	0	5	0	0	24	4	158	0	0	9	171	377
11:30 AM	3	1	3	0	0	7	5	130	18	0	0	153	22	0	8	0	0	30	4	175	6	0	0	185	375
11:45 AM	6	1	8	0	0	15	9	144	21	1	0	175	10	0	5	0	1	16	6	183	3	0	5	197	403
Total	16	6	20	0	2	44	30	530	70	2	0	632	66	1	28	0	3	98	17	663	13	0	16	709	1483
12:00 PM	1	0	4	0	0	5	3	181	13	2	0	199	30	0	5	0	1	36	7	162	3	0	1	173	413
12:15 PM	3	0	7	0	0	10	7	186	16	5	0	214	21	1	9	0	0	31	2	168	0	0	10	180	435
12:30 PM	3	0	2	0	0	5	3	165	31	1	0	200	25	0	9	0	2	36	1	170	4	0	1	176	417
12:45 PM	4	2	6	0	0	12	10	166	24	3	0	203	23	1	3	0	0	27	7	198	2	0	2	209	451
Total	11	2	19	0	0	32	23	698	84	11	0	816	99	2	26	0	3	130	17	698	9	0	14	738	1716
01:00 PM	1	0	7	0	1	9	4	168	22	3	0	197	19	0	3	0	0	22	8	178	4	0	2	192	420
01:15 PM	3	0	6	0	0	9	8	165	20	0	0	193	28	0	7	0	1	36	9	165	1	0	6	181	419
01:30 PM	2	3	7	0	0	12	4	193	27	1	0	225	17	0	7	0	0	24	4	160	7	0	5	176	437
01:45 PM	6	1	8	0	1	16	7	140	24	2	0	173	20	0	7	0	0	27	8	185	3	0	3	199	415
Total	12	4	28	0	2	46	23	666	93	6	0	788	84	0	24	0	1	109	29	688	15	0	16	748	1691



TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-07-22
 Site Code :
 Start Date : 9/7/2022
 Page No : 2

