

MEMORANDUM

Date: April 6, 2018

Project #: 22076

To: Andre Spinelli, Spinell Homes

From: Andrew Ooms, PE and Wende Wilber, AICP, PTP

Project: Spruce Terrace

Subject: Preliminary Traffic Analysis

Spinell Homes has proposed a 27-unit single family home development east of Golden View Drive and south of Rabbit Creek Road. This preliminary traffic analysis explores conceptual traffic impacts of the proposed development. The trip generation, shown in Figure 1, falls below the Municipality of Anchorage’s typical traffic impact analysis threshold of 100 peak hour trips.

Table 1 Proposed Trip Generation

Land Use	ITE Code	Size (Units)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing	210	27	257	20	5	15	27	17	10

The 2012 *Golden View Drive Intersection and Safety Upgrades* study reported that the northbound leg of the Rabbit Creek Road/Golden View Drive intersection experiences congestion during the weekday a.m. peak hour. However, the most recent counts available for the intersection from May 2015 indicate reduced demand at the intersection from the 2010 counts used in that study. Traffic operations for 2018 existing conditions, 2021 without the development, and 2021 with site buildout are shown in Table 2. The 2015 counts were grown by a 1 percent compound growth rate.

Table 2 Preliminary Traffic Operations: Northbound Approach at Rabbit Creek Road/Golden View Drive

Scenario	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Delay/Veh	LOS	V/C	Delay/Veh	LOS	V/C
2018 Existing Condition	15.2	C	0.53	13.3	B	0.31
2021 Without Development	15.9	C	0.56	13.5	B	0.33
2021 With Development	16.5	C	0.58	13.8	B	0.34

This analysis indicates that the proposed 27 units increases average vehicle delay for northbound vehicles by less than one second while maintaining the movement LOS. Traffic operations worksheets and traffic counts are attached.



Municipality of Anchorage

Data Source: MOA Data

Device Type: Pneumatic

Type: Intersection Volume

Location: GOLDEN VIEW DRIVE, ANCHORAGE and RABBIT CREEK ROAD, ANCHORAGE At: Intersection

Time Span: 15 Min

Report Date: 05/28/2015

Vehicles

START_TIME	5/28/2015 Thursday NBLTR	5/28/2015 Thursday SBLTR	5/28/2015 Thursday EBLTR	5/28/2015 Thursday WBLTR	NB	SB	EB	WB	ALL
12:00 AM	15	1	11	5	15	1	11	5	32
12:15 AM	4	1	4	1	4	1	4	1	10
12:30 AM	6	2	5	1	6	2	5	1	14
12:45 AM	1	1	4	1	1	1	4	1	7
01:00 AM	4	0	2	3	4	0	2	3	9
01:15 AM	0	0	5	0	0	0	5	0	5
01:30 AM	1	2	4	0	1	2	4	0	7
01:45 AM	0	0	1	0	0	0	1	0	1
02:00 AM	0	0	2	0	0	0	2	0	2
02:15 AM	0	0	3	1	0	0	3	1	4
02:30 AM	0	1	5	0	0	1	5	0	6
02:45 AM	2	0	1	2	2	0	1	2	5
03:00 AM	1	0	0	0	1	0	0	0	1
03:15 AM	1	0	3	1	1	0	3	1	5
03:30 AM	3	0	4	0	3	0	4	0	7
03:45 AM	3	0	2	3	3	0	2	3	8
04:00 AM	1	0	1	2	1	0	1	2	4
04:15 AM	5	0	0	3	5	0	0	3	8
04:30 AM	3	0	2	4	3	0	2	4	9
04:45 AM	10	0	1	6	10	0	1	6	17
05:00 AM	14	3	4	2	14	3	4	2	23
05:15 AM	22	1	2	4	22	1	2	4	29
05:30 AM	20	5	5	15	20	5	5	15	45
05:45 AM	25	4	1	11	25	4	1	11	41
06:00 AM	49	1	6	21	49	1	6	21	77
06:15 AM	36	2	11	13	36	2	11	13	62
06:30 AM	37	3	15	32	37	3	15	32	87
06:45 AM	69	6	16	27	69	6	16	27	118
07:00 AM	76	2	12	21	76	2	12	21	111
07:15 AM	129	7	23	24	129	7	23	24	183
07:30 AM	56	10	30	27	56	10	30	27	123
07:45 AM	60	10	27	21	60	10	27	21	118
08:00 AM	73	5	34	37	73	5	34	37	149
08:15 AM	74	8	25	27	74	8	25	27	134
08:30 AM	73	12	50	16	73	12	50	16	151
08:45 AM	40	6	32	13	40	6	32	13	91
09:00 AM	42	1	27	15	42	1	27	15	85
09:15 AM	50	9	22	20	50	9	22	20	101
09:30 AM	58	9	28	19	58	9	28	19	114
09:45 AM	60	4	38	27	60	4	38	27	129
10:00 AM	60	7	38	15	60	7	38	15	120
10:15 AM	69	5	23	20	69	5	23	20	117
10:30 AM	48	3	46	15	48	3	46	15	112
10:45 AM	45	9	34	18	45	9	34	18	106
11:00 AM	41	7	32	23	41	7	32	23	103
11:15 AM	69	8	39	18	69	8	39	18	134
11:30 AM	31	2	39	12	31	2	39	12	84
11:45 AM	52	4	54	13	52	4	54	13	123
12:00 PM	45	3	53	16	45	3	53	16	117
12:15 PM	62	9	43	13	62	9	43	13	127
12:30 PM	40	6	44	20	40	6	44	20	110
12:45 PM	48	4	45	22	48	4	45	22	119
01:00 PM	55	7	35	16	55	7	35	16	113
01:15 PM	40	2	47	16	40	2	47	16	105
01:30 PM	34	0	64	19	34	0	64	19	117
01:45 PM	47	2	46	23	47	2	46	23	118
02:00 PM	41	5	52	15	41	5	52	15	113
02:15 PM	53	5	49	17	53	5	49	17	124

