

TRAILBLAZER ELEMENTARY TO COYOTE CREEK ELEMENTARY CONSOLIDATION WITHOUT 6TH GRADE

Traffic Impact Study

Project Number: 1124175

Prepared For: Douglas County
School District

March 2, 2025
Revised:
April 8, 2025

DIBBLE

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Traffic Impact Study Highlands Ranch, Colorado

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Prepared For: Douglas County School District
Planning and Construction
2808 Highway 85, Building B
Castle Rock, Colorado 80109

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EXECUTIVE SUMMARY

Douglas County School District is considering options for consolidating schools in Highlands Ranch, Colorado. One option being considered is moving Trailblazer Elementary into Coyote Creek Elementary. In addition, the 6th grade students will be moved from the elementary schools to a middle school. This traffic impact study addresses existing traffic patterns and potential traffic challenges at Coyote Creek Elementary, while considering the anticipated increase in traffic caused by the school consolidation.

Coyote Creek has a parking area to the south of the school, with an access point on Baneberry Court, and a designated drop-off lane with two access points on Westridge Village Parkway. Pedestrian crosswalks are located at the intersection of Baneberry Court at Baneberry Place, the intersection of Baneberry Court at Westridge Village Parkway, and near the western access of the drop-off lane on Westridge Village Parkway. School bus service is provided for individuals within Coyote Creek's attendance boundary but is restricted to individuals living more than one mile from the school. This bus service will be expanded for Trailblazer students who qualify after relocating to Coyote Creek.

The projected 2028-2029 combined enrollment of 1,052 students without 6th Grade. This projected combined enrollment is 110 percent more than the previous maximum enrollment. When the existing traffic is relocated to the new school, additional students will be eligible to take the bus. It is anticipated that about 1/3 of the Trailblazer students will be newly eligible to take the bus to school. Students who currently walk to Trailblazer are unlikely to walk to Coyote Creek due to distance and crossing a major roadway, therefore, it is assumed that these students will now be driven to school and count as a new vehicular trip to Coyote Creek. Taking into account the estimated street parking trips, the ingress/egress trips, pedestrians and bicyclists converted to vehicle trips, anticipated carpooling and the subtraction of new bus ridership, the resulting increase in trip demand for Coyote Creek is about 231 trips during the morning peak hour and 249 trips during the afternoon peak hour.

Traffic will be increased with the additional enrollment, but additional bus service will be offered, limiting the impact of the increased enrollment. Consolidation of the schools will increase traffic at Coyote Creek with more vehicles using on-street parking, the school parking lot, and the pick-off/drop-off lanes. This will increase impacts to the surrounding roadways during pick-up and drop-off times.

Although increased traffic is expected around Coyote Creek with the increased enrollment, no traffic mitigation measures are recommended. Douglas County recognizes there will be increased delays around the school during 15-minute peak periods at pick-up and drop-off times.

1. INTRODUCTION

1.1 Study Purpose and Scope

The purpose of this Traffic Impact Study (TIS) is to discuss the existing traffic patterns at Coyote Creek Elementary (Coyote Creek) and potential mitigation measures for current traffic and potential increased traffic due to increased enrollment caused by school consolidations. A potential school consolidation option includes having Trailblazer Elementary (Trailblazer) consolidate into Coyote Creek. In addition, the 6th grade students will be moved from the elementary schools to a middle school.

The scope of this TIS includes assessing school driveways, nearby intersections, school parking lots, school drop-off and pick-up locations, traffic flow, bicycle and pedestrian facilities, and general traffic challenges at Trailblazer.

1.2 Study Area

Coyote Creek Elementary School is located at 2861 Baneberry Court in the southwest region of Highlands Ranch. This is near the intersection of Westridge Village Parkway and Baneberry Court. The parcel number for the property is 22917403050. A vicinity map showing the school's location is provided as **Figure 1**.