Groups Printed- Cars + - Trucks

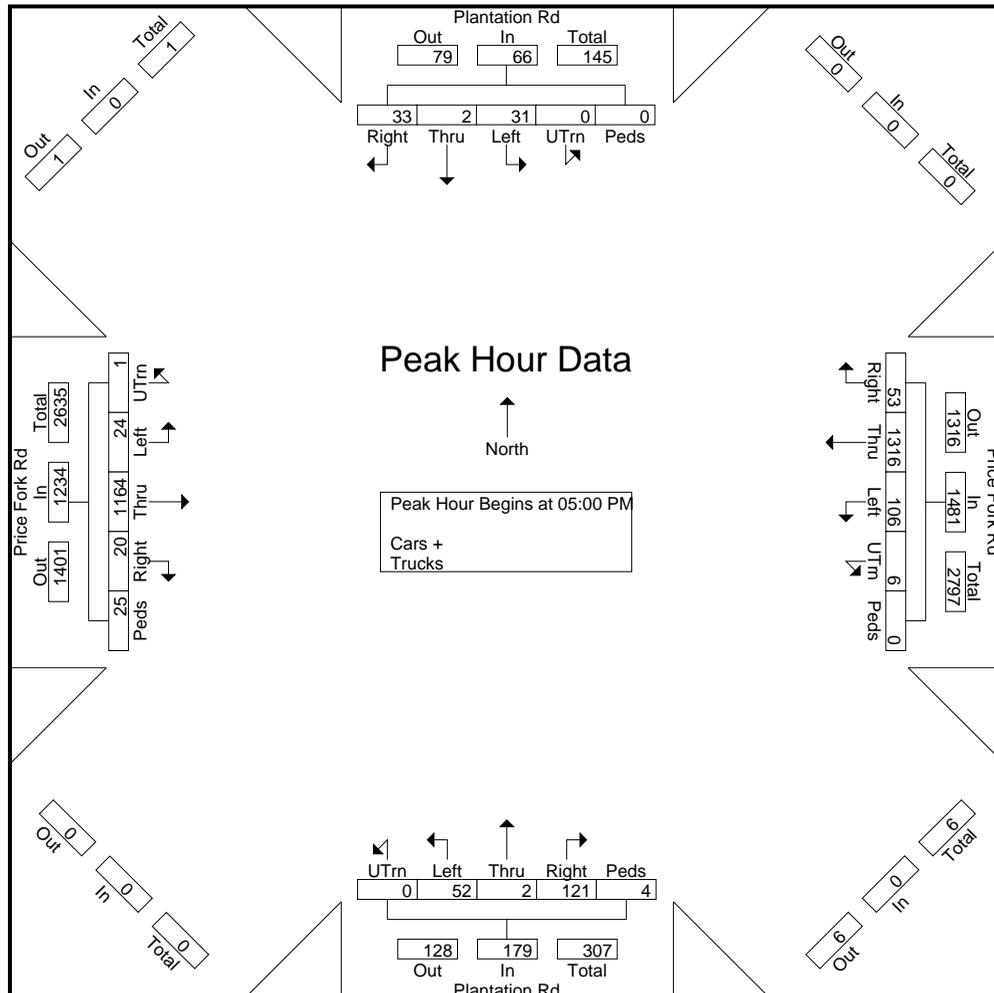
Start Time	Plantation Rd Southbound						Price Fork Rd Westbound						Plantation Rd Northbound						Price Fork Rd Eastbound						Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	
02:00 PM	3	0	0	0	0	3	3	164	25	0	0	192	17	0	8	0	0	25	9	164	2	0	0	175	395
02:15 PM	4	0	4	0	0	8	5	221	16	1	0	243	26	0	4	0	4	34	6	184	1	1	5	197	482
02:30 PM	4	1	3	0	0	8	12	243	12	1	0	268	16	0	11	0	3	30	4	156	2	0	10	172	478
02:45 PM	5	2	3	0	0	10	4	222	17	3	0	246	11	1	6	0	0	18	3	206	2	0	2	213	487
Total	16	3	10	0	0	29	24	850	70	5	0	949	70	1	29	0	7	107	22	710	7	1	17	757	1842
03:00 PM	1	0	7	0	0	8	5	224	19	1	0	249	30	0	11	0	1	42	6	415	3	1	1	426	725
03:15 PM	3	1	4	0	2	10	5	184	19	1	0	209	20	1	9	0	1	31	6	216	3	0	4	229	479
03:30 PM	1	1	4	0	0	6	10	219	19	1	0	249	18	1	3	0	0	22	7	232	1	0	5	245	522
03:45 PM	5	2	7	0	0	14	10	200	11	1	0	222	23	2	11	0	1	37	8	325	3	0	2	338	611
Total	10	4	22	0	2	38	30	827	68	4	0	929	91	4	34	0	3	132	27	1188	10	1	12	1238	2337
04:00 PM	8	0	8	0	0	16	7	296	32	2	0	337	19	0	13	0	1	33	8	254	6	0	11	279	665
04:15 PM	5	0	14	0	3	22	11	276	13	0	0	300	36	2	11	0	0	49	3	210	8	0	5	226	597
04:30 PM	7	0	8	0	1	16	7	292	18	4	0	321	19	1	9	0	1	30	6	240	5	1	3	255	622
04:45 PM	11	2	7	0	0	20	16	258	14	3	0	291	20	2	13	0	1	36	5	291	6	0	4	306	653
Total	31	2	37	0	4	74	41	1122	77	9	0	1249	94	5	46	0	3	148	22	995	25	1	23	1066	2537
05:00 PM	12	1	5	0	0	18	17	296	20	1	0	334	42	1	18	0	1	62	3	262	6	0	6	277	691
05:15 PM	5	0	9	0	0	14	11	336	35	1	0	383	32	0	21	0	0	53	7	310	2	0	6	325	775
05:30 PM	10	1	2	0	0	13	15	372	31	1	0	419	28	1	8	0	2	39	7	311	8	0	5	331	802
05:45 PM	6	0	15	0	0	21	10	312	20	3	0	345	19	0	5	0	1	25	3	281	8	1	8	301	692
Total	33	2	31	0	0	66	53	1316	106	6	0	1481	121	2	52	0	4	179	20	1164	24	1	25	1234	2960
06:00 PM	8	1	12	0	0	21	10	282	32	1	0	325	28	1	5	0	4	38	1	191	7	1	1	201	585
06:15 PM	6	1	8	0	0	15	15	250	22	1	0	288	17	1	7	0	2	27	6	226	5	0	3	240	570
06:30 PM	6	0	4	0	0	10	10	238	23	2	0	273	22	0	9	0	0	31	3	254	3	0	2	262	576
06:45 PM	4	2	5	0	0	11	7	237	31	6	0	281	19	0	4	0	0	23	11	242	3	0	5	261	576
Total	24	4	29	0	0	57	42	1007	108	10	0	1167	86	2	25	0	6	119	21	913	18	1	11	964	2307
Grand Total	189	36	293	0	15	533	333	9697	921	66	0	11017	983	23	321	0	40	1367	320	10684	182	7	156	11349	24266
Apprch %	35.5	6.8	55	0	2.8		3	88	8.4	0.6	0		71.9	1.7	23.5	0	2.9		2.8	94.1	1.6	0.1	1.4		
Total %	0.8	0.1	1.2	0	0.1	2.2	1.4	40	3.8	0.3	0	45.4	4.1	0.1	1.3	0	0.2	5.6	1.3	44	0.8	0	0.6	46.8	
Cars +	187	36	290	0	10	523	329	9347	912	66	0	10654	970	23	318	0	24	1335	316	10333	179	7	150	10985	23497
% Cars +	98.9	100	99	0	66.7	98.1	98.8	96.4	99	100	0	96.7	98.7	100	99.1	0	60	97.7	98.8	96.7	98.4	100	96.2	96.8	96.8
Trucks	2	0	3	0	5	10	4	350	9	0	0	363	13	0	3	0	16	32	4	351	3	0	6	364	769
% Trucks	1.1	0	1	0	33.3	1.9	1.2	3.6	1	0	0	3.3	1.3	0	0.9	0	40	2.3	1.2	3.3	1.6	0	3.8	3.2	3.2