02:30 PM	37	8	51	15	37	8	51	15	111
02:45 PM	28	9	51	9	28	9	51	9	97
03:00 PM	50	8	67	20	50	8	67	20	145
03:15 PM	63	7	49	7	63	7	49	7	126
03:30 PM	40	11	46	30	40	11	46	30	127
03:45 PM	55	2	72	14	55	2	72	14	143
04:00 PM	53	7	85	19	53	7	85	19	164
04:15 PM	39	6	73	19	39	6	73	19	137
04:30 PM	41	7	65	20	41	7	65	20	133
04:45 PM	43	4	82	17	43	4	82	17	146
05:00 PM	43	4	113	18	43	4	113	18	178
05:15 PM	55	8	87	21	55	8	87	21	171
05:30 PM	47	8	100	15	47	8	100	15	170
05:45 PM	46	5	88	13	46	5	88	13	152
06:00 PM	43	2	91	14	43	2	91	14	150
06:15 PM	50	9	84	21	50	9	84	21	164
06:30 PM	37	10	73	15	37	10	73	15	135
06:45 PM	24	3	78	15	24	3	78	15	120
07:00 PM	37	6	80	15	37	6	80	15	138
07:15 PM	40	9	55	12	40	9	55	12	116
07:30 PM	28	11	56	12	28	11	56	12	107
07:45 PM	27	1	51	16	27	1	51	16	95
08:00 PM	22	1	64	12	22	1	64	12	99
08:15 PM	22	6	46	15	22	6	46	15	89
08:30 PM	30	0	52	14	30	0	52	14	96
08:45 PM	39	8	48	8	39	8	48	8	103
09:00 PM	35	2	38	12	35	2	38	12	87
09:15 PM	29	4	34	8	29	4	34	8	75
09:30 PM	23	2	34	8	23	2	34	8	67
09:45 PM	24	0	34	6	24	0	34	6	64
10:00 PM	12	2	29	3	12	2	29	3	46
10:15 PM	23	3	21	7	23	3	21	7	54
10:30 PM	22	2	16	3	22	2	16	3	43
10:45 PM	10	1	23	6	10	1	23	6	40
11:00 PM	8	1	17	4	8	1	17	4	30
11:15 PM	15	4	14	2	15	4	14	2	35
11:30 PM	9	2	10	1	9	2	10	1	22
11:45 PM	0	0	10	3	0	0	10	3	13

Peak Hour Volumes

AM Peak	NBLTR	SBLTR	EBLTR	WBLTR	NB	SB	EB	WB	ALL
07:15 AM - 08:15 AM	318	32	114	109	318	32	114	109	573
Approach %	100.00%	100.00%	100.00%	100.00%	55.50%	5.58%	19.90%	19.02%	
Middy Peak	NBLTR	SBLTR	EBLTR	WBLTR	NB	SB	EB	WB	ALL
11:45 AM - 12:45 PM	199	22	194	62	199	22	194	62	477
Approach %	100.00%	100.00%	100.00%	100.00%	41.72%	4.61%	40.67%	13.00%	
PM Peak	NBLTR	SBLTR	EBLTR	WBLTR	NB	SB	EB	WB	ALL
05:00 PM - 06:00 PM	191	25	388	67	191	25	388	67	671
Approach %	100.00%	100.00%	100.00%	100.00%	28.46%	3.73%	57.82%	9.99%	
Off Peak	NBLTR	SBLTR	EBLTR	WBLTR	NB	SB	EB	WB	ALL
07:00 PM - 08:00 PM	132	27	242	55	132	27	242	55	456
Approach %	100.00%	100.00%	100.00%	100.00%	28.95%	5.92%	53.07%	12.06%	






















