

Traffic Impact Study

To: City of Lone Tree

From: Eli Farney, PE, PTOE

Date: February 28, 2025

Hillcamp Development

Lone Tree, Colorado

Prepared By:



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Table of Contents

Executive Summary.....	3
Introduction	4
Existing Conditions.....	6
Traffic Volumes and Distribution	7
Traffic Operations Analysis	16
Conclusion.....	22

List of Figures

Figure 1: Vicinity Map	5
Figure 2: 2024 Existing Traffic Volumes and Lane Geometry	9
Figure 3: Site-Generated Traffic Volumes and Distribution	10
Figure 4: Cut-Through Traffic Route	11
Figure 5: 2028 Opening Day Background Traffic Volumes	12
Figure 6: 2028 Opening Day Total Traffic Volumes	13
Figure 7: 2045 Future Year Background Traffic Volumes	14
Figure 8: 2045 Future Year Total Traffic Volumes	15

List of Tables

Table 1: 2024 Existing Levels of Service.....	17
Table 2: 2028 Opening Day Levels of Service	17
Table 3: 2045 Future Year Levels of Service	18
Table 4: 2024 Existing 95 th Percentile Queue Lengths	19
Table 5: 2028 Opening Day 95 th Percentile Queue Lengths.....	20
Table 6: 2045 Future Year 95 th Percentile Queue Lengths.....	20

List of Appendices

- Appendix A: Site Plan
- Appendix B: Traffic Counts
- Appendix C: Trip Generation
- Appendix D: Synchro Reports

Executive Summary

JR Engineering (JR) has completed a review of the traffic impacts resulting from the proposed development of Hillcamp (Project) in Lone Tree, Colorado (City).

The objectives of this Traffic Impact Study (TIS, Study) are:

- Analyze 2024 existing traffic operations
- Estimate site-generated traffic and route onto nearby streets
- Analyze 2028 Opening Day and 2045 Future Year traffic operations
- Recommend mitigations to accommodate added traffic

The methodology, content, and findings of this TIS are consistent with the following document:

- Douglas County *Roadway Design and Construction Standards*, Appendix B – Traffic Impact Study Criteria

Key Findings of this TIS

- Levels of Service: Existing levels of service are mostly LOS C or better, except for the eastbound approach of the roundabout at Ridgeway Parkway & Park Meadows Boulevard, which operates at LOS F in the PM peak hour. Levels of service are expected to degrade in the future, primarily caused by increased background traffic volumes.
- Queue Lengths: Existing queue lengths are mostly acceptable, except for the eastbound approach of the roundabout. Queue lengths are expected to increase as a result of higher traffic volumes in the future.
- Recommendations: The City may consider restriping the existing roundabout in order to improve traffic operations. The traffic signal at Ridgeway Parkway & Cabela Drive functions satisfactorily in the existing condition and the projected future conditions.

Introduction

JR has completed a review of the existing and forecasted traffic operations in the vicinity of the Hillcamp development. A vicinity map is included in **Figure 1**.

Proposed Land Use

The development is anticipated to contain the following land use:

- 343 Single-Family Homes (ITE 210)

A site plan is included in **Appendix A**.

Study Intersections

Two existing intersections were analyzed in this Study:

- Ridgeway Parkway & Cabela Drive (E1)
 - Signalized
- Ridgeway Parkway & Park Meadows Boulevard/Ridgeway Circle (E2)
 - Roundabout

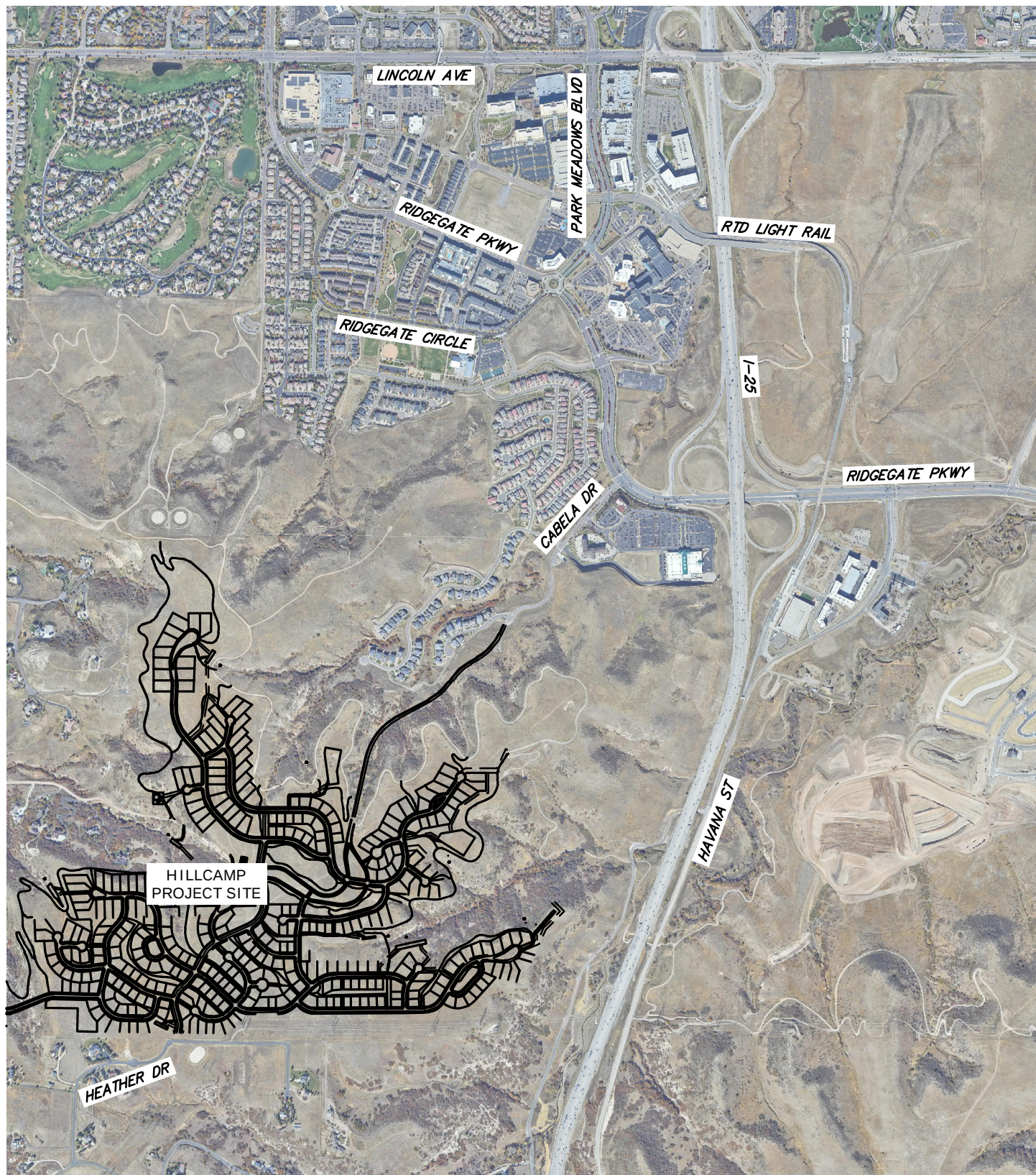


Figure 1 - Vicinity Map

1500 750 0 1500
 ORIGINAL SCALE: 1" = 1500'



Existing Conditions

Existing Land Use

The Project site is currently vacant. No trips are generated in the existing condition.

The primary access for the Hillcamp development is existing Cabela Drive, which currently has a dead-end 2,000 feet south of Ridgeway Parkway. The project will connect into the existing dead-end.

Hillcamp is proposed to connect to an existing residential area to the south via Heather Drive. The existing residential area is part of unincorporated Douglas County and contains approximately 200 single-family homes.

Existing Traffic Volumes

Existing traffic volumes were obtained on Tuesday, November 12, 2024 by All Traffic Data Services. Counts were collected at both of the Study intersections, along with a 24-hour tube count on Ridgeway Parkway northwest of Cabela Drive. Existing traffic volumes are shown in **Figure 2**. Traffic counts are included in **Appendix B**.

Traffic Volumes and Distribution

Background Traffic

JR applied a 1.5% growth rate to the existing traffic volumes to account for future regional development. This growth rate is consistent with the DRCOG travel demand model.

In addition to the growth rate, JR added background traffic from the proposed retail development adjacent to the existing Cabela's store. This development was analyzed in March 2012 by Felsburg Holt & Ullevig. A trip generation report for this development is included in **Appendix C**.

JR also considered the existing residential area south of Hillcamp, which may generate cut-through traffic once Hillcamp is built. JR assumed that 25% of traffic from the existing homes will pass through Hillcamp to access Ridgeway Parkway. A trip generation report for the residential area is included in **Appendix C**.

Future background traffic volumes are shown in **Figure 5** (2028) and **Figure 7** (2045).

Site-Generated Traffic Volumes

Site-generated traffic volumes were estimated using ITE *Trip Generation Manual*, 11th Edition. The development is expected to produce the following trips:

- Average Daily Trips: 3,136
- AM Peak Entering Site: 57
- AM Peak Exiting Site: 172
- PM Peak Entering Site: 199
- PM Peak Exiting Site: 118

Site-generated traffic volumes are shown in **Figure 3**. A trip generation report is included in **Appendix C**.

Distribution of Site-Generated Traffic

Site-generated traffic was routed onto adjacent streets according to the distribution in **Figure 3**.

No site-generated traffic was routed to the south, despite the proposed connection to the existing residential area via Heather Drive. Drivers are unlikely to use this route, as it provides a less direct path to I-25. **Figure 4** illustrates the route which drivers may take through the existing residential area to reach Havana Street, which can then be driven north or south to access I-25. Because the route is indirect, cut-through traffic generated by Hillcamp is expected to be nominal.

Total Traffic

Total traffic is the sum of background and site-generated traffic. JR forecasted total traffic volumes at the Study intersections in the years 2028 (Opening Day) and 2045 (Future Year). Total traffic is shown in **Figure 6** (2028) and **Figure 8** (2045).

Average Daily Traffic

JR estimated average daily traffic (ADT) volumes along Ridgeway Parkway, west of Cabela Drive. ADT volumes for existing and future conditions are included in the traffic figures.

Internal Roadway Classifications

JR considered the appropriate roadway classification for roads within the Hillcamp development. Douglas County standards allow up to 2,500 ADT for Urban Local roads in fully established communities.

Cabela Drive, which serves as the primary access to the site, is classified as a collector. All other internal roadways shall be classified as local roads. Although the daily trip generation for the site is 3,136 trips, these trips are dispersed such that no local road carries more than 2,500 trips.

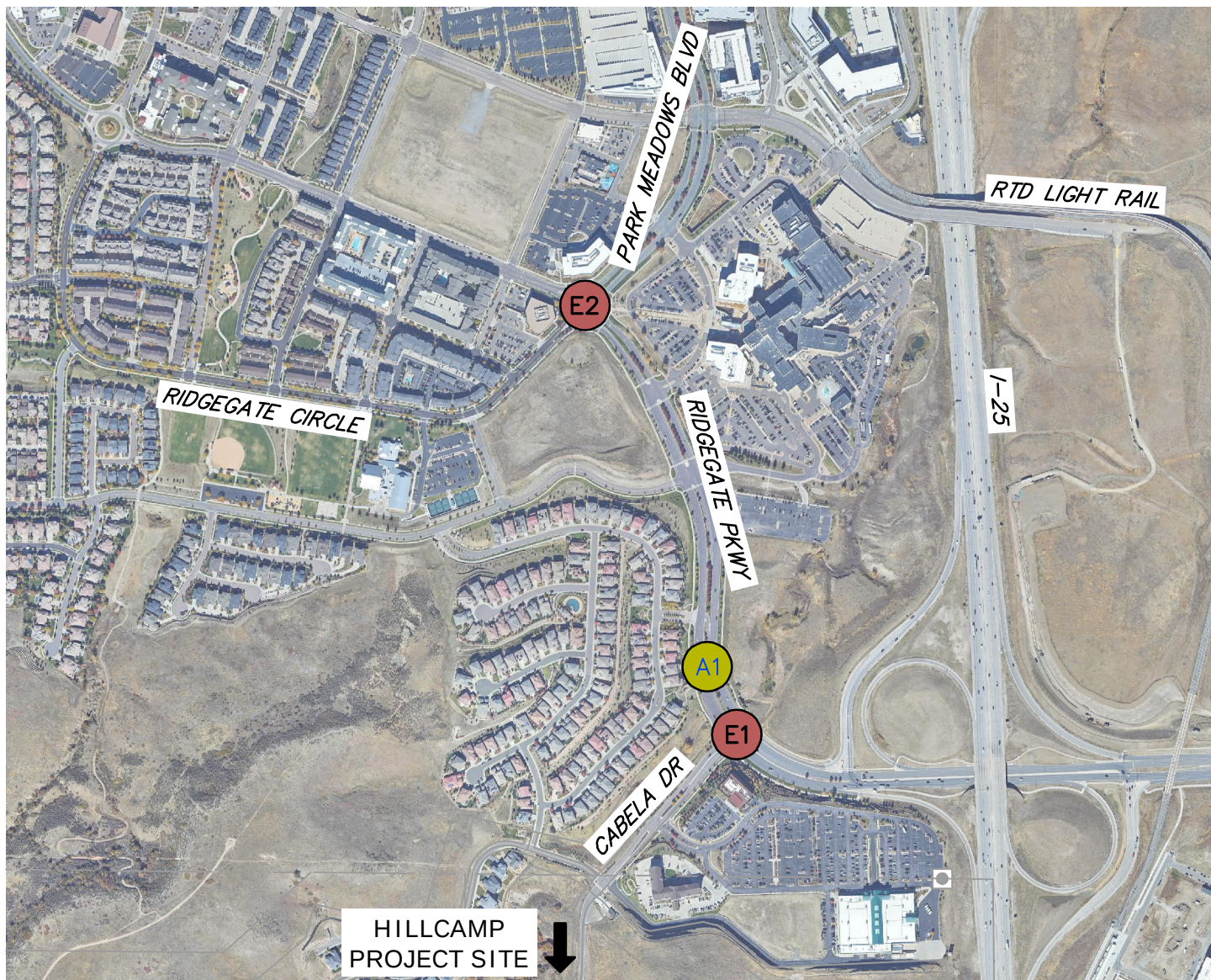
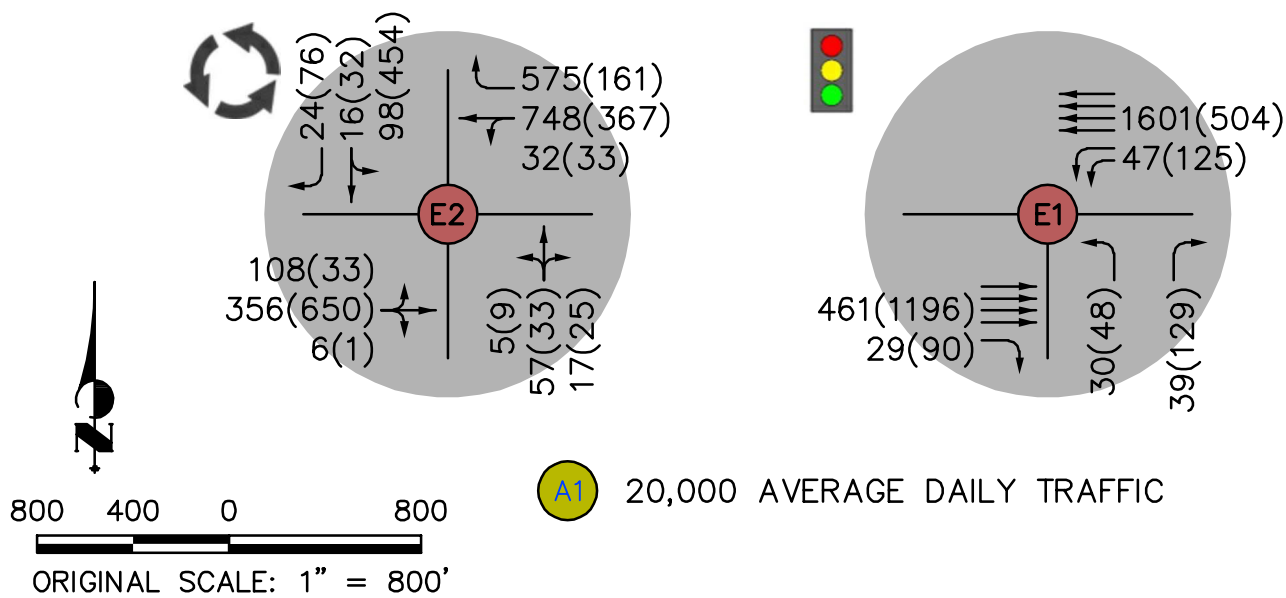