TRAFFIC DATA COLLECTION

File Name : Blacksburg(Price Fork Rd and Plantation Rd) 09-07-22
 Site Code :
 Start Date : 9/7/2022
 Page No : 3

Start Time	Plantation Rd Southbound						Price Fork Rd Westbound						Plantation Rd Northbound						Price Fork Rd Eastbound						Int. Total
	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	12	1	5	0	0	18	17	296	20	1	0	334	42	1	18	0	1	62	3	262	6	0	6	277	691
05:15 PM	5	0	9	0	0	14	11	336	35	1	0	383	32	0	21	0	0	53	7	310	2	0	6	325	775
05:30 PM	10	1	2	0	0	13	15	372	31	1	0	419	28	1	8	0	2	39	7	311	8	0	5	331	802
05:45 PM	6	0	15	0	0	21	10	312	20	3	0	345	19	0	5	0	1	25	3	281	8	1	8	301	692
Total Volume	33	2	31	0	0	66	53	1316	106	6	0	1481	121	2	52	0	4	179	20	1164	24	1	25	1234	2960
% App. Total	50	3	47	0	0		3.6	88.9	7.2	0.4	0		67.6	1.1	29.1	0	2.2		1.6	94.3	1.9	0.1	2		
PHF	.688	.500	.517	.000	.000	.786	.779	.884	.757	.500	.000	.884	.720	.500	.619	.000	.500	.722	.714	.936	.750	.250	.781	.932	.923



