

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION - DISTRICT TWO
Signal Retiming - City of Alachua
Design Turning Movement Counts: US 441 from 140th Street to NW 173rd St (CR 235A)

AM PLAN		RAW DATA												
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
US 441 AND NW 140TH ST	1	7:00	145	434	46	88	978	114	86	147	77	126	177	25
US 441 AND MAIN ST	2	7:00	10	532	5	13	1151	32	35	6	33	9	17	18
US 441 AND NW 147TH DR	3	7:15	25	666	34	58	1059	60	102	13	47	38	2	50
US 441 AND I-75 NB RAMP	4	7:30	57	646	128	42	898	72	59	29	15	231	37	238
US 441 AND I-75 SB RAMP	5	7:00	29	556	272	0	1660	55	2	0	85	198	13	43
US 441 AND 167TH BLVD	6	7:15	7	556	96	55	1511	0	0	0	0	94	0	10
US 441 AND NW 173RD ST (CR 235A)	7	7:15	79	440	64	30	1365	31	40	24	113	94	19	32
AM PLAN		ADJUSTED BY AGGREGATED FACTOR												
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
US 441 AND NW 140TH ST	1	7:00	155	464	49	94	1046	122	92	157	82	135	189	27
US 441 AND MAIN ST	2	7:00	11	569	5	14	1232	34	37	6	35	10	18	19
US 441 AND NW 147TH DR	3	7:15	27	713	36	62	1133	64	109	14	50	41	2	54
US 441 AND I-75 NB RAMP	4	7:30	61	691	137	45	961	77	63	31	16	247	40	255
US 441 AND I-75 SB RAMP	5	7:00	31	595	291	0	1776	59	2	0	91	212	14	46
US 441 AND 167TH BLVD	6	7:15	7	595	103	59	1617	0	0	0	0	101	0	11
US 441 AND NW 173RD ST (CR 235A)	7	7:15	85	471	68	32	1461	33	43	26	121	101	20	34

PM PEAK PERIOD

TABLE B2
NW 140TH STREET (CR 241) / NW 172ND AVENUE INTERSECTION
MANUAL TURNING MOVEMENT COUNT
Weekday PM Peak Period

Monday, September 17, 2018

	CR 241 (Main Street)				NW 172nd Avenue				All
	Northbound Left Turn	Northbound Right Turn	Southbound Left Turn	Southbound Right Turn	Eastbound Left Turn	Eastbound Right Turn	Westbound Left Turn	Westbound Right Turn	
3:45-4:00 PM	0	1	0	0	0	0	2	0	3
4:00-4:15 PM	0	1	0	0	0	0	4	0	5
4:15-4:30 PM	0	3	1	0	0	0	1	0	5
4:30-4:45 PM	0	5	0	0	0	0	1	0	6
4:45-5:00 PM	0	3	0	0	0	0	0	0	3
5:00-5:15 PM	1	1	0	0	0	0	2	0	4
5:15-5:30 PM	0	2	0	0	0	1	3	0	6
5:30-5:45 PM	0	3	0	0	0	0	2	0	5
TOTAL:	1	19	1	0	0	1	15	0	37

BUCKHOLZ TRAFFIC

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

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AUTOMOBILES, COMMERCIAL VEHICLES

NW 140TH STREET				NW 174TH AVE.				NW 140TH STREET				NW 174TH AVE.							
From North				From East				From South				From West							
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total			
Date 09/17/18																			
15:45	0	16	0	0	1	0	0	0	1	31	0	0	0	0	2	0	51		
16:00	0	13	0	0	0	0	0	0	1	32	0	0	0	0	2	0	48		
16:15	0	8	1	0	1	0	0	0	1	31	2	0	0	0	1	0	45		
16:30	0	16	0	0	0	0	1	0	5	30	1	0	0	0	1	0	54		
Hr Total	0	53	1	0	2	0	1	0	8	124	3	0	0	0	6	0	198		
16:45	0	8	0	0	0	0	0	0	3	29	1	0	0	0	0	0	41		
17:00	0	14	0	0	0	0	0	0	2	33	0	0	0	0	1	0	50		
17:15	0	18	0	0	0	0	0	0	2	35	1	0	0	0	0	0	56		
17:30	0	19	0	0	1	0	0	0	0	36	0	0	0	0	0	0	56		
Hr Total	0	59	0	0	1	0	0	0	7	133	2	0	0	0	1	0	203		
TOTAL	0	112	1	0	3	0	1	0	15	257	5	0	0	0	7	0	401		

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start 16:45				16:45				16:45				16:45			
Volume	0	59	0	0	1	0	0	0	7	133	2	0	0	0	1
Percent	0%	100%	0%	0%	100%	0%	0%	0%	5%	94%	1%	0%	0%	0%	100%
Pk total	59				1				142				1		
Highest	17:30				17:30				17:15				17:00		
Volume	0	19	0	0	1	0	0	0	2	35	1	0	0	0	1
Hi total	19				1				38				1		
PHF	.78				.25				.93				.25		

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

Page : 1

AUTOMOBILES

NW 140TH STREET				NW 174TH AVE.				NW 140TH STREET				NW 174TH AVE.							
From North				From East				From South				From West							
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total			
Date 09/17/18																			
15:45	0	14	0	0	1	0	0	0	1	30	0	0	0	0	2	0	48		
16:00	0	12	0	0	0	0	0	0	1	28	0	0	0	0	2	0	43		
16:15	0	8	1	0	1	0	0	0	1	29	1	0	0	0	1	0	42		
16:30	0	15	0	0	0	0	1	0	5	28	1	0	0	0	1	0	51		
Hr Total	0	49	1	0	2	0	1	0	8	115	2	0	0	0	6	0	184		
16:45	0	7	0	0	0	0	0	0	3	29	1	0	0	0	0	0	40		
17:00	0	14	0	0	0	0	0	0	2	32	0	0	0	0	1	0	49		
17:15	0	18	0	0	0	0	0	0	2	35	1	0	0	0	0	0	56		
17:30	0	18	0	0	1	0	0	0	0	36	0	0	0	0	0	0	55		
Hr Total	0	57	0	0	1	0	0	0	7	132	2	0	0	0	1	0	200		
TOTAL	0	106	1	0	3	0	1	0	15	247	4	0	0	0	7	0	384		

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start 16:45				16:45				16:45				16:45			
Volume	0	57	0	0	1	0	0	0	7	132	2	0	0	0	1
Percent	0%	100%	0%	0%	100%	0%	0%	0%	5%	94%	1%	0%	0%	0%	100%
Pk total	57				1				141				1		
Highest	17:15				17:30				17:15				17:00		
Volume	0	18	0	0	1	0	0	0	2	35	1	0	0	0	1
Hi total	18				1				38				1		
PHF	.79				.25				.93				.25		

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

Page : 1

COMMERCIAL VEHICLES

NW 140TH STREET				NW 174TH AVE.				NW 140TH STREET				NW 174TH AVE.					
From North				From East				From South				From West					
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total	
Date 09/17/18 -----																	
15:45	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
16:00	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
16:15	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
16:30	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
Hr Total	0	4	0	0	0	0	0	0	0	9	1	0	0	0	0	0	14
16:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3

TOTAL	0	6	0	0	0	0	0	0	0	10	1	0	0	0	0	0	17

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start	16:45				16:45				16:45				16:45			
Volume	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Percent	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
Pk total	2				0				1				0			
Highest	16:45				15:45				17:00				15:45			
Volume	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Hi total	1				0				1				0			
PHF	.50				.0				.25				.0			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

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AUTOMOBILES, COMMERCIAL VEHICLES

NW 140TH STREET From North				NW 174TH AVE. From East				NW 140TH STREET From South				NW 174TH AVE. From West					
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total	
Date 09/17/18																	
15:45	0	16	0	0	1	0	0	0	1	31	0	0	0	0	2	0	51
16:00	0	13	0	0	0	0	0	0	1	32	0	0	0	0	2	0	48
16:15	0	8	1	0	1	0	0	0	1	31	2	0	0	0	1	0	45
16:30	0	16	0	0	0	0	1	0	5	30	1	0	0	0	1	0	54
Hr Total	0	53	1	0	2	0	1	0	8	124	3	0	0	0	6	0	198
16:45	0	8	0	0	0	0	0	0	3	29	1	0	0	0	0	0	41
17:00	0	14	0	0	0	0	0	0	2	33	0	0	0	0	1	0	50
17:15	0	18	0	0	0	0	0	0	2	35	1	0	0	0	0	0	56
17:30	0	19	0	0	1	0	0	0	0	36	0	0	0	0	0	0	56
Hr Total	0	59	0	0	1	0	0	0	7	133	2	0	0	0	1	0	203
TOTAL	0	112	1	0	3	0	1	0	15	257	5	0	0	0	7	0	401

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start 16:45				16:45				16:45				16:45			
Volume	0	59	0	0	1	0	0	0	7	133	2	0	0	0	1
Percent	0%	100%	0%	0%	100%	0%	0%	0%	5%	94%	1%	0%	0%	0%	100%
Pk total	59				1				142				1		
Highest	17:30				17:30				17:15				17:00		
Volume	0	19	0	0	1	0	0	0	2	35	1	0	0	0	1
Hi total	19				1				38				1		
PHF	.78				.25				.93				.25		

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

Page : 1

AUTOMOBILES

NW 140TH STREET				NW 174TH AVE.				NW 140TH STREET				NW 174TH AVE.							
From North				From East				From South				From West							
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total			
Date 09/17/18																			
15:45	0	14	0	0	1	0	0	0	1	30	0	0	0	0	2	0	48		
16:00	0	12	0	0	0	0	0	0	1	28	0	0	0	0	2	0	43		
16:15	0	8	1	0	1	0	0	0	1	29	1	0	0	0	1	0	42		
16:30	0	15	0	0	0	0	1	0	5	28	1	0	0	0	1	0	51		
Hr Total	0	49	1	0	2	0	1	0	8	115	2	0	0	0	6	0	184		
16:45	0	7	0	0	0	0	0	0	3	29	1	0	0	0	0	0	40		
17:00	0	14	0	0	0	0	0	0	2	32	0	0	0	0	1	0	49		
17:15	0	18	0	0	0	0	0	0	2	35	1	0	0	0	0	0	56		
17:30	0	18	0	0	1	0	0	0	0	36	0	0	0	0	0	0	55		
Hr Total	0	57	0	0	1	0	0	0	7	132	2	0	0	0	1	0	200		
TOTAL	0	106	1	0	3	0	1	0	15	247	4	0	0	0	7	0	384		

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start 16:45				16:45				16:45				16:45			
Volume	0	57	0	0	1	0	0	0	7	132	2	0	0	0	1
Percent	0%	100%	0%	0%	100%	0%	0%	0%	5%	94%	1%	0%	0%	0%	100%
Pk total	57				1				141				1		
Highest	17:15				17:30				17:15				17:00		
Volume	0	18	0	0	1	0	0	0	2	35	1	0	0	0	1
Hi total	18				1				38				1		
PHF	.79				.25				.93				.25		

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 33333333

DATE: 09/17/18

NW 140TH STREET @ NW 174TH AVENUE

Start Date: 09/17/18

WEATHER: CLEAR & DRY

ALACHUA, COUNTY, FLORIDA

File I.D. : 18153401

BEGIN TIME (MILITARY):15:45 Hrs

Page : 1

COMMERCIAL VEHICLES

NW 140TH STREET				NW 174TH AVE.				NW 140TH STREET				NW 174TH AVE.					
From North				From East				From South				From West					
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total	
Date 09/17/18 -----																	
15:45	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
16:00	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
16:15	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
16:30	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
Hr Total	0	4	0	0	0	0	0	0	0	9	1	0	0	0	0	0	14
16:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3

TOTAL	0	6	0	0	0	0	0	0	0	10	1	0	0	0	0	0	17

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 09/17/18

Peak start	16:45				16:45				16:45				16:45			
Volume	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Percent	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
Pk total	2				0				1				0			
Highest	16:45				15:45				17:00				15:45			
Volume	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Hi total	1				0				1				0			
PHF	.50				.0				.25				.0			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 15082619

DATE: 08/26/19

US 441 @ NW 147TH DRIVE

Start Date: 08/26/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 082619PM

BEGIN TIME (MILITARY): 15:45 Hrs

Page : 1

AUTOMOBILES, COMMERCIAL VEHICLES

NW 147TH DRIVE					US 441				NW 147TH DRIVE				US 441						
From North					From East				From South				From West						
Left	Thru	Right	Other		Left	Thru	Right	U-TURN		Left	Thru	Right	Other		Left	Thru	Right	U-TURN	Total
Date 08/26/19 -----																			
15:45	15	5	26	0	15	238	24	0		36	3	13	0		20	165	27	2	589
16:00	20	4	22	0	14	230	28	1		31	4	7	0		12	164	33	3	573
16:15	15	2	28	0	24	227	18	1		43	4	8	0		18	148	27	0	563
16:30	18	6	23	0	15	266	23	2		33	5	8	0		17	156	34	0	606
Hr Total	68	17	99	0	68	961	93	4		143	16	36	0		67	633	121	5	2331
16:45	15	6	29	0	14	299	20	0		32	3	15	0		13	186	30	0	662
17:00	18	3	31	0	26	326	25	2		49	7	14	0		21	169	27	2	720
17:15	13	4	27	0	26	348	16	0		38	10	17	0		24	200	36	1	760
17:30	12	5	28	0	30	306	16	0		53	3	18	0		14	156	34	3	678
Hr Total	58	18	115	0	96	1279	77	2		172	23	64	0		72	711	127	6	2820
17:45	16	4	18	0	23	252	13	1		29	3	8	0		12	180	27	1	587
Hr Total	16	4	18	0	23	252	13	1		29	3	8	0		12	180	27	1	587

TOTAL	142	39	232	0	187	2492	183	7		344	42	108	0		151	1524	275	12	5738

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 08/26/19

Peak start 16:45					16:45				16:45					16:45			
Volume	58	18	115	0	96	1279	77	2	172	23	64	0		72	711	127	6
Percent	30%	9%	60%	0%	7%	88%	5%	0%	66%	9%	25%	0%		8%	78%	14%	1%
Pk total	191				1454				259					916			
Highest	17:00				17:15				17:30					17:15			
Volume	18	3	31	0	26	348	16	0	53	3	18	0		24	200	36	1
Hi total	52				390				74					261			
PHF	.92				.93				.88					.88			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 15082619

DATE: 08/26/19

US 441 @ NW 147TH DRIVE

Start Date: 08/26/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 082619PM

BEGIN TIME (MILITARY): 15:45 Hrs

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AUTOMOBILES

NW 147TH DRIVE					US 441				NW 147TH DRIVE				US 441					
From North					From East				From South				From West					
Left	Thru	Right	Other		Left	Thru	Right	U-TURN	Left	Thru	Right	Other	Left	Thru	Right	U-TURN	Total	
Date 08/26/19																		
15:45	14	5	26	0	15	226	23	0	36	3	13	0	20	155	27	2	565	
16:00	18	4	22	0	14	215	26	1	31	4	5	0	11	156	31	2	540	
16:15	14	2	28	0	23	218	17	1	42	4	8	0	18	134	27	0	536	
16:30	17	6	21	0	15	252	22	2	32	5	8	0	16	146	34	0	576	
Hr Total	63	17	97	0	67	911	88	4	141	16	34	0	65	591	119	4	2217	
16:45	14	6	29	0	13	282	20	0	31	3	15	0	13	183	29	0	638	
17:00	18	3	30	0	26	316	24	2	48	7	14	0	21	159	26	2	696	
17:15	13	4	27	0	26	333	15	0	37	10	17	0	24	190	35	1	732	
17:30	12	5	27	0	30	301	16	0	53	3	18	0	13	149	34	3	664	
Hr Total	57	18	113	0	95	1232	75	2	169	23	64	0	71	681	124	6	2730	
17:45	16	4	17	0	23	240	13	1	28	3	7	0	12	176	25	1	566	
Hr Total	16	4	17	0	23	240	13	1	28	3	7	0	12	176	25	1	566	
TOTAL	136	39	227	0	185	2383	176	7	338	42	105	0	148	1448	268	11	5513	

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 08/26/19

Peak start 16:45					16:45				16:45					16:45			
Volume	57	18	113	0	95	1232	75	2	169	23	64	0	71	681	124	6	
Percent	30%	10%	60%	0%	7%	88%	5%	0%	66%	9%	25%	0%	8%	77%	14%	1%	
Pk total	188				1404				256				882				
Highest	17:00				17:15				17:30				17:15				
Volume	18	3	30	0	26	333	15	0	53	3	18	0	24	190	35	1	
Hi total	51				374				74				250				
PHF	.92				.94				.86				.88				