Figure 2 - 2024 Existing Traffic Volumes and Lane Geometry



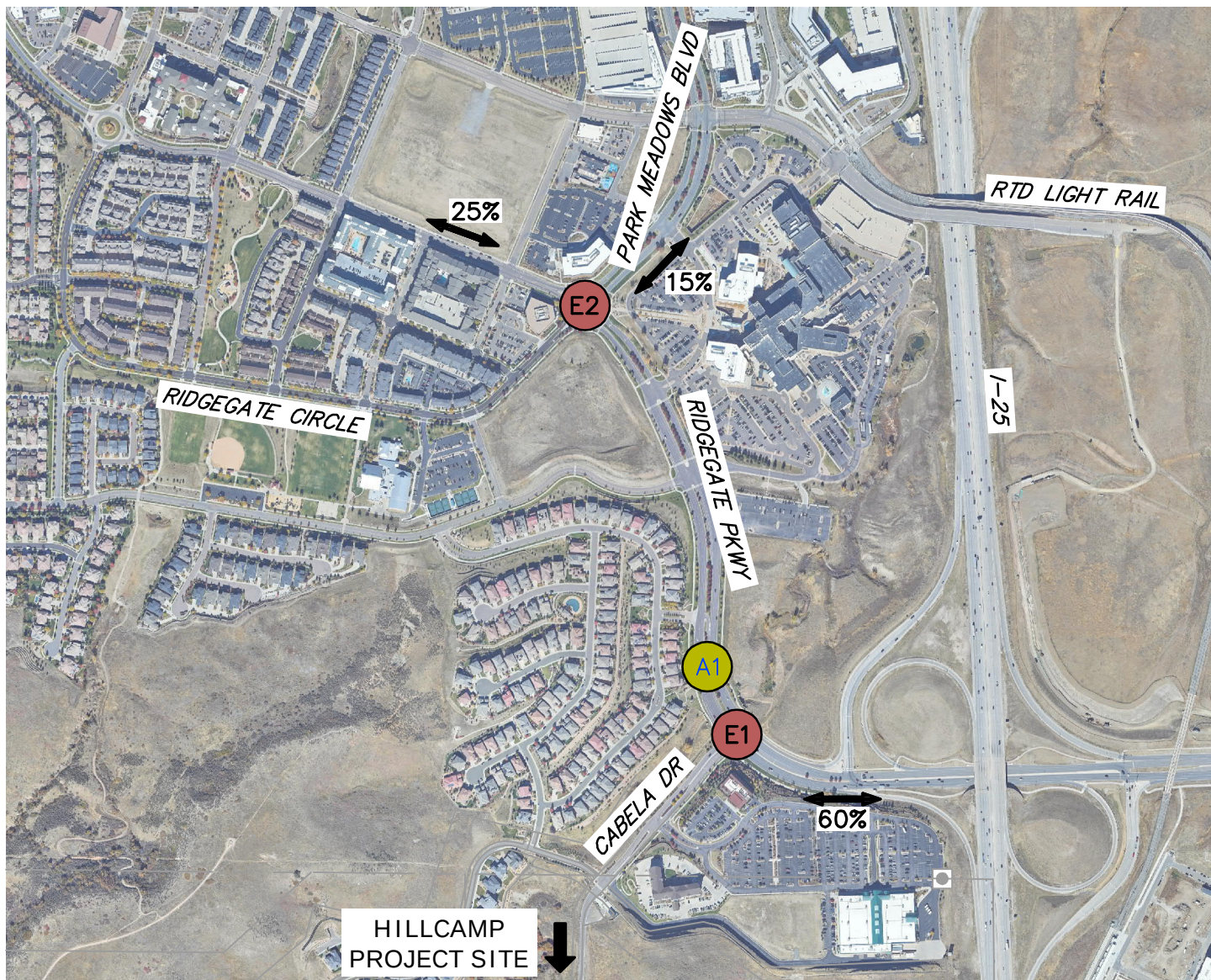
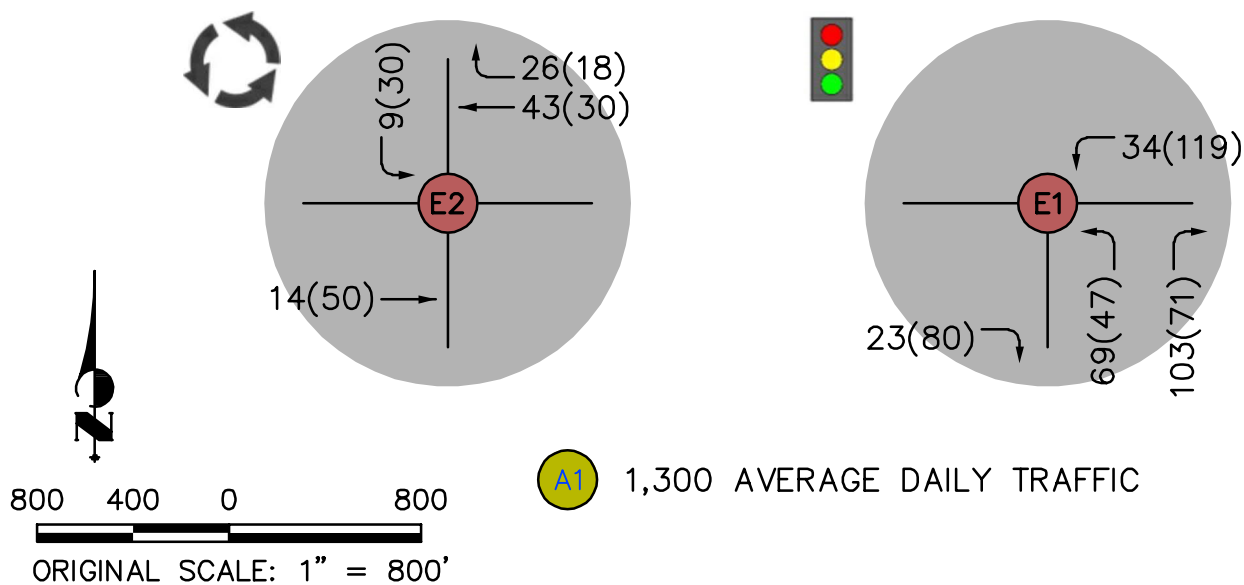


Figure 3 - Site-Generated Traffic Volumes and Distribution



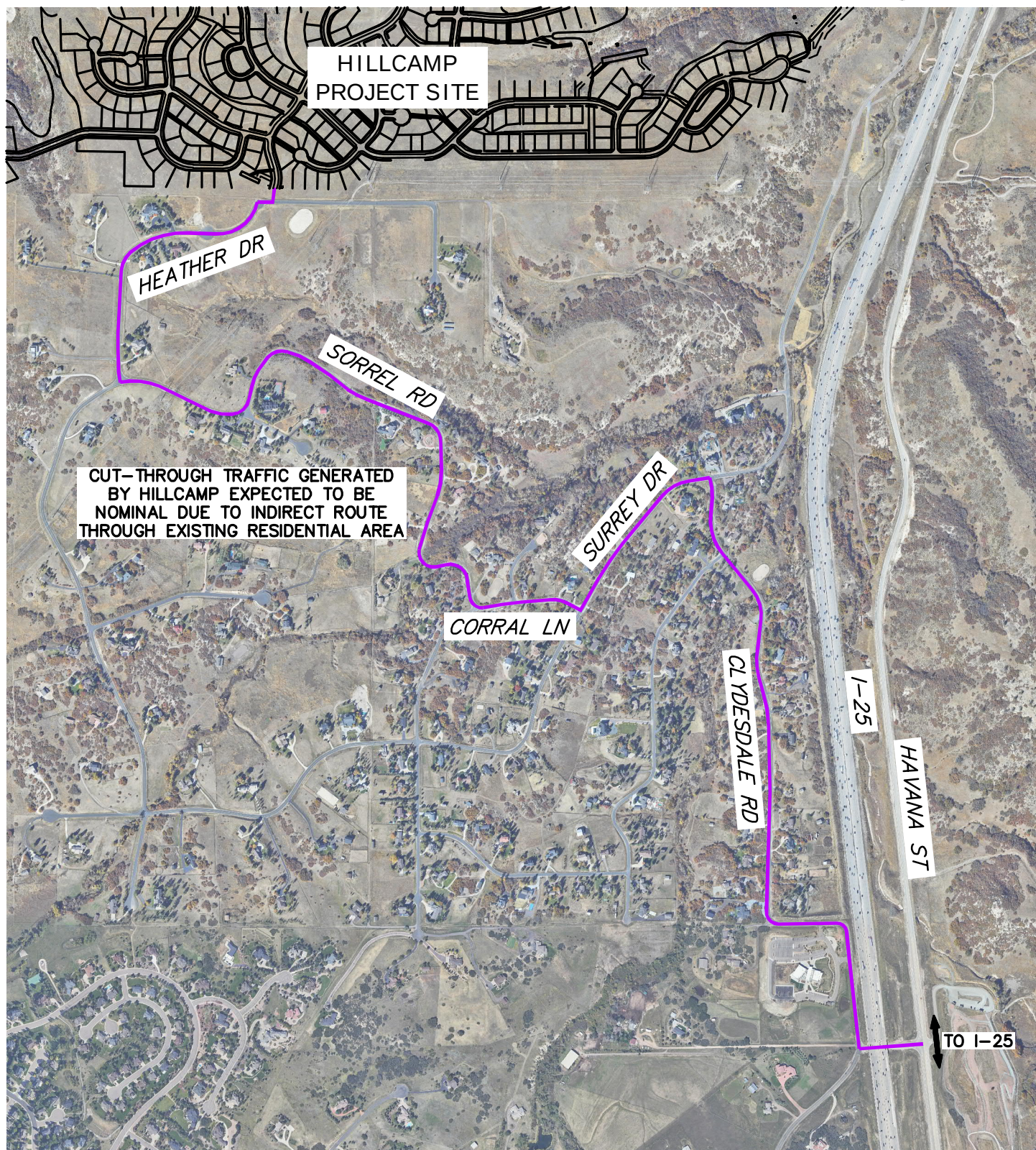
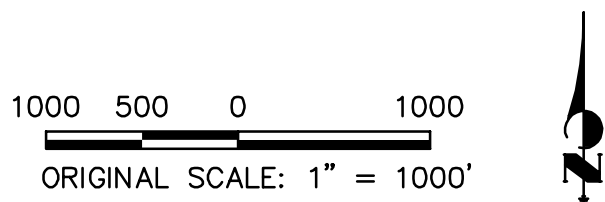


Figure 4 - Cut-Through Traffic Route



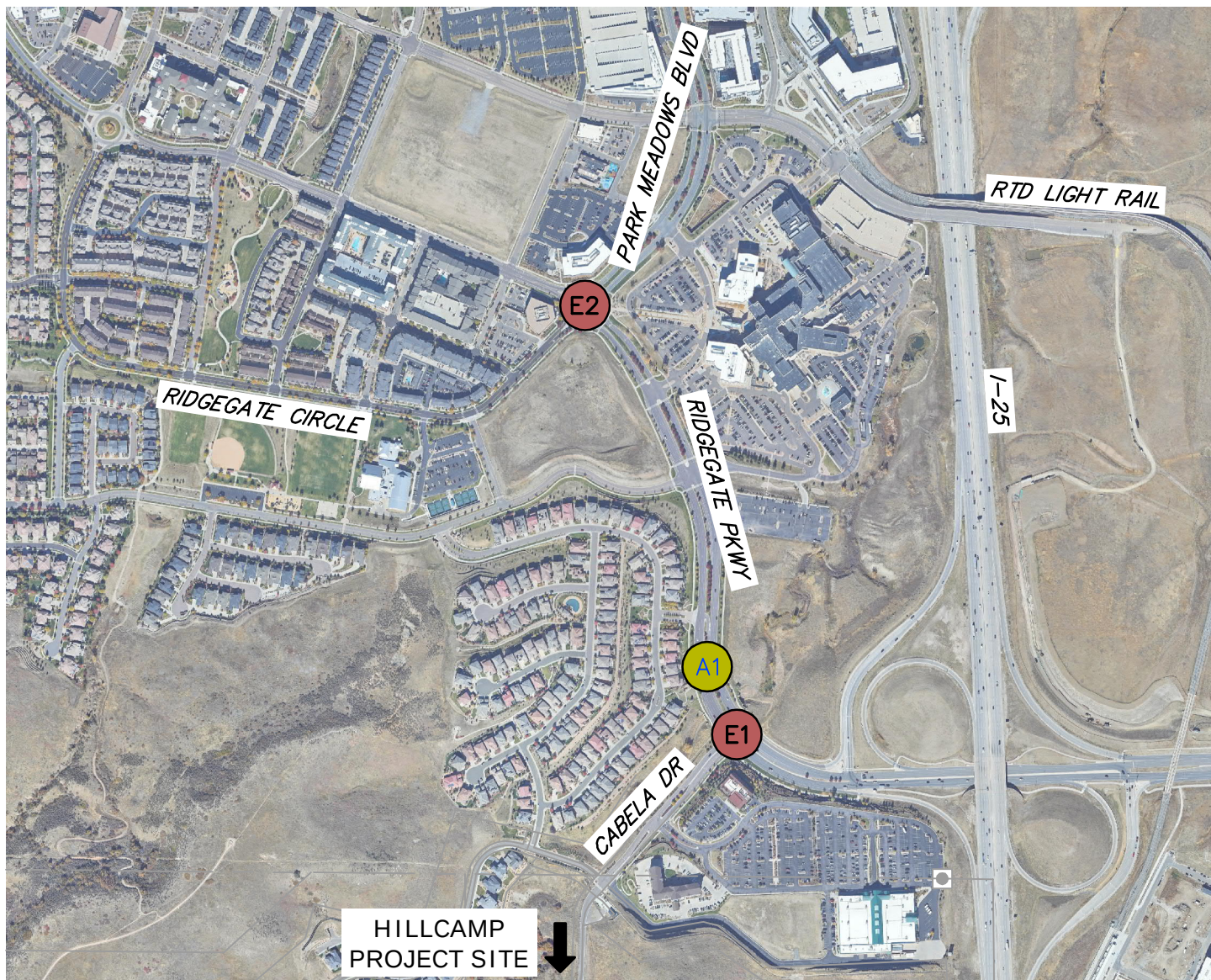
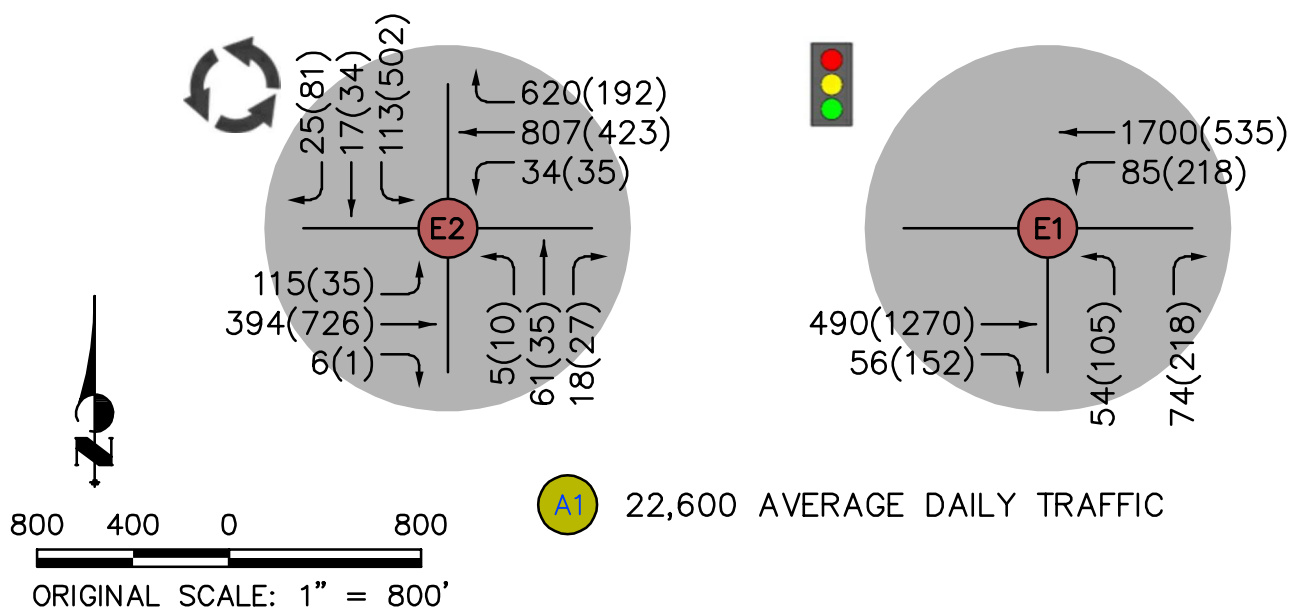


Figure 5 - 2028 Opening Day Background Traffic Volumes



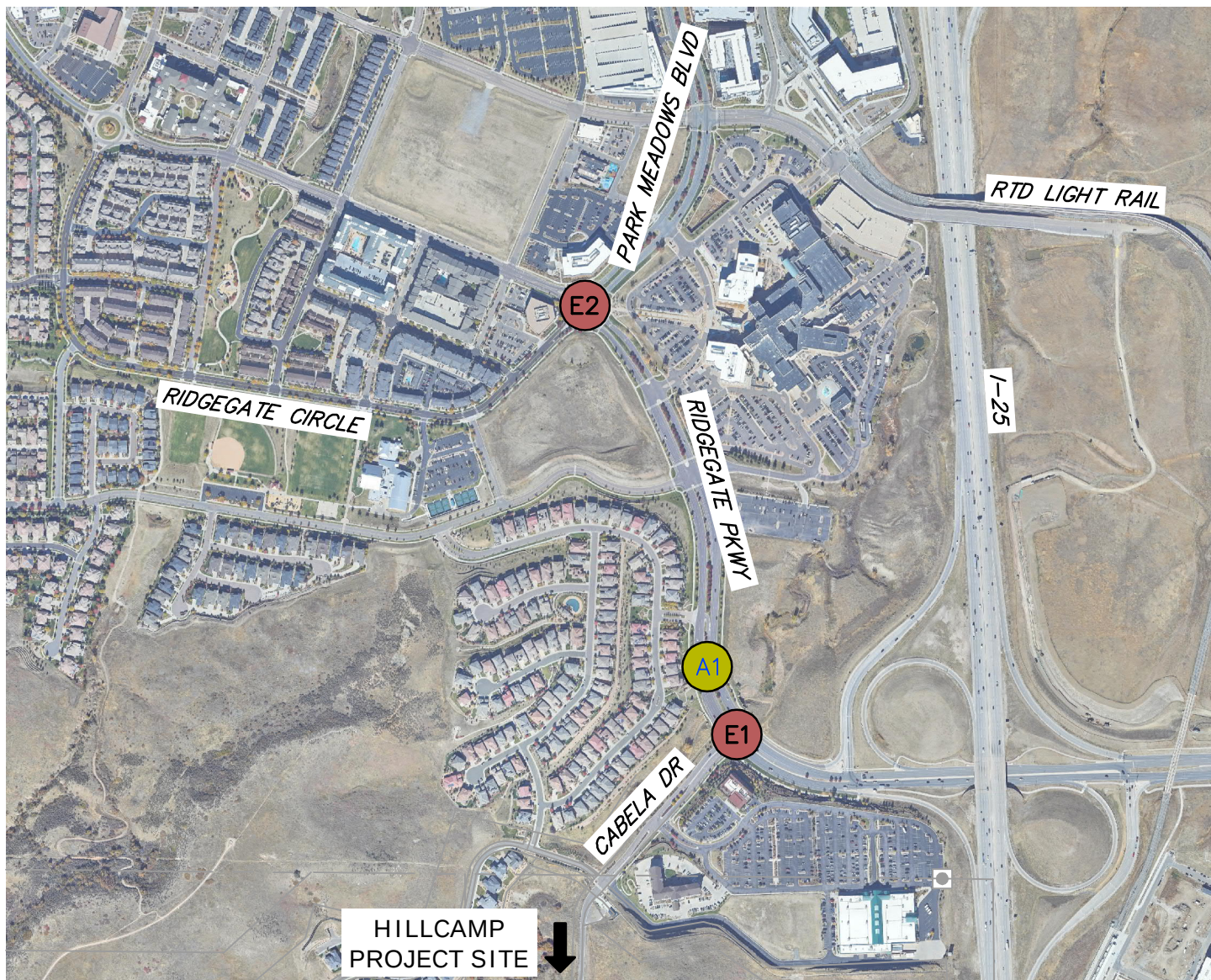
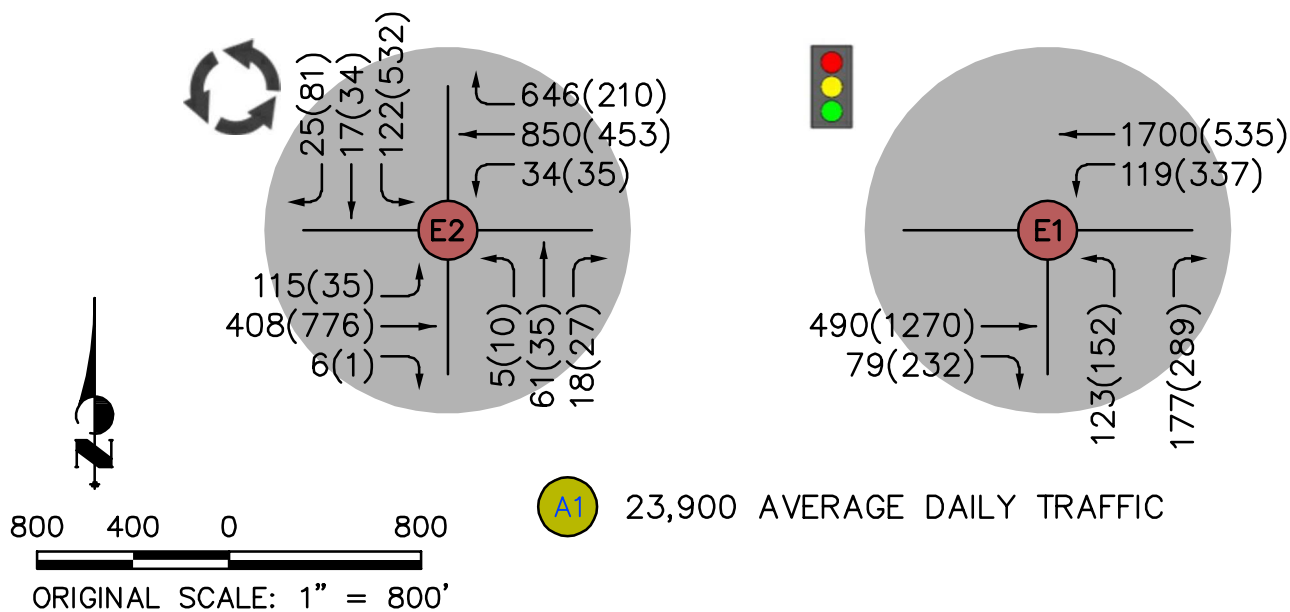