Prices Fork Road & Plantation Road

Check/reset time clock

Check/verify standard Ring Structure

Input Traffic Events

Input Equate Data

Vehicle Recalls - Min for Phases 2 & 6

Lock/Non-Lock - Check settings

Check Dual Entry settings - 2, 6

Switch Phase: None

Detector Delay - 10 sec Phases 1, 3, 4, 5

Coordination Settings							
OPER	MODE	MAX	CORR	OFST	FRCE	MX DWLL	YIELD
1 - AUTO	0 - PRM	0 - INH	2 - SW	1 - END	0 - PLAN	0	0

Clearance Intervals								
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Min Green	5	15	5	5	15	5	x	x
Yellow	4.6	4.6	3.4	3.0	4.6	4.6	x	x
Red	3.8	3.8	3.1	3.6	3.8	3.8	x	x

Pedestrian Clearance Intervals								
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Walk	x	5	x	5	x	5	x	x
Flash D/W	x	12	x	23	x	12	x	x

150s Cycle	Pattern 2/1/1 - Inbound Peak				Offset: 4			
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Split	20	80	20	30	15	85	x	x
Mode	0	1	0	0	0	1	x	x

120s Cycle	Pattern 3/1/1 - Midday Peak				Offset: 8			
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Split	20	55	20	25	15	60	x	x
Mode	0	1	0	0	0	1	x	x

150s Cycle	Pattern 2/2/1 - Outbound Peak				Offset: 148			
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Split	20	85	23	22	15	90	x	x
Mode	0	1	0	0	0	1	x	x

100s Cycle	Pattern 1/2/1 - Off Peak				Offset: 6			
Phase	1 - WBL	2 - EBT	3 - NB	4 - SB	5 - EBL	6 - WBT	7 -	8 -
Split	20	40	20	20	15	45	x	x
Mode	0	1	0	0	0	1	x	x

Local TBC Traffic Data

Updated: 8-24-2016

Corridor: Prices Fork Road West

Intersections: [Plantation Road, Huntington Lane, Heather Drive, Hethwood Boulevard]

Day	HH	MM	Pattern	Cycle Length (seconds)
1	0	00	Free	Max Times
1	9	00	1/2/1	100
1	11	00	2/1/1	120
1	18	00	1/2/1	100
1	20	00	Free	Max Times
2	0	00	Free	Max Times
2	06	30	2/1/1	150
2	11	00	3/1/1	120
2	14	30	2/1/1	150
2	16	00	2/2/1	150
2	19	00	1/2/1	100
2	21	00	Free	Max Times
6	0	00	Free	Max Times
6	06	30	2/1/1	150
6	11	00	2/2/1	150
6	14	30	2/1/1	150
6	16	00	2/2/1	150
6	19	00	1/2/1	100
6	21	00	Free	Max Times

1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

Existing (2022) Volumes
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	1249	53	58	1060	17	6	1	59	24	2	9
Future Volume (vph)	22	1249	53	58	1060	17	6	1	59	24	2	9
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1785	1583	0	1736	0
Flt Permitted	0.156			0.111				0.958			0.966	
Satd. Flow (perm)	291	3539	1583	207	3539	1583	0	1785	1583	0	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148		10	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		485			727			669			617	
Travel Time (s)		8.3			12.4			18.2			16.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1542	65	72	1309	21	0	8	73	0	43	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	15.0	80.0	80.0	20.0	85.0	85.0	20.0	20.0	20.0	30.0	30.0	
Total Split (%)	10.0%	53.3%	53.3%	13.3%	56.7%	56.7%	13.3%	13.3%	13.3%	20.0%	20.0%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	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)	118.1	102.3	102.3	111.6	104.6	104.6		6.8	6.8		9.0	
Actuated g/C Ratio	0.79	0.68	0.68	0.74	0.70	0.70		0.05	0.05		0.06	
v/c Ratio	0.07	0.64	0.06	0.28	0.53	0.02		0.10	0.34		0.38	
Control Delay	4.8	16.4	0.1	7.6	14.8	0.1		70.8	4.4		63.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	4.8	16.4	0.1	7.6	14.8	0.1		70.8	4.4		63.1	
LOS	A	B	A	A	B	A		E	A		E	
Approach Delay		15.5			14.2			10.9			63.1	
Approach LOS		B			B			B			E	
Queue Length 50th (ft)	5	431	0	14	386	0		8	0		32	
Queue Length 95th (ft)	13	502	0	27	418	0		24	0		65	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	400	2412	1122	301	2467	1144		166	281		286	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