DAY: MONDAY

DATE: 08/26/19

WEATHER: CLEAR & DRY

BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENT COUNTS

US 441 @ NW 147TH DRIVE

ALACHUA COUNTY, FLORIDA

Site Code : 15082619

Start Date: 08/26/19

File I.D. : 082619PM

Page : 1

COMMERCIAL VEHICLES

NW 147TH DRIVE					US 441					NW 147TH DRIVE					US 441					
From North					From East					From South					From West					
	Left	Thru	Right	Other	Left	Thru	Right	U-TURN	Left	Thru	Right	Other	Left	Thru	Right	U-TURN	Total			
Date 08/26/19																				
15:45	1	0	0	0	0	12	1	0	0	0	0	0	0	0	10	0	0	24		
16:00	2	0	0	0	0	15	2	0	0	0	2	0	1	8	2	1	33			
16:15	1	0	0	0	1	9	1	0	1	0	0	0	0	14	0	0	27			
16:30	1	0	2	0	0	14	1	0	1	0	0	0	1	10	0	0	30			
Hr Total	5	0	2	0	1	50	5	0	2	0	2	0	2	42	2	1	114			
16:45	1	0	0	0	1	17	0	0	1	0	0	0	0	3	1	0	24			
17:00	0	0	1	0	0	10	1	0	1	0	0	0	0	10	1	0	24			
17:15	0	0	0	0	0	15	1	0	1	0	0	0	0	10	1	0	28			
17:30	0	0	1	0	0	5	0	0	0	0	0	0	1	7	0	0	14			
Hr Total	1	0	2	0	1	47	2	0	3	0	0	0	1	30	3	0	90			
17:45	0	0	1	0	0	12	0	0	1	0	1	0	0	4	2	0	21			
Hr Total	0	0	1	0	0	12	0	0	1	0	1	0	0	4	2	0	21			
TOTAL	6	0	5	0	2	109	7	0	6	0	3	0	3	76	7	1	225			

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 08/26/19

Peak start 16:45	16:45				16:45	16:45				16:45	16:45			
Volume	1	0	2	0	1	47	2	0	3	0	0	0	1	30
Percent	33%	0%	67%	0%	2%	94%	4%	0%	100%	0%	0%	0%	3%	88%
Pk total	3				50				3				34	
Highest	16:45				16:45				16:45				17:00	
Volume	1	0	0	0	1	17	0	0	1	0	0	0	0	10
Hi total	1				18				1				11	
PHF	.75				.69				.75				.77	

DAY: MONDAY

DATE: 08/26/19

WEATHER: CLEAR & DRY

BEGIN TIME (MILITARY): 15:45 Hrs

MANUAL TURNING MOVEMENT COUNTS

US 441 @ NW 147TH DRIVE

ALACHUA COUNTY, FLORIDA

Site Code : 15082619

Start Date: 08/26/19

File I.D. : 082619PM

Page : 1

PEDESTRIAN & BICYCLE

NW 147TH DRIVE					US 441					NW 147TH DRIVE					US 441					
From North					From East					From South					From West					
Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		Total
Date 08/26/19 -----																				
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:15	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	3
16:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	5
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	4
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2	0	5
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL	0	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	3	0	10

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 08/26/19

Peak start 16:45	16:45				16:45	16:45				16:45	16:45			
Volume	0	0	0	0	0	0	0	0	0	3	0	0	0	2
Percent	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%
Pk total	0				0				3		2			
Highest	15:45				15:45				17:00		17:00			
Volume	0	0	0	0	0	0	0	0	2	0	0	0	2	
Hi total	0				0				2		2			
PHF	.0				.0				.38		.25			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 22222222

DATE: 12/09/19

US 441 AT CR 235

Start Date: 12/09/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 18153403

BEGIN TIME (MILITARY):15:30 Hrs

Page : 1

AUTOMOBILES, COMMERCIAL VEHICLES

CR 235				US 441				CR 235				US 441					
From North				From East				From South				From West					
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	U-TURN	Total	
Date 12/09/19																	
15:30	14	21	15	0	18	227	19	0	34	26	24	0	19	154	29	0	600
15:45	15	19	19	0	35	228	23	0	25	41	29	0	19	116	19	0	588
16:00	11	30	12	0	28	220	19	0	29	30	21	0	23	138	22	0	583
16:15	22	24	20	0	29	204	15	0	35	33	12	0	15	109	19	0	537
Hr Total	62	94	66	0	110	879	76	0	123	130	86	0	76	517	89	0	2308
16:30	14	26	9	0	33	261	27	0	43	30	15	0	32	116	41	1	648
16:45	13	32	18	0	36	259	18	0	36	37	20	0	43	115	37	1	665
17:00	26	39	22	0	41	330	25	0	41	37	20	0	29	150	34	0	794
17:15	9	44	16	0	39	302	18	0	28	44	23	0	51	140	47	0	761
Hr Total	62	141	65	0	149	1152	88	0	148	148	78	0	155	521	159	2	2868
17:30	13	41	26	0	50	285	27	0	31	32	14	0	27	114	44	0	704
Hr Total	13	41	26	0	50	285	27	0	31	32	14	0	27	114	44	0	704
TOTAL	137	276	157	0	309	2316	191	0	302	310	178	0	258	1152	292	2	5880

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 12/09/19

Peak start 16:45				16:45				16:45				16:45			
Volume	61	156	82	0	166	1176	88	0	136	150	77	0	150	519	162
Percent	20%	52%	27%	0%	12%	82%	6%	0%	37%	41%	21%	0%	18%	62%	19%
Pk total	299				1430				363				832		
Highest	17:00				17:00				17:00				17:15		
Volume	26	39	22	0	41	330	25	0	41	37	20	0	51	140	47
Hi total	87				396				98				238		
PHF	.86				.90				.93				.87		

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 22222222

DATE: 12/09/19

US 441 AT CR 235

Start Date: 12/09/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 18153403

BEGIN TIME (MILITARY):15:30 Hrs

Page : 1

AUTOMOBILES

CR 235					US 441				CR 235				US 441						
From North					From East				From South				From West						
Left	Thru	Right	Other		Left	Thru	Right	Other		Left	Thru	Right	Other		Left	Thru	Right	U-TURN	Total
Date 12/09/19																			
15:30	13	17	15	0	17	222	16	0		32	19	22	0		19	145	26	0	563
15:45	10	10	18	0	34	210	22	0		22	35	28	0		19	103	19	0	530
16:00	11	20	10	0	26	211	19	0		28	23	18	0		23	122	21	0	532
16:15	21	21	17	0	27	199	15	0		34	29	12	0		15	103	19	0	512
Hr Total	55	68	60	0	104	842	72	0		116	106	80	0		76	473	85	0	2137
16:30	14	24	6	0	32	245	25	0		38	28	13	0		29	113	37	1	605
16:45	13	24	16	0	35	247	17	0		34	37	12	0		42	113	36	1	627
17:00	24	36	21	0	37	324	24	0		39	34	18	0		28	146	34	0	765
17:15	8	39	16	0	38	292	18	0		27	39	22	0		51	133	44	0	727
Hr Total	59	123	59	0	142	1108	84	0		138	138	65	0		150	505	151	2	2724
17:30	13	37	26	0	47	281	27	0		30	29	13	0		27	110	42	0	682
Hr Total	13	37	26	0	47	281	27	0		30	29	13	0		27	110	42	0	682
TOTAL	127	228	145	0	293	2231	183	0		284	273	158	0		253	1088	278	2	5543

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 12/09/19

Peak start 16:45					16:45				16:45				16:45			
Volume	58	136	79	0	157	1144	86	0	130	139	65	0	148	502	156	1
Percent	21%	50%	29%	0%	11%	82%	6%	0%	39%	42%	19%	0%	18%	62%	19%	0%
Pk total	273				1387				334				807			
Highest	17:00				17:00				17:00				17:15			
Volume	24	36	21	0	37	324	24	0	39	34	18	0	51	133	44	0
Hi total	81				385				91				228			
PHF	.84				.90				.92				.88			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 22222222

DATE: 12/09/19

US 441 AT CR 235

Start Date: 12/09/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 18153403

BEGIN TIME (MILITARY):15:30 Hrs

Page : 1

COMMERCIAL VEHICLES

CR 235				US 441				CR 235				US 441					
From North				From East				From South				From West					
Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total	
Date 12/09/19																	
15:30	1	4	0	0	1	5	3	0	2	7	2	0	0	9	3	0	37
15:45	5	9	1	0	1	18	1	0	3	6	1	0	0	13	0	0	58
16:00	0	10	2	0	2	9	0	0	1	7	3	0	0	16	1	0	51
16:15	1	3	3	0	2	5	0	0	1	4	0	0	0	6	0	0	25
Hr Total	7	26	6	0	6	37	4	0	7	24	6	0	0	44	4	0	171
16:30	0	2	3	0	1	16	2	0	5	2	2	0	3	3	4	0	43
16:45	0	8	2	0	1	12	1	0	2	0	8	0	1	2	1	0	38
17:00	2	3	1	0	4	6	1	0	2	3	2	0	1	4	0	0	29
17:15	1	5	0	0	1	10	0	0	1	5	1	0	0	7	3	0	34
Hr Total	3	18	6	0	7	44	4	0	10	10	13	0	5	16	8	0	144
17:30	0	4	0	0	3	4	0	0	1	3	1	0	0	4	2	0	22
Hr Total	0	4	0	0	3	4	0	0	1	3	1	0	0	4	2	0	22
TOTAL	10	48	12	0	16	85	8	0	18	37	20	0	5	64	14	0	337

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 12/09/19

Peak start	16:45				16:45				16:45				16:45			
Volume	3	20	3	0	9	32	2	0	6	11	12	0	2	17	6	0
Percent	12%	77%	12%	0%	21%	74%	5%	0%	21%	38%	41%	0%	8%	68%	24%	0%
Pk total	26				43				29				25			
Highest	16:45				16:45				16:45				17:15			
Volume	0	8	2	0	1	12	1	0	2	0	8	0	0	7	3	0
Hi total	10				14				10				10			
PHF	.65				.77				.72				.62			

DAY: MONDAY

MANUAL TURNING MOVEMENT COUNTS

Site Code : 22222222

DATE: 12/09/19

US 441 AT CR 235

Start Date: 12/09/19

WEATHER: CLEAR & DRY

ALACHUA COUNTY, FLORIDA

File I.D. : 18153403

BEGIN TIME (MILITARY):15:30 Hrs

Page : 1

PEDESTRIAN & BICYCLE

CR 235					US 441					CR 235					US 441					
From North					From East					From South					From West					
Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		Left	Thru	Right	PEDS		
Date 12/09/19																				
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
15:45	0	0	0	0	0	0	0	1	0	1	0	3	0	0	0	0	0	0	5	
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
16:15	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
Hr Total	0	0	0	0	0	0	0	3	0	1	0	4	0	0	0	0	0	1	9	
16:30	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
Hr Total	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	
17:30	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	
Hr Total	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	
TOTAL	0	0	0	4	0	0	0	5	0	1	0	6	0	0	0	0	0	2	18	

Peak Hour Analysis By Entire Intersection for the Period: 16:45 to 17:45 on 12/09/19

Peak start 16:45					16:45					16:45					16:45				
Volume	0	0	0	4	0	0	0	0	0	0	0	0	2	0	0	0	1	1	1
Percent	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	100%	100%
Pk total	4				0					2				1					
Highest	17:30				15:30					17:15				17:30					
Volume	0	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	1	1	1
Hi total	3				0					2				1					
PHF	.33				.0					.25				.25					

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION - DISTRICT TWO
Signal Retiming - City of Alachua
Design Turning Movement Counts: US 441 from 140th Street to NW 173rd St (CR 235A)

PM PLAN			RAW DATA											
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
US 441 AND NW 140TH ST	1	16:45	178	1164	93	118	583	147	141	132	94	68	134	88
US 441 AND MAIN ST	2	16:45	49	1306	11	48	798	68	72	8	44	9	16	47
US 441 AND NW 147TH DR	3	16:45	131	1173	102	92	874	122	174	13	67	65	14	104
US 441 AND I-75 NB RAMP	4	17:00	45	1166	204	57	810	22	41	13	12	260	17	659
US 441 AND I-75 SB RAMP	5	17:00	45	1618	195	0	956	58	26	0	98	173	22	54
US 441 AND 167TH BLVD	6	17:00	3	1360	305	123	787	0	0	0	0	185	0	49
US 441 AND NW 173RD ST (CR 235A)	7	17:00	105	1392	116	35	711	49	83	26	107	93	20	48
PM PLAN			ADJUSTED BY AGGREGATED FACTOR											
LOCATION	INT #	TIME	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
US 441 AND NW 140TH ST	1	16:45	190	1245	100	126	624	157	151	141	101	73	143	94
US 441 AND MAIN ST	2	16:45	52	1397	12	51	854	73	77	9	47	10	17	50
US 441 AND NW 147TH DR	3	16:45	140	1255	109	98	935	131	186	14	72	70	15	111
US 441 AND I-75 NB RAMP	4	17:00	48	1248	218	61	867	24	44	14	13	278	18	705
US 441 AND I-75 SB RAMP	5	17:00	48	1731	209	0	1023	62	28	0	105	185	24	58
US 441 AND 167TH BLVD	6	17:00	3	1455	326	132	842	0	0	0	0	198	0	52
US 441 AND NW 173RD ST (CR 235A)	7	17:00	112	1489	124	37	761	52	89	28	114	100	21	51

APPENDIX C

FDOT TRAFFIC DATA

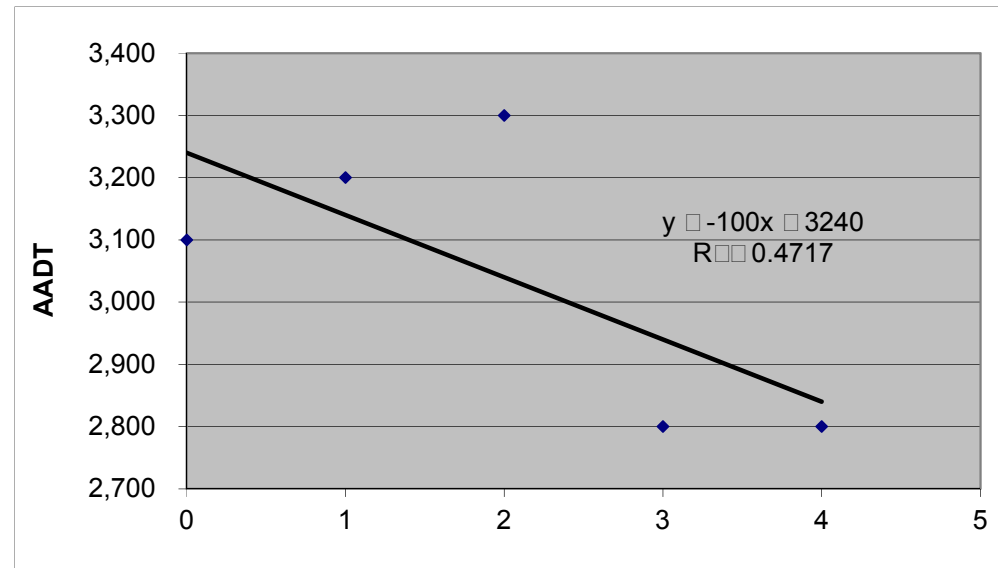


TABLE C1
LINEAR REGRESSION ANALYSIS

CR 241, North of SR 235

<u>Year</u>	<u></u>	<u>Actual</u> <u>AADT (Y)</u>	<u>Predicted</u> <u>AADT</u>
2014	0	3,100	3,240
2015	1	3,200	3,140
2016	2	3,300	3,040
2017	3	2,800	2,940
2018	4	2,800	2,840
2019	5		2,740
2020	6		2,640
2021	7		2,540
2022	8		2,440
2023	9		2,340
2024	10		2,240
2025	11		2,140
2026	12		2,040

i = - 3.8%



BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 26 - ALACHUA

SITE: 0240 - CR 241.1 MI. N. OF SR 235

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	2800 F		0		0	9.50	57.90	2.70
2017	2800 C	N	0		S 0	9.50	53.80	2.60
2016	3300 R		0		0	9.50	53.60	2.80
2015	3200 T		0		0	9.50	57.00	2.60
2014	3100 S					9.50	57.40	2.40
2013	3100 F		0		0	9.50	57.80	2.60
2012	3100 C	N	0		S 0	9.50	58.40	2.50