Figure 6 - 2028 Opening Day Total Traffic Volumes



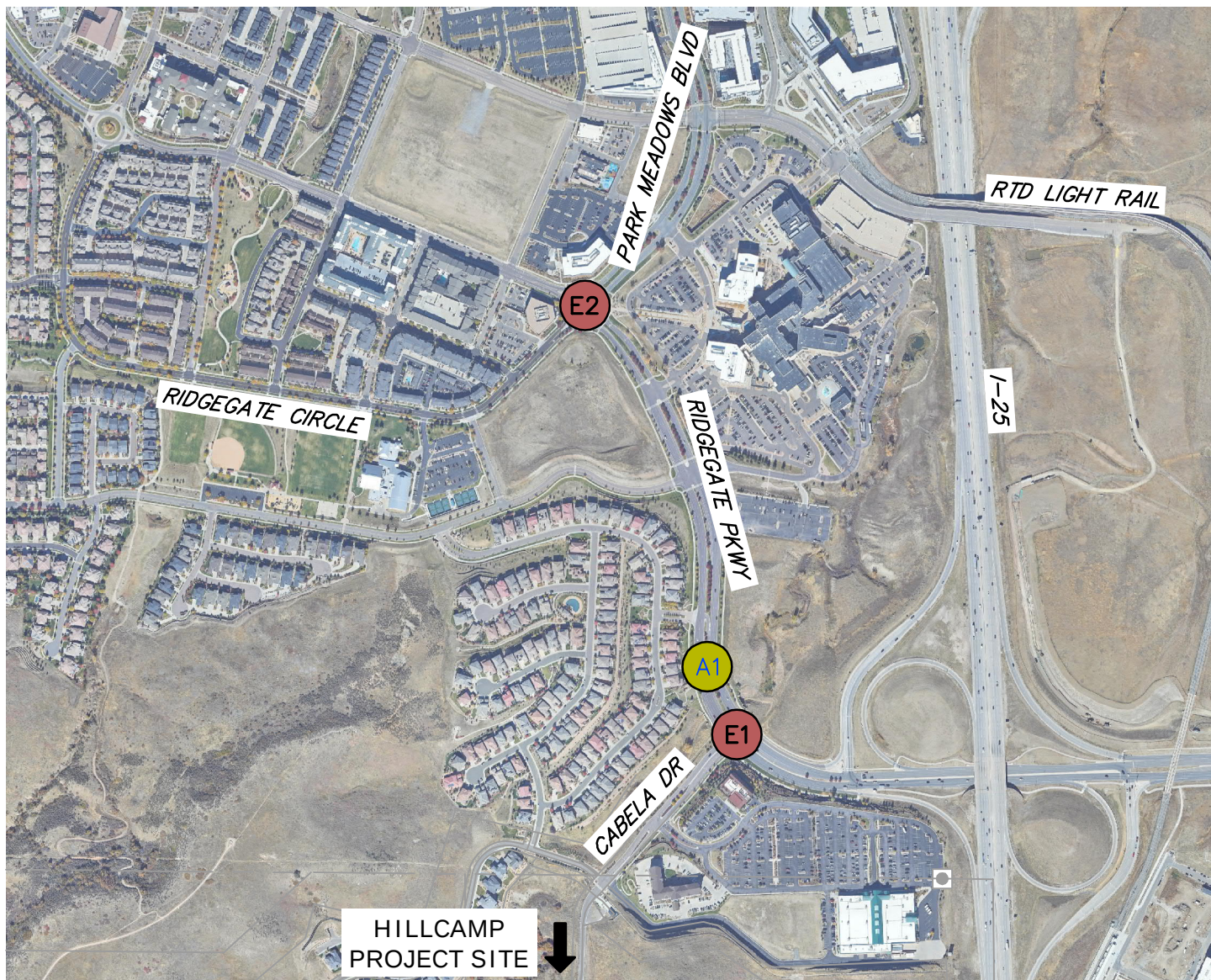
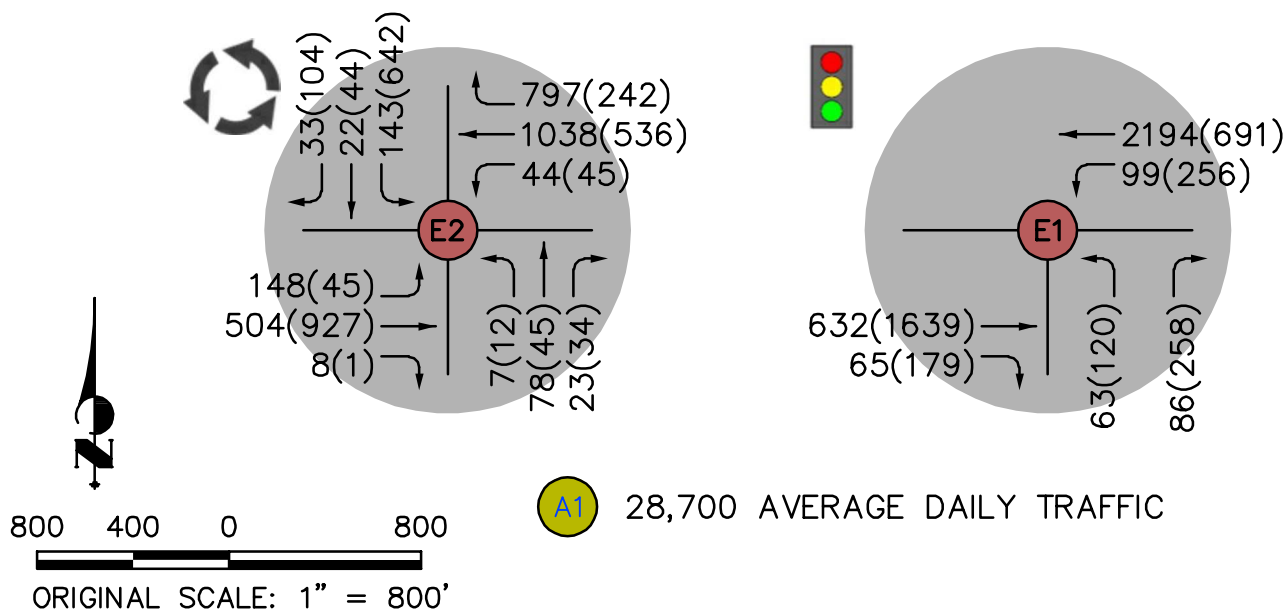


Figure 7 - 2045 Future Year Background Traffic Volumes



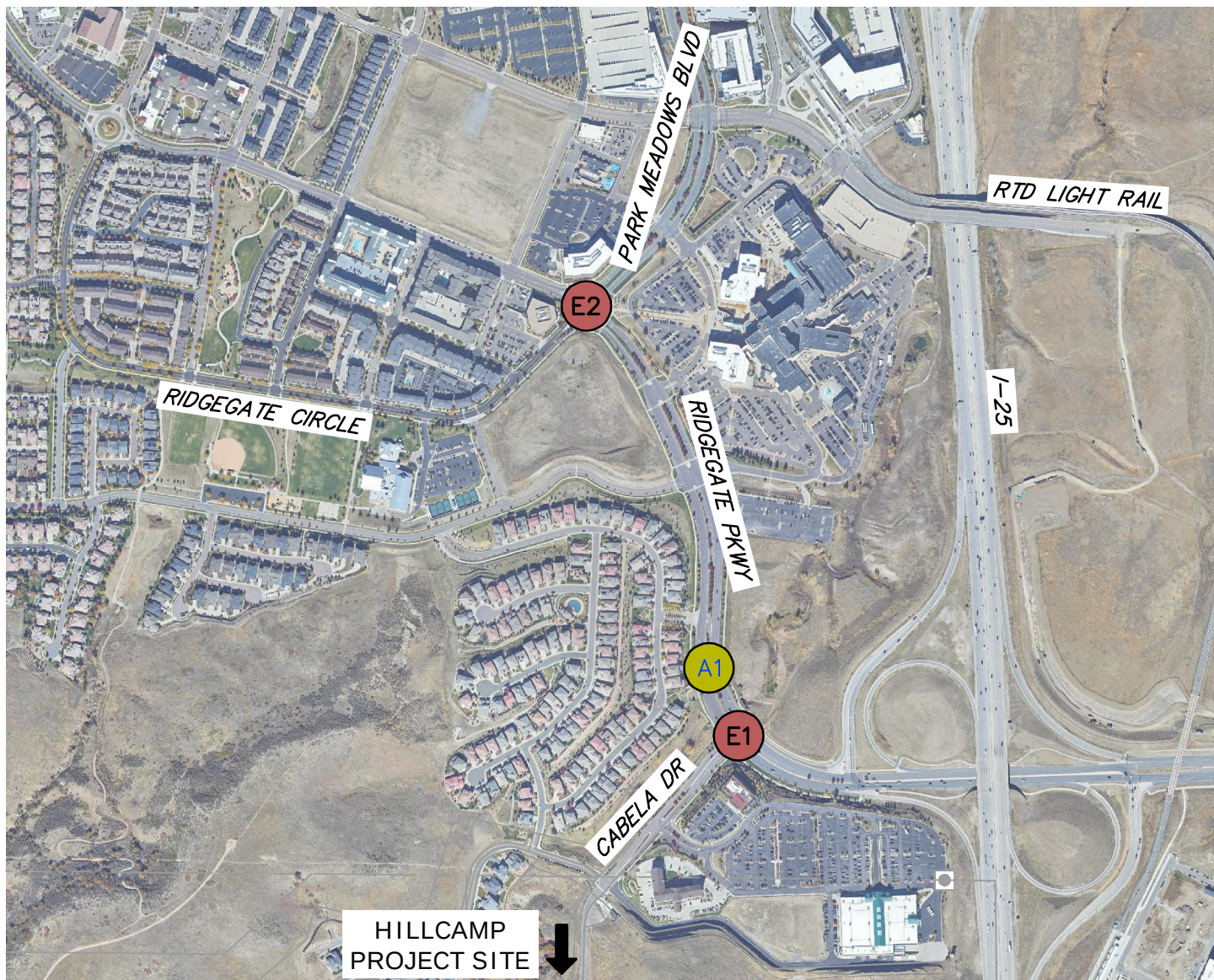
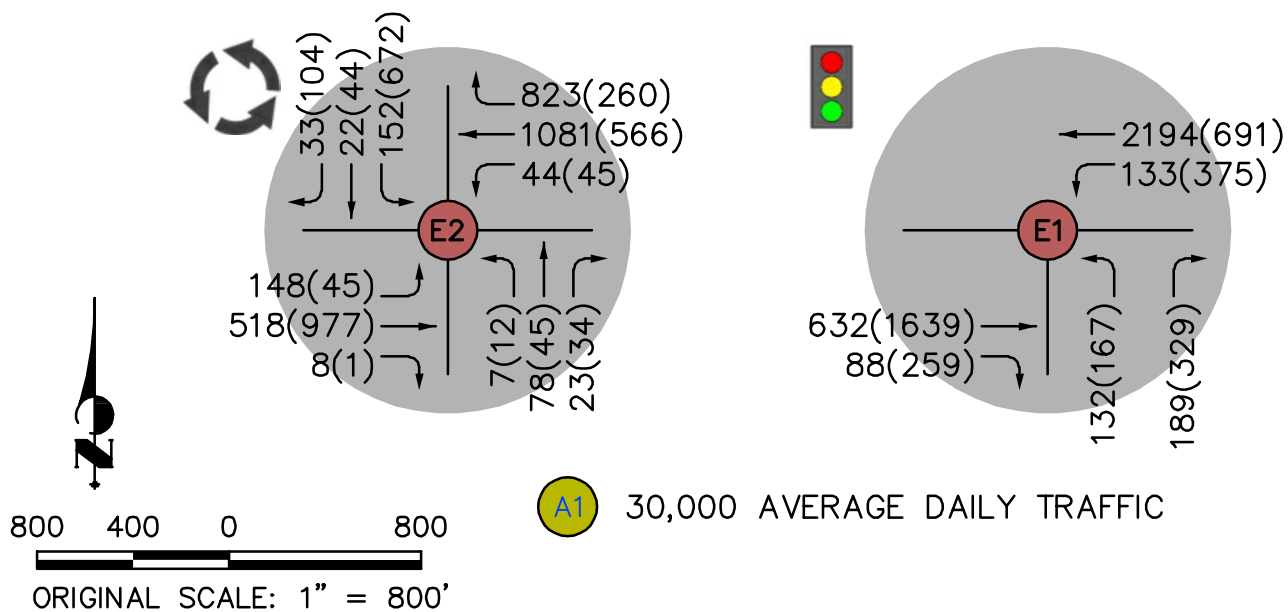


Figure 8 - 2045 Future Year Total Traffic Volumes



Traffic Operations Analysis

Traffic operations were analyzed using *Highway Capacity Manual*, 7th Edition methodology. Synchro reports are included in **Appendix D**.

Proposed Lane Geometry

Ridgegate & Cabela Intersection (E1)

For this Traffic Operations Analysis, existing lane geometry was assumed to remain at the Ridgegate & Cabela intersection through year 2045.

Ridgegate & Park Meadows Roundabout (E2)

The roundabout is currently striped with a single circulatory lane. However, it was built to accommodate a second lane.

JR considered the need for modified lane geometry at the roundabout. Specifically, JR analyzed the effects of striping a second eastbound entry/exit lane. This 2-lane alternative was analyzed in the 2028 Opening Day and 2045 Future Year conditions.

Levels of Service

JR analyzed the Study intersections for peak hour level of service (LOS). **Table 1** includes the LOS for each movement in the existing condition (year 2024). **Table 2** includes the forecasted LOS for background traffic and total traffic in the year 2028. **Table 3** includes the forecasted LOS for background traffic and total traffic in the year 2045. In each table, seconds of delay are shown in parentheses for movements operating at LOS F.

Note: For the roundabout analysis, JR used Highway Capacity software (HCS 2024) in addition to using Synchro 12. Both programs generated similar operational results. The results below are from the Synchro analysis.

Table 1: 2024 Existing Levels of Service



Intersection	Movement/Approach	AM Peak LOS	PM Peak LOS
E1: Ridgeway Parkway & Cabela Drive	EB Through	B	B
	EB Right	B	B
	WB Left	C	C
	WB Through	B	A
	NB Left	B	B
	NB Right	B	B
	Overall	B	B
E2: Ridgeway Parkway & Park Meadows Boulevard (1-Lane EB)	EB Approach	A	F (61s)
	WB Left/Through	C	A
	WB Right	A	A
	NB Approach	A	B
	SB Left/Through	A	B
	SB Right	A	A
	Overall	B	D

Table 2: 2028 Opening Day Levels of Service




Intersection	Movement/Approach	AM Peak LOS		PM Peak LOS	
		Background Traffic	Total Traffic	Background Traffic	Total Traffic
E1: Ridgeway Parkway & Cabela Drive	EB Through	B	B	B	C
	EB Right	B	B	B	B
	WB Left	C	C	C	D
	WB Through	B	B	A	A
	NB Left	B	B	B	B
	NB Right	B	B	B	C
	Overall	B	B	B	C
E2: Ridgeway Parkway & Park Meadows Boulevard (1-Lane EB)	EB Approach	A	B	F (123s)	F (167s)
	WB Left/Through	C	C	A	A
	WB Right	B	B	A	A
	NB Approach	A	A	C	C
	SB Left/Through	A	B	C	C
	SB Right	A	A	A	A
	Overall	B	B	F	F
E2: Ridgeway Parkway & Park Meadows Boulevard (2-Lane EB)	EB Left/Through	A	A	B	B
	EB Through/Right	A	A	B	B
	WB Left/Through	C	D	A	A
	WB Right	B	B	A	A
	NB Approach	A	A	B	B
	SB Left/Through	B	B	C	C
	SB Right	A	A	A	A
	Overall	B	C	B	B

Table 3: 2045 Future Year Levels of Service



Intersection	Movement/ Approach	AM Peak LOS		PM Peak LOS	
		Background Traffic	Total Traffic	Background Traffic	Total Traffic
E1: Ridgeway Parkway & Cabela Drive	EB Through	B	B	C	C
	EB Right	B	B	B	C
	WB Left	C	C	C	D
	WB Through	B	B	A	A
	NB Left	B	B	B	B
	NB Right	B	B	C	C
	Overall	B	B	B	C
E2: Ridgeway Parkway & Park Meadows Boulevard (2-Lane EB)	EB Left/Through	A	A	D	E
	EB Through/Right	A	A	D	E
	WB Left/Through	F (97s)	F (114s)	A	B
	WB Right	C	C	A	A
	NB Approach	A	A	C	C
	SB Left/Through	C	C	F (73s)	F (99s)
	SB Right	A	A	A	A
	Overall	E	F	D	E

Discussion on Levels of Service

In the 2024 Existing condition, levels of service are mostly satisfactory at LOS C or better. However, the eastbound approach of the roundabout operates at LOS F in the PM peak hour as a single lane.