Daily Total

TIME SPAN	NBLTR	SBLTR	EBLTR	WBLTR	NB	SB	EB	WB	ALL
24 Hour	3252	387	3338	1205	3252	387	3338	1205	8182
Approach %	100.00%	100.00%	100.00%	100.00%	39.75%	4.73%	40.80%	14.73%	

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road






















04/06/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	18	97	41	71	1	266	8	53	2	11	19
Future Volume (Veh/h)	3	18	97	41	71	1	266	8	53	2	11	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	4	23	124	53	91	1	341	10	68	3	14	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									5			3
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	92			147			247	229	23	268	352	92
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	92			147			247	229	23	268	352	92
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			48	98	94	100	97	98
cM capacity (veh/h)	1515			1447			660	648	1060	618	553	971
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	4	23	124	53	92	419	41					
Volume Left	4	0	0	53	0	341	3					
Volume Right	0	0	124	0	1	68	24					
cSH	1515	1700	1700	1447	1700	787	1362					
Volume to Capacity	0.00	0.01	0.07	0.04	0.05	0.53	0.03					
Queue Length 95th (ft)	0	0	0	3	0	80	2					
Control Delay (s)	7.4	0.0	0.0	7.6	0.0	15.2	10.0					
Lane LOS	A			A		C	A					
Approach Delay (s)	0.2			2.8		15.2	10.0					
Approach LOS						C	A					
Intersection Summary												
Average Delay			9.5									
Intersection Capacity Utilization			37.4%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road

04/06/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	159	212	21	46	3	169	7	21	16	9	1
Future Volume (Veh/h)	29	159	212	21	46	3	169	7	21	16	9	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	31	169	226	22	49	3	180	7	22	17	10	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									5			3
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	52			395			330	327	169	340	552	50
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	52			395			330	327	169	340	552	50
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			70	99	98	97	98	100
cM capacity (veh/h)	1567			1175			598	572	880	579	428	1023
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	31	169	226	22	52	209	28					
Volume Left	31	0	0	22	0	180	17					
Volume Right	0	0	226	0	3	22	1					
cSH	1567	1700	1700	1175	1700	667	543					
Volume to Capacity	0.02	0.10	0.13	0.02	0.03	0.31	0.05					
Queue Length 95th (ft)	2	0	0	1	0	33	4					
Control Delay (s)	7.3	0.0	0.0	8.1	0.0	13.3	12.1					
Lane LOS	A			A		B	B					
Approach Delay (s)	0.5			2.4		13.3	12.1					
Approach LOS						B	B					
Intersection Summary												
Average Delay			4.8									
Intersection Capacity Utilization		38.1%		ICU Level of Service	A							
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis

2: Golden View Drive & 156th Ave

04/06/2018



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	0	0	0	0	2	0	153	0	6	427	1
Future Volume (Veh/h)	0	0	0	0	0	2	0	153	0	6	427	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	0	0	0	2	0	163	0	6	454	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	632	630	454	630	630	163	455			163		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	632	630	454	630	630	163	455			163		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	394	400	610	396	400	887	1116			1428		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	2	163	461								
Volume Left	0	0	0	6								
Volume Right	0	2	0	1								
cSH	1700	887	1116	1428								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.0	9.1	0.0	0.1								
Lane LOS	A	A		A								
Approach Delay (s)	0.0	9.1	0.0	0.1								
Approach LOS	A	A										
Intersection Summary												
Average Delay			0.1									
Intersection Capacity Utilization			37.3%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Golden View Drive






















04/06/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1029	900	1091	1029	900	1091	1636			1636		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	0	0	0								
Volume Left	0	0	0	0								
Volume Right	0	0	0	0								
cSH	1700	1700	1700	1700								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.0	0.0	0.0	0.0								
Lane LOS	A	A										
Approach Delay (s)	0.0	0.0	0.0	0.0								
Approach LOS	A	A										
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Utilization			0.0%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road






