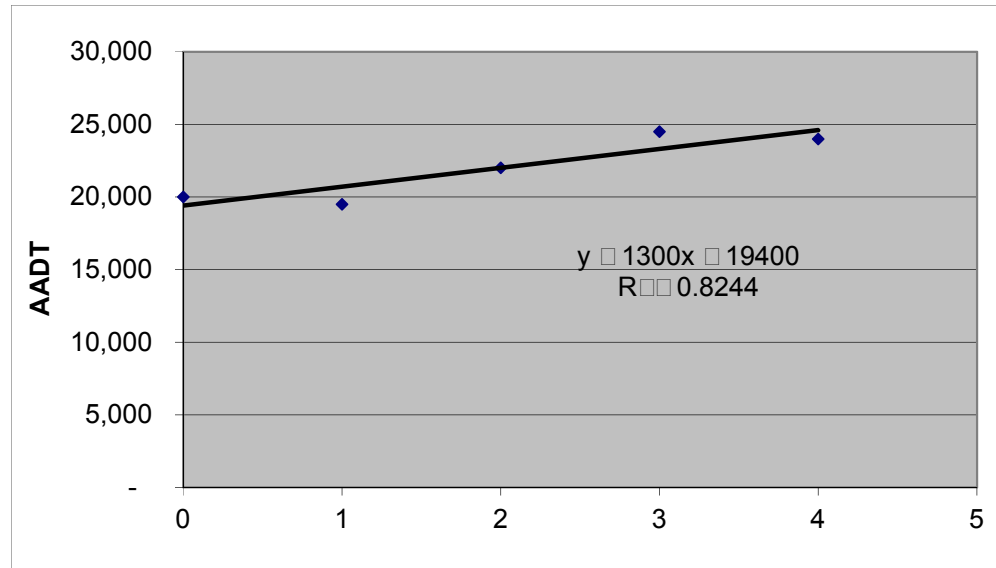
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

TABLE C2
LINEAR REGRESSION ANALYSIS

US 441, Southeast of NW 147th Drive

<u>Year</u>	<u></u>	<u>Actual</u> <u>AADT (Y)</u>	<u>Predicted</u> <u>AADT</u>
2014	0	20,000	19,400
2015	1	19,500	20,700
2016	2	22,000	22,000
2017	3	24,500	23,300
2018	4	24,000	24,600
2019	5		25,900
2020	6		27,200
2021	7		28,500
2022	8		29,800
2023	9		31,100
2024	10		32,400
2025	11		33,700
2026	12		35,000

i = 5.0%



BUCKHOLZ TRAFFIC

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 26 - ALACHUA

SITE: 5106 - SR 20 .4 MI. NW OF SR 235

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2018	24000 C	N	12000	S 12000	9.50	57.90	4.90
2017	24500 C	N	12500	S 12000	9.50	53.80	4.60
2016	22000 C	N	11000	S 11000	9.50	53.60	4.90
2015	19500 C	N	9700	S 9800	9.50	57.00	5.20
2014	20000 C	N	10000	S 10000	9.50	57.40	5.40
2013	19800 C	N	9800	S 10000	9.50	57.80	5.00
2012	18900 C	N	9600	S 9300	9.50	58.40	4.90
2011	18600 C	N	9200	S 9400	9.50	58.80	5.50
2010	17600 C	N	8700	S 8900	10.13	59.87	5.10
2009	19600 C	N	9600	S 10000	10.04	57.81	6.20
2008	19400 C	N	9800	S 9600	10.17	57.73	7.30
2007	20000 C	N	10000	S 10000	10.22	58.44	5.70
2006	20500 C	N	10000	S 10500	9.98	59.05	6.70
2005	20000 C	N	10000	S 10000	10.10	58.20	19.60
2004	19900 C	N	10000	S 9900	10.20	62.30	9.10
2003	21000 C	N	10500	S 10500	10.20	59.50	12.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

COUNTY: 26
STATION: 5106
DESCRIPTION: SR 20 .4 MI. NW OF SR 235
START DATE: 04/24/2018
START TIME: 0000

TIME	DIRECTION: N					DIRECTION: S					COMBINED TOTAL	
	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL		
0000	19	17	14	8	58	12	9	10	10	41	99	
0100	11	8	14	11	44	1	20	13	6	40	84	
0200	5	6	10	12	33	5	4	5	11	25	58	
0300	6	9	8	7	30	10	8	21	15	54	84	
0400	14	11	6	30	61	18	22	39	33	112	173	
0500	36	39	46	38	159	59	88	114	106	367	526	
0600	82	97	130	139	448	187	206	252	278	923	1371	
0700	172	195	180	183	730	311	310	346	269	1236	1966	
0800	185	174	123	148	630	230	304	232	159	925	1555	
0900	161	158	148	142	609	206	212	195	169	782	1391	
1000	172	168	179	200	719	163	149	159	156	627	1346	
1100	186	184	208	222	800	191	176	203	180	750	1550	
1200	213	201	187	181	782	232	188	215	220	855	1637	
1300	196	203	181	205	785	228	224	212	201	865	1650	
1400	225	199	208	240	872	209	159	184	184	736	1608	
1500	241	235	252	282	1010	219	217	237	206	879	1889	
1600	261	314	285	300	1160	226	168	267	211	872	2032	
1700	327	337	348	277	1289	241	215	220	174	850	2139	
1800	282	202	177	166	827	174	156	147	123	600	1427	
1900	171	147	119	116	553	130	102	100	92	424	977	
2000	123	124	102	76	425	117	113	95	74	399	824	
2100	66	68	59	48	241	74	75	57	61	267	508	
2200	40	36	26	30	132	43	23	25	25	116	248	
2300	21	17	20	18	76	23	15	10	6	54	130	
24-HOUR TOTALS:					12473						12799	25272

			PEAK VOLUME INFORMATION			
DIRECTION: N			DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	715	743	645	1245	700	1966
P.M.	1645	1312	1630	934	1645	2199
DAILY	1645	1312	645	1245	1645	2199

COUNTY: 26
 STATION: 5106
 DESCRIPTION: SR 20 .4 MI. NW OF SR 235
 START DATE: 04/25/2018
 START TIME: 0000

TIME	DIRECTION: N					DIRECTION: S					COMBINED TOTAL	
	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL		
0000	12	11	9	12	44	20	13	17	13	63	107	
0100	8	7	13	8	36	12	19	7	7	45	81	
0200	8	11	9	6	34	10	14	5	9	38	72	
0300	11	13	12	5	41	7	9	18	11	45	86	
0400	11	21	8	32	72	14	29	17	35	95	167	
0500	38	45	54	48	185	59	96	114	123	392	577	
0600	73	106	102	104	385	160	221	246	269	896	1281	
0700	161	206	182	180	729	331	311	344	261	1247	1976	
0800	185	185	151	119	640	265	258	245	187	955	1595	
0900	137	167	133	169	606	169	171	190	141	671	1277	
1000	151	151	152	178	632	158	141	147	176	622	1254	
1100	150	240	207	247	844	205	193	216	220	834	1678	
1200	220	202	221	246	889	231	215	252	210	908	1797	
1300	197	190	205	186	778	223	194	210	182	809	1587	
1400	203	237	195	226	861	187	189	190	197	763	1624	
1500	225	233	257	290	1005	212	239	207	201	859	1864	
1600	281	296	306	348	1231	204	190	196	213	803	2034	
1700	332	322	282	271	1207	214	214	192	184	804	2011	
1800	259	195	184	181	819	182	165	167	135	649	1468	
1900	159	128	145	128	560	127	130	105	109	471	1031	
2000	134	145	109	103	491	107	96	90	97	390	881	
2100	92	75	63	42	272	73	91	63	61	288	560	
2200	49	38	32	34	153	35	35	34	27	131	284	
2300	20	30	27	15	92	29	21	18	10	78	170	
24-HOUR TOTALS:					12606						12856	25462

PEAK VOLUME INFORMATION						
DIRECTION: N			DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	715	753	645	1255	700	1976
P.M.	1630	1308	1200	908	1630	2145
DAILY	1630	1308	645	1255	1630	2145

APPENDIX D

UNSIGNALIZED INTERSECTION CAPACITY CALCULATIONS



AM PEAK HOUR

HCS7 Two-Way Stop-Control Report

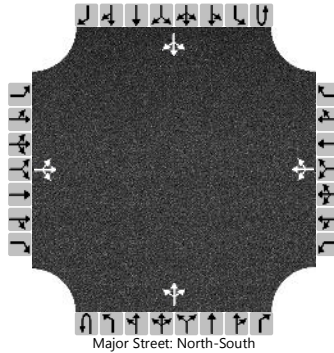
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	9/7/2019
Analysis Year	2028
Time Analyzed	AM Peak Hour - BUILD
Intersection Orientation	North-South
Project Description	#18-1534

Site Information

Intersection	CR 241/NW 174th Avenue
Jurisdiction	Alachua County
East/West Street	NW 174th Avenue
North/South Street	CR241
Peak Hour Factor	0.98
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		0	0	1		2	28	0		0	128	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

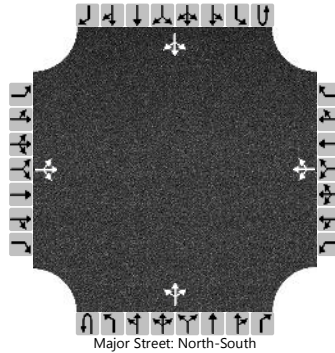
Flow Rate, v (veh/h)			1				1			2				0		
Capacity, c (veh/h)			924				1052			1467				1598		
v/c Ratio			0.00				0.00			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.9				8.4			7.5				7.3		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	8.9				8.4				0.5				0.0			
Approach LOS	A				A											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	J. Buckholz	Intersection	CR 241/NW 172nd Avenue
Agency/Co.	BUCKHOLZ TRAFFIC	Jurisdiction	Alachua County
Date Performed	9/7/2019	East/West Street	NW 172nd Avenue
Analysis Year	2028	North/South Street	CR241
Time Analyzed	AM Peak Hour - BUILD	Peak Hour Factor	0.98
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	#18-1534		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		18	0	0		0	30	4		0	128	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			1				18			0				0		
Capacity, c (veh/h)			924				805			1467				1590		
v/c Ratio			0.00				0.02			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.1			0.0				0.0		
Control Delay (s/veh)			8.9				9.6			7.5				7.3		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	8.9				9.6				0.0				0.0			
Approach LOS	A				A											

HCS7 Two-Way Stop-Control Report

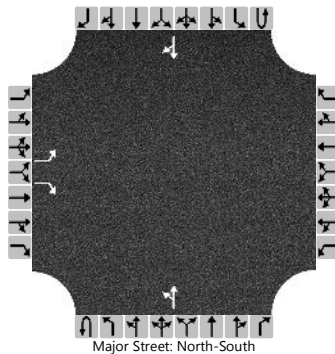
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	9/7/2019
Analysis Year	2028
Time Analyzed	AM Peak Hour - BUILD
Intersection Orientation	North-South
Project Description	#18-1534

Site Information

Intersection	CR 241/Site Drive
Jurisdiction	Alachua County
East/West Street	Site Drive
North/South Street	CR241
Peak Hour Factor	0.98
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration		L		R						LT						TR
Volume (veh/h)		2		102						33	34				127	1
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2		104						34						
Capacity, c (veh/h)		738		920						1455						
v/c Ratio		0.00		0.11						0.02						
95% Queue Length, Q ₉₅ (veh)		0.0		0.4						0.1						
Control Delay (s/veh)		9.9		9.4						7.5						
Level of Service (LOS)		A		A						A						
Approach Delay (s/veh)	9.4								3.8							
Approach LOS	A															

PM PEAK HOUR

HCS7 Two-Way Stop-Control Report

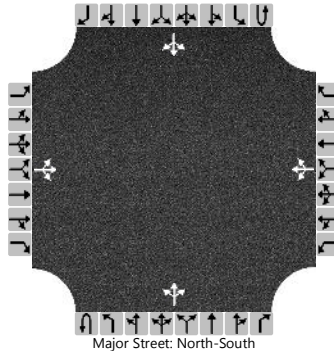
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	9/7/2019
Analysis Year	2028
Time Analyzed	PM Peak Hour - BUILD
Intersection Orientation	North-South
Project Description	#18-1534

Site Information

Intersection	CR 241/NW 174th Avenue
Jurisdiction	Alachua County
East/West Street	NW 174th Avenue
North/South Street	CR241
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		0	0	1		7	133	2		0	60	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

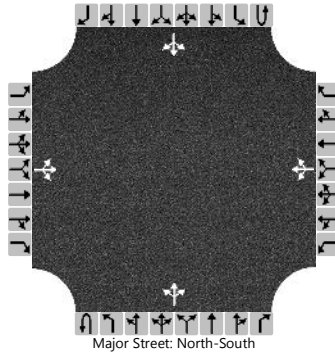
Flow Rate, v (veh/h)			1				1			8				0		
Capacity, c (veh/h)			1004				905			1549				1446		
v/c Ratio			0.00				0.00			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.6				9.0			7.3				7.5		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	8.6				9.0				0.4				0.0			
Approach LOS	A				A											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	J. Buckholz	Intersection	CR 241/NW 172nd Avenue
Agency/Co.	BUCKHOLZ TRAFFIC	Jurisdiction	Alachua County
Date Performed	9/7/2019	East/West Street	NW 172nd Avenue
Analysis Year	2028	North/South Street	CR241
Time Analyzed	PM Peak Hour - BUILD	Peak Hour Factor	0.91
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	#18-1534		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	1		7	0	0		1	142	9		0	62	0
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			1				8			1				0		
Capacity, c (veh/h)			1001				726			1546				1424		
v/c Ratio			0.00				0.01			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.6				10.0			7.3				7.5		
Level of Service (LOS)			A				B			A				A		
Approach Delay (s/veh)	8.6				10.0				0.1				0.0			
Approach LOS	A				B											

HCS7 Two-Way Stop-Control Report

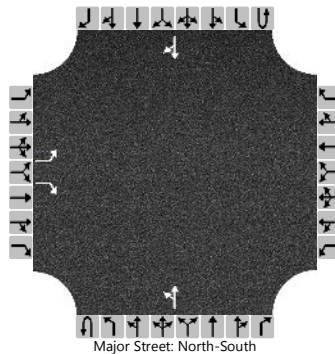
General Information

Analyst	J. Buckholz
Agency/Co.	BUCKHOLZ TRAFFIC
Date Performed	9/7/2019
Analysis Year	2028
Time Analyzed	PM Peak Hour - BUILD
Intersection Orientation	North-South
Project Description	#18-1534

Site Information

Intersection	CR 241/Site Drive
Jurisdiction	Alachua County
East/West Street	Site Drive
North/South Street	CR241
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration		L		R						LT						TR
Volume (veh/h)		1		65						110	152				60	2
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1		71						121						
Capacity, c (veh/h)		500		996						1533						
v/c Ratio		0.00		0.07						0.08						
95% Queue Length, Q ₉₅ (veh)		0.0		0.2						0.3						
Control Delay (s/veh)		12.2		8.9						7.5						
Level of Service (LOS)		B		A						A						
Approach Delay (s/veh)	8.9								3.6							
Approach LOS	A															

APPENDIX E

SIGNAL TIMINGS



EXISTING TIMINGS

Station : 160 - US 441 @ 147th Dr (Alachua) - FYA (Standard File)

Phase [1.1.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	28	0	31	0	19	0	31	0	0	0	0	0	0	0	0
Min Green	4	20	4	6	4	20	4	6	0	0	0	0	0	0	0	0
Passage	2	3.5	2	3	2	3.5	2	3	0	0	0	0	0	0	0	0
Max1	15	50	15	30	15	50	15	30	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow	4.8	4.9	3.8	4	4.9	4.9	4	4	0	0	0	0	0	0	0	0
Red	2	2	2.6	3.1	2	2	2.1	3.1	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Entry				ON				ON								
Non Act1																
Non Act2																
Lock Call		ON				ON										
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable		ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1	0 0 0 0 0	0	0	0	0	0	0	0	0	0
2	0 0 0 0 0	0	0	0	0	0	0	0	0	0
3	0 0 0 0 0	0	0	0	0	0	0	0	0	0
4	0 0 0 0 0	0	0	0	0	0	0	0	0	0
5	0 0 0 0 0	0	0	0	0	0	0	0	0	0
6	0 0 0 0 0	0	0	0	0	0	0	0	0	0
7	0 0 0 0 0	0	0	0	0	0	0	0	0	0
8	0 0 0 0 0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1	0 0 0 0 0	0	0	0	0	0	0	0	0	0
2	0 0 0 0 0	0	0	0	0	0	0	0	0	0
3	0 0 0 0 0	0	0	0	0	0	0	0	0	0
4	0 0 0 0 0	0	0	0	0	0	0	0	0	0
5	0 0 0 0 0	0	0	0	0	0	0	0	0	0
6	0 0 0 0 0	0	0	0	0	0	0	0	0	0
7	0 0 0 0 0	0	0	0	0	0	0	0	0	0
8	0 0 0 0 0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Station : 160 - US 441 @ 147th Dr (Alachua) - FYA (Standard File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
	OFF	900	3	10	OFF		STD8	4PH		OFF	ALARM				ON	ON		OFF	OFF	OFF	1

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
160			OFF					

[illegible]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap	Included Phases					Modifier Phases					Type	Green	Yellow	Red
Overlap 1											NORMAL		3.5	1.5
Overlap 2	1					2					R-T/OTH		5	1.5
Overlap 3											NORMAL		3.5	1.5
Overlap 4	3					4					R-T/OTH		4	1
Overlap 5											NORMAL		3.5	1.5
Overlap 6	5					6					R-T/OTH		5	1.5
Overlap 7											NORMAL		3.5	1.5
Overlap 8	7					8					R-T/OTH		4	1