In the 2028 Opening Day condition, traffic operations are expected to degrade as a result of higher background traffic volumes and the site-generated traffic. However, most movements are expected to operate at LOS D or better. The eastbound approach of the roundabout is expected to improve to a satisfactory LOS if a second entry/exit lane is added by the City.

In the 2045 Future Year condition, traffic operations are anticipated to degrade further as a result of higher background traffic volumes. Multiple failures are expected at the roundabout, even with the recommended restriping. The signalized intersection, however, is expected to operate acceptably.

Queue Lengths

JR analyzed each of the Study intersections for 95th percentile queue lengths. **Table 4** includes the queue lengths for the year 2024 with existing traffic. **Table 5** includes the queue lengths for the year 2028 with total traffic. **Table 6** includes the queue lengths for the year 2045 with total traffic. In each of these tables, queue lengths which conflict with upstream intersections are marked in red.

Table 4: 2024 Existing 95th Percentile Queue Lengths



Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
E1: Ridgeway Parkway & Cabela Drive	EB Through	57	149
	EB Right	<25	<25
	WB Left	<25	47
	WB Through	144	42
	NB Left	<25	33
	NB Right	<25	28
E2: Ridgeway Parkway & Park Meadows Boulevard	EB Approach	75	450
	WB Left/Through	175	50
	WB Right	75	25
	NB Approach	<25	25
	SB Left/Through	25	100
	SB Right	<25	<25



Table 5: 2028 Opening Day 95th Percentile Queue Lengths

	Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
	E1: Ridgeway Parkway & Cabela Drive	EB Through	61	160
		EB Right	<25	41
		WB Left	45	137
		WB Through	157	42
		NB Left	70	89
		NB Right	33	48
	E2: Ridgeway Parkway & Park Meadows Boulevard (1-Lane EB)	EB Approach	75	875
		WB Left/Through	275	50
		WB Right	100	25
		NB Approach	25	25
		SB Left/Through	25	175
		SB Right	<25	<25
	E2: Ridgeway Parkway & Park Meadows Boulevard (2-Lane EB)	EB Left/Through	25	100
		EB Through/Right	25	100
		WB Left/Through	325	50
		WB Right	100	25
		NB Approach	25	25
		SB Left/Through	25	200
		SB Right	<25	<25

Table 6: 2045 Future Year 95th Percentile Queue Lengths

	Intersection	Movement/Approach	AM Peak Queue (ft)	PM Peak Queue (ft)
	E1: Ridgeway Parkway & Cabela Drive	EB Through	77	263
		EB Right	<25	46
		WB Left	48	152
		WB Through	215	56
		NB Left	76	105
		NB Right	36	56
	E2: Ridgeway Parkway & Park Meadows Boulevard	EB Left/Through	50	250
		EB Through/Right	50	275
		WB Left/Through	925	100
		WB Right	225	25
		NB Approach	25	50
		SB Left/Through	75	600
		SB Right	<25	25

Discussion on Queue Lengths

In the 2024 Existing condition, queue lengths are mostly acceptable. However, the eastbound approach of the roundabout experiences an estimated queue of 450 feet in the PM peak hour, which may block the upstream intersection at Bismark Drive 300 feet to the west.

In the 2028 Opening Day condition, queue lengths are expected to increase as a result of higher traffic volumes. Queuing at the eastbound approach of the roundabout may be improved by adding a second entry/exit lane.

In the 2045 Future Year condition, queue lengths are anticipated to increase further as a result of higher background traffic volumes. The WB left/through lane at the roundabout is expected to have a queue length of 925 feet in the PM peak hour, which would conflict with access to the Sky Ridge hospital. The City may consider installing Do Not Block pavement markings in the future if queuing issues occur.

Roundabout Lane Geometry

Based on the results of the Traffic Operations Analysis, JR recommends the City consider restriping the existing roundabout. The need for this restriping is caused primarily by regional traffic growth, as Hillcamp contributes only a small portion of traffic to the roundabout. In 2045, traffic generated by Hillcamp is estimated to be 3.1% of total traffic in the AM peak hour and 4.6% of total traffic in the PM peak hour.

Multiple restriping alternatives may be considered including:

- Adding a second eastbound entry/exit lane
- Full conversion to a double-lane roundabout

As shown in the LOS and queuing analysis, the second eastbound entry/exit lane may not be sufficient in the year 2045. Therefore, a full-double-lane roundabout should be considered in the future.

Conclusion

Below is a summary of the conclusions and findings of this TIS.

Levels of Service

2024 Existing levels of service are mostly satisfactory at LOS C or better. The eastbound approach of the roundabout operates at LOS F in the PM peak hour as a single lane.

In 2028 Opening Day, traffic operations are expected to degrade as a result of higher traffic volumes. Most movements are expected to operate at LOS D or better. The roundabout may benefit from restriping.

In the 2045 Future Year, traffic operations are anticipated to degrade as a result of higher traffic volumes. Multiple failures are expected at the roundabout. The signalized intersection is expected to operate acceptably.

Queue Lengths

2024 Existing queue lengths are mostly acceptable. The eastbound approach of the roundabout experiences an estimated queue of 450 feet in the PM peak hour, which may block the Bismark Drive intersection.

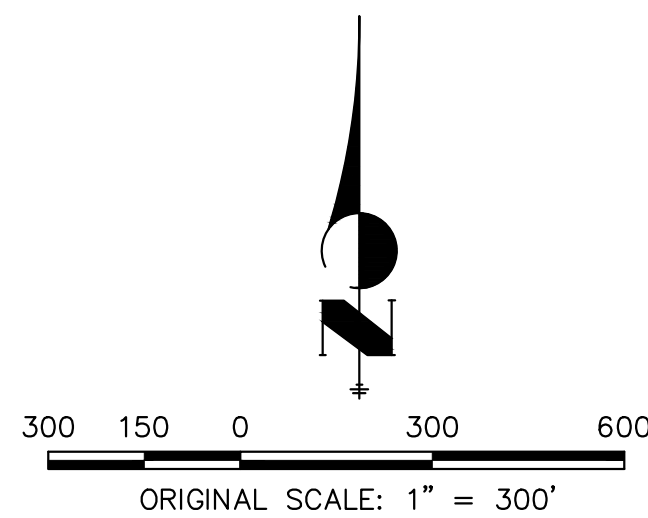
In 2028 Opening Day, queue lengths are expected to increase as a result of higher traffic volumes. Queuing at the eastbound approach of the roundabout may benefit from restriping.

In the 2045 Future Year, queue lengths are anticipated to increase as a result of higher traffic volumes. The WB left/through lane at the roundabout is expected to have a queue length of 925 feet, which would conflict with access to the Sky Ridge hospital.

Recommendations

JR recommends that the City consider striping improvements at the roundabout. Adding a second entry/exit lane on the eastbound approach is expected to improve traffic operations. Alternatively, the City may consider conversion into a full double-lane roundabout.

Appendix A: Site Plan



PREPARED UNDER

KEVIN J. ROHRER
COLORADO P.E. #
FOR AND ON BEHALF OF JR ENGINEERING, LLC

 J-R ENGINEERING A Western Company Central 303-740-9388 • Colorado Springs 719-593-2583 Fort Collins 970-491-9888 • www.jrengineering.com	PREPARED FOR BC-RC MESA TOPS JV LLC 6465 S GREENWOOD PLZ BLVD SUITE 700 CENTENNIAL, CO 80111 OFFICE PHONE (303) 791-8180	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCY OR ENGINEER. THESE DRAWINGS ARE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.
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Appendix B: Traffic Counts

All Traffic Data Services
www.alltrafficdata.net

Page 1

Site Code: 3
Station ID:
RIDGEGATE PKWY WO CABELA DR

Start Time	11/20/24 Wed	EB	WB							Total
12:00 AM		13	12							25
01:00		3	9							12
02:00		6	6							12
03:00		7	12							19
04:00		15	25							40
05:00		49	187							236
06:00		248	694							942
07:00		484	1518							2002
08:00		408	1463							1871
09:00		428	819							1247
10:00		415	618							1033
11:00		556	570							1126
12:00 PM		531	562							1093
01:00		496	567							1063
02:00		668	621							1289
03:00		1073	727							1800
04:00		1254	576							1830
05:00		1209	520							1729
06:00		552	445							997
07:00		393	254							647
08:00		252	204							456
09:00		159	124							283
10:00		75	63							138
11:00		38	30							68
Total		9332	10626							19958
Percent		46.8%	53.2%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	556	1518	-	-	-	-	-	-	2002
PM Peak	-	16:00	15:00	-	-	-	-	-	-	16:00
Vol.	-	1254	727	-	-	-	-	-	-	1830
Grand Total		9332	10626							19958
Percent		46.8%	53.2%							
ADT		ADT 19,958	AADT 19,958							



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

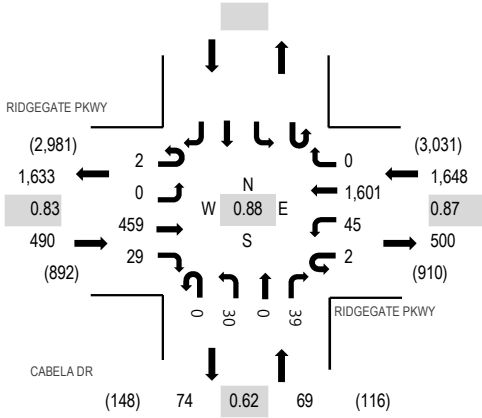
Location: 1 CABELA DR & RIDGEGATE PKWY AM

Date: Tuesday, November 12, 2024

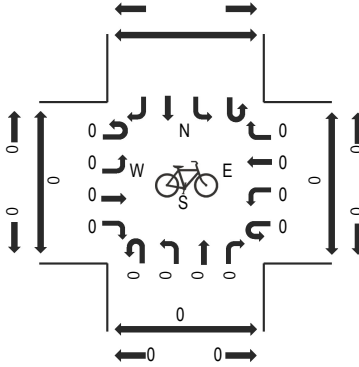
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

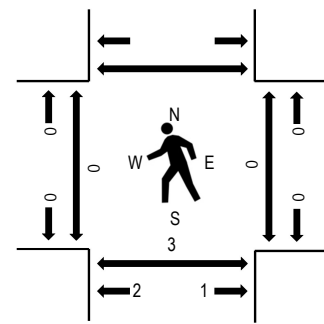
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RIDGEGATE PKWY Eastbound				RIDGEGATE PKWY Westbound				CABELA DR Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	89	4	0	7	303	0	0	3	0	6					412	2,088	0	0	2	
7:15 AM	1	0	110	4	1	10	345	0	0	6	0	5					482	2,207	0	0	0	
7:30 AM	0	0	138	10	1	12	386	0	0	9	0	9					565	2,185	0	0	0	
7:45 AM	0	0	118	10	0	16	457	0	0	8	0	20					629	2,097	0	0	3	
8:00 AM	1	0	93	5	0	7	413	0	0	7	0	5					531	1,951	0	0	0	
8:15 AM	1	0	86	6	0	8	348	0	0	5	0	6					460		0	0	0	
8:30 AM	0	0	101	5	0	18	340	0	0	4	0	9					477		0	0	0	
8:45 AM	0	0	104	6	1	20	338	0	0	6	0	8					483		0	0	4	
Count Total	3	0	839	50	3	98	2,930	0	0	48	0	68					4,039		0	0	9	
Peak Hour	2	0	459	29	2	45	1,601	0	0	30	0	39					2,207		0	0	3	



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

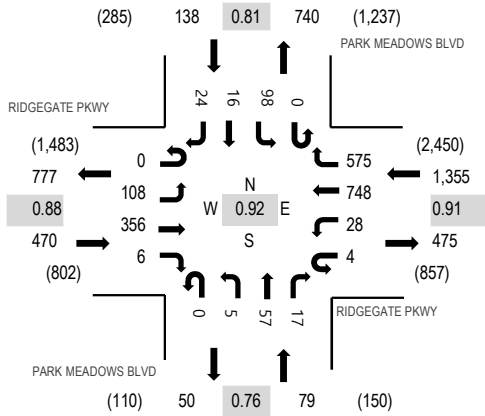
Location: 2 PARK MEADOWS BLVD & RIDGEGATE PKWY AM

Date: Tuesday, November 12, 2024

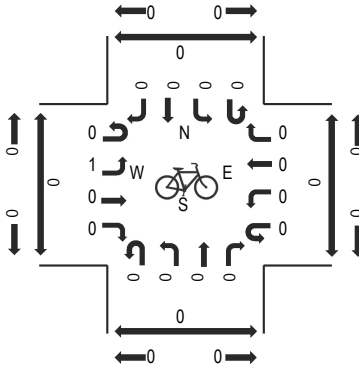
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

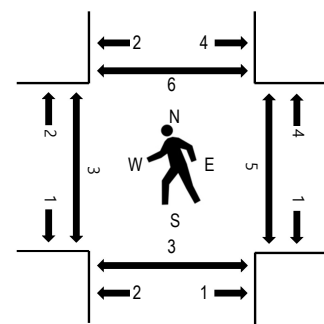
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RIDGEGATE PKWY Eastbound				RIDGEGATE PKWY Westbound				PARK MEADOWS BLVD Northbound				PARK MEADOWS BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	18	54	1	0	6	154	68	0	0	12	7	0	17	8	1	346	1,876	0	0	0	0
7:15 AM	0	29	77	0	0	9	170	111	0	1	13	4	0	31	2	4	451	2,042	0	0	0	1
7:30 AM	0	25	109	0	2	8	168	157	0	0	11	4	0	27	7	8	526	2,011	1	0	1	0
7:45 AM	0	29	102	2	1	7	206	159	0	3	11	5	0	17	5	6	553	1,934	1	2	0	1
8:00 AM	0	25	68	4	1	4	204	148	0	1	22	4	0	23	2	6	512	1,811	1	3	2	4
8:15 AM	0	14	58	1	0	7	164	117	0	0	11	6	0	27	6	9	420		2	1	2	1
8:30 AM	0	15	72	0	0	12	166	118	0	2	14	3	1	30	10	6	449		3	1	0	3
8:45 AM	0	16	83	0	1	5	194	83	0	1	10	5	0	19	4	9	430		2	0	1	3
Count Total	0	171	623	8	5	58	1,426	961	0	8	104	38	1	191	44	49	3,687		10	7	6	13
Peak Hour	0	108	356	6	4	28	748	575	0	5	57	17	0	98	16	24	2,042		3	5	3	6



ALL TRAFFIC DATA SERVICES

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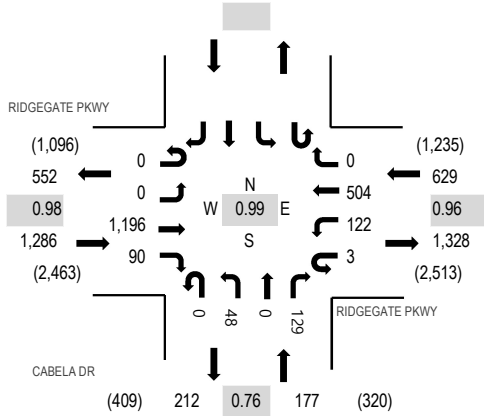
Location: 1 CABELA DR & RIDGEGATE PKWY PM

Date: Tuesday, November 12, 2024

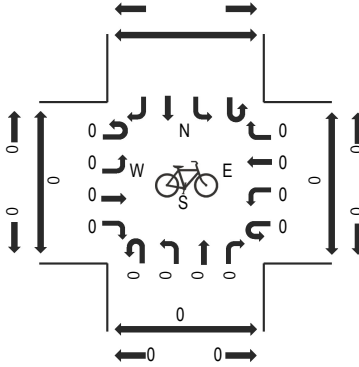
Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

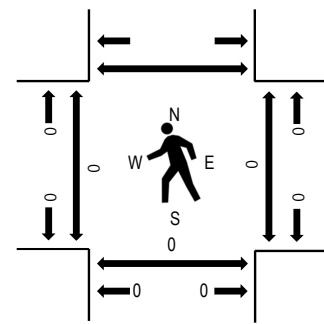
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RIDGEGATE PKWY Eastbound				RIDGEGATE PKWY Westbound				CABELA DR Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	278	21	0	24	132	0	0	10	0	31					496	2,060	0	0	1	
4:15 PM	0	0	293	23	1	22	141	0	0	8	0	36					524	2,092	0	0	0	
4:30 PM	0	0	302	17	0	34	135	0	0	11	0	26					525	2,079	0	0	0	
4:45 PM	0	0	293	27	2	26	129	0	0	10	0	28					515	2,051	0	0	0	
5:00 PM	0	0	308	23	0	40	99	0	0	19	0	39					528	1,958	0	0	0	
5:15 PM	0	0	298	30	1	26	127	0	0	8	0	21					511		0	0	1	
5:30 PM	0	0	290	23	0	29	118	0	0	9	0	28					497		0	0	0	
5:45 PM	0	0	215	22	1	21	127	0	1	13	0	22					422		0	0	1	
Count Total	0	0	2,277	186	5	222	1,008	0	1	88	0	231					4,018		0	0	3	
Peak Hour	0	0	1,196	90	3	122	504	0	0	48	0	129					2,092		0	0	0	



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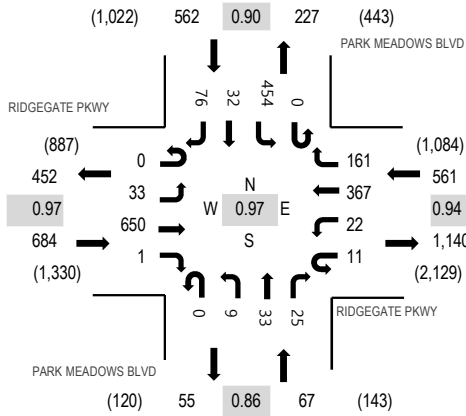
Location: 2 PARK MEADOWS BLVD & RIDGEGATE PKWY PM