04/06/2018

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	3	19	100	42	73	1	274	8	55	2	12	20	
Future Volume (Veh/h)	3	19	100	42	73	1	274	8	55	2	12	20	
Sign Control		Free			Free			Stop			Stop		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	
Hourly flow rate (vph)	4	24	128	54	94	1	351	10	71	3	15	26	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)										5	3		
Median type	None					None							
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	95			152				254	235	24	275	362	94
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	95			152				254	235	24	275	362	94
tC, single (s)	4.1			4.1				7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)													
tF (s)	2.2			2.2				3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96				46	98	93	100	97	97
cM capacity (veh/h)	1512			1441				649	642	1058	609	545	968
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1						
Volume Total	4	24	128	54	95	432	44						
Volume Left	4	0	0	54	0	351	3						
Volume Right	0	0	128	0	1	71	26						
cSH	1512	1700	1700	1441	1700	777	1359						
Volume to Capacity	0.00	0.01	0.08	0.04	0.06	0.56	0.03						
Queue Length 95th (ft)	0	0	0	3	0	87	3						
Control Delay (s)	7.4	0.0	0.0	7.6	0.0	15.9	10.0						
Lane LOS	A			A				C	A				
Approach Delay (s)	0.2			2.8				15.9	10.0				
Approach LOS						C		A					
Intersection Summary													
Average Delay			9.9										
Intersection Capacity Utilization			37.9%		ICU Level of Service				A				
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road

04/06/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	164	218	21	47	3	174	7	22	16	9	1
Future Volume (Veh/h)	30	164	218	21	47	3	174	7	22	16	9	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	32	174	232	22	50	3	185	7	23	17	10	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									5			3
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	53			406			338	335	174	348	566	52
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	53			406			338	335	174	348	566	52
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			69	99	97	97	98	100
cM capacity (veh/h)	1566			1164			590	566	875	571	420	1022
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	32	174	232	22	53	215	28					
Volume Left	32	0	0	22	0	185	17					
Volume Right	0	0	232	0	3	23	1					
cSH	1566	1700	1700	1164	1700	660	534					
Volume to Capacity	0.02	0.10	0.14	0.02	0.03	0.33	0.05					
Queue Length 95th (ft)	2	0	0	1	0	35	4					
Control Delay (s)	7.3	0.0	0.0	8.2	0.0	13.5	12.2					
Lane LOS	A			A		B	B					
Approach Delay (s)	0.5			2.4		13.5	12.2					
Approach LOS						B	B					
Intersection Summary												
Average Delay			4.8									
Intersection Capacity Utilization			38.6%			ICU Level of Service			A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road

04/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	3	19	105	42	73	1	287	8	56	2	12	20	
Future Volume (Veh/h)	3	19	105	42	73	1	287	8	56	2	12	20	
Sign Control		Free			Free			Stop			Stop		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	
Hourly flow rate (vph)	4	24	135	54	94	1	368	10	72	3	15	26	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)										5			3
Median type	None					None							
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	95			159				254	235	24	276	370	94
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	95			159				254	235	24	276	370	94
tC, single (s)	4.1			4.1				7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)													
tF (s)	2.2			2.2				3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96				43	98	93	100	97	97
cM capacity (veh/h)	1512			1433				649	642	1058	608	540	968
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1						
Volume Total	4	24	135	54	95	450	44						
Volume Left	4	0	0	54	0	368	3						
Volume Right	0	0	135	0	1	72	26						
cSH	1512	1700	1700	1433	1700	772	1349						
Volume to Capacity	0.00	0.01	0.08	0.04	0.06	0.58	0.03						
Queue Length 95th (ft)	0	0	0	3	0	96	3						
Control Delay (s)	7.4	0.0	0.0	7.6	0.0	16.5	10.0						
Lane LOS	A			A				C			B		
Approach Delay (s)	0.2			2.8				16.5			10.0		
Approach LOS						C	B						
Intersection Summary													
Average Delay			10.3										
Intersection Capacity Utilization			38.6%	ICU Level of Service				A					
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis

1: Golden View Drive & Rabbit Creek Road

04/06/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	164	233	22	47	3	182	7	23	16	9	1
Future Volume (Veh/h)	30	164	233	22	47	3	182	7	23	16	9	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	32	174	248	23	50	3	194	7	24	17	10	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									5			3
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	53			422			340	337	174	351	584	52
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	53			422			340	337	174	351	584	52
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			67	99	97	97	98	100
cM capacity (veh/h)	1566			1148			588	564	875	567	409	1022
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1					
Volume Total	32	174	248	23	53	225	28					
Volume Left	32	0	0	23	0	194	17					
Volume Right	0	0	248	0	3	24	1					
cSH	1566	1700	1700	1148	1700	657	528					
Volume to Capacity	0.02	0.10	0.15	0.02	0.03	0.34	0.05					
Queue Length 95th (ft)	2	0	0	2	0	38	4					
Control Delay (s)	7.3	0.0	0.0	8.2	0.0	13.8	12.3					
Lane LOS	A			A		B	B					
Approach Delay (s)	0.5			2.5		13.8	12.3					
Approach LOS						B	B					
Intersection Summary												
Average Delay			4.9									
Intersection Capacity Utilization			39.1%		ICU Level of Service				A			
Analysis Period (min)			15									