[illegible][illegible][illegible]

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Detector Alternate Program 1, Vehicle Parameters [5.5.1]

[illegible][illegible]

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	TX2_V14	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1		1									1	1			
2		1		1							1	1			
3	1								1	1					
4	1		1						1	1					
5				1											
6		1		1											
7			1												
8	1		1												
9															
10															
11															
12															
13			1												
14	1														
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac		Detector								MMU								Diag
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
Present	ON	ON							ON								ON		
Peer to Peer																			

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

City of Gainesville

Timing Sheet

8/26/2019 2:09:58 PM

Station : 160 - US 441 @ 147th Dr (Alachua) - FYA (Standard File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	ON
8	ON
9	
10	ON
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	ON
19	ON
20	ON
21	ON
22	ON
23	ON
24	ON
25	
26	ON

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	ON
8	ON
9	
10	ON
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	ON
19	ON
20	ON
21	ON
22	ON
23	ON
24	ON
25	
26	ON

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash						
Override Higher	ON	ON	ON	ON	ON	ON
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear	32	32	32	32	32	32
Track Green						
Min Dwell	10	10	10	10	10	10
Max Presence	120	120	120	120	120	120
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1	4	2	3	4	2	1
Dwell P2	8	6	8	7	5	6
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						

27	ON	27	ON	Dwell P9							
28	ON	28	ON	Dwell P10							
29	ON	29	ON	Dwell P11							
30	ON	30	ON	Dwell P12							
31		31		Dwell Ped1							
32		32		Dwell Ped2							
33		33		Dwell Ped3							
34		34		Dwell Ped4							
35		35		Dwell Ped5							
36		36		Dwell Ped6							
37		37		Dwell Ped7							
38		38		Dwell Ped8							
39		39		Exit R1	4	2	4	4	2	2	
40		40		Exit R2	8	6	8	8	6	6	
41		41		Exit R3							
42		42		Exit R4							
43		43									
44		44									
45		45									
46		46									
47		47									
48		48									
49	ON	49	ON								
50	ON	50	ON								
51	ON	51	ON								
52	ON	52	ON								
53	ON	53	ON								
54	ON	54	ON								
55	ON	55	ON								
56	ON	56	ON								
57	ON	57	ON								
58	ON	58	ON								
59	ON	59									
60		60									
61	ON	61									
62		62									
63		63									
64		64									

Alarms, Parameters [1.4.1] Auto Flash Parameter

Yellow	Red	Mode	Source
4	2	VOT_MON	TEST B

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases	2	6										
Overlaps												

Station : 160 - US 441 @ 147th Dr (Alachua) - FYA (Standard File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON	ON	ON	ON	ON	ON
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Max2						
Return Max/Min	MIN	MIN	MIN	MIN	MIN	MIN
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1			4	8	6	2
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						

[illegible]

City of Gainesville Timing Sheet 8/26/2019 2:09:58 PM
Station : 160 - US 441 @ 147th Dr (Alachua) - FYA (Standard File)
TB Coor, Advanced Scheduler [4.3]

[illegible][illegible]

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99												
100	255											



City of Gainesville Traffic Operations

Intersection Timing Sheet

Name **US 441** ☐ **SR 235 (Alachua)** Mod. Date **5/23/2017** Initial Operation Date **____/____/____**
Intersection ID **11** System ID **175** Mod. No. **1**

Part I Actuated Timing Information

Non-coordinated Operation

Phase	1	2	3	4	5	6	7	8	Other(A)	Other(B)
Direction	EBL	WBT	SBL	NBT	WBL	EBT	NBL	SBT		
Initial	4	15	4	6	4	15	4	6		
Passage	2.0	3.5	2.0	4.0	2.0	3.5	2.0	4.0		
Max1	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0		
Max2										
Yellow	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0		
All Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Walk		7.0		5.0		7.0		7.0		
Ped Clear		26.0		22.0		26.0		22.0		
Recall		MIN				MIN				
Flash Pattern										
Left TurnType										
Detect Type										

Preemption

Fire Station	☐ Active	Emergency Opticom	☐ Active	Preemption Notes
Bridge	☐ Active	Emergency.now	☐ Active	
Rail Road	☐ Active	Other _____	☐ Active	

Part II Coordinated Timing Information

Pattern Tables

PHASE	1	2	3	4	5	6	7	8	Cycle	Offset
Pattern 1	16	49	16	39	17	48	16	39	120	0
Pattern 2	20	45	16	39	20	45	16	39	120	106
Pattern 3	17	50	14	39	17	50	14	39	120	4
Pattern 4	12	46	12	20	12	46	12	20	90	56
Pattern 5										
Pattern 6										
Pattern 7										

Schedule Implementation

Schedule Notes	Day Plan 1 (Mon-Thurs)			Day Plan 2 (Fri)			Day Plan 3 (Sat)		
	Start	End	Pattern	Start	End	Pattern	Start	End	Pattern
	0:00	5:45	FREE	0:00	5:45	FREE	0:00	8:00	FREE
	5:45	6:30	4	5:45	6:30	4	8:00	18:00	1
	6:30	9:00	2	6:30	9:00	2	18:00	21:00	4
	9:00	15:00	1	9:00	15:00	1	21:00	0:00	FREE
	15:00	19:00	3	15:00	19:00	3			
	19:00	20:30	1	19:00	20:30	1			
	20:30	22:00	4	20:30	22:00	4			
	22:00	0:00	FREE	22:00	0:00	FREE			

Schedule Notes	Day Plan 4 (Sun)								
	Start	End	Pattern	Start	End	Pattern	Start	End	Pattern
	0:00	8:00	FREE						
	8:00	18:00	1						
	18:00	21:00	4						
	21:00	0:00	FREE						

Part III Equipment Information

Equipment (N)	Manufacturer	Equipment (C)	Manufacturer	Equipment (V)	Manufacturer
Switch	☐ ITS-Express	Controller	☐ Naztec	CCTV	☐ Bosch
Wireless	☐	CMU/MMU	☐	Video Detection	☐ Iteris
Other _____	☐	Other _____	☐	Other _____	☐

CONSULTANT (FUTURE) TIMINGS

Time of Day Plan

Designed By:	J.M.
Date:	4/19/2019
Checked By:	R. A. A
Date:	4/19/2019

Section:	26020000
Corridor:	US 441
From:	NW 140th St/SR 235
To:	NW 173rd St/CR 235A

TIME OF DAY

Day	Plan	Time		Pattern	Cycle Length
Monday Thru Friday	FREE	0:00	6:00	-	FREE
	AM	6:00	10:00	1	130
	MIDDAY	10:00	16:15	2	130
	PM	16:15	18:15	3	160
	NT	18:15	21:30	4	110
	FREE	21:30	0:00	-	FREE
Saturday	FREE	0:00	7:00	-	FREE
	NT	7:00	9:00	4	110
	WKN OffPk	9:00	12:30	6	130
	WKN	12:30	18:00	5	130
	NT	18:00	21:00	4	110
	FREE	21:00	0:00	-	FREE
Sunday	FREE	0:00	9:00	-	FREE
	NT	9:00	11:00	4	110
	WKN OffPk	11:00	17:30	6	130
	NT	17:30	21:00	4	110
	FREE	21:00	0:00	-	FREE

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION - DISTRICT TWO
US 441 - Signal Retiming
City of Alachua

Designed By:	J.M.		Section	26020000	Mile Post	18.481	Node	3					
Date:	4/19/2019		Sig ID	160	Controller	Naztec 900 TS2	System ID						
Checked By:	R.A.A		Maj. Street	US 441	Orientation	N-S	SOP	10					
Date:	4/19/2019		Min. Street	NW 147th Dr	Orientation	E-W							
Pedestrians													
Movement # Phase Ø)	(Controller	1	2	3	4	5	6	7	8	Notes			
Direction		SBL	NB	WBL	EB	NBL	SB	EBL	WB				
Speed Limit (mph)		45	45	25	30	45	45	30	25				
Vehicle Traversed Width		116	111	109	130	104	109	115	128				
Approach Grades		0.3%	-0.9%	-7.2%	-4.4%	-0.9%	0.3%	-4.4%	-7.2%				
Ped-X (curb to curb)			95		106		64		106				
Crossing Time			28		31		19		31				
Ped-X (button to curb)			6		12		13		13				
Ped-X (button to far curb)			101		118		77		119				
Crossing Time (to far curb)			34		40		26		40				
Controller Timings (seconds)													
Movement # Phase Ø)	(Controller	1	2	3	4	5	6	7	8	Notes			
Direction		SBL	NB	WBL	EB	NBL	SB	EBL	WB				
Turn Type		Prot/Perm		Prot/Perm		Prot/Perm		Prot/Perm					
Min Green		4	20	4	6	4	20	4	6				
Ext		2.0	3.5	2.0	3.0	2.0	3.5	2.0	3.0				
Yellow Change Interval		4.8	4.9	3.8	4.0	4.9	4.8	4.0	3.8				
Red Clearance Interval		2.0	2.0	2.6	2.5	2.0	2.0	2.1	3.1				
Max I		15	50	15	30	15	50	15	30				
Max II													
Walk			7		7		7		7				
Flashing Don't Walk			28		31		19		31				
Min Splits		11.0	42.0	11.0	45.0	11.0	33.0	11.0	45.0				
Detector Memory			ON				ON						
Det. Cross Switch.		ON		ON		ON		ON					
Recall			Min				Min						
CNA													
Coord Phase			YES										
Coordination Timings (seconds)													
Plan	Pattern	C-O-S	Splits								Cycle Length	Offset	Seq
AM	1		18	75	19	18	18	75	19	18	130	37	1
MIDDAY	2		18	74	18	20	18	74	20	18	130	93	1
PM	3		18	71	19	52	22	67	26	45	160	1	1
PM Alt	7		18	63	18	51	22	59	24	45	150	35	1
NT	4		18	55	19	18	18	55	19	18	110	10	1
WKN	5		18	49	19	44	18	49	18	45	130	99	1
WKN OffPk	6		22	69	19	20	18	73	19	20	130	99	1

Notes

- Offset referenced to end of first through movement 2 & 6
- Program float force-offs
- Program Max Inhibit during coordination

	All Patterns							
Ring-1	1	2	3	4				
Ring-2	5	6	7	8				

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION - DISTRICT TWO
US 441 - Signal Retiming
City of Alachua

Designed By:	J.M.		Section	26020000	Mile Post	17.962	Node	1					
Date:	4/19/2019		Sig ID	175	Controller	Naztec 900 TS2	System ID						
Checked By:	R.A.A		Maj. Street	US 441	Orientation	N-S	SOP	10					
Date:	4/19/2019		Min. Street	NW 140th St/CR 235	Orientation	E-W							
Pedestrians													
Movement # Phase Ø)	(Controller	1	2	3	4	5	6	7	8	Notes			
Direction		SBL	NB	WBL	EB	NBL	SB	EBL	WB				
Speed Limit (mph)		45	45	30	30	45	45	30	30				
Vehicle Traversed Width		96	126	171	161	135	149	173	170				
Approach Grades		-1.0%	0.6%	-7.0%	4.5%	0.6%	-1.0%	4.5%	-7.0%				
Ped-X (curb to curb)			83		116		63		105				
Crossing Time			24		34		18		30				
Ped-X (button to curb)			14		12		16		11				
Ped-X (button to far curb)			97		128		79		116				
Crossing Time (to far curb)			33		43		27		39				
Controller Timings (seconds)													
Movement # Phase Ø)	(Controller	1	2	3	4	5	6	7	8	Notes			
Direction		SBL	NB	WBL	EB	NBL	SB	EBL	WB				
Turn Type		Prot/Perm		Prot/Perm		Prot/Perm		Prot/Perm					
Min Green		4	15	4	6	4	15	4	6				
Ext		2.0	3.5	2.0	9.0	2.0	3.5	2.0	9.0				
Yellow Change Interval		4.9	4.8	4.3	3.7	4.8	4.9	3.7	4.3				
Red Clearance Interval		2.0	2.0	3.4	3.2	2.0	2.0	3.4	3.4				
Max I		25	50	20	35	25	50	20	35				
Max II													
Walk			7		7		7		7				
Flashing Don't Walk			24		34		18		30				
Min Splits		11.0	38.0	12.0	48.0	11.0	32.0	12.0	45.0				
Detector Memory			ON		ON		ON						
Det. Cross Switch.		ON		ON		ON		ON					
Recall			Max				Max		Min				
CNA													
Coord Phase			YES										
Coordination Timings (seconds)													
Plan	Pattern	C-O-S	Splits								Cycle Length	Offset	Seq
AM	1		18	57	20	35	20	55	20	35	130	88	1
MIDDAY	2		18	56	18	38	18	56	19	37	130	19	1
PM	3		18	74	20	48	24	68	23	45	160	150	1
PM Alt	7		18	66	18	48	20	64	21	45	150	147	1
NT	4		18	48	18	26	18	48	21	23	110	73	1
WKN	5		18	57	22	33	18	57	33	22	130	60	1
WKN OffPk	6		19	44	19	48	18	45	22	45	130	60	1

Notes

- Offset referenced to end of first through movement 2 & 6
- Program Max inhibit during coordination
- Program float force-offs

	All Patterns			
Ring-1	1	2	3	4
Ring-2	5	6	7	8

APPENDIX F

SIGNALIZED INTERSECTION CAPACITY CALCULATIONS



AM PEAK HOUR

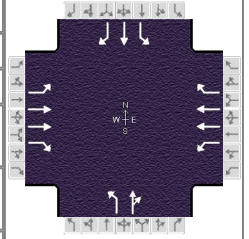
HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC
Analyst	J. Buckholz
Jurisdiction	Alachua County
Urban Street	US 441
Intersection	US 441/NW 147th Drive
Project Description	2019 AM Peak Hour Traffic

Intersection Information

Duration, h	0.25
Area Type	Other
PHF	0.89
Analysis Period	1> 7:15
File Name	Ex_2019_AM_US441_NW147.xus



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	49	1048	66	34	675	59	93	10	65	38	8	48

Signal Information

Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.2	0.5	101.9	4.6	5.9	7.0			
				Yellow	4.8	0.0	4.9	4.0	0.0	4.0			
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	0.0	2.0	2.1	0.0	3.1			

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	10.5	109.3	10.0	108.8	16.6	20.0	10.7	14.1
Change Period, (Y+R c), s	6.9	6.9	6.8	6.9	6.4	7.1	6.1	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.2	3.0	4.2
Queue Clearance Time (g s), s	3.5		3.0		10.3	9.7	5.5	6.9
Green Extension Time (g e), s	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.1
Phase Call Probability	0.90		0.80		0.99	1.00	0.83	1.00
Max Out Probability	0.00		0.00		0.04	0.00	0.00	0.00

Movement Group Results

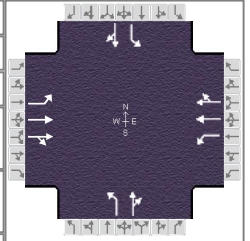
	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	55	1178	66	38	758	60	104	84		43	9	48
Adjusted Saturation Flow Rate (s), veh/h/ln	1682	1724	1510	1810	1710	1422	1767	1579		1739	1707	1447
Queue Service Time (g s), s	1.5	8.4	2.2	1.0	4.5	2.1	8.3	7.7		3.5	0.8	4.9
Cycle Queue Clearance Time (g c), s	1.5	8.4	2.2	1.0	4.5	2.1	8.3	7.7		3.5	0.8	4.9
Green Ratio (g/C)	0.70	0.68	0.68	0.70	0.68	0.68	0.12	0.09		0.08	0.05	0.05
Capacity (c), veh/h	522	2354	1031	383	2323	966	226	136		128	80	68
Volume-to-Capacity Ratio (X)	0.106	0.500	0.064	0.100	0.326	0.062	0.462	0.619		0.332	0.112	0.712
Back of Queue (Q), ft/ln (95 th percentile)	24.4	95.5	33.6	15.8	61.2	32.3	173.2	154.6		73.7	17.2	103.4
Back of Queue (Q), veh/ln (95 th percentile)	0.9	3.6	1.3	0.6	2.3	1.2	6.8	5.9		2.8	0.6	3.7
Queue Storage Ratio (RQ) (95 th percentile)	0.08	0.00	0.13	0.08	0.00	0.00	0.00	1.03		0.33	0.00	0.26
Uniform Delay (d 1), s/veh	6.9	2.5	7.9	7.2	2.5	8.1	61.1	66.2		65.5	68.5	70.5
Incremental Delay (d 2), s/veh	0.0	0.8	0.1	0.0	0.4	0.1	0.5	4.5		0.6	0.6	12.9
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	6.9	3.3	8.0	7.3	2.9	8.2	61.6	70.7		66.1	69.1	83.4
Level of Service (LOS)	A	A	A	A	A	A	E	E		E	E	F
Approach Delay, s/veh / LOS	3.7		A	3.4		A	65.7		E	74.7		E
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	BUCKHOLZ TRAFFIC			Duration, h	0.25
Analyst	J. Buckholz	Analysis Date	2/22/2015	Area Type	Other
Jurisdiction	Alachua County	Time Period	Weekday AM Peak Hour	PHF	0.90
Urban Street	US 441	Analysis Year	2019 Existing Traffic	Analysis Period	1> 7:15
Intersection	US 441/CR 235	File Name	Ex_2019_AM_US441_CR235.xus		
Project Description	2019 AM Peak Hour Traffic				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	63	1048	11	99	460	50	104	141	82	113	214	38