Existing (2022) Volumes
 Timing Plan: AM Peak Hour

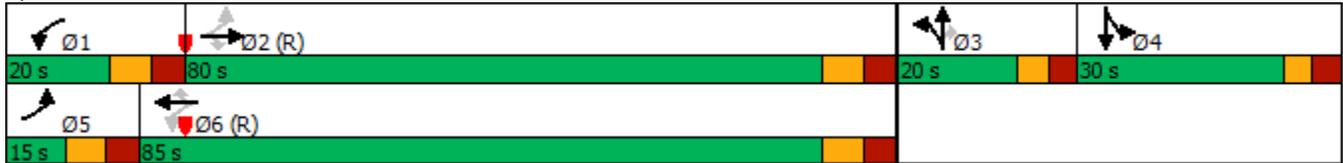
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.07	0.64	0.06	0.24	0.53	0.02		0.05	0.26		0.15	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 15.5
 Intersection Capacity Utilization 65.5%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Plantation Rd & Prices Fork Rd



1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

Existing (2022) Volumes
Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1164	20	106	1316	53	52	2	121	31	2	33
Future Volume (vph)	25	1164	20	106	1316	53	52	2	121	31	2	33
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1777	1583	0	1696	0
Flt Permitted	0.120			0.157				0.954			0.977	
Satd. Flow (perm)	224	3539	1583	292	3539	1583	0	1777	1583	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148			27
Link Speed (mph)		40			40			25				25
Link Distance (ft)		485			727			669				617
Travel Time (s)		8.3			12.4			18.2				16.8
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1265	22	115	1430	58	0	59	132	0	72	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	15.0	85.0	85.0	20.0	90.0	90.0	23.0	23.0	23.0	22.0	22.0	
Total Split (%)	10.0%	56.7%	56.7%	13.3%	60.0%	60.0%	15.3%	15.3%	15.3%	14.7%	14.7%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	109.6	94.2	94.2	105.0	97.9	97.9		10.8	10.8		10.2	
Actuated g/C Ratio	0.73	0.63	0.63	0.70	0.65	0.65		0.07	0.07		0.07	
v/c Ratio	0.08	0.57	0.02	0.37	0.62	0.05		0.46	0.53		0.51	
Control Delay	7.0	18.5	0.1	10.2	19.5	0.1		77.5	14.4		55.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	7.0	18.5	0.1	10.2	19.5	0.1		77.5	14.4		55.6	
LOS	A	B	A	B	B	A		E	B		E	
Approach Delay		17.9			18.1			33.9			55.6	
Approach LOS		B			B			C			E	
Queue Length 50th (ft)	6	354	0	28	493	0		56	0		43	
Queue Length 95th (ft)	19	512	0	58	613	0		104	51		95	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	332	2222	1044	344	2310	1080		201	310		205	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

Existing (2022) Volumes
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.08	0.57	0.02	0.33	0.62	0.05		0.29	0.43		0.35	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 148 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 19.8
 Intersection Capacity Utilization 74.4%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Plantation Rd & Prices Fork Rd