Date: Tuesday, November 12, 2024

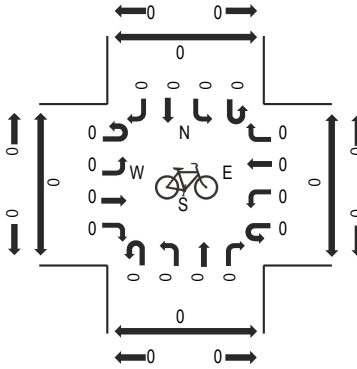
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

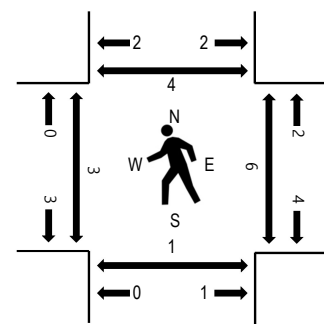
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RIDGEGATE PKWY				RIDGEGATE PKWY				PARK MEADOWS BLVD				PARK MEADOWS BLVD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:00 PM	1	10	148	2	0	4	103	35	0	1	12	8	0	105	12	12	453	1,836	1	0	0	1
4:15 PM	1	7	169	0	0	4	99	34	0	2	6	9	0	91	4	19	445	1,842	0	3	0	2
4:30 PM	0	6	170	0	5	10	91	46	0	3	13	6	0	102	8	23	483	1,874	1	2	0	1
4:45 PM	0	8	165	0	4	5	95	38	0	1	3	3	0	103	8	22	455	1,835	0	2	1	2
5:00 PM	0	6	151	0	2	3	80	39	0	3	9	10	0	135	10	11	459	1,743	1	1	0	0
5:15 PM	0	13	164	1	0	4	101	38	0	2	8	6	0	114	6	20	477		1	1	0	1
5:30 PM	0	5	152	2	0	8	82	41	1	4	12	4	0	98	11	24	444		1	0	1	0
5:45 PM	0	15	133	1	2	6	77	28	0	0	11	6	0	64	10	10	363		0	0	1	0
Count Total	2	70	1,252	6	13	44	728	299	1	16	74	52	0	812	69	141	3,579		5	9	3	7
Peak Hour	0	33	650	1	11	22	367	161	0	9	33	25	0	454	32	76	1,874		3	6	1	4

Appendix C: Trip Generation

Trip Generation Summary

Project: Hillcamp Development

ITE Code	Description	Size	Units	Weekday Average Daily Trips			Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
210	Single-Family Detached Housing	343	Dwelling Units	1,568	1,568	3,136	57	172	229	199	118	317
			Unadjusted Volume	1,568	1,568	3,136	57	172	229	199	118	317
			Internal Capture	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Pass-By Trips	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Volume Added to Adjacent Streets	1,568	1,568	3,136	57	172	229	199	118	317

Source: Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition

Trip Generation Summary

Project: Adjacent Retail/Furniture Store (Background Traffic)

ITE Code	Description	Size	Units	Weekday Average Daily Trips			Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
821	Shopping Plaza (40-150k SF)	40,000	Square Feet	1,350	1,350	2,700	43	26	69	102	106	208
890	Furniture Store	41,000	Square Feet	129	129	258	8	3	11	9	11	20
Unadjusted Volume				1,479	1,479	2,958	51	29	80	111	117	228
Internal Capture				0%	0%	0%	0%	0%	0%	0%	0%	0%
Pass-By Trips				0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume Added to Adjacent Streets				1,479	1,479	2,958	51	29	80	111	117	228

Source: Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition

Trip Generation Summary

Project: Adjacent Residential (Background Traffic)

ITE Code	Description	Size	Units	Weekday Average Daily Trips			Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
210	Single-Family Detached Housing	200	Dwelling Units	955	955	1,910	35	105	140	120	71	191
			Unadjusted Volume	955	955	1,910	35	105	140	120	71	191
			Internal Capture	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Pass-By Trips	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Volume Added to Adjacent Streets	955	955	1,910	35	105	140	120	71	191

Source: Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition

Appendix D: Synchro Reports

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/23/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↙	↑↑↑	↖	↗
Traffic Volume (vph)	461	29	47	1601	30	39
Future Volume (vph)	461	29	47	1601	30	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		37				50
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.91	0.78	0.78	0.94	0.78	0.78
Adj. Flow (vph)	507	37	60	1703	38	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	507	37	60	1703	38	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

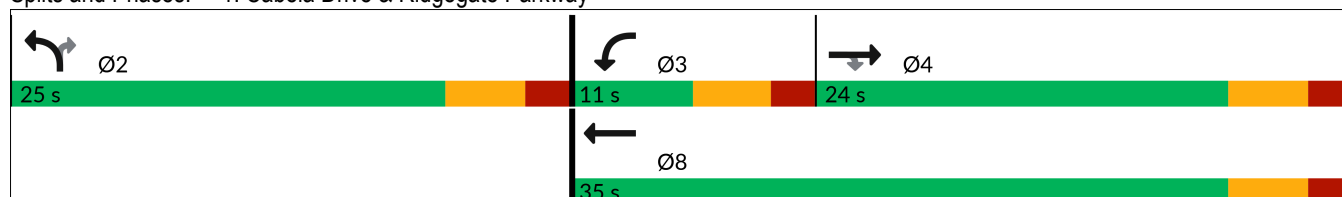
JR Engineering
12/23/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	24.0	24.0	11.0	35.0	25.0	25.0
Total Split (%)	40.0%	40.0%	18.3%	58.3%	41.7%	41.7%
Maximum Green (s)	18.5	18.5	5.5	29.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	20.2	20.2	5.5	26.5	19.6	19.6
Actuated g/C Ratio	0.35	0.35	0.10	0.46	0.34	0.34
v/c Ratio	0.22	0.06	0.18	0.57	0.06	0.09
Control Delay (s/veh)	14.3	6.3	26.4	11.9	14.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.3	6.3	26.4	11.9	14.3	5.5
LOS	B	A	C	B	B	A
Approach Delay (s/veh)	13.8			12.4	9.3	
Approach LOS	B			B	A	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 57.1
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay (s/veh): 12.6
 Intersection LOS: B
 Intersection Capacity Utilization 36.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	507	37	60	1703	38	50
v/c Ratio	0.22	0.06	0.18	0.57	0.06	0.09
Control Delay (s/veh)	14.3	6.3	26.4	11.9	14.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.3	6.3	26.4	11.9	14.3	5.5
Queue Length 50th (ft)	39	0	10	115	9	0
Queue Length 95th (ft)	57	14	22	144	23	15
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2265	583	332	3326	607	576
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.06	0.18	0.51	0.06	0.09
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/23/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↘↙	↑↑↑↑	↗	↗
Traffic Volume (veh/h)	461	29	47	1601	30	39
Future Volume (veh/h)	461	29	47	1601	30	39
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	507	37	60	1703	38	50
Peak Hour Factor	0.91	0.78	0.78	0.94	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1796	442	190	2804	643	572
Arrive On Green	0.28	0.28	0.05	0.44	0.36	0.36
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	507	37	60	1703	38	50
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	3.3	0.9	0.9	11.0	0.8	1.1
Cycle Q Clear(g_c), s	3.3	0.9	0.9	11.0	0.8	1.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1796	442	190	2804	643	572
V/C Ratio(X)	0.28	0.08	0.32	0.61	0.06	0.09
Avail Cap(c_a), veh/h	2202	542	352	3511	643	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	14.4	24.6	11.7	11.3	11.4
Incr Delay (d2), s/veh	0.1	0.1	0.9	0.2	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.3	0.4	3.0	0.3	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.3	14.5	25.5	11.9	11.5	11.7
LnGrp LOS	B	B	C	B	B	B
Approach Vol, veh/h	544			1763	88	
Approach Delay, s/veh	15.3			12.4	11.6	
Approach LOS	B			B	B	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	25.0		8.5	20.6	29.1	
Change Period (Y+Rc), s	5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s	19.5		5.5	18.5	29.5	
Max Q Clear Time (g_c+I1), s	3.1		2.9	5.3	13.0	
Green Ext Time (p_c), s	0.2		0.0	2.7	10.6	
Intersection Summary						
HCM 7th Control Delay, s/veh			13.0			
HCM 7th LOS			B			

Lanes, Volumes, Timings

2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	356	6	32	748	575	5	57	17	98	16	24
Future Volume (vph)	108	356	6	32	748	575	5	57	17	98	16	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.970				0.850
Flt Protected		0.988			0.998			0.997			0.959	
Satd. Flow (prot)	0	1837	0	0	1859	1583	0	1801	0	0	1786	1583
Flt Permitted		0.988			0.998			0.997			0.959	
Satd. Flow (perm)	0	1837	0	0	1859	1583	0	1801	0	0	1786	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.83	0.90	0.78	0.78	0.92	0.92	0.78	0.79	0.78	0.83	0.78	0.78
Adj. Flow (vph)	130	396	8	41	813	625	6	72	22	118	21	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	534	0	0	854	625	0	100	0	0	139	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	89.1%											
Analysis Period (min)	15											
ICU Level of Service E												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/23/2024

Intersection						
Intersection Delay, s/veh	11.2					
Intersection LOS	B					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	534	1479		100	170	
Demand Flow Rate, veh/h	545	1509		101	173	
Vehicles Circulating, veh/h	183	212		657	877	
Vehicles Exiting, veh/h	867	546		71	844	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	8.5	12.9		6.7	8.1	
Approach LOS	A	B		A	A	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.577	0.423	1.000	0.815	0.185
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	545	871	638	101	141	32
Cap Entry Lane, veh/h	1145	1171	1171	706	639	639
Entry HV Adj Factor	0.980	0.980	0.980	0.986	0.983	0.969
Flow Entry, veh/h	534	854	625	100	139	31
Cap Entry, veh/h	1122	1148	1147	696	628	619
V/C Ratio	0.476	0.744	0.545	0.143	0.221	0.050
Control Delay, s/veh	8.5	15.3	9.6	6.7	8.4	6.4
LOS	A	C	A	A	A	A
95th %tile Queue, veh	3	7	3	0	1	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/23/2024

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↓	↑↑↑↑	↓	↑
Traffic Volume (vph)	1196	90	125	504	48	129
Future Volume (vph)	1196	90	125	504	48	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		110				154
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.93	0.82	0.84	0.92	0.78	0.84
Adj. Flow (vph)	1286	110	149	548	62	154
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1286	110	149	548	62	154
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

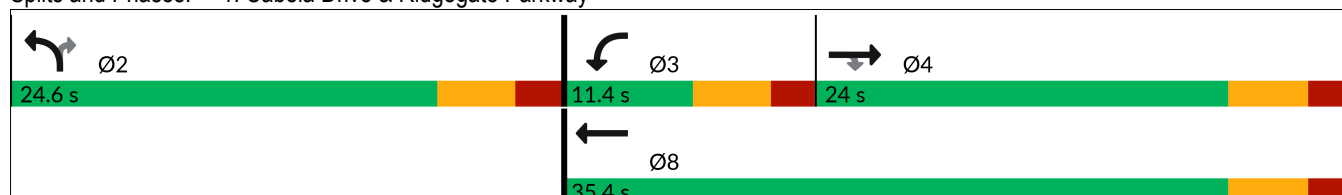
JR Engineering
12/23/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	24.0	24.0	11.4	35.4	24.6	24.6
Total Split (%)	40.0%	40.0%	19.0%	59.0%	41.0%	41.0%
Maximum Green (s)	18.5	18.5	5.9	29.9	19.1	19.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	17.6	17.6	6.0	26.3	19.4	19.4
Actuated g/C Ratio	0.31	0.31	0.11	0.46	0.34	0.34
v/c Ratio	0.65	0.19	0.41	0.19	0.10	0.24
Control Delay (s/veh)	19.1	4.9	29.3	8.7	15.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.1	4.9	29.3	8.7	15.1	4.3
LOS	B	A	C	A	B	A
Approach Delay (s/veh)	18.0			13.1	7.4	
Approach LOS	B			B	A	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 56.8
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay (s/veh): 15.5
 Intersection LOS: B
 Intersection Capacity Utilization 39.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1286	110	149	548	62	154
v/c Ratio	0.65	0.19	0.41	0.19	0.10	0.24
Control Delay (s/veh)	19.1	4.9	29.3	8.7	15.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.1	4.9	29.3	8.7	15.1	4.3
Queue Length 50th (ft)	115	0	26	29	16	0
Queue Length 95th (ft)	149	24	47	42	33	28
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2118	597	361	3423	604	641
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.18	0.41	0.16	0.10	0.24
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/23/2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1196	90	125	504	48	129
Future Volume (veh/h)	1196	90	125	504	48	129
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1286	110	149	548	62	154
Peak Hour Factor	0.93	0.82	0.84	0.92	0.78	0.84
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1857	458	277	3000	603	537
Arrive On Green	0.29	0.29	0.08	0.47	0.34	0.34
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	1286	110	149	548	62	154
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	10.0	3.0	2.3	2.8	1.3	4.0
Cycle Q Clear(g_c), s	10.0	3.0	2.3	2.8	1.3	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1857	458	277	3000	603	537
V/C Ratio(X)	0.69	0.24	0.54	0.18	0.10	0.29
Avail Cap(c_a), veh/h	2111	520	362	3411	603	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	15.3	24.9	8.8	12.8	13.7
Incr Delay (d2), s/veh	0.8	0.3	1.6	0.0	0.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.0	0.9	0.8	0.5	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.7	15.6	26.6	8.8	13.1	15.0
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	1396			697	216	
Approach Delay, s/veh	18.4			12.6	14.5	
Approach LOS	B			B	B	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	24.6		10.0	21.8	31.8	
Change Period (Y+Rc), s	5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s	19.1		5.9	18.5	29.9	
Max Q Clear Time (g_c+I1), s	6.0		4.3	12.0	4.8	
Green Ext Time (p_c), s	0.5		0.1	4.3	3.6	
Intersection Summary						
HCM 7th Control Delay, s/veh			16.3			
HCM 7th LOS			B			

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/23/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	650	1	33	367	161	9	33	25	454	32	76
Future Volume (vph)	33	650	1	33	367	161	9	33	25	454	32	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.950				0.850
Flt Protected		0.997			0.995			0.993			0.956	
Satd. Flow (prot)	0	1857	0	0	1853	1583	0	1757	0	0	1781	1583
Flt Permitted		0.997			0.995			0.993			0.956	
Satd. Flow (perm)	0	1857	0	0	1853	1583	0	1757	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.92	0.78	0.78	0.90	0.85	0.78	0.78	0.78	0.91	0.78	0.81
Adj. Flow (vph)	42	707	1	42	408	189	12	42	32	499	41	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	750	0	0	450	189	0	86	0	0	540	94
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 100.7%												
ICU Level of Service G												
Analysis Period (min) 15												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/23/2024

Intersection						
Intersection Delay, s/veh	27.3					
Intersection LOS	D					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	750	639		86	634	
Demand Flow Rate, veh/h	765	652		88	647	
Vehicles Circulating, veh/h	594	98		1273	471	
Vehicles Exiting, veh/h	524	1263		86	279	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	60.9	5.5		13.9	11.5	
Approach LOS	F	A		B	B	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.704	0.296	1.000	0.852	0.148
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	765	459	193	88	551	96
Cap Entry Lane, veh/h	753	1299	1299	377	925	925
Entry HV Adj Factor	0.980	0.980	0.979	0.979	0.980	0.979
Flow Entry, veh/h	750	450	189	86	540	94
Cap Entry, veh/h	738	1273	1272	369	907	906
V/C Ratio	1.016	0.353	0.149	0.234	0.596	0.104
Control Delay, s/veh	60.9	6.1	4.1	13.9	12.6	5.0
LOS	F	A	A	B	B	A
95th %tile Queue, veh	18	2	1	1	4	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑↑	↖	↗
Traffic Volume (vph)	490	56	85	1700	54	74
Future Volume (vph)	490	56	85	1700	54	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		71				93
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.92	0.79	0.82	0.94	0.78	0.80
Adj. Flow (vph)	533	71	104	1809	69	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	533	71	104	1809	69	93
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

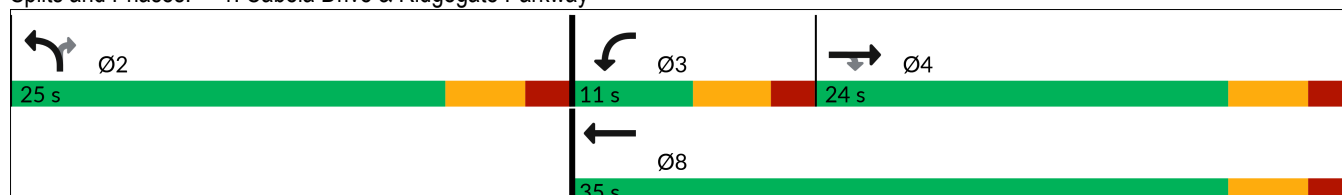
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	24.0	24.0	11.0	35.0	25.0	25.0
Total Split (%)	40.0%	40.0%	18.3%	58.3%	41.7%	41.7%
Maximum Green (s)	18.5	18.5	5.5	29.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	18.9	18.9	5.5	27.5	19.6	19.6
Actuated g/C Ratio	0.33	0.33	0.09	0.47	0.34	0.34
v/c Ratio	0.26	0.13	0.32	0.60	0.12	0.16
Control Delay (s/veh)	15.5	5.3	28.4	12.1	14.9	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.5	5.3	28.4	12.1	14.9	4.7
LOS	B	A	C	B	B	A
Approach Delay (s/veh)	14.3			13.0	9.1	
Approach LOS	B			B	A	

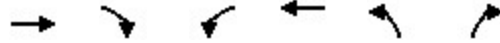
Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 58.1
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay (s/veh): 13.0 Intersection LOS: B
 Intersection Capacity Utilization 38.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	533	71	104	1809	69	93
v/c Ratio	0.26	0.13	0.32	0.60	0.12	0.16
Control Delay (s/veh)	15.5	5.3	28.4	12.1	14.9	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.5	5.3	28.4	12.1	14.9	4.7
Queue Length 50th (ft)	41	0	18	124	17	0
Queue Length 95th (ft)	60	18	35	156	36	20
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2123	572	325	3264	596	594
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.12	0.32	0.55	0.12	0.16
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering