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	3.9	2.0	61.9	8.4	0.3	22.9		
				Yellow	4.0	0.0	4.5	4.0	0.0	4.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	1.0	0.0	1.0	1.0	0.0	1.0		

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Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	8.9	67.4	10.9	69.4	13.4	27.9	13.8	28.2
Change Period, (Y+R _c), s	5.0	5.5	5.0	5.5	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	5.0	3.0	4.9
Queue Clearance Time (g _s), s	4.2		5.9		8.6	20.3	8.9	22.0
Green Extension Time (g _e), s	0.1	0.0	0.1	0.0	0.0	1.1	0.0	1.2
Phase Call Probability	0.90		0.97		0.98	1.00	0.98	1.00
Max Out Probability	0.00		0.00		1.00	0.01	1.00	0.02

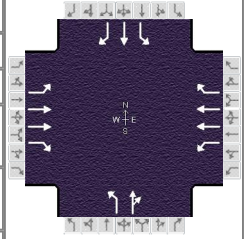
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	70	589	587	110	287	279	116	248		126	280	
Adjusted Saturation Flow Rate (s), veh/h/ln	1767	1826	1819	1570	1811	1748	1668	1560		1739	1633	
Queue Service Time (g_s), s	2.2	21.2	21.4	3.9	10.6	10.7	6.6	18.3		6.9	20.0	
Cycle Queue Clearance Time (g_c), s	2.2	21.2	21.4	3.9	10.6	10.7	6.6	18.3		6.9	20.0	
Green Ratio (g/C)	0.55	0.52	0.52	0.57	0.53	0.53	0.26	0.19		0.26	0.19	
Capacity (c), veh/h	475	942	939	279	965	931	188	298		229	316	
Volume-to-Capacity Ratio (X)	0.147	0.626	0.626	0.394	0.298	0.300	0.615	0.832		0.548	0.886	
Back of Queue (Q), ft/ln (95 th percentile)	38.8	289.6	298.3	67.1	202.3	212	135.2	351		139	400.8	
Back of Queue (Q), veh/ln (95 th percentile)	1.5	11.1	11.2	2.4	7.7	7.6	5.0	12.4		5.3	14.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.19	0.00	0.00	0.45	0.00	0.00	0.90	0.00		0.93	0.00	
Uniform Delay (d_1), s/veh	13.3	12.4	12.5	14.8	15.6	15.6	37.3	46.7		36.6	47.1	
Incremental Delay (d_2), s/veh	0.1	3.1	3.1	0.3	0.8	0.8	1.7	9.2		0.8	13.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	13.3	15.5	15.7	15.1	16.4	16.4	39.0	55.9		37.4	60.8	
Level of Service (LOS)	B	B	B	B	B	B	D	E		D	E	
Approach Delay, s/veh / LOS	15.5	B		16.2	B		50.5	D		53.6	D	
Intersection Delay, s/veh / LOS	26.1						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS												
Bicycle LOS Score / LOS												

HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC			Duration, h	0.25
Analyst	J. Buckholz	Analysis Date	2/22/2015	Area Type	Other
Jurisdiction	Alachua County	Time Period	Weekday AM Peak Hour	PHF	0.89
Urban Street	US 441	Analysis Year	2028 BUILD Traffic	Analysis Period	1> 7:15
Intersection	US 441/NW 147th Drive	File Name	2028_B_AM_US441_NW147.xus		
Project Description	2028 AM BUILD Peak Hour Traffic				



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	99	1609	101	53	1035	113	143	20	99	131	23	146

Signal Information

Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.5	1.9	73.8	11.8	0.2	11.4
Yellow	4.9	0.0	4.9	3.8	0.0	4.0
Red	2.0	0.0	2.0	2.6	0.0	3.1

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	12.3	82.6	10.4	80.7	18.5	18.8	18.2	18.5
Change Period, (Y+R _c), s	6.8	6.9	6.9	6.9	5.9	7.1	6.4	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.2	3.0	4.2
Queue Clearance Time (g _s), s	5.6		3.8		12.6	12.9	11.9	13.4
Green Extension Time (g _e), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	0.98		0.88		1.00	1.00	1.00	1.00
Max Out Probability	0.02		0.00		1.00	1.00	1.00	1.00

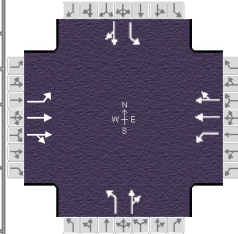
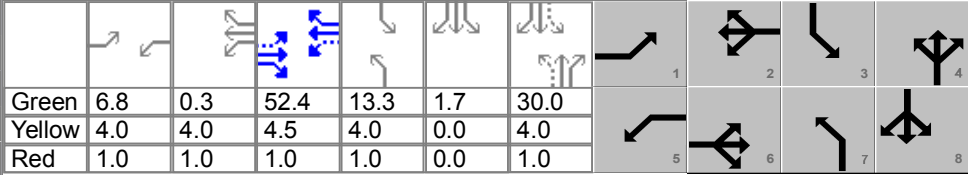
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	111	1808	102	60	1163	115	161	134		147	26	147
Adjusted Saturation Flow Rate (s), veh/h/ln	1682	1724	1510	1810	1710	1422	1767	1588		1739	1707	1447
Queue Service Time (g _s), s	3.6	50.7	3.9	1.8	19.7	4.9	10.6	10.9		9.9	1.8	11.4
Cycle Queue Clearance Time (g _c), s	3.6	50.7	3.9	1.8	19.7	4.9	10.6	10.9		9.9	1.8	11.4
Green Ratio (g/C)	0.61	0.58	0.58	0.59	0.57	0.57	0.18	0.09		0.18	0.09	0.09
Capacity (c), veh/h	317	2007	879	151	1940	807	328	143		214	150	127
Volume-to-Capacity Ratio (X)	0.351	0.901	0.116	0.394	0.599	0.142	0.490	0.938		0.689	0.172	1.158
Back of Queue (Q), ft/ln (95 th percentile)	61.3	463.6	63.7	37.8	237.6	79.9	212.2	282.1		214.1	40.3	394.2
Back of Queue (Q), veh/ln (95 th percentile)	2.3	17.7	2.4	1.5	9.0	2.9	8.3	10.8		8.2	1.5	14.3
Queue Storage Ratio (RQ) (95 th percentile)	0.20	0.00	0.25	0.19	0.00	0.00	0.00	1.88		0.95	0.00	0.99
Uniform Delay (d ₁), s/veh	12.6	11.8	12.2	23.9	9.2	13.2	47.6	58.8		48.4	54.9	59.3
Incremental Delay (d ₂), s/veh	0.2	7.0	0.3	0.6	1.4	0.4	0.4	56.8		6.6	0.5	128.5
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	12.8	18.8	12.4	24.5	10.6	13.6	48.0	115.6		55.0	55.5	187.8
Level of Service (LOS)	B	B	B	C	B	B	D	F		D	E	F
Approach Delay, s/veh / LOS	18.1		B	11.5		B	78.7		E	116.0		F
Intersection Delay, s/veh / LOS	28.3						C					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

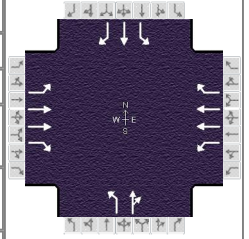
HCS7 Signalized Intersection Results Summary

General Information					Intersection Information												
Agency		BUCKHOLZ TRAFFIC					Duration, h		0.25								
Analyst		J. Buckholz		Analysis Date		2/22/2015		Area Type					Other				
Jurisdiction		Alachua County		Time Period		Weekday AM Peak Hour		PHF					0.90				
Urban Street		US 441		Analysis Year		2028 BUILD Traffic		Analysis Period					1> 7:15				
Intersection		US 441/CR 235		File Name		2028_B_AM_US441_CR235.xus											
Project Description		2028 AM BUILD Peak Hour Traffic															
Demand Information					EB			WB			NB			SB			
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h					102	1771	25	161	768	91	173	252	133	223	412	62	
Signal Information																	
Cycle, s	130.0	Reference Phase	2														
Offset, s	0	Reference Point	End														
Uncoordinated	No	Simult. Gap E/W	On														
Force Mode	Fixed	Simult. Gap N/S	Off														
Green					6.8	0.3	52.4	13.3	1.7	30.0							
Yellow					4.0	4.0	4.5	4.0	0.0	4.0							
Red					1.0	1.0	1.0	1.0	0.0	1.0							
Timer Results					EBL		EBT	WBL		WBT	NBL		NBT	SBL		SBT	
Assigned Phase					1		6	5		2	7		4	3		8	
Case Number					1.1		4.0	1.1		4.0	1.1		4.0	1.1		4.0	
Phase Duration, s					11.8		57.9	17.1		63.2	18.3		35.0	20.0		36.7	
Change Period, (Y+R c), s					5.0		5.5	5.0		5.5	5.0		5.0	5.0		5.0	
Max Allow Headway (MAH), s					2.9		0.0	2.9		0.0	3.0		5.0	3.0		4.9	
Queue Clearance Time (g s), s					6.8			12.0			13.3		32.0	16.3		33.7	
Green Extension Time (g e), s					0.1		0.0	0.1		0.0	0.1		0.0	0.0		0.0	
Phase Call Probability					0.98			1.00			1.00		1.00	1.00		1.00	
Max Out Probability					0.01			0.84			1.00		1.00	1.00		1.00	
Movement Group Results					EB			WB			NB			SB			
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement					1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h					113	998	998	179	486	468	192	428		248	527		
Adjusted Saturation Flow Rate (s), veh/h/ln					1767	1826	1817	1570	1811	1743	1668	1566		1739	1639		
Queue Service Time (g s), s					4.8	52.4	52.4	10.0	26.5	26.5	11.3	30.0		14.3	31.7		
Cycle Queue Clearance Time (g c), s					4.8	52.4	52.4	10.0	26.5	26.5	11.3	30.0		14.3	31.7		
Green Ratio (g/C)					0.46	0.40	0.40	0.51	0.44	0.44	0.33	0.23		0.35	0.24		
Capacity (c), veh/h					279	737	733	201	804	774	226	361		256	399		
Volume-to-Capacity Ratio (X)					0.407	1.354	1.361	0.891	0.605	0.605	0.849	1.184		0.968	1.319		
Back of Queue (Q), ft/ln (95 th percentile)					90.9	2055.6	2125	325.7	454.6	471.6	265.7	934.2		374.9	1284.7		
Back of Queue (Q), veh/ln (95 th percentile)					3.6	79.1	79.9	11.5	17.4	16.8	9.8	33.1		14.4	45.9		
Queue Storage Ratio (RQ) (95 th percentile)					0.45	0.00	0.00	2.17	0.00	0.00	1.77	0.00		2.50	0.00		
Uniform Delay (d 1), s/veh					23.2	30.0	30.3	36.8	27.5	27.5	36.1	50.0		36.6	49.2		
Incremental Delay (d 2), s/veh					0.4	168.3	171.3	26.3	3.4	3.5	20.2	107.5		46.9	160.2		
Initial Queue Delay (d 3), s/veh					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Control Delay (d), s/veh					23.5	198.4	201.6	63.1	30.9	31.0	56.3	157.5		83.5	209.4		
Level of Service (LOS)					C	F	F	E	C	C	E	F		F	F		
Approach Delay, s/veh / LOS					190.5	F		36.0	D		126.1	F		169.1	F		
Intersection Delay, s/veh / LOS					140.6										F		
Multimodal Results					EB			WB			NB			SB			
Pedestrian LOS Score / LOS																	
Bicycle LOS Score / LOS																	

HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC			Duration, h	0.25
Analyst	J. Buckholz	Analysis Date	2/22/2015	Area Type	Other
Jurisdiction	Alachua County	Time Period	Weekday AM Peak Hour	PHF	0.89
Urban Street	US 441	Analysis Year	2028 BUILD - OptimizedTimings	Analysis Period	1> 7:15
Intersection	US 441/NW 147th Drive	File Name	OPT_2028_B_AM_US441_NW147.xus		
Project Description	2028 AM BUILD Peak Hour Traffic				



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	99	1609	101	53	1035	113	143	20	99	131	23	146

Signal Information

Cycle, s	130.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	Off								
				Green	3.6	2.3	69.4	11.7	0.3	15.6	
				Yellow	4.9	0.0	4.9	3.8	0.0	4.0	
				Red	2.0	0.0	2.0	2.6	0.0	3.1	

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	12.7	78.5	10.5	76.3	18.3	22.9	18.1	22.7
Change Period, (Y+R c), s	6.8	6.9	6.9	6.9	5.9	7.1	6.4	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.2	3.0	4.2
Queue Clearance Time (g s), s	5.9		3.9		12.2	12.5	11.5	15.0
Green Extension Time (g e), s	0.2	0.0	0.1	0.0	0.3	0.5	0.2	0.6
Phase Call Probability	0.98		0.88		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	0.00	0.00

Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	111	1808	102	60	1163	115	161	134		147	26	147
Adjusted Saturation Flow Rate (s), veh/h/ln	1682	1724	1510	1810	1710	1422	1767	1588		1739	1707	1447
Queue Service Time (g s), s	3.9	60.1	4.2	1.9	23.3	5.3	10.2	10.5		9.5	1.8	13.0
Cycle Queue Clearance Time (g c), s	3.9	60.1	4.2	1.9	23.3	5.3	10.2	10.5		9.5	1.8	13.0
Green Ratio (g/C)	0.58	0.55	0.55	0.56	0.53	0.53	0.22	0.12		0.21	0.12	0.12
Capacity (c), veh/h	293	1900	832	124	1825	759	370	194		243	205	173
Volume-to-Capacity Ratio (X)	0.379	0.951	0.123	0.480	0.637	0.151	0.434	0.691		0.606	0.126	0.849
Back of Queue (Q), ft/ln (95 th percentile)	67.8	643.6	69.7	43.8	281.3	87.8	205	205.4		195.7	38.5	248.7
Back of Queue (Q), veh/ln (95 th percentile)	2.5	24.6	2.6	1.8	10.7	3.1	8.0	7.9		7.5	1.4	9.0
Queue Storage Ratio (RQ) (95 th percentile)	0.23	0.00	0.28	0.22	0.00	0.00	0.00	1.37		0.87	0.00	0.62
Uniform Delay (d 1), s/veh	15.1	15.7	14.1	29.9	12.1	15.4	44.0	54.7		45.0	51.1	56.1
Incremental Delay (d 2), s/veh	0.3	12.0	0.3	1.1	1.7	0.4	0.3	4.4		0.9	0.3	10.8
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	15.4	27.7	14.4	31.0	13.8	15.8	44.3	59.1		45.9	51.4	66.9
Level of Service (LOS)	B	C	B	C	B	B	D	E		D	D	E
Approach Delay, s/veh / LOS	26.3		C	14.8		B	51.0		D	56.0		E
Intersection Delay, s/veh / LOS	26.7						C					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

HCS7 Signalized Intersection Results Summary

General Information

Agency BUCKHOLZ TRAFFIC

Analyst J. Buckholz

Jurisdiction Alachua County

Urban Street US 441

Intersection US 441/CR 235

Project Description 2028 AM BUILD Peak Hour Traffic

Intersection Information

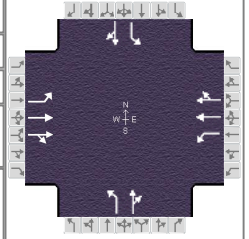
Duration, h 0.25

Area Type Other

PHF 0.90

Analysis Period 1> 7:15

File Name OPT_2028_B_AM_US441_CR235.xus



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	102	1771	25	161	768	91	173	252	133	223	412	62