1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

No-Build (2024) Conditions
Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	1274	54	59	1081	17	6	1	60	24	2	9
Future Volume (vph)	22	1274	54	59	1081	17	6	1	60	24	2	9
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1785	1583	0	1736	0
Flt Permitted	0.150			0.105				0.958			0.966	
Satd. Flow (perm)	279	3539	1583	196	3539	1583	0	1785	1583	0	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148		10	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		485			727			669			617	
Travel Time (s)		8.3			12.4			18.2			16.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1573	67	73	1335	21	0	8	74	0	43	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	23.0	84.0	84.0	15.0	76.0	76.0	16.0	16.0	16.0	35.0	35.0	
Total Split (%)	15.3%	56.0%	56.0%	10.0%	50.7%	50.7%	10.7%	10.7%	10.7%	23.3%	23.3%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	118.0	102.2	102.2	111.7	104.6	104.6		6.8	6.8		9.0	
Actuated g/C Ratio	0.79	0.68	0.68	0.74	0.70	0.70		0.05	0.05		0.06	
v/c Ratio	0.07	0.65	0.06	0.29	0.54	0.02		0.10	0.35		0.38	
Control Delay	4.8	16.8	0.1	7.8	15.0	0.1		70.8	4.5		63.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	4.8	16.8	0.1	7.8	15.0	0.1		70.8	4.5		63.1	
LOS	A	B	A	A	B	A		E	A		E	
Approach Delay		15.9			14.4			10.9			63.1	
Approach LOS		B			B			B			E	
Queue Length 50th (ft)	5	447	0	15	398	0		8	0		32	
Queue Length 95th (ft)	13	521	0	28	430	0		24	0		65	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	392	2410	1121	257	2467	1144		119	243		343	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

No-Build (2024) Conditions
 Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.07	0.65	0.06	0.28	0.54	0.02		0.07	0.30		0.13	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 15.8
 Intersection Capacity Utilization 66.0%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Plantation Rd & Prices Fork Rd



1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1187	20	108	1342	54	53	2	123	32	2	34
Future Volume (vph)	26	1187	20	108	1342	54	53	2	123	32	2	34
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1777	1583	0	1696	0
Flt Permitted	0.114			0.142				0.954			0.977	
Satd. Flow (perm)	212	3539	1583	265	3539	1583	0	1777	1583	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148			30
Link Speed (mph)		40			40			25				25
Link Distance (ft)		485			727			669				617
Travel Time (s)		8.3			12.4			18.2				16.8
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	1290	22	117	1459	59	0	60	134	0	74	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	24.0	63.0	63.0	20.0	59.0	59.0	32.0	32.0	32.0	35.0	35.0	
Total Split (%)	16.0%	42.0%	42.0%	13.3%	39.3%	39.3%	21.3%	21.3%	21.3%	23.3%	23.3%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	108.1	91.3	91.3	106.5	96.9	96.9		10.9	10.9		10.1	
Actuated g/C Ratio	0.72	0.61	0.61	0.71	0.65	0.65		0.07	0.07		0.07	
v/c Ratio	0.08	0.60	0.02	0.36	0.64	0.06		0.47	0.53		0.52	
Control Delay	7.1	21.1	0.1	9.7	20.9	0.1		77.5	14.9		54.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	7.1	21.1	0.1	9.7	20.9	0.1		77.5	14.9		54.0	
LOS	A	C	A	A	C	A		E	B		D	
Approach Delay		20.5			19.4			34.2			54.0	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	7	387	0	29	510	0		57	0		42	
Queue Length 95th (ft)	19	580	0	60	687	0		105	52		95	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	340	2154	1016	342	2285	1070		308	396		352	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.08	0.60	0.02	0.34	0.64	0.06		0.19	0.34		0.21	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 148 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 21.5
 Intersection Capacity Utilization 75.2%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Plantation Rd & Prices Fork Rd