12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↘↙	↑↑↑	↘	↑
Traffic Volume (veh/h)	490	56	85	1700	54	74
Future Volume (veh/h)	490	56	85	1700	54	74
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	533	71	104	1809	69	92
Peak Hour Factor	0.92	0.79	0.82	0.94	0.78	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1768	436	250	2875	630	561
Arrive On Green	0.27	0.27	0.07	0.45	0.35	0.35
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	533	71	104	1809	69	92
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	3.6	1.9	1.6	11.9	1.4	2.2
Cycle Q Clear(g_c), s	3.6	1.9	1.6	11.9	1.4	2.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1768	436	250	2875	630	561
V/C Ratio(X)	0.30	0.16	0.42	0.63	0.11	0.16
Avail Cap(c_a), veh/h	2159	532	345	3442	630	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	15.2	24.5	11.7	12.0	12.2
Incr Delay (d2), s/veh	0.1	0.2	1.1	0.3	0.4	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	0.6	3.3	0.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.9	15.4	25.6	12.0	12.3	12.9
LnGrp LOS	B	B	C	B	B	B
Approach Vol, veh/h	604			1913	161	
Approach Delay, s/veh	15.8			12.7	12.6	
Approach LOS	B			B	B	
Timer - Assigned Phs	2	3	4		8	
Phs Duration (G+Y+Rc), s	25.0	9.5	20.7		30.1	
Change Period (Y+Rc), s	5.5	5.5	5.5		5.5	
Max Green Setting (Gmax), s	19.5	5.5	18.5		29.5	
Max Q Clear Time (g_c+I1), s	4.2	3.6	5.6		13.9	
Green Ext Time (p_c), s	0.4	0.0	2.9		10.7	
Intersection Summary						
HCM 7th Control Delay, s/veh			13.4			
HCM 7th LOS			B			

Lanes, Volumes, Timings

2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	394	6	34	807	620	5	61	18	113	17	25
Future Volume (vph)	115	394	6	34	807	620	5	61	18	113	17	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.988			0.998			0.997			0.959	
Satd. Flow (prot)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Flt Permitted		0.988			0.998			0.997			0.959	
Satd. Flow (perm)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.84	0.90	0.78	0.78	0.93	0.92	0.78	0.79	0.78	0.83	0.78	0.78
Adj. Flow (vph)	137	438	8	44	868	674	6	77	23	136	22	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	583	0	0	912	674	0	106	0	0	158	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	82.6%											
Analysis Period (min)	15											
ICU Level of Service E												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	13.6							
Intersection LOS	B							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	583		1586		106		190	
Demand Flow Rate, veh/h	595		1617		108		194	
Vehicles Circulating, veh/h	206		225		726		936	
Vehicles Exiting, veh/h	924		609		75		906	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	5.6		17.5		6.3		9.7	
Approach LOS	A		C		A		A	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.471	0.529	0.575	0.425	1.000	0.830	0.170	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	280	315	930	687	108	161	33	
Cap Entry Lane, veh/h	1117	1192	1097	1173	766	571	641	
Entry HV Adj Factor	0.979	0.981	0.980	0.981	0.986	0.979	0.970	
Flow Entry, veh/h	274	309	912	674	106	158	32	
Cap Entry, veh/h	1093	1170	1076	1151	755	558	621	
V/C Ratio	0.251	0.264	0.847	0.586	0.141	0.282	0.051	
Control Delay, s/veh	5.6	5.5	22.8	10.4	6.3	10.4	6.4	
LOS	A	A	C	B	A	B	A	
95th %tile Queue, veh	1	1	11	4	0	1	0	

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	394	6	34	807	620	5	61	18	113	17	25
Future Volume (vph)	115	394	6	34	807	620	5	61	18	113	17	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.988			0.998			0.997			0.959	
Satd. Flow (prot)	0	1837	0	0	1859	1583	0	1803	0	0	1786	1583
Flt Permitted		0.988			0.998			0.997			0.959	
Satd. Flow (perm)	0	1837	0	0	1859	1583	0	1803	0	0	1786	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.84	0.90	0.78	0.78	0.93	0.92	0.78	0.79	0.78	0.83	0.78	0.78
Adj. Flow (vph)	137	438	8	44	868	674	6	77	23	136	22	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	583	0	0	912	674	0	106	0	0	158	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 95.6%												
ICU Level of Service F												
Analysis Period (min) 15												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection						
Intersection Delay, s/veh	13.1					
Intersection LOS	B					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	583	1586		106	190	
Demand Flow Rate, veh/h	595	1617		108	194	
Vehicles Circulating, veh/h	206	225		726	936	
Vehicles Exiting, veh/h	924	609		75	906	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	9.6	15.3		7.5	9.1	
Approach LOS	A	C		A	A	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.575	0.425	1.000	0.830	0.170
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	595	930	687	108	161	33
Cap Entry Lane, veh/h	1118	1157	1157	658	606	606
Entry HV Adj Factor	0.980	0.980	0.981	0.986	0.979	0.970
Flow Entry, veh/h	583	912	674	106	158	32
Cap Entry, veh/h	1096	1134	1135	649	593	587
V/C Ratio	0.532	0.804	0.594	0.164	0.266	0.054
Control Delay, s/veh	9.6	18.7	10.7	7.5	9.6	6.8
LOS	A	C	B	A	A	A
95th %tile Queue, veh	3	9	4	1	1	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↘	↑↑↑↑	↖	↗
Traffic Volume (vph)	1270	152	218	535	105	218
Future Volume (vph)	1270	152	218	535	105	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		179				251
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.94	0.85	0.87	0.92	0.83	0.87
Adj. Flow (vph)	1351	179	251	582	127	251
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1351	179	251	582	127	251
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

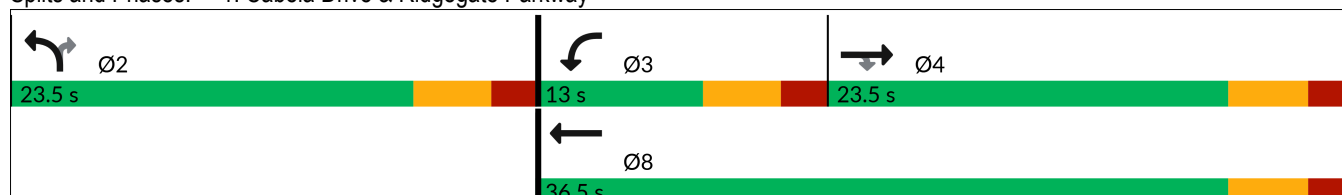
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	23.5	23.5	13.0	36.5	23.5	23.5
Total Split (%)	39.2%	39.2%	21.7%	60.8%	39.2%	39.2%
Maximum Green (s)	18.0	18.0	7.5	31.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	17.9	17.9	7.4	30.8	18.0	18.0
Actuated g/C Ratio	0.30	0.30	0.12	0.52	0.30	0.30
v/c Ratio	0.70	0.30	0.59	0.18	0.24	0.39
Control Delay (s/veh)	21.0	4.6	31.1	7.9	17.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.0	4.6	31.1	7.9	17.3	4.6
LOS	C	A	C	A	B	A
Approach Delay (s/veh)	19.1			14.9	8.9	
Approach LOS	B			B	A	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 59.8
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay (s/veh): 16.4
 Intersection LOS: B
 Intersection Capacity Utilization 44.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1351	179	251	582	127	251
v/c Ratio	0.70	0.30	0.59	0.18	0.24	0.39
Control Delay (s/veh)	21.0	4.6	31.1	7.9	17.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.0	4.6	31.1	7.9	17.3	4.6
Queue Length 50th (ft)	124	0	44	29	34	0
Queue Length 95th (ft)	160	32	74	42	64	39
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	1928	601	430	3321	533	651
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.30	0.58	0.18	0.24	0.39
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↘↙	↑↑↑↑	↘	↗
Traffic Volume (veh/h)	1270	152	218	535	105	218
Future Volume (veh/h)	1270	152	218	535	105	218
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1351	179	251	582	127	251
Peak Hour Factor	0.94	0.85	0.87	0.92	0.83	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1863	459	364	3162	562	500
Arrive On Green	0.29	0.29	0.11	0.49	0.32	0.32
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	1351	179	251	582	127	251
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	10.8	5.2	4.0	2.9	3.0	7.3
Cycle Q Clear(g_c), s	10.8	5.2	4.0	2.9	3.0	7.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1863	459	364	3162	562	500
V/C Ratio(X)	0.73	0.39	0.69	0.18	0.23	0.50
Avail Cap(c_a), veh/h	2031	500	455	3498	562	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	16.2	24.6	8.1	14.4	15.9
Incr Delay (d2), s/veh	1.2	0.5	3.2	0.0	0.9	3.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	1.7	1.6	0.8	1.3	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.4	16.8	27.8	8.1	15.3	19.4
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	1530			833	378	
Approach Delay, s/veh	19.1			14.1	18.0	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4	8	
Phs Duration (G+Y+Rc), s		23.5	11.5	22.0	33.5	
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	
Max Green Setting (Gmax), s		18.0	7.5	18.0	31.0	
Max Q Clear Time (g_c+I1), s		9.3	6.0	12.8	4.9	
Green Ext Time (p_c), s		0.9	0.1	3.7	3.9	
Intersection Summary						
HCM 7th Control Delay, s/veh			17.4			
HCM 7th LOS			B			

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	726	1	35	423	192	10	35	27	502	34	81
Future Volume (vph)	35	726	1	35	423	192	10	35	27	502	34	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.949				0.850
Flt Protected		0.997			0.996			0.993			0.956	
Satd. Flow (prot)	0	3529	0	0	1855	1583	0	1755	0	0	1781	1583
Flt Permitted		0.997			0.996			0.993			0.956	
Satd. Flow (perm)	0	3529	0	0	1855	1583	0	1755	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.92	0.78	0.78	0.91	0.87	0.78	0.78	0.78	0.92	0.78	0.81
Adj. Flow (vph)	45	789	1	45	465	221	13	45	35	546	44	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	835	0	0	510	221	0	93	0	0	590	100
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	91.6%											
Analysis Period (min)	15											
ICU Level of Service F												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	12.1							
Intersection LOS	B							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	835		731		93		690	
Demand Flow Rate, veh/h	852		745		95		704	
Vehicles Circulating, veh/h	648		105		1408		533	
Vehicles Exiting, veh/h	589		1398		92		317	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	12.9		6.4		12.1		17.0	
Approach LOS	B		A		B		C	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.469	0.531	0.698	0.302	1.000	0.855	0.145	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	400	452	520	225	95	602	102	
Cap Entry Lane, veh/h	744	819	1226	1299	429	827	903	
Entry HV Adj Factor	0.981	0.979	0.980	0.982	0.980	0.980	0.980	
Flow Entry, veh/h	393	443	510	221	93	590	100	
Cap Entry, veh/h	730	802	1201	1276	420	810	885	
V/C Ratio	0.538	0.552	0.424	0.173	0.221	0.728	0.113	
Control Delay, s/veh	13.2	12.6	7.3	4.3	12.1	19.0	5.2	
LOS	B	B	A	A	B	C	A	
95th %tile Queue, veh	3	3	2	1	1	7	0	

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	35	726	1	35	423	192	10	35	27	502	34	81	
Future Volume (vph)	35	726	1	35	423	192	10	35	27	502	34	81	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt						0.850						0.949	0.850
Flt Protected	0.997				0.996				0.993			0.956	
Satd. Flow (prot)	0	1857	0	0	1855	1583	0	1755	0	0	1781	1583	
Flt Permitted	0.997				0.996				0.993			0.956	
Satd. Flow (perm)	0	1857	0	0	1855	1583	0	1755	0	0	1781	1583	
Link Speed (mph)	35				35				35				
Link Distance (ft)	1081				1107				1169				
Travel Time (s)	21.1				21.6				22.8				
Peak Hour Factor	0.78	0.92	0.78	0.78	0.91	0.87	0.78	0.78	0.78	0.92	0.78	0.81	
Adj. Flow (vph)	45	789	1	45	465	221	13	45	35	546	44	100	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	835	0	0	510	221	0	93	0	0	590	100	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0				0				0				
Link Offset(ft)	0				0				0				
Crosswalk Width(ft)	16				16				16				
Two way Left Turn Lane													
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Sign Control	Yield				Yield				Yield				
Intersection Summary													
Area Type:	Other												
Control Type: Roundabout													
Intersection Capacity Utilization 109.7%													
ICU Level of Service H													
Analysis Period (min) 15													

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection						
Intersection Delay, s/veh	50.6					
Intersection LOS	F					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	835	731		93	690	
Demand Flow Rate, veh/h	852	745		95	704	
Vehicles Circulating, veh/h	648	105		1408	533	
Vehicles Exiting, veh/h	589	1398		92	317	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	122.8	6.0		17.1	14.8	
Approach LOS	F	A		C	B	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.698	0.302	1.000	0.855	0.145
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	852	520	225	95	602	102
Cap Entry Lane, veh/h	713	1291	1291	328	874	874
Entry HV Adj Factor	0.980	0.980	0.982	0.980	0.980	0.980
Flow Entry, veh/h	835	510	221	93	590	100
Cap Entry, veh/h	699	1265	1268	322	857	857
V/C Ratio	1.196	0.403	0.174	0.289	0.689	0.117
Control Delay, s/veh	122.8	6.8	4.3	17.1	16.4	5.3
LOS	F	A	A	C	C	A
95th %tile Queue, veh	28	2	1	1	6	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑↑	↖	↗
Traffic Volume (vph)	490	79	119	1700	123	177
Future Volume (vph)	490	79	119	1700	123	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		98				206
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.92	0.81	0.84	0.94	0.84	0.86
Adj. Flow (vph)	533	98	142	1809	146	206
Shared Lane Traffic (%)						
Lane Group Flow (vph)	533	98	142	1809	146	206
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Hillcamp 7:15 am 07/01/2028 Opening Day (Total)
Timing Plan: AM Peak Hour

Synchro 12 Report
Page 1

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

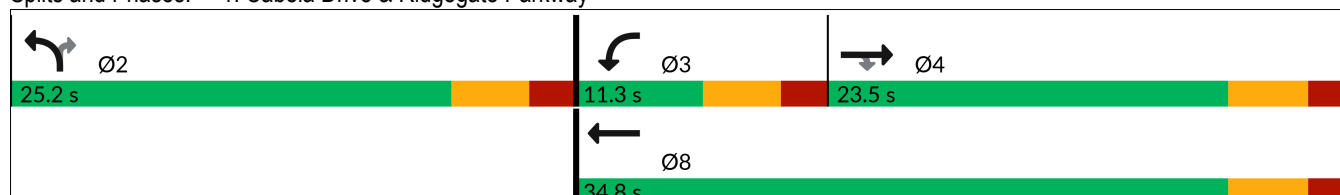
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	23.5	23.5	11.3	34.8	25.2	25.2
Total Split (%)	39.2%	39.2%	18.8%	58.0%	42.0%	42.0%
Maximum Green (s)	18.0	18.0	5.8	29.3	19.7	19.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	18.6	18.6	5.8	27.4	19.8	19.8
Actuated g/C Ratio	0.32	0.32	0.10	0.47	0.34	0.34
v/c Ratio	0.26	0.17	0.41	0.60	0.24	0.31
Control Delay (s/veh)	15.9	5.0	29.4	12.2	16.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.9	5.0	29.4	12.2	16.0	4.1
LOS	B	A	C	B	B	A
Approach Delay (s/veh)	14.2			13.5	9.0	
Approach LOS	B			B	A	

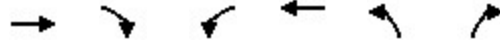
Intersection Summary

Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 58.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay (s/veh): 13.1	Intersection LOS: B
Intersection Capacity Utilization 40.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	533	98	142	1809	146	206
v/c Ratio	0.26	0.17	0.41	0.60	0.24	0.31
Control Delay (s/veh)	15.9	5.0	29.4	12.2	16.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.9	5.0	29.4	12.2	16.0	4.1
Queue Length 50th (ft)	42	0	25	125	38	0
Queue Length 95th (ft)	61	22	45	157	70	33
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2077	579	343	3237	601	673
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.41	0.56	0.24	0.31
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↘↙	↑↑↑↑	↘	↑
Traffic Volume (veh/h)	490	79	119	1700	123	177
Future Volume (veh/h)	490	79	119	1700	123	177
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	533	98	142	1809	146	206
Peak Hour Factor	0.92	0.81	0.84	0.94	0.84	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1704	420	277	2860	635	565
Arrive On Green	0.26	0.26	0.08	0.44	0.36	0.36
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	533	98	142	1809	146	206
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	3.7	2.7	2.2	12.0	3.2	5.3
Cycle Q Clear(g_c), s	3.7	2.7	2.2	12.0	3.2	5.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1704	420	277	2860	635	565
V/C Ratio(X)	0.31	0.23	0.51	0.63	0.23	0.36
Avail Cap(c_a), veh/h	2095	516	363	3411	635	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	15.9	24.4	11.9	12.5	13.2
Incr Delay (d2), s/veh	0.1	0.3	1.5	0.3	0.8	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	0.9	3.3	1.3	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.4	16.2	25.8	12.1	13.3	15.0
LnGrp LOS	B	B	C	B	B	B
Approach Vol, veh/h	631			1951	352	
Approach Delay, s/veh	16.4			13.1	14.3	
Approach LOS	B			B	B	
Timer - Assigned Phs	2	3	4		8	
Phs Duration (G+Y+Rc), s	25.2	9.9	20.1		30.1	
Change Period (Y+Rc), s	5.5	5.5	5.5		5.5	
Max Green Setting (Gmax), s	19.7	5.8	18.0		29.3	
Max Q Clear Time (g_c+I1), s	7.3	4.2	5.7		14.0	
Green Ext Time (p_c), s	0.9	0.1	3.0		10.6	
Intersection Summary						
HCM 7th Control Delay, s/veh			14.0			
HCM 7th LOS			B			