Signal Information

Cycle, s	130.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.0	1.5	58.0	9.0	3.0	33.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Yellow	4.0	0.0	4.5	4.0	0.0	4.0		
				Red	1.0	0.0	1.0	1.0	0.0	1.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	11.5	65.0	10.0	63.5	14.0	38.0	17.0	41.0
Change Period, ($Y+R_c$), s	5.0	5.5	5.0	5.5	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	5.0	3.0	4.9
Queue Clearance Time (g_s), s	6.5		7.0		11.0	35.0	14.0	38.0
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	0.98		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18			
Adjusted Flow Rate (v), veh/h	113	998	998	179	486	468	192	428		248	527				
Adjusted Saturation Flow Rate (s), veh/h/ln	1767	1826	1817	1570	1811	1743	1668	1566		1739	1639				
Queue Service Time (g_s), s	4.5	59.5	59.5	5.0	26.4	26.4	9.0	33.0		12.0	36.0				
Cycle Queue Clearance Time (g_c), s	4.5	59.5	59.5	5.0	26.4	26.4	9.0	33.0		12.0	36.0				
Green Ratio (g/C)	0.50	0.46	0.46	0.48	0.45	0.45	0.32	0.25		0.35	0.28				
Capacity (c), veh/h	285	836	832	116	809	778	171	397		216	454				
Volume-to-Capacity Ratio (X)	0.398	1.194	1.200	1.545	0.601	0.601	1.125	1.076		1.148	1.160				
Back of Queue (Q), ft/ln (95 th percentile)	82.7	1584.2	1644.9	514.5	452.5	469.4	395.9	812.6		466.9	1066.3				
Back of Queue (Q), veh/ln (95 th percentile)	3.2	60.9	61.8	18.1	17.3	16.8	14.7	28.8		18.0	38.1				
Queue Storage Ratio (RQ) (95 th percentile)	0.41	0.00	0.00	3.43	0.00	0.00	2.64	0.00		3.11	0.00				
Uniform Delay (d_1), s/veh	21.0	25.3	25.6	33.4	27.2	27.2	39.7	48.5		36.0	47.0				
Incremental Delay (d_2), s/veh	0.3	99.0	101.5	283.6	3.3	3.4	106.3	67.1		106.8	94.1				
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0				
Control Delay (d), s/veh	21.3	124.3	127.1	317.0	30.5	30.7	146.0	115.6		142.8	141.1				
Level of Service (LOS)	C	F	F	F	C	C	F	F		F	F				
Approach Delay, s/veh / LOS	120.1	F		75.8		E		125.0		F		141.6		F	
Intersection Delay, s/veh / LOS	113.5						F								

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				

PM PEAK HOUR

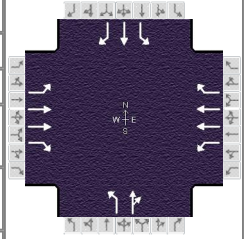
HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC
Analyst	J. Buckholz
Jurisdiction	Alachua County
Urban Street	US 441
Intersection	US 441/NW 147th Drive
Project Description	2019 PM Peak Hour Traffic

Intersection Information

Duration, h	0.25
Area Type	Other
PHF	0.93
Analysis Period	1> 16:45
File Name	Ex_2019_PM_US441_NW147.xus



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	78	711	127	98	1279	77	172	23	64	58	18	115

Signal Information

Cycle, s	160.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	4.6	0.7	101.3	6.7	6.2	13.5				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.9	0.0	4.9	4.0	0.0	4.0				
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	0.0	2.0	2.1	0.0	3.1				

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	11.5	108.2	12.2	108.9	19.0	26.8	12.8	20.6
Change Period, (Y+R _c), s	6.9	6.9	6.8	6.9	6.4	7.1	6.1	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.1	3.0	4.2
Queue Clearance Time (g _s), s	4.6		5.3		14.6	10.3	7.1	13.0
Green Extension Time (g _e), s	0.1	0.0	0.1	0.0	0.0	0.3	0.1	0.4
Phase Call Probability	0.98		0.99		1.00	1.00	0.94	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	84	765	123	105	1375	74	185	94		62	19	111
Adjusted Saturation Flow Rate (s), veh/h/ln	1795	1752	1585	1795	1752	1572	1781	1678		1781	1900	1585
Queue Service Time (g _s), s	2.6	7.7	4.9	3.3	19.8	2.9	12.6	8.3		5.1	1.5	11.0
Cycle Queue Clearance Time (g _c), s	2.6	7.7	4.9	3.3	19.8	2.9	12.6	8.3		5.1	1.5	11.0
Green Ratio (g/C)	0.66	0.63	0.63	0.67	0.64	0.64	0.17	0.12		0.13	0.08	0.08
Capacity (c), veh/h	296	2219	1004	520	2234	1002	289	206		196	160	133
Volume-to-Capacity Ratio (X)	0.283	0.344	0.122	0.203	0.616	0.074	0.639	0.453		0.318	0.121	0.831
Back of Queue (Q), ft/ln (95 th percentile)	46.3	111.6	80.4	57.3	211.5	46.9	57.6	164.9		107	34	218.7
Back of Queue (Q), veh/ln (95 th percentile)	1.8	4.3	3.2	2.3	8.2	1.8	2.3	6.6		4.2	1.4	8.6
Queue Storage Ratio (RQ) (95 th percentile)	0.15	0.00	0.32	0.29	0.00	0.00	0.00	1.10		0.48	0.00	0.55
Uniform Delay (d ₁), s/veh	11.3	5.2	11.7	9.6	5.8	11.0	61.5	65.2		63.4	67.8	72.2
Incremental Delay (d ₂), s/veh	0.2	0.4	0.2	0.1	1.3	0.1	3.6	1.6		0.3	0.3	12.3
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	11.5	5.6	11.9	9.7	7.1	11.2	65.2	66.7		63.7	68.1	84.5
Level of Service (LOS)	B	A	B	A	A	B	E	E		E	E	F
Approach Delay, s/veh / LOS	6.9		A	7.5		A	65.7		E	76.1		E
Intersection Delay, s/veh / LOS	17.1						B					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

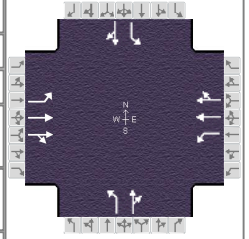
HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC
Analyst	J. Buckholz
Jurisdiction	Alachua County
Urban Street	US 441
Intersection	US 441/CR 235
Project Description	2019 PM Peak Hour Traffic

Intersection Information

Duration, h	0.25
Area Type	Other
PHF	0.92
Analysis Period	1 > 16:45
File Name	Ex_2019_PM_US441_CR235.xus



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	151	519	162	166	1176	88	136	150	77	61	156	82

Signal Information

Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	7.3	0.7	61.8	5.0	4.0	20.7		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	0.0	4.5	4.0	0.0	4.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	1.0	0.0	1.0	1.0	0.0	1.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	12.3	67.3	13.0	68.0	14.0	29.7	10.0	25.7
Change Period, (Y+R c), s	5.0	5.5	5.0	5.5	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	5.0	3.0	5.0
Queue Clearance Time (g s), s	7.1		7.8		10.3	19.0	5.6	19.6
Green Extension Time (g e), s	0.2	0.0	0.2	0.0	0.0	1.2	0.0	1.1
Phase Call Probability	1.00		1.00		0.99	1.00	0.89	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.50	0.01

Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	164	385	355	180	694	680	148	247		66	259	
Adjusted Saturation Flow Rate (s), veh/h/ln	1795	1856	1704	1739	1856	1810	1731	1629		1813	1722	
Queue Service Time (g s), s	5.1	10.8	13.2	5.8	34.3	34.6	8.3	17.0		3.6	17.6	
Cycle Queue Clearance Time (g c), s	5.1	10.8	13.2	5.8	34.3	34.6	8.3	17.0		3.6	17.6	
Green Ratio (g/C)	0.58	0.52	0.52	0.58	0.52	0.52	0.26	0.21		0.21	0.17	
Capacity (c), veh/h	255	956	877	460	967	943	218	335		190	297	
Volume-to-Capacity Ratio (X)	0.643	0.403	0.405	0.392	0.718	0.721	0.678	0.736		0.349	0.872	
Back of Queue (Q), ft/ln (95 th percentile)	89.7	182	221.9	98.6	546.4	589.2	183.2	315.8		76	358.9	
Back of Queue (Q), veh/ln (95 th percentile)	3.6	7.1	8.3	3.8	21.3	21.0	7.1	11.7		2.9	13.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.45	0.00	0.00	0.66	0.00	0.00	1.22	0.00		0.51	0.00	
Uniform Delay (d 1), s/veh	21.0	10.8	14.2	12.7	22.0	22.0	38.0	44.6		39.5	48.4	
Incremental Delay (d 2), s/veh	1.0	1.3	1.4	0.2	4.6	4.8	6.7	4.4		0.4	12.0	
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	22.0	12.1	15.6	12.9	26.6	26.8	44.7	49.0		39.9	60.3	
Level of Service (LOS)	C	B	B	B	C	C	D	D		D	E	
Approach Delay, s/veh / LOS	15.3		B	25.1		C	47.4		D	56.2		E
Intersection Delay, s/veh / LOS	28.2						C					

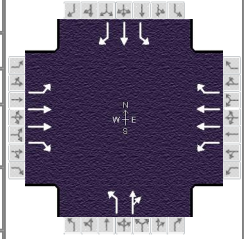
Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC			Duration, h	0.25
Analyst	J. Buckholz	Analysis Date	2/22/2015	Area Type	Other
Jurisdiction	Alachua County	Time Period	Weekday PM Peak Hour	PHF	0.93
Urban Street	US 441	Analysis Year	2028 BUILD Traffic	Analysis Period	1> 16:45
Intersection	US 441/NW 147th Drive	File Name	2028_B_PM_US441_NW147.xus		
Project Description	2028 PM BUILD Peak Hour Traffic				



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	199	1091	195	150	1962	187	264	54	98	128	39	224

Signal Information

Cycle, s	160.0	Reference Phase	2																																																																																																																																																																																																																																																															
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Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	23.9	85.9	16.7	78.7	26.0	39.0	18.4	31.4
Change Period, (Y+R c), s	6.9	6.9	6.8	6.9	6.4	7.1	6.1	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.1	3.0	4.2
Queue Clearance Time (g s), s	16.8		9.7		21.6	15.6	12.3	23.5
Green Extension Time (g e), s	0.2	0.0	0.2	0.0	0.0	0.5	0.0	0.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

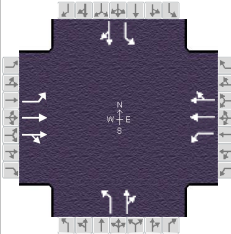
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	214	1173	188	161	2110	181	284	163		138	42	217
Adjusted Saturation Flow Rate (s), veh/h/ln	1795	1752	1585	1795	1752	1572	1781	1702		1781	1900	1585
Queue Service Time (g s), s	14.8	33.1	10.9	7.7	71.8	11.4	19.6	13.6		10.3	3.1	21.5
Cycle Queue Clearance Time (g c), s	14.8	33.1	10.9	7.7	71.8	11.4	19.6	13.6		10.3	3.1	21.5
Green Ratio (g/C)	0.57	0.49	0.49	0.51	0.45	0.45	0.29	0.20		0.23	0.15	0.15
Capacity (c), veh/h	236	1730	782	289	1573	706	444	339		307	289	241
Volume-to-Capacity Ratio (X)	0.908	0.678	0.241	0.559	1.341	0.256	0.639	0.482		0.449	0.145	0.902
Back of Queue (Q), ft/ln (95 th percentile)	376.3	442.8	192	148.2	2280.1	202.2	37.9	250.9		209.8	68	382
Back of Queue (Q), veh/ln (95 th percentile)	14.9	17.2	7.6	5.9	88.4	7.9	1.5	10.0		8.3	2.7	15.0
Queue Storage Ratio (RQ) (95 th percentile)	1.25	0.00	0.77	0.74	0.00	0.00	0.00	1.67		0.93	0.00	0.95
Uniform Delay (d 1), s/veh	54.4	19.5	23.3	24.7	32.1	27.5	48.9	56.7		51.8	58.8	66.7
Incremental Delay (d 2), s/veh	19.6	2.2	0.7	0.6	158.0	0.9	2.4	1.1		0.4	0.2	16.9
Initial Queue Delay (d 3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	74.0	21.7	24.0	25.3	190.1	28.3	51.3	57.8		52.2	59.1	83.5
Level of Service (LOS)	E	C	C	C	F	C	D	E		D	E	F
Approach Delay, s/veh / LOS	29.1	C		167.4	F		53.7	D		70.1	E	
Intersection Delay, s/veh / LOS	104.3						F					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

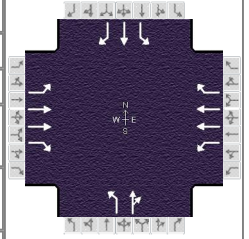
HCS7 Signalized Intersection Results Summary

General Information					Intersection Information														
Agency	BUCKHOLZ TRAFFIC					Duration, h		0.25											
Analyst	J. Buckholz	Analysis Date	2/22/2015		Area Type		Other												
Jurisdiction	Alachua County	Time Period	Weekday PM Peak Hour		PHF		0.92												
Urban Street	US 441	Analysis Year	2028 BUILD Traffic		Analysis Period		1> 16:45												
Intersection	US 441/CR 235	File Name	2028_B_PM_US441_CR235.xus																
Project Description	2028 PM BUILD Peak Hour Traffic																		
																			
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				246	872	271	270	1975	185	230	313	126	120	298	133				
Signal Information																			
Cycle, s	160.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On	Green	11.1	6.0	61.1	10.7	4.6	37.3	1		2		3		4		
				Yellow	4.9	0.0	4.9	4.3	0.0	4.3	5		6		7		8		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	0.0	2.0	3.4	0.0	3.4									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				1		6		5		2		7		4		3		8	
Case Number				1.1		4.0		1.1		4.0		1.1		4.0		1.1		4.0	
Phase Duration, s				18.0		68.0		24.0		74.0		23.0		49.6		18.4		45.0	
Change Period, (Y+R c), s				6.9		6.9		6.8		6.9		7.1		7.7		7.7		7.7	
Max Allow Headway (MAH), s				2.9		0.0		2.9		0.0		3.0		10.0		3.0		10.0	
Queue Clearance Time (g s), s				13.1				19.2				17.9		43.9		10.7		39.3	
Green Extension Time (g e), s				0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
Phase Call Probability				1.00				1.00				1.00		1.00		1.00		1.00	
Max Out Probability				1.00				1.00				1.00		1.00		1.00		1.00	
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				1	6	16	5	2	12	7	4	14	3	8	18				
Adjusted Flow Rate (v), veh/h				267	646	597	293	1174	1174	250	477		130	468					
Adjusted Saturation Flow Rate (s), veh/h/ln				1795	1856	1704	1739	1856	1800	1731	1643		1813	1732					
Queue Service Time (g s), s				11.1	51.0	52.5	17.2	67.1	67.1	15.9	41.9		8.7	37.3					
Cycle Queue Clearance Time (g c), s				11.1	51.0	52.5	17.2	67.1	67.1	15.9	41.9		8.7	37.3					
Green Ratio (g/C)				0.45	0.38	0.38	0.50	0.42	0.42	0.33	0.26		0.30	0.23					
Capacity (c), veh/h				170	709	651	255	778	755	217	431		166	404					
Volume-to-Capacity Ratio (X)				1.577	0.911	0.917	1.149	1.509	1.555	1.152	1.108		0.786	1.160					
Back of Queue (Q), ft/ln (95 th percentile)				799.1	822.8	859.5	678.5	3112.6	3518.2	600.9	1005.7		265.6	1050.3					
Back of Queue (Q), veh/ln (95 th percentile)				31.7	32.1	32.3	26.1	121.6	125.6	23.3	37.2		10.2	38.9					
Queue Storage Ratio (RQ) (95 th percentile)				4.00	0.00	0.00	4.52	0.00	0.00	4.01	0.00		1.77	0.00					
Uniform Delay (d 1), s/veh				49.7	36.8	41.9	47.1	46.5	46.5	48.3	59.0		46.6	61.4					
Incremental Delay (d 2), s/veh				286.0	18.0	19.9	102.6	235.5	256.3	108.2	76.1		15.8	96.2					
Initial Queue Delay (d 3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0					
Control Delay (d), s/veh				335.7	54.8	61.8	149.7	282.0	302.7	156.5	135.2		62.4	157.5					
Level of Service (LOS)				F	D	E	F	F	F	F	F		E	F					
Approach Delay, s/veh / LOS				107.3		F		276.5		F		142.5		F		136.8		F	
Intersection Delay, s/veh / LOS				196.8						F									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS																			
Bicycle LOS Score / LOS																			

HCS7 Signalized Intersection Results Summary

General Information

Agency	BUCKHOLZ TRAFFIC			Duration, h	0.25
Analyst	J. Buckholz	Analysis Date	2/22/2015	Area Type	Other
Jurisdiction	Alachua County	Time Period	Weekday PM Peak Hour	PHF	0.93
Urban Street	US 441	Analysis Year	2028 BUILD - OptimizedTimings	Analysis Period	16:45 - 18:45
Intersection	US 441/NW 147th Drive	File Name	OPT_2028_B_PM_US441_NW147.xus		
Project Description	2028 PM BUILD Peak Hour Traffic				



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	199	1091	195	150	1962	187	264	54	98	128	39	224

Signal Information

Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	Off

Green	9.2	1.0	79.6	11.6	0.5	23.9
Yellow	4.8	4.9	4.9	3.8	0.0	4.0
Red	2.0	2.0	2.0	2.6	0.0	3.1