1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1313	54	59	1100	27	6	1	60	70	2	10
Future Volume (vph)	24	1313	54	59	1100	27	6	1	60	70	2	10
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1785	1583	0	1758	0
Flt Permitted	0.132			0.083				0.958			0.959	
Satd. Flow (perm)	246	3539	1583	155	3539	1583	0	1785	1583	0	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148		4	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		485			727			669			617	
Travel Time (s)		8.3			12.4			18.2			16.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	1621	67	73	1358	33	0	8	74	0	100	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	23.0	84.0	84.0	15.0	76.0	76.0	16.0	16.0	16.0	35.0	35.0	
Total Split (%)	15.3%	56.0%	56.0%	10.0%	50.7%	50.7%	10.7%	10.7%	10.7%	23.3%	23.3%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	110.5	94.6	94.6	104.1	97.0	97.0		6.8	6.8		14.2	
Actuated g/C Ratio	0.74	0.63	0.63	0.69	0.65	0.65		0.05	0.05		0.09	
v/c Ratio	0.08	0.73	0.06	0.33	0.59	0.03		0.10	0.35		0.59	
Control Delay	6.6	22.5	0.1	11.1	19.3	0.0		70.8	4.5		75.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	6.6	22.5	0.1	11.1	19.3	0.0		70.8	4.5		75.9	
LOS	A	C	A	B	B	A		E	A		E	
Approach Delay		21.4			18.4			10.9			75.9	
Approach LOS		C			B			B			E	
Queue Length 50th (ft)	7	530	0	17	453	0		8	0		92	
Queue Length 95th (ft)	17	621	0	34	497	0		24	0		135	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	357	2231	1047	222	2289	1071		119	243		343	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
 Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.08	0.73	0.06	0.33	0.59	0.03		0.07	0.30		0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 4 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 21.5
 Intersection Capacity Utilization 69.2%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 1: Plantation Rd & Prices Fork Rd



1800 Prices Fork Rd
1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1244	20	108	1443	93	53	2	123	99	2	37
Future Volume (vph)	28	1244	20	108	1443	93	53	2	123	99	2	37
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		125	200		125	0		50	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	100			100			100			100		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1777	1583	0	1733	0
Flt Permitted	0.072			0.109				0.954			0.965	
Satd. Flow (perm)	134	3539	1583	203	3539	1583	0	1777	1583	0	1733	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			135			148		11	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		485			727			669			617	
Travel Time (s)		8.3			12.4			18.2			16.8	
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	1352	22	117	1568	101	0	60	134	0	150	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2		2	6		6			3			
Detector Phase	5	2	2	1	6	6	3	3	3	4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.4	25.4	25.4	13.4	25.4	25.4	16.0	16.0	16.0	34.6	34.6	
Total Split (s)	24.0	73.0	73.0	18.0	67.0	67.0	24.0	24.0	24.0	35.0	35.0	
Total Split (%)	16.0%	48.7%	48.7%	12.0%	44.7%	44.7%	16.0%	16.0%	16.0%	23.3%	23.3%	
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.0	3.0	
All-Red Time (s)	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.6	3.6	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4		-0.5	-0.5		-0.6	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	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)	100.3	83.5	83.5	98.6	89.0	89.0		10.9	10.9		18.0	
Actuated g/C Ratio	0.67	0.56	0.56	0.66	0.59	0.59		0.07	0.07		0.12	
v/c Ratio	0.11	0.69	0.02	0.43	0.75	0.10		0.47	0.53		0.69	
Control Delay	10.4	28.3	0.1	14.6	28.8	1.5		77.5	14.9		74.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	10.4	28.3	0.1	14.6	28.8	1.5		77.5	14.9		74.3	
LOS	B	C	A	B	C	A		E	B		E	
Approach Delay		27.4			26.4			34.2			74.3	
Approach LOS		C			C			C			E	
Queue Length 50th (ft)	9	481	0	36	662	0		57	0		133	
Queue Length 95th (ft)	25	714	0	74	#943	15		105	52		202	
Internal Link Dist (ft)		405			647			589			537	
Turn Bay Length (ft)	75		125	200		125			50			
Base Capacity (vph)	286	1970	941	283	2100	994		213	320		343	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	

1800 Prices Fork Rd
 1: Plantation Rd & Prices Fork Rd

Build (2024) Conditions
 Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.10	0.69	0.02	0.41	0.75	0.10		0.28	0.42		0.44	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 148 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 29.3
 Intersection Capacity Utilization 81.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Plantation Rd & Prices Fork Rd