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	408	6	34	850	646	5	61	18	122	17	25
Future Volume (vph)	115	408	6	34	850	646	5	61	18	122	17	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.989			0.998			0.997			0.958	
Satd. Flow (prot)	0	3493	0	0	1859	1583	0	1803	0	0	1785	1583
Flt Permitted		0.989			0.998			0.997			0.958	
Satd. Flow (perm)	0	3493	0	0	1859	1583	0	1803	0	0	1785	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.84	0.90	0.78	0.78	0.93	0.92	0.78	0.79	0.78	0.84	0.78	0.78
Adj. Flow (vph)	137	453	8	44	914	702	6	77	23	145	22	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	598	0	0	958	702	0	106	0	0	167	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	85.7%											
Analysis Period (min)	15											
ICU Level of Service E												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	15.6							
Intersection LOS	C							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	598		1660		106		199	
Demand Flow Rate, veh/h	610		1693		108		203	
Vehicles Circulating, veh/h	215		225		750		983	
Vehicles Exiting, veh/h	971		633		75		935	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	5.7		20.4		6.4		10.5	
Approach LOS	A		C		A		B	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.577	0.423	1.000	0.837	0.163	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	287	323	977	716	108	170	33	
Cap Entry Lane, veh/h	1108	1183	1097	1173	751	546	616	
Entry HV Adj Factor	0.979	0.981	0.980	0.980	0.986	0.980	0.970	
Flow Entry, veh/h	281	317	958	702	106	167	32	
Cap Entry, veh/h	1085	1161	1076	1150	740	535	597	
V/C Ratio	0.259	0.273	0.890	0.610	0.144	0.311	0.054	
Control Delay, s/veh	5.8	5.6	27.3	11.0	6.4	11.3	6.6	
LOS	A	A	D	B	A	B	A	
95th %tile Queue, veh	1	1	13	4	1	1	0	

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering

12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	408	6	34	850	646	5	61	18	122	17	25
Future Volume (vph)	115	408	6	34	850	646	5	61	18	122	17	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.989			0.998			0.997			0.958	
Satd. Flow (prot)	0	1839	0	0	1859	1583	0	1803	0	0	1785	1583
Flt Permitted		0.989			0.998			0.997			0.958	
Satd. Flow (perm)	0	1839	0	0	1859	1583	0	1803	0	0	1785	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.84	0.90	0.78	0.78	0.93	0.92	0.78	0.79	0.78	0.84	0.78	0.78
Adj. Flow (vph)	137	453	8	44	914	702	6	77	23	145	22	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	598	0	0	958	702	0	106	0	0	167	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 99.1%												
ICU Level of Service F												
Analysis Period (min) 15												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection						
Intersection Delay, s/veh	14.6					
Intersection LOS	B					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	598	1660		106	199	
Demand Flow Rate, veh/h	610	1693		108	203	
Vehicles Circulating, veh/h	215	225		750	983	
Vehicles Exiting, veh/h	971	633		75	935	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	10.0	17.3		7.7	9.9	
Approach LOS	B	C		A	A	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.577	0.423	1.000	0.837	0.163
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	610	977	716	108	170	33
Cap Entry Lane, veh/h	1108	1157	1157	642	580	580
Entry HV Adj Factor	0.980	0.980	0.980	0.986	0.980	0.970
Flow Entry, veh/h	598	958	702	106	167	32
Cap Entry, veh/h	1086	1134	1135	633	569	563
V/C Ratio	0.550	0.844	0.619	0.168	0.293	0.057
Control Delay, s/veh	10.0	21.7	11.3	7.7	10.4	7.1
LOS	B	C	B	A	B	A
95th %tile Queue, veh	3	11	4	1	1	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↘	↑↑↑↑	↖	↗
Traffic Volume (vph)	1270	232	337	535	152	289
Future Volume (vph)	1270	232	337	535	152	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		264				322
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.94	0.88	0.89	0.92	0.85	0.88
Adj. Flow (vph)	1351	264	379	582	179	328
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1351	264	379	582	179	328
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	23.5	23.5	13.0	36.5	23.5	23.5
Total Split (%)	39.2%	39.2%	21.7%	60.8%	39.2%	39.2%
Maximum Green (s)	18.0	18.0	7.5	31.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	17.9	17.9	7.5	30.9	18.0	18.0
Actuated g/C Ratio	0.30	0.30	0.13	0.52	0.30	0.30
v/c Ratio	0.71	0.40	0.88	0.18	0.34	0.47
Control Delay (s/veh)	21.1	4.6	50.9	7.9	18.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.1	4.6	50.9	7.9	18.6	5.0
LOS	C	A	D	A	B	A
Approach Delay (s/veh)	18.4			24.9	9.8	
Approach LOS	B			C	A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 59.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay (s/veh): 19.0

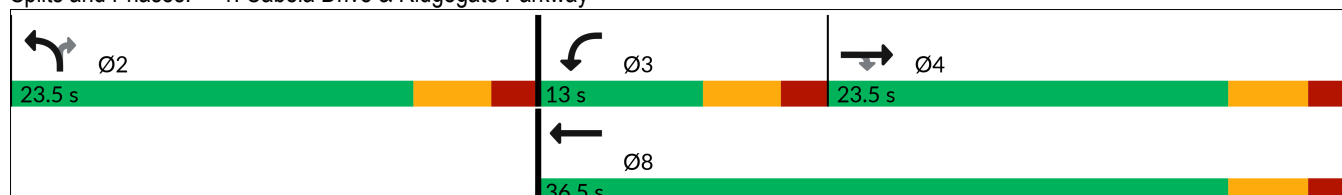
Intersection LOS: B

Intersection Capacity Utilization 50.2%

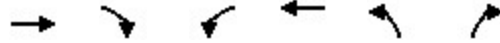
ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1351	264	379	582	179	328
v/c Ratio	0.71	0.40	0.88	0.18	0.34	0.47
Control Delay (s/veh)	21.1	4.6	50.9	7.9	18.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.1	4.6	50.9	7.9	18.6	5.0
Queue Length 50th (ft)	124	0	71	29	50	2
Queue Length 95th (ft)	160	41	#137	42	89	48
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	1925	660	430	3316	532	701
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.40	0.88	0.18	0.34	0.47

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗	↘↙	↑↑↑↑	↘	↗
Traffic Volume (veh/h)	1270	232	337	535	152	289
Future Volume (veh/h)	1270	232	337	535	152	289
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1351	264	379	582	179	328
Peak Hour Factor	0.94	0.88	0.89	0.92	0.85	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1833	452	441	3257	546	486
Arrive On Green	0.28	0.28	0.13	0.51	0.31	0.31
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	1351	264	379	582	179	328
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	11.2	8.4	6.3	2.9	4.6	10.6
Cycle Q Clear(g_c), s	11.2	8.4	6.3	2.9	4.6	10.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1833	452	441	3257	546	486
V/C Ratio(X)	0.74	0.58	0.86	0.18	0.33	0.68
Avail Cap(c_a), veh/h	1972	486	441	3396	546	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	18.0	25.1	7.9	15.7	17.8
Incr Delay (d2), s/veh	1.4	1.6	15.5	0.0	1.6	7.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.8	3.3	0.8	2.0	4.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	20.4	19.6	40.6	7.9	17.3	25.2
LnGrp LOS	C	B	D	A	B	C
Approach Vol, veh/h	1615			961	507	
Approach Delay, s/veh	20.3			20.8	22.4	
Approach LOS	C			C	C	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	23.5		13.0	22.2	35.2	
Change Period (Y+Rc), s	5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s	18.0		7.5	18.0	31.0	
Max Q Clear Time (g_c+I1), s	12.6		8.3	13.2	4.9	
Green Ext Time (p_c), s	0.9		0.0	3.6	3.9	
Intersection Summary						
HCM 7th Control Delay, s/veh			20.8			
HCM 7th LOS			C			

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	776	1	35	453	210	10	35	27	532	34	81
Future Volume (vph)	35	776	1	35	453	210	10	35	27	532	34	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.949				0.850
Flt Protected		0.997			0.996			0.993			0.956	
Satd. Flow (prot)	0	3529	0	0	1855	1583	0	1755	0	0	1781	1583
Flt Permitted		0.997			0.996			0.993			0.956	
Satd. Flow (perm)	0	3529	0	0	1855	1583	0	1755	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.93	0.78	0.78	0.91	0.87	0.78	0.78	0.78	0.92	0.78	0.81
Adj. Flow (vph)	45	834	1	45	498	241	13	45	35	578	44	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	880	0	0	543	241	0	93	0	0	622	100
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	96.2%											
Analysis Period (min)	15											
	ICU Level of Service F											

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	13.9							
Intersection LOS	B							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	880		784		93		722	
Demand Flow Rate, veh/h	898		800		95		737	
Vehicles Circulating, veh/h	681		105		1487		567	
Vehicles Exiting, veh/h	623		1477		92		338	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	14.6		6.7		13.2		21.1	
Approach LOS	B		A		B		C	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.693	0.308	1.000	0.862	0.138	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	422	476	554	246	95	635	102	
Cap Entry Lane, veh/h	721	796	1226	1299	401	801	877	
Entry HV Adj Factor	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
Flow Entry, veh/h	414	467	543	241	93	622	100	
Cap Entry, veh/h	707	780	1201	1272	393	785	860	
V/C Ratio	0.585	0.598	0.452	0.189	0.237	0.793	0.116	
Control Delay, s/veh	14.9	14.2	7.7	4.4	13.2	23.6	5.3	
LOS	B	B	A	A	B	C	A	
95th %tile Queue, veh	4	4	2	1	1	8	0	

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	776	1	35	453	210	10	35	27	532	34	81
Future Volume (vph)	35	776	1	35	453	210	10	35	27	532	34	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.949				0.850
Flt Protected		0.997			0.996			0.993			0.956	
Satd. Flow (prot)	0	1857	0	0	1855	1583	0	1755	0	0	1781	1583
Flt Permitted		0.997			0.996			0.993			0.956	
Satd. Flow (perm)	0	1857	0	0	1855	1583	0	1755	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.93	0.78	0.78	0.91	0.87	0.78	0.78	0.78	0.92	0.78	0.81
Adj. Flow (vph)	45	834	1	45	498	241	13	45	35	578	44	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	880	0	0	543	241	0	93	0	0	622	100
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	113.9%											
Analysis Period (min)	15											
	ICU Level of Service H											

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection						
Intersection Delay, s/veh	67.1					
Intersection LOS	F					
Approach	EB	WB		NB	SB	
Entry Lanes	1	2		1	2	
Conflicting Circle Lanes	1	1		1	1	
Adj Approach Flow, veh/h	880	784		93	722	
Demand Flow Rate, veh/h	898	800		95	737	
Vehicles Circulating, veh/h	681	105		1487	567	
Vehicles Exiting, veh/h	623	1477		92	338	
Ped Vol Crossing Leg, #/h	0	0		0	0	
Ped Cap Adj	1.000	1.000		1.000	1.000	
Approach Delay, s/veh	166.8	6.3		19.1	17.8	
Approach LOS	F	A		C	C	
Lane	Left	Left	Right	Left	Left	Right
Designated Moves	LTR	LT	R	LTR	LT	R
Assumed Moves	LTR	LT	R	LTR	LT	R
RT Channelized						
Lane Util	1.000	0.693	0.308	1.000	0.862	0.138
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.976	4.544	4.544
A (Intercept)	1380	1420	1420	1380	1420	1420
B (Slope)	1.02e-3	9.101e-4	9.101e-4	1.02e-3	9.101e-4	9.101e-4
Entry Flow, veh/h	898	554	246	95	635	102
Cap Entry Lane, veh/h	689	1291	1291	303	848	848
Entry HV Adj Factor	0.980	0.980	0.980	0.980	0.980	0.980
Flow Entry, veh/h	880	543	241	93	622	100
Cap Entry, veh/h	675	1265	1264	297	830	831
V/C Ratio	1.303	0.429	0.191	0.314	0.749	0.120
Control Delay, s/veh	166.8	7.1	4.5	19.1	19.8	5.5
LOS	F	A	A	C	C	A
95th %tile Queue, veh	35	2	1	1	7	0

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑↑	↖	↗
Traffic Volume (vph)	632	65	99	2194	63	86
Future Volume (vph)	632	65	99	2194	63	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		81				105
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.92	0.80	0.83	0.95	0.79	0.82
Adj. Flow (vph)	687	81	119	2309	80	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	687	81	119	2309	80	105
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

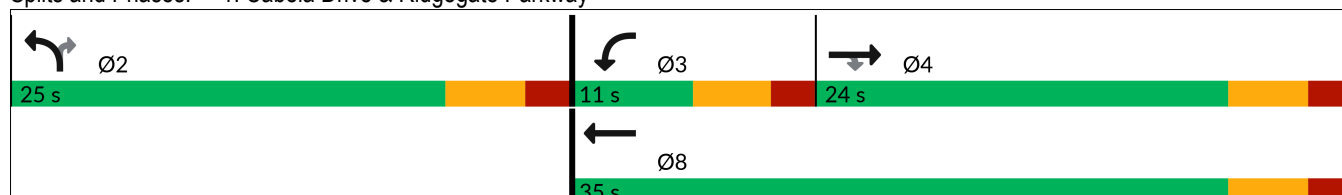
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	24.0	24.0	11.0	35.0	25.0	25.0
Total Split (%)	40.0%	40.0%	18.3%	58.3%	41.7%	41.7%
Maximum Green (s)	18.5	18.5	5.5	29.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	20.7	20.7	5.5	29.5	19.5	19.5
Actuated g/C Ratio	0.35	0.35	0.09	0.49	0.33	0.33
v/c Ratio	0.31	0.14	0.38	0.73	0.14	0.18
Control Delay (s/veh)	15.7	5.1	29.4	13.9	15.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.7	5.1	29.4	13.9	15.2	4.7
LOS	B	A	C	B	B	A
Approach Delay (s/veh)	14.6			14.6	9.2	
Approach LOS	B			B	A	

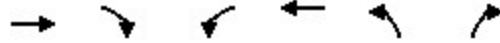
Intersection Summary

Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 14.3	Intersection LOS: B
Intersection Capacity Utilization 45.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	687	81	119	2309	80	105
v/c Ratio	0.31	0.14	0.38	0.73	0.14	0.18
Control Delay (s/veh)	15.7	5.1	29.4	13.9	15.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.7	5.1	29.4	13.9	15.2	4.7
Queue Length 50th (ft)	55	0	21	178	20	0
Queue Length 95th (ft)	77	20	39	220	40	23
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2210	599	314	3150	575	585
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.14	0.38	0.73	0.14	0.18
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘↙	↑↑↑	↘	↗
Traffic Volume (veh/h)	632	65	99	2194	63	86
Future Volume (veh/h)	632	65	99	2194	63	86
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	687	81	119	2309	80	105
Peak Hour Factor	0.92	0.80	0.83	0.95	0.79	0.82
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2014	496	252	3087	592	527
Arrive On Green	0.31	0.31	0.07	0.48	0.33	0.33
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	687	81	119	2309	80	105
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	4.8	2.2	1.9	17.1	1.8	2.8
Cycle Q Clear(g_c), s	4.8	2.2	1.9	17.1	1.8	2.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2014	496	252	3087	592	527
V/C Ratio(X)	0.34	0.16	0.47	0.75	0.14	0.20
Avail Cap(c_a), veh/h	2030	500	324	3237	592	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	14.6	26.1	12.4	13.7	14.0
Incr Delay (d2), s/veh	0.1	0.2	1.4	0.9	0.5	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.7	0.8	4.8	0.8	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.6	14.7	27.5	13.3	14.1	14.8
LnGrp LOS	B	B	C	B	B	B
Approach Vol, veh/h	768			2428	185	
Approach Delay, s/veh	15.5			14.0	14.5	
Approach LOS	B			B	B	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	25.0		9.8	23.9	33.6	
Change Period (Y+Rc), s	5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s	19.5		5.5	18.5	29.5	
Max Q Clear Time (g_c+I1), s	4.8		3.9	6.8	19.1	
Green Ext Time (p_c), s	0.5		0.0	3.6	9.1	
Intersection Summary						
HCM 7th Control Delay, s/veh			14.4			
HCM 7th LOS			B			

Lanes, Volumes, Timings

2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	504	8	44	1038	797	7	78	23	143	22	33
Future Volume (vph)	148	504	8	44	1038	797	7	78	23	143	22	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.988			0.998			0.997			0.959	
Satd. Flow (prot)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Flt Permitted		0.988			0.998			0.997			0.959	
Satd. Flow (perm)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.85	0.92	0.78	0.78	0.93	0.93	0.78	0.81	0.78	0.85	0.78	0.78
Adj. Flow (vph)	174	548	10	56	1116	857	9	96	29	168	28	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	732	0	0	1172	857	0	134	0	0	196	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	101.3%											
Analysis Period (min)	15											
	ICU Level of Service G											

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	44.1							
Intersection LOS	E							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	732		2029		134		238	
Demand Flow Rate, veh/h	746		2069		137		243	
Vehicles Circulating, veh/h	257		284		907		1204	
Vehicles Exiting, veh/h	1190		760		96		1149	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	6.7		63.4		8.1		15.4	
Approach LOS	A		F		A		C	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.471	0.529	0.578	0.422	1.000	0.823	0.177	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	351	395	1195	874	137	200	43	
Cap Entry Lane, veh/h	1066	1141	1039	1115	657	446	510	
Entry HV Adj Factor	0.980	0.982	0.980	0.981	0.979	0.982	0.977	
Flow Entry, veh/h	344	388	1172	857	134	196	42	
Cap Entry, veh/h	1045	1121	1019	1094	643	438	498	
V/C Ratio	0.329	0.346	1.150	0.784	0.209	0.448	0.084	
Control Delay, s/veh	6.8	6.6	96.6	17.9	8.1	17.0	8.3	
LOS	A	A	F	C	A	C	A	
95th %tile Queue, veh	1	2	33	8	1	2	0	

Lanes, Volumes, Timings
1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑↑	↑↑	↑↑↑↑	↑↑	↑↑
Traffic Volume (vph)	1639	179	256	691	120	258
Future Volume (vph)	1639	179	256	691	120	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		208				293
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.94	0.86	0.88	0.92	0.84	0.88
Adj. Flow (vph)	1744	208	291	751	143	293
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1744	208	291	751	143	293
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	27.0	27.0	14.0	41.0	24.0	24.0
Total Split (%)	41.5%	41.5%	21.5%	63.1%	36.9%	36.9%
Maximum Green (s)	21.5	21.5	8.5	35.5	18.5	18.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	21.5	21.5	8.4	35.4	18.5	18.5
Actuated g/C Ratio	0.33	0.33	0.13	0.55	0.29	0.29
v/c Ratio	0.82	0.31	0.66	0.22	0.28	0.44
Control Delay (s/veh)	24.0	4.2	34.8	7.8	20.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.0	4.2	34.8	7.8	20.0	5.1
LOS	C	A	C	A	B	A
Approach Delay (s/veh)	21.9			15.3	10.0	
Approach LOS	C			B	A	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 64.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay (s/veh): 18.4

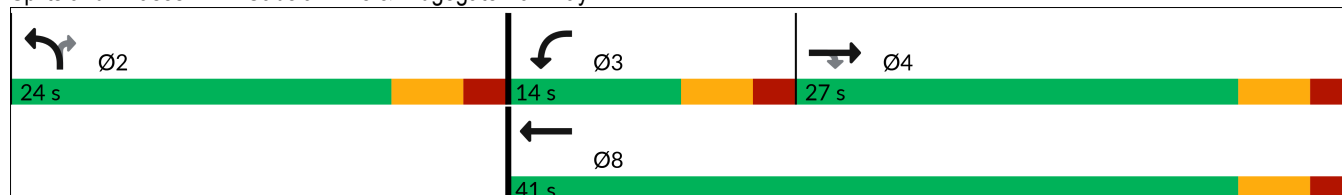
Intersection LOS: B

Intersection Capacity Utilization 51.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1744	208	291	751	143	293
v/c Ratio	0.82	0.31	0.66	0.22	0.28	0.44
Control Delay (s/veh)	24.0	4.2	34.8	7.8	20.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.0	4.2	34.8	7.8	20.0	5.1
Queue Length 50th (ft)	181	0	57	40	44	0
Queue Length 95th (ft)	225	35	91	54	79	47
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2124	663	449	3507	504	661
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.31	0.65	0.21	0.28	0.44
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↘↙	↑↑↑↑	↘	↑
Traffic Volume (veh/h)	1639	179	256	691	120	258
Future Volume (veh/h)	1639	179	256	691	120	258
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1744	208	291	751	143	293
Peak Hour Factor	0.94	0.86	0.88	0.92	0.84	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2131	525	396	3429	522	464
Arrive On Green	0.33	0.33	0.11	0.53	0.29	0.29
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	1744	208	291	751	143	293
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	15.7	6.4	5.1	3.9	3.9	10.1
Cycle Q Clear(g_c), s	15.7	6.4	5.1	3.9	3.9	10.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2131	525	396	3429	522	464
V/C Ratio(X)	0.82	0.40	0.73	0.22	0.27	0.63
Avail Cap(c_a), veh/h	2190	539	465	3616	522	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	16.3	27.0	7.8	17.2	19.4
Incr Delay (d2), s/veh	2.5	0.5	5.0	0.0	1.3	6.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	2.1	2.2	1.0	1.7	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.9	16.7	32.0	7.8	18.5	25.8
LnGrp LOS	C	B	C	A	B	C
Approach Vol, veh/h	1952			1042	436	
Approach Delay, s/veh	21.3			14.6	23.4	
Approach LOS	C			B	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		24.0	12.7	26.4		39.2
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5
Max Green Setting (Gmax), s		18.5	8.5	21.5		35.5
Max Q Clear Time (g_c+I1), s		12.1	7.1	17.7		5.9
Green Ext Time (p_c), s		0.9	0.1	3.2		5.4
Intersection Summary						
HCM 7th Control Delay, s/veh			19.5			
HCM 7th LOS			B			
Notes						
User approved pedestrian interval to be less than phase max green.						