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	24.0	94.4	16.0	86.5	18.0	31.0	18.5	31.5
Change Period, ($Y+R_c$), s	6.9	6.9	6.8	6.9	6.4	7.1	6.1	7.1
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	3.0	4.1	3.0	4.2
Queue Clearance Time (g_s), s	16.8		9.0		13.6	16.5	12.4	23.5
Green Extension Time (g_e), s	0.3	0.0	0.2	0.0	0.0	0.6	0.1	0.9
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	214	1173	188	161	2110	181	284	163		138	42	217
Adjusted Saturation Flow Rate (s), veh/h/ln	1795	1752	1585	1795	1752	1572	1781	1702		1781	1900	1585
Queue Service Time (g_s), s	14.8	26.2	9.8	7.0	79.6	10.4	11.6	14.5		10.4	3.1	21.5
Cycle Queue Clearance Time (g_c), s	14.8	26.2	9.8	7.0	79.6	10.4	11.6	14.5		10.4	3.1	21.5
Green Ratio (g/C)	0.62	0.55	0.55	0.56	0.50	0.50	0.22	0.15		0.23	0.15	0.15
Capacity (c), veh/h	237	1917	867	327	1743	782	340	254		256	290	242
Volume-to-Capacity Ratio (X)	0.904	0.612	0.217	0.493	1.210	0.231	0.836	0.643		0.538	0.144	0.897
Back of Queue (Q), ft/ln (95 th percentile)	345.9	329.1	168.1	131.8	1851.9	183.4	294.5	267.1		210.7	67.9	369.8
Back of Queue (Q), veh/ln (95 th percentile)	13.7	12.8	6.6	5.2	71.8	7.2	11.6	10.7		8.3	2.7	14.6
Queue Storage Ratio (RQ) (95 th percentile)	1.15	0.00	0.67	0.66	0.00	0.00	0.00	1.78		0.94	0.00	0.92
Uniform Delay (d_1), s/veh	56.0	13.4	18.6	19.3	27.0	22.8	60.9	64.0		52.5	58.7	66.5
Incremental Delay (d_2), s/veh	5.1	1.5	0.6	0.4	100.3	0.7	15.6	2.7		0.7	0.2	11.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	61.1	14.8	19.2	19.8	127.2	23.5	76.5	66.7		53.2	58.9	77.8
Level of Service (LOS)	E	B	B	B	F	C	E	E		D	E	E
Approach Delay, s/veh / LOS	21.6		C	112.5		F	72.9		E	67.3		E
Intersection Delay, s/veh / LOS	75.8						E					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				



Geologists ► Engineers ► Environmental Scientists

700 DeSoto Avenue • Brooksville, FL • 34601



July 18, 2021

Christopher Potts, P.E.
Director of Engineering
JB Pro
3530 NW 43rd Street
Gainesville, FL 32606

RE: 378± Acre Tara Forest, Tara Phoenicia, and Tara Baywood Site, Alachua County
Environmental Resources Assessment

Dear Christopher:

This letter report and attachments are Creative Environmental Solutions, Inc. (CES) Environmental Resources Assessment of the 378± Acre Tara Forest, Tara Phoenicia, and Tara Baywood site. The study site is in Alachua County, Florida in Sections 3 and 10, Township 8 South, Range 18 East.

The following are attachments to this report:

Figure 1: Vicinity Aerial
Figure 2: Quad Map
Figure 3: Habitat Map
Figure 4: Listed Species Map
Figure 5: Soil Map
Figures 6 and 6B: Historical Aerials
Figure 7: Wetland Delineation Map
Figure 8: Flood Map
Figure 9: Topo Map
Figure 10: Parcels Map
Figure 11: Site Photos
Figure 12: FNAI Report
Table 1: Probability of Occurrence of Listed Wildlife Species
Alachua County Environmental Resources Assessment Checklist
Literature Reviewed

CES completed the assessment of the referenced site in accordance with Alachua County Environmental Resources Assessment Checklist requirements, a copy of which is attached. Our study identified and mapped habitat communities, and the use and/or likely presence of fauna or flora species listed as endangered, threatened, or species of special concern by either federal or state agencies. The listed species study was preliminary and an overview, and was not a complete study for any one listed fauna or flora species. The report provides confirmation of the presence of listed fauna or flora species encountered and/or the likelihood of fauna and flora species occurring on the site at the time of the inspection(s), based on known habitat preferences and geographical distribution.

The site inspections were conducted on May 5, 2021, June 11, 2021 and July 12, 2021.

The following outlines the checklist and provides discussion on each issue:

HABITAT CHARACTERIZATION

Site Overview

The site abuts silvicultural property to the west, rural residential to the north, NW 140th Street (CR 241) and residential developments to the east, and US 441 and commercial developments to the south. Based on Figures 6 and 6B and the site inspections, the site has been historically used for silvicultural and agricultural uses for many years (80 year at least). A habitable house and two old barns exist on the site. Most of the site was in planted pines before timbering took place between 2014 and 2019.

Land Covers

Eight (8) land covers were identified within the study site in accordance with the Florida Land Cover Classification System (FLCCS), (Sept. 2018). These land covers are delineated on Figure 3.

These land covers were:

<u>CLC Class¹</u>	<u>Habitat Type</u>	<u>Ac.</u>
1110	Upland Hardwood Forest	32.0
1400	Mixed Hardwood-Pine	21.0
1831	Rural Open	14.0
1832	Rural Structure (Driveway, House, Barn)	12.0
1870	Extractive (Clay Pit)	3.8
2123	Floodplain Marsh	0.2
183312	Former Hay Field (Old-field Successive)	70.0
183332	Coniferous Plantations (Clear-cut)	<u>225.0</u>
Total		378.0

Surface Waters (ponds, lakes, streams, springs, etc.)

No surface waters exist on the site, although a small (0.2± acre) floodplain marsh (see Photo 6) encroaches the site along its west boundary. This marsh is further discussed in the Wetlands portion of the report below.

Wetlands

2123: Floodplain Marsh

A small portion (0.2± acre) of a floodplain marsh (see Photo 6) encroaches the site along its west boundary. This area was disturbed from recent logging activities. This area is a portion of a larger marsh system created by tail-waters from a nearby creek (Mill Creek) west of the site.

Dominant vegetation in the onsite and offsite portions of this area consisted of Bahiagrass (*Paspalum notatum*) stressed from recent water inundation, buttonweed (*Diodia virginiana*), flatsedge (*Cyperus haspan*), smartweed (*Polygonum punctatum*), maidencane (*Panicum hemitomon*), dog fennel (*Eupatorium spp.*) and soft-rush (*Juncus effusus*). CES flagged the wetland lines on the project site per Chapter 62-340, Florida Administrative Code. Onsite and adjacent wetland delineations are shown on Figure 7.

Uplands

1110: Upland Hardwood Forest

Dominant trees in this area consisted of laurel oak (*Quercus laurifolia*), live oak (*Quercus virginiana*), sweet gum (*Liquidambar styraciflua*), black cherry (*Prunus serotina*), water oak (*Quercus nigra*), and

magnolia (*Magnolia grandifolia*). Green briar (*Smilax spp.*), grapevine (*Vitis spp.*), and beautybush (*Callicarpa americana*), Carolina cherry laurel (*Prunus caroliniana*), and hog plum (*Prunus umbellata*) were dominant ground and shrub cover species.

1400: Mixed Hardwood-Pine

Dominant trees in this area consisted of loblolly pine (*Pinus taeda*), laurel oak, live oak, sweet gum, black cherry, water oak and magnolia. Green briar, grapevine, and beautybush were dominant ground and shrub cover species.

1831: Rural Open

This area was disturbed from past land uses. The vegetation was dense ground cover mainly consisting of Bahiagrass, blackberry, grapevine, hairy indigo (*Indigofera hirsuta*), showy rattlebox (*Crotalaria spectabilis*), ragweed (*Ambrosia artemisiifolia*), beggarticks (*Bidens alba*) and broomsedge (*Andropogon spp.*).

1832: Rural Structure (Driveway, House, Barn)

A house and an old barn are in this area. Vegetation in the open areas mainly consisted of laurel oak, live oak and Bahiagrass. A potable well and septic system are within this area.

1870: Extractive (Clay Pit)

A 3.8± acre apparent clay pit was observed in the southeast portion of the site. Based on Figures 6 and 6B, the pit was excavated in 2007 for construction material for adjacent residential and commercial (Lowes) developments.

434: Upland Hardwood-Pine Mixed

Dominant trees in this area consisted of sweet gum, laurel oak, water oak, live oak, loblolly pine and magnolia (*Magnolia grandifolia*). Saw palmetto (*Serenoa repens*), green briar (*Smilax spp.*), grapevine, and beautybush (*Callicarpa americana*) were dominant ground and shrub cover species.

183312: Former Hay Field (Old-field Successive)

Two former apparent hay field areas were noted on the site. It appeared, based on Figures 6 and 6B and the site inspections, these areas have been out of use since approximately 2018. Dominant vegetation in this area consisted of Bahiagrass, Bernudagrass, dog fennel, blackberry, and beggartick.

183332: Coniferous Plantations (Clear-cut)

This land cover made up the major portion of the site. Based on Figures 6 and 6B and the site inspections, clear-cutting of this land cover type occurred between 2014 and 2019. This area is very disturbed with a dense dominant vegetative cover of catbriar, dog fennel, grapevine, and groundsel tree (*Baccharis halimifolia*) as well as sweet gum, laurel oak, blackcherry, Chinese tallow (*Sapium sebiferum*), and Chinaberry (*Melia azedarach*) saplings.

Non-native Invasive Species

Our inspection included identifying and estimating percent coverage non-native invasive plants species listed by the Florida Exotic Pest Plant Council (FLEPPC). A copy of the list can be found at:

<http://www.fleppc.org/list/list.htm>

The following defines Categories I and II per FLEPPC:

CATEGORY I

Invasive exotics that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives.

CATEGORY II

Invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species.

The following is a list of non-native plants observed on the site and FLEPPC Category designation:

Non-native Invasive Plants Observed on the Site			
Common Name	Latin Name	Listed	Comment
Chinaberry	<i>Melia azedarach</i>	II	Found scattered within clear-cut area. Estimated Coverage: <2%)
Air-potato	<i>Dioscorea bulbifera</i>	I	Found scattered throughout the site. Estimated Coverage: <3%)
Silktree	<i>Albizia julibrissin</i>	I	Found scattered throughout the site. Estimated Coverage: <1%)
Chinese tallow	<i>Sapium sebiferum</i>	I	Found scattered within clear-cut area. Estimated Coverage: <1%)
*Listed by the FLEPPC I = Category I, II Category II, NL = Not Listed			

Surface Water or Wetland Buffers

Surface water and wetland buffers will be established in accordance with county and state regulations.

Floodplains (100-year)

According to a Alachua County Department of Growth Management Wetlands and Floodplains map (Figure 8), floodplain exist along the western boundary of the site and in the souther portion of the site.

Special Area Study Resource Protection Areas (Cross Creek, Idylwild/Serenola, etc)

The site is not within or near a Special Area Study Resource Protection Area.

Strategic Ecosystems (within or adjacent to mapped areas)

The site is not within or adjacent to a Strategic Ecosystem.

Significant Habitat (biologically diverse natural areas)

The site is not within or adjacent to Significant Habitat (biologically diverse natural areas).

Listed Species/Listed Species Habitats (FNAI S1, S2, & S3; State or Federally E, T, SSC)

No listed species except gopher tortoises (GT) were observed on the site. Based on our sample survey of potential onsite GT habitats, we estimate 6.8 (7) GTs inhabit the site. Figure 4 summarizes the gopher tortoise survey on the site. A copy of a FNAI report is attached. A table listing the estimated probability of occurrence with comments of the listed fauna species is attached as Table 1.

Recreation/Conservation/Preservation Lands

The site is not within or adjacent to Recreation/Conservation/Preservation Lands.

Significant Geological Features (caves, springs, sinkholes, etc.)

No Significant Geological Features (caves, springs, sinkholes, etc.) were observed on the site. A sinkhole was observed adjacent to the southwest corner of the site. Figure 3 shows the location of the sinkhole.

High Aquifer Recharge Areas

According to a Alachua County Aquifer Recharge Area map, the site is within a "Perforated" zone. No surface features indicating a direct connection to the Floridan aquifer were observed on the site during the inspections.

Wellfield Protection Areas

The site is not within a Wellfield Protection Area.

Wells

A residential or private well exists on the site adjacent to the house. A septic system also exists in this area.

Soils

The following table summarizes onsite soil series, acreage and percentage of each soils series on the site, and their descriptions:

<u>Soil I.D.</u>	<u>Name</u>	<u>Ac.</u>	<u>Description</u>
3	Arredondo fine sand, 0 to 5% slopes	108.3	Well Drained, WT: >80"
5	Ft Meade fine sand, 0 to 5% slopes	31.5	Well Drained, WT: >80"
8	Millhopper sand, 0 to 5% slopes	27.8	Moderately Well Drained, WT: 42-72"
29	Lochloosa fine sand, 2 to 5% slopes	21.2	Somewhat Well Drained, WT: 18-42"
30	Kendrick sand, 2 to 5% slopes	15.7	Well Drained, WT: >80"
33	Norfolk loamy fs, 2 to 5% slopes	14.9	Well Drained, WT: 42-72"
35	Gainesville sand, 0 to 2% slopes	24.0	Well Drained, WT: >80"
38	Pits and Dumps	19.9	NA
69	Arredondo fine sand, 5 to 8% slopes	15.9	Well Drained, WT: >80"
72	Lochloosa fine sand, 2 to 5% slopes	25.1	Somewhat Well Drained, WT: 18-42"
73	Kendrick sand, 5 to 8% slopes	40.2	Well Drained, Water Table: >80"
74	Blichton sand, 2 to 5% slopes	0.8	Well Drained, Water Table: >80"
76	Bivans sand, 5 to 8% slopes	9.4	Somewhat Well Drained, WT: 18-42"
78	Norfolk loamy fs, 5 to 8% slopes	23.3	Well Drained, WT: 42-72"

A soil map is attached as Figure 5.

Mineral Resource Areas

According to Alachua County Comprehensive Plan, the site is not within a mineral resource area.

Topography/Steep Slopes

According to a Alachua County Department of Growth Management topographical map (Figure 9) at 2 foot intervals, elevations on the site range from approximately 162 feet in the northeastern portion of the site to 45 feet in the southwestern portion of the site. Based on Figure 9, the general flow of surface waters on the site would be to the west and southwest towards Mill Creek.

Historical and Paleontological Resources

No cultural sites or other historical/archaeological resources are recorded on or immediately adjacent to this property. No evidence was observed of human burials, middens, old building sites or other evidence that historical or archaeological sites exist on the site.

Hazardous Materials Storage Facilities and Contamination (soil, surface water, ground water)

No evidence was observed of hazardous material storage or facilities exist or existed on the site. Based on historical aerial review, no red-flag warnings of the site being used for hazardous material storage, production, or use was discerned. Copies of historical aerals is attached as Figures 6 and 6B. No evidence of contaminated soils, surface water, or groundwater was observed during the site inspection.

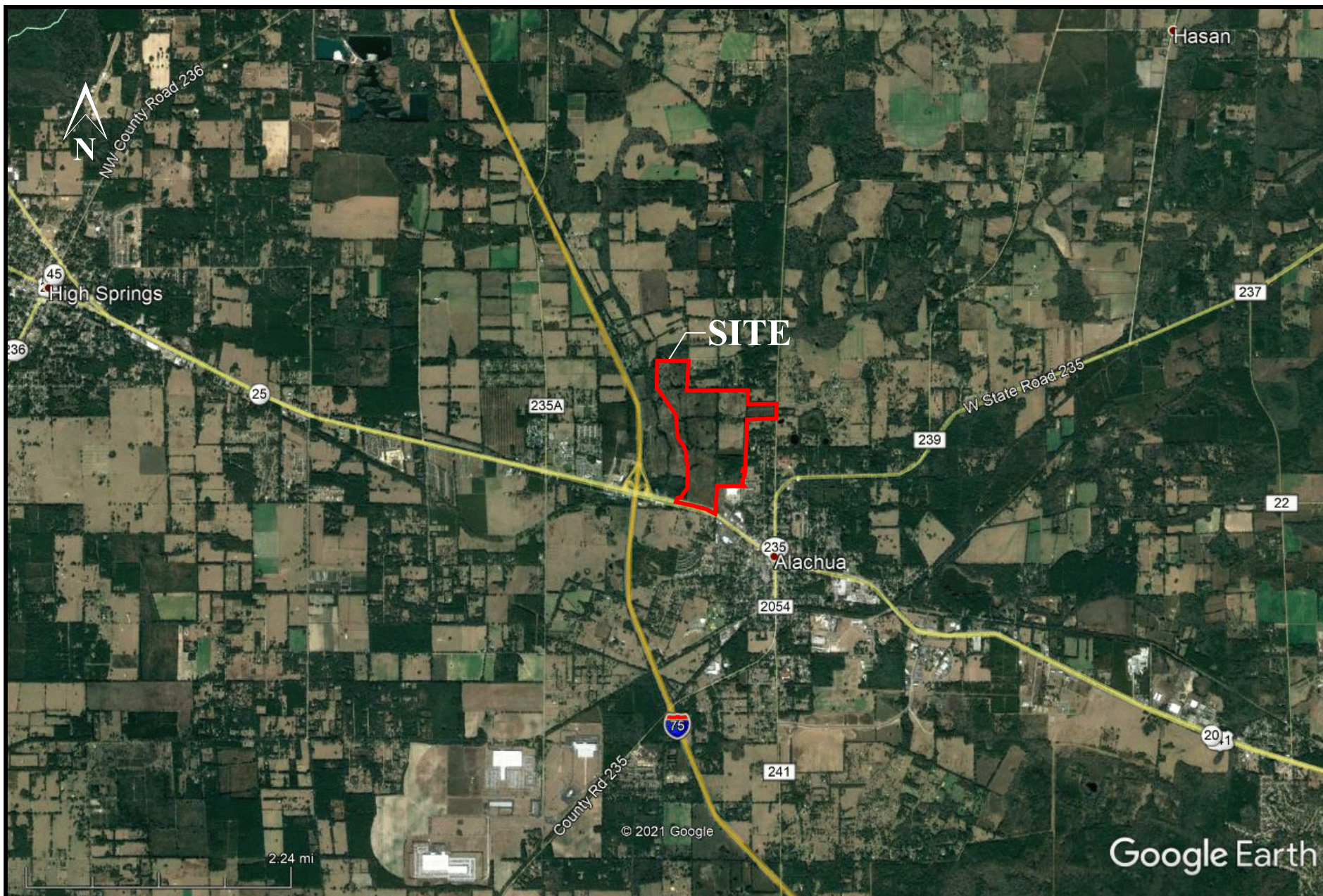
We appreciate the opportunity to provide our services. If you have any questions, please contact me.

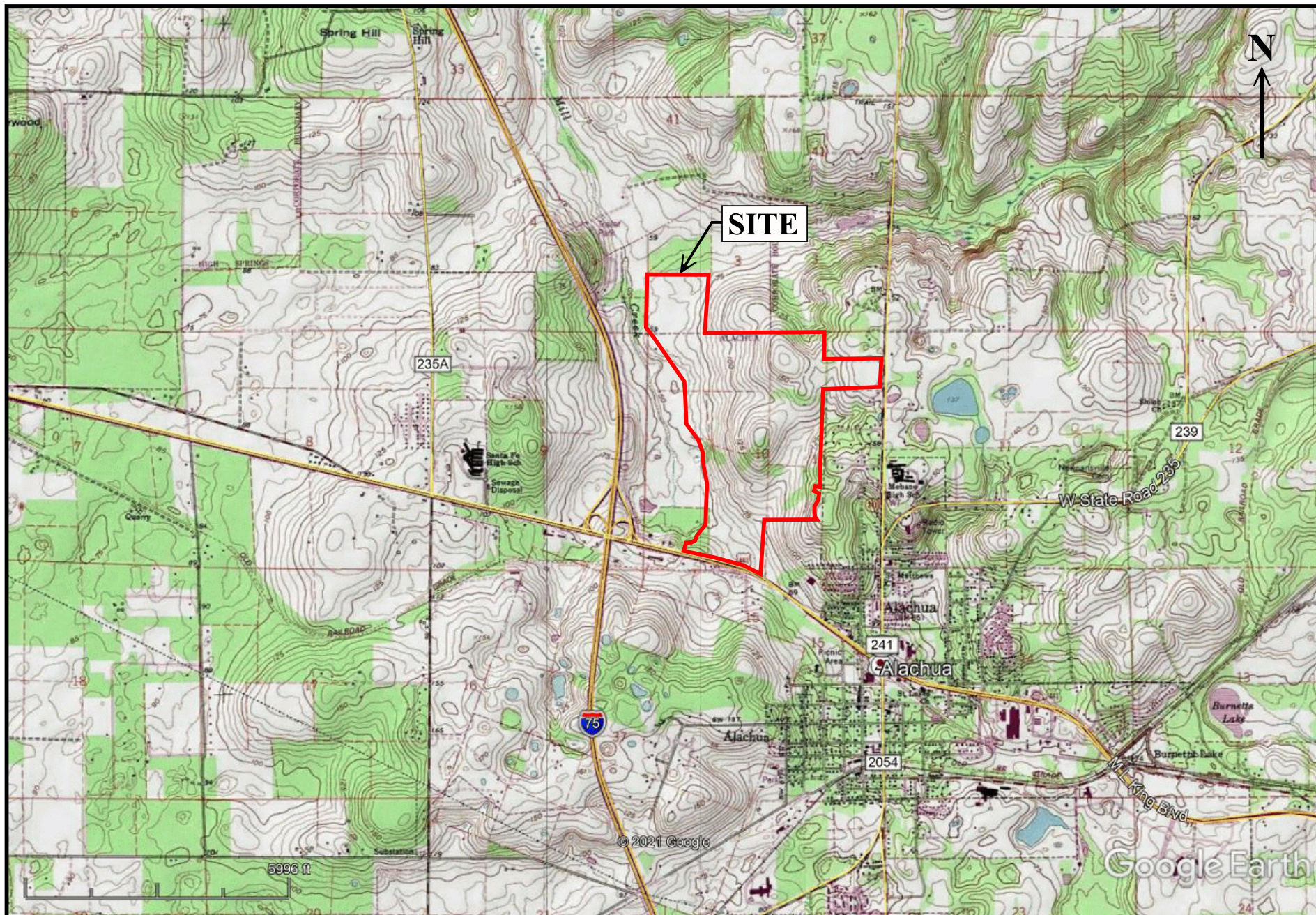
Sincerely,

A handwritten signature in dark ink, appearing to read 'George Foster', followed by a long, sweeping horizontal line that extends to the right.

George Foster
President

Figures





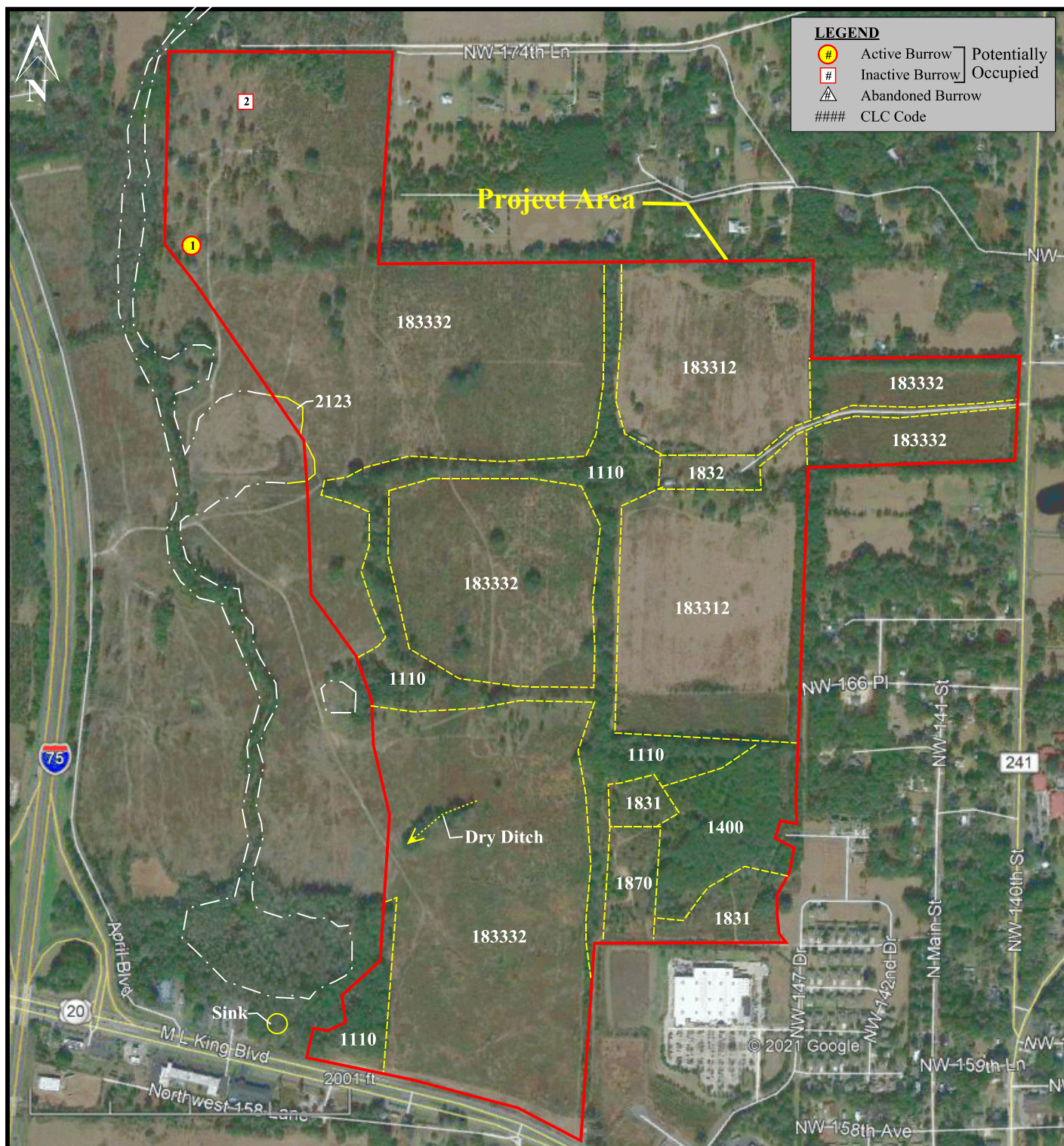


CLC Class ¹	Habitat Type	Ac.
1110	Upland Hardwood Forest	32.0
1400	Mixed Hardwood-Pine	21.0
1831	Rural Open	14.0
1832	Rural Structure (Driveway, House, Barn)	12.0
1870	Extractive (Clay Pit)	3.8
2123	Floodplain Marsh	0.2
183312	Former Hay Field (Old-field Successive)	70.0
183332	Coniferous Plantations (Clear-cut 2014-19)	225.0
	Total	378.0

LEGEND

- #### CLC Code
- Habitat Delineation
- Flagged Wetland Line
- Offsite Wetland Line

1. The Florida Cooperative Land Cover Map, (Sept. 2018)



GOPHER TORTOISE SURVEY RESULTS

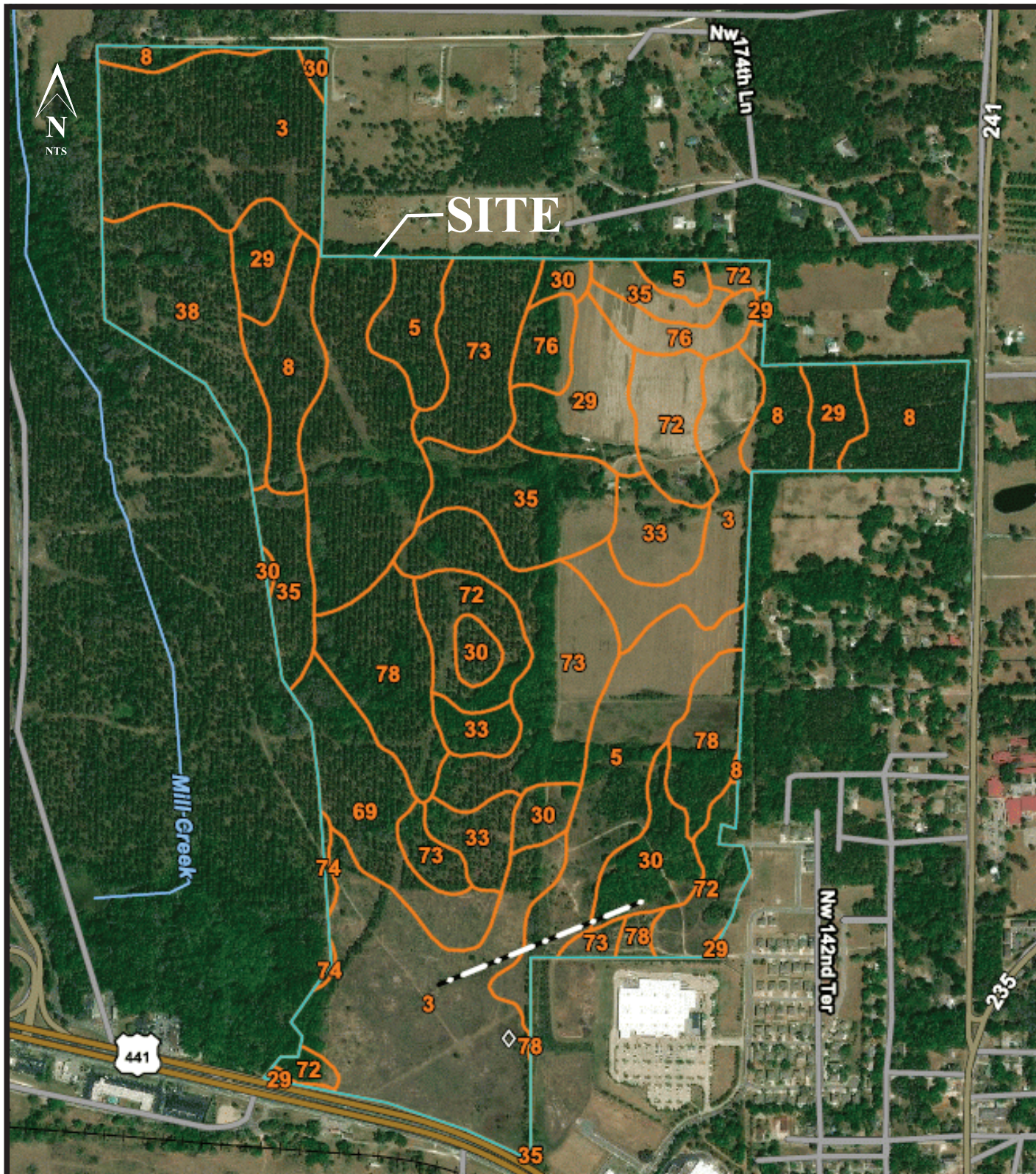
CLC Class ¹	Habitat Type	Ac.	%Cover	Sample Ac	POB ²	GTs ³	GT/Ac	GTs ⁴
1110	Upland Hardwood Forest	32.0	15	4.8	0	0	0	0
1400	Mixed Hardwood-Pine	21.0	15	3.2	0	0	0	0
1831	Rural Open	14.0	15	2.1	0	0	0	0
1832	Rural Structure	12.0	100	12.0	0	0	0	0
1870	Extractive (Clay Pit)	3.8	100	3.8	0	0	0	0
2123	Floodplain Marsh	0.2	0	0	0	0	0	0
183312	Former Hay Field	70.0	15	10.5	0	0	0	0
183332	Coniferous Plantations	225.0	15	33.8	2	1	0.03	6.8
Total		378.0	NA	NA	NA	NA	NA	6.8

Survey Summary:

The site was inspected on 5/521, 6/11/21, and 7/12/21. No listed species except gopher tortoises (GT) were observed on the site. Based on our sample survey (see table) of potential onsite GT habitat, we estimate 6.8 (≈ 7) GTs inhabit the site.

Table Footnotes:

1. The Florida Cooperative Land Cover Map, (Sept. 2018)
2. Potentially Occupied Burrow (Active and Inactive Burrows)
3. PO Burrows X 0.5 = Estimated GTs
4. Estimated Number of GTs Extrapolated Over Habitat



Soil I.D.	Name	Ac.	Description
3	Arredondo fine sand, 0 to 5% slopes	108.3	Well Drained, WT: >80"
5	Ft Meade fine sand, 0 to 5% slopes	31.5	Well Drained, WT: >80"
8	Millhopper sand, 0 to 5% slopes	27.8	Moderately Well Drained, WT: 42-72"
29	Lochloosa fine sand, 2 to 5% slopes	21.2	Somewhat Well Drained, WT: 18-42"
30	Kendrick sand, 2 to 5% slopes	15.7	Well Drained, WT: >80"
33	Norfolk loamy fine sand, 2 to 5% slopes	14.9	Well Drained, WT: 42-72"
35	Gainesville sand, 0 to 2% slopes	24.0	Well Drained, WT: >80"
38	Pits and Dumps	19.9	NA

Soil I.D.	Name	Ac.	Description
69	Arredondo fine sand, 5 to 8% slopes	15.9	Well Drained, WT: >80"
72	Lochloosa fine sand, 2 to 5% slopes	25.1	Somewhat Well Drained, WT: 18-42"
73	Kendrick sand, 5 to 8% slopes	40.2	Well Drained, Water Table: >80"
74	Blichton sand, 2 to 5% slopes	0.8	Well Drained, Water Table: >80"
76	Bivans sand, 5 to 8% slopes	9.4	Somewhat Well Drained, WT: 18-42"
78	Norfolk loamy fs, 5 to 8% slopes	23.3	Well Drained, WT: 42-72"