Lanes, Volumes, Timings

2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	927	1	45	536	242	12	45	34	642	44	104
Future Volume (vph)	45	927	1	45	536	242	12	45	34	642	44	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.949				0.850
Flt Protected		0.997			0.995			0.994			0.956	
Satd. Flow (prot)	0	3529	0	0	1853	1583	0	1757	0	0	1781	1583
Flt Permitted		0.997			0.995			0.994			0.956	
Satd. Flow (perm)	0	3529	0	0	1853	1583	0	1757	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.93	0.78	0.78	0.92	0.88	0.78	0.78	0.78	0.92	0.78	0.83
Adj. Flow (vph)	58	997	1	58	583	275	15	58	44	698	56	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1056	0	0	641	275	0	117	0	0	754	125
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	112.2%											
Analysis Period (min)	15											
	ICU Level of Service H											

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	32.2							
Intersection LOS	D							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	1056		916		117		879	
Demand Flow Rate, veh/h	1077		935		119		897	
Vehicles Circulating, veh/h	828		133		1788		669	
Vehicles Exiting, veh/h	738		1774		117		399	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	28.5		8.1		20.9		63.1	
Approach LOS	D		A		C		F	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.699	0.301	1.000	0.857	0.143	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	506	571	654	281	119	769	128	
Cap Entry Lane, veh/h	630	702	1194	1268	311	729	804	
Entry HV Adj Factor	0.981	0.980	0.981	0.979	0.982	0.980	0.977	
Flow Entry, veh/h	496	560	641	275	117	754	125	
Cap Entry, veh/h	618	689	1171	1241	305	715	785	
V/C Ratio	0.803	0.813	0.548	0.222	0.383	1.054	0.159	
Control Delay, s/veh	29.3	27.9	9.5	4.8	20.9	72.6	6.2	
LOS	D	D	A	A	C	F	A	
95th %tile Queue, veh	8	9	3	1	2	19	1	

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗	↘	↑↑↑	↖	↗
Traffic Volume (vph)	632	88	133	2194	132	189
Future Volume (vph)	632	88	133	2194	132	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		107				217
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.92	0.82	0.84	0.95	0.84	0.87
Adj. Flow (vph)	687	107	158	2309	157	217
Shared Lane Traffic (%)						
Lane Group Flow (vph)	687	107	158	2309	157	217
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

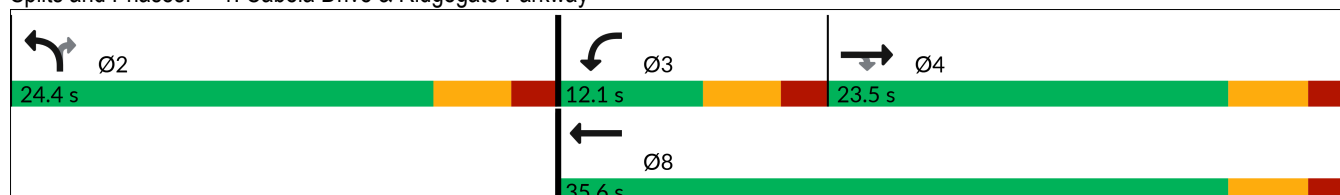
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	23.5	23.5	12.1	35.6	24.4	24.4
Total Split (%)	39.2%	39.2%	20.2%	59.3%	40.7%	40.7%
Maximum Green (s)	18.0	18.0	6.6	30.1	18.9	18.9
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	20.4	20.4	6.5	30.1	18.9	18.9
Actuated g/C Ratio	0.34	0.34	0.11	0.50	0.32	0.32
v/c Ratio	0.32	0.18	0.43	0.72	0.28	0.34
Control Delay (s/veh)	16.0	4.9	28.8	13.3	17.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.0	4.9	28.8	13.3	17.2	4.3
LOS	B	A	C	B	B	A
Approach Delay (s/veh)	14.5			14.2	9.7	
Approach LOS	B			B	A	

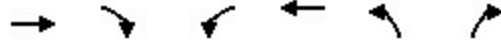
Intersection Summary

Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 13.8	Intersection LOS: B
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	687	107	158	2309	157	217
v/c Ratio	0.32	0.18	0.43	0.72	0.28	0.34
Control Delay (s/veh)	16.0	4.9	28.8	13.3	17.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.0	4.9	28.8	13.3	17.2	4.3
Queue Length 50th (ft)	56	0	28	174	42	0
Queue Length 95th (ft)	77	24	48	215	76	36
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	2180	609	377	3214	557	647
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.18	0.42	0.72	0.28	0.34
Intersection Summary						

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↘↙	↑↑↑	↘	↑
Traffic Volume (veh/h)	632	88	133	2194	132	189
Future Volume (veh/h)	632	88	133	2194	132	189
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	687	107	158	2309	157	217
Peak Hour Factor	0.92	0.82	0.84	0.95	0.84	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2028	500	273	3142	576	513
Arrive On Green	0.32	0.32	0.08	0.49	0.32	0.32
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	687	107	158	2309	157	217
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	4.8	2.9	2.6	16.7	3.8	6.3
Cycle Q Clear(g_c), s	4.8	2.9	2.6	16.7	3.8	6.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2028	500	273	3142	576	513
V/C Ratio(X)	0.34	0.21	0.58	0.73	0.27	0.42
Avail Cap(c_a), veh/h	2028	500	390	3314	576	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	14.7	26.0	11.9	14.7	15.5
Incr Delay (d2), s/veh	0.1	0.2	1.9	0.8	1.2	2.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.9	1.0	4.7	1.6	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.4	14.9	27.9	12.8	15.8	18.0
LnGrp LOS	B	B	C	B	B	B
Approach Vol, veh/h	794			2467	374	
Approach Delay, s/veh	15.4			13.7	17.1	
Approach LOS	B			B	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		24.4	10.1	23.9		34.0
Change Period (Y+Rc), s		5.5	5.5	5.5		5.5
Max Green Setting (Gmax), s		18.9	6.6	18.0		30.1
Max Q Clear Time (g_c+I1), s		8.3	4.6	6.8		18.7
Green Ext Time (p_c), s		0.9	0.1	3.6		9.8
Intersection Summary						
HCM 7th Control Delay, s/veh			14.4			
HCM 7th LOS			B			
Notes						
User approved pedestrian interval to be less than phase max green.						

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	518	8	44	1081	823	7	78	23	152	22	33
Future Volume (vph)	148	518	8	44	1081	823	7	78	23	152	22	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.971				0.850
Flt Protected		0.988			0.998			0.997			0.959	
Satd. Flow (prot)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Flt Permitted		0.988			0.998			0.997			0.959	
Satd. Flow (perm)	0	3490	0	0	1859	1583	0	1803	0	0	1786	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.85	0.92	0.78	0.78	0.93	0.93	0.78	0.81	0.78	0.85	0.78	0.78
Adj. Flow (vph)	174	563	10	56	1162	885	9	96	29	179	28	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	747	0	0	1218	885	0	134	0	0	207	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	104.4%											
Analysis Period (min)	15											
	ICU Level of Service G											

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering

12/30/2024

Intersection								
Intersection Delay, s/veh	51.7							
Intersection LOS	F							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	747		2103		134		249	
Demand Flow Rate, veh/h	761		2145		137		255	
Vehicles Circulating, veh/h	269		284		934		1251	
Vehicles Exiting, veh/h	1237		787		96		1178	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	6.9		74.4		8.3		17.5	
Approach LOS	A		F		A		C	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.579	0.421	1.000	0.831	0.169	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	358	403	1242	903	137	212	43	
Cap Entry Lane, veh/h	1054	1130	1039	1115	642	427	490	
Entry HV Adj Factor	0.980	0.982	0.980	0.980	0.979	0.978	0.977	
Flow Entry, veh/h	351	396	1218	885	134	207	42	
Cap Entry, veh/h	1033	1110	1019	1093	628	418	479	
V/C Ratio	0.340	0.357	1.195	0.810	0.213	0.496	0.088	
Control Delay, s/veh	7.0	6.8	114.2	19.6	8.3	19.3	8.7	
LOS	A	A	F	C	A	C	A	
95th %tile Queue, veh	2	2	37	9	1	3	0	

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

JR Engineering
12/30/2024

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑
Traffic Volume (vph)	1639	259	375	691	167	329
Future Volume (vph)	1639	259	375	691	167	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	225		300	0
Storage Lanes		1	2		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.86	1.00	0.97	0.86	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	6408	1583	3433	6408	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	6408	1583	3433	6408	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		294				358
Link Speed (mph)	40			40	25	
Link Distance (ft)	1042			1066	868	
Travel Time (s)	17.8			18.2	23.7	
Peak Hour Factor	0.94	0.88	0.90	0.92	0.86	0.89
Adj. Flow (vph)	1744	294	417	751	194	370
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1744	294	417	751	194	370
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2

Hillcamp 4:15 pm 07/01/2045 Future Year (Total)
Timing Plan: PM Peak Hour

Synchro 12 Report
Page 1

Lanes, Volumes, Timings

1: Cabela Drive & Ridgeway Parkway

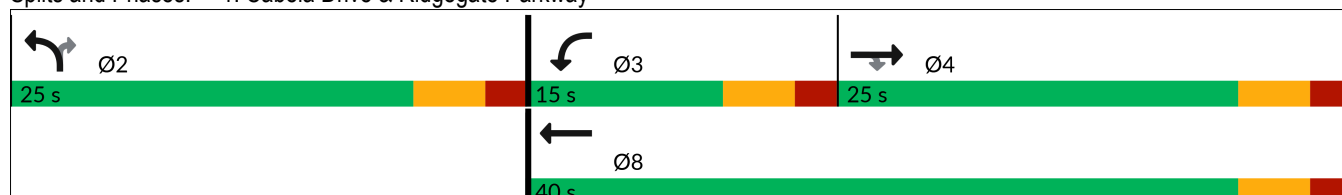
JR Engineering
12/30/2024

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	10.5	23.5	23.5	23.5
Total Split (s)	25.0	25.0	15.0	40.0	25.0	25.0
Total Split (%)	38.5%	38.5%	23.1%	61.5%	38.5%	38.5%
Maximum Green (s)	19.5	19.5	9.5	34.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Don't Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effect Green (s)	19.5	19.5	9.5	34.5	19.5	19.5
Actuated g/C Ratio	0.30	0.30	0.15	0.53	0.30	0.30
v/c Ratio	0.91	0.43	0.83	0.22	0.37	0.51
Control Delay (s/veh)	30.5	4.8	43.7	8.3	20.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.5	4.8	43.7	8.3	20.4	5.5
LOS	C	A	D	A	C	A
Approach Delay (s/veh)	26.8			20.9	10.6	
Approach LOS	C			C	B	

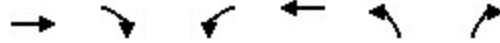
Intersection Summary

Area Type:	Other
Cycle Length: 65	
Actuated Cycle Length: 65	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 22.6	Intersection LOS: C
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Cabela Drive & Ridgeway Parkway



1: Cabela Drive & Ridgeway Parkway



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1744	294	417	751	194	370
v/c Ratio	0.91	0.43	0.83	0.22	0.37	0.51
Control Delay (s/veh)	30.5	4.8	43.7	8.3	20.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.5	4.8	43.7	8.3	20.4	5.5
Queue Length 50th (ft)	191	0	84	42	60	3
Queue Length 95th (ft)	#263	46	#152	56	105	56
Internal Link Dist (ft)	962			986	788	
Turn Bay Length (ft)		150	225		300	
Base Capacity (vph)	1922	680	501	3401	531	725
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.43	0.83	0.22	0.37	0.51

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Cabela Drive & Ridgeway Parkway

JR Engineering

12/30/2024

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1639	259	375	691	167	329
Future Volume (veh/h)	1639	259	375	691	167	329
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1744	294	417	751	194	370
Peak Hour Factor	0.94	0.88	0.90	0.92	0.86	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1926	475	505	3412	535	476
Arrive On Green	0.30	0.30	0.15	0.53	0.30	0.30
Sat Flow, veh/h	6696	1585	3456	6696	1781	1585
Grp Volume(v), veh/h	1744	294	417	751	194	370
Grp Sat Flow(s),veh/h/ln	1609	1585	1728	1609	1781	1585
Q Serve(g_s), s	16.9	10.4	7.6	4.0	5.6	13.8
Cycle Q Clear(g_c), s	16.9	10.4	7.6	4.0	5.6	13.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1926	475	505	3412	535	476
V/C Ratio(X)	0.91	0.62	0.82	0.22	0.36	0.78
Avail Cap(c_a), veh/h	1932	476	505	3418	535	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	19.6	26.9	8.1	17.8	20.7
Incr Delay (d2), s/veh	6.6	2.4	10.7	0.0	1.9	11.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	3.7	3.6	1.1	2.4	6.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	28.4	22.0	37.6	8.1	19.7	32.6
LnGrp LOS	C	C	D	A	B	C
Approach Vol, veh/h	2038			1168	564	
Approach Delay, s/veh	27.5			18.7	28.2	
Approach LOS	C			B	C	
Timer - Assigned Phs	2		3	4	8	
Phs Duration (G+Y+Rc), s	25.0		15.0	24.9	39.9	
Change Period (Y+Rc), s	5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s	19.5		9.5	19.5	34.5	
Max Q Clear Time (g_c+I1), s	15.8		9.6	18.9	6.0	
Green Ext Time (p_c), s	0.8		0.0	0.5	5.3	
Intersection Summary						
HCM 7th Control Delay, s/veh			24.9			
HCM 7th LOS			C			
Notes						
User approved pedestrian interval to be less than phase max green.						

Lanes, Volumes, Timings
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	977	1	45	566	260	12	45	34	672	44	104
Future Volume (vph)	45	977	1	45	566	260	12	45	34	672	44	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.949				0.850
Flt Protected		0.997			0.996			0.994			0.956	
Satd. Flow (prot)	0	3529	0	0	1855	1583	0	1757	0	0	1781	1583
Flt Permitted		0.997			0.996			0.994			0.956	
Satd. Flow (perm)	0	3529	0	0	1855	1583	0	1757	0	0	1781	1583
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1081			1107			1169			1099	
Travel Time (s)		21.1			21.6			22.8			21.4	
Peak Hour Factor	0.78	0.93	0.78	0.78	0.92	0.88	0.78	0.78	0.78	0.92	0.78	0.83
Adj. Flow (vph)	58	1051	1	58	615	295	15	58	44	730	56	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1110	0	0	673	295	0	117	0	0	786	125
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization 116.8%												
ICU Level of Service H												
Analysis Period (min) 15												

HCM 7th Roundabout
2: Park Meadows Boulevard & Ridgeway Parkway

JR Engineering
12/30/2024

Intersection								
Intersection Delay, s/veh	42.1							
Intersection LOS	E							
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	1110		968		117		911	
Demand Flow Rate, veh/h	1132		987		119		930	
Vehicles Circulating, veh/h	861		133		1876		701	
Vehicles Exiting, veh/h	770		1862		117		419	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	36.8		8.5		23.5		86.6	
Approach LOS	E		A		C		F	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	R	LTR	LT	R	
Assumed Moves	LT	TR	LT	R	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.695	0.305	1.000	0.862	0.138	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
A (Intercept)	1350	1420	1350	1420	1420	1350	1420	
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	9.199e-4	8.501e-4	
Entry Flow, veh/h	532	600	686	301	119	802	128	
Cap Entry Lane, veh/h	611	683	1194	1268	288	708	783	
Entry HV Adj Factor	0.981	0.980	0.981	0.980	0.982	0.980	0.977	
Flow Entry, veh/h	522	588	673	295	117	786	125	
Cap Entry, veh/h	600	670	1171	1243	283	694	764	
V/C Ratio	0.870	0.878	0.574	0.237	0.413	1.132	0.164	
Control Delay, s/veh	37.7	36.0	10.0	5.0	23.5	99.3	6.4	
LOS	E	E	B	A	C	F	A	
95th %tile Queue, veh	10	11	4	1	2	24	1	