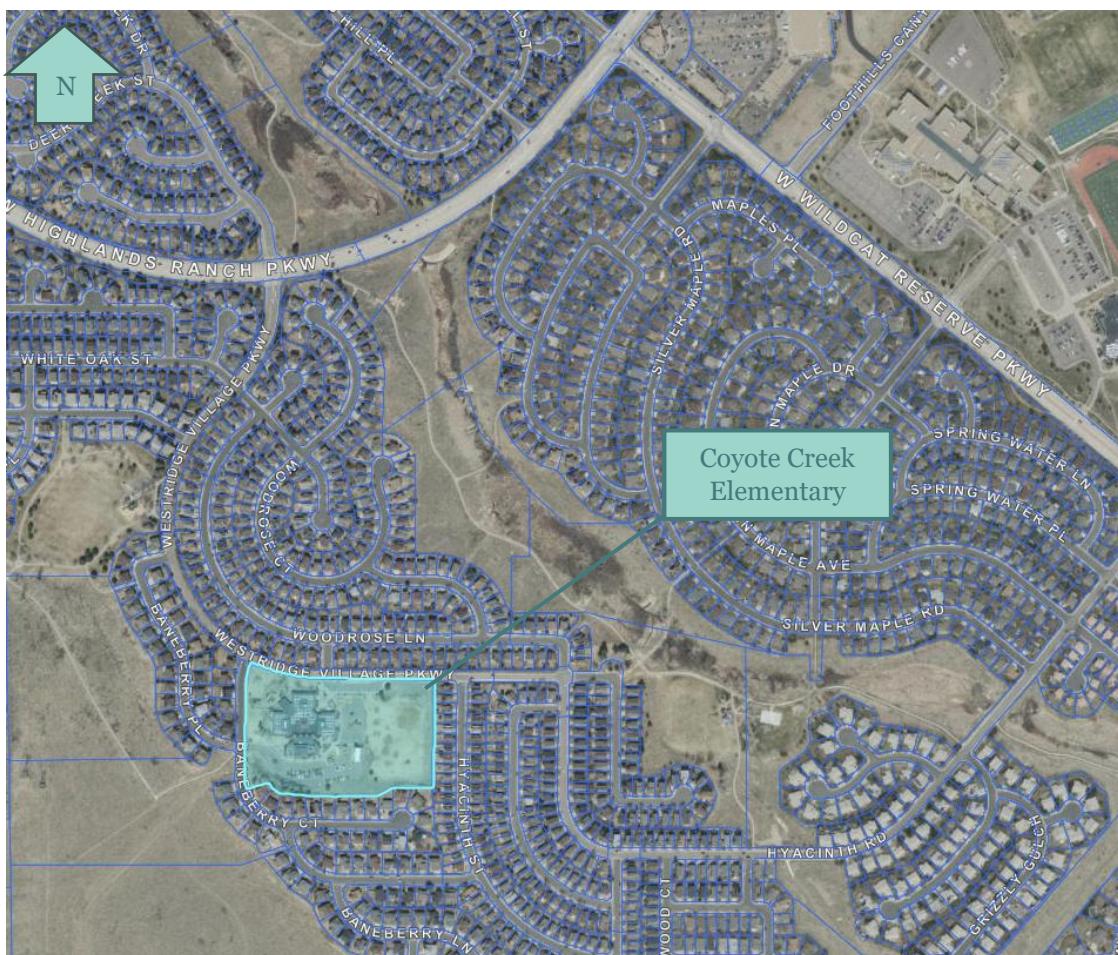


Figure 1 – Vicinity Map

The study area was determined through consultation with Douglas County School District (DCSD) and Douglas County and potentially impacted intersections were identified. Each school access and adjacent streets are included in the TIS study area as well as the following intersections:

- Highlands Ranch Parkway at Westridge Village Parkway
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Westridge Village Parkway at Baneberry Court
- Baneberry Place at Baneberry Court

Neighborhood local and collector streets are analyzed for safety challenges, bicycle and pedestrian facilities, parking availability, and queueing lengths. Larger intersections at arterial streets are analyzed for the same items, but also for accident history and traffic signal warrant criteria if a traffic signal is not present.

1.3 School Description

Coyote Creek

Coyote Creek has a start time of 8:40 AM and an end time of 3:30 PM. The school is located in the neighborhood to the south of the intersection of Highlands Ranch Parkway at Wildcat Reserve Parkway. Coyote Creek has a parking area to the south of the school, with an access point on Baneberry Court, and a designated drop-off lane with two access points on Westridge Village Parkway. Pedestrian crosswalks are located at the intersection of Baneberry Court at Baneberry Place, the intersection of Baneberry Court at Westridge Village Parkway, and near the western access of the drop-off lane on Westridge Village Parkway. Coyote Creek has a maximum Capacity of 800 students but the largest enrollment since 2013 is 502 students.

School bus service is provided for individuals within Coyote Creek's attendance boundary but is restricted to individuals living more than one mile from the school. **Figure 2** depicts Coyote Creek's local attendance boundary in blue with the orange circle representing the walking radius. As depicted, the entire local attendance boundary is within one mile, so no local bus service is provided. However, Coyote Creek does serve a portion of the developing Sterling Ranch neighborhood to the southwest and three school bus routes are provided from that neighborhood to Coyote Creek. As of November 2024, 169 individuals are eligible to receive bus service, and 141 individuals have used the bus service which is an 83 percent rate.

Trailblazer

Trailblazer has a start time of 8:30 AM and an end time of 3:30 PM. The school is located in the neighborhood to the northwest of the intersection of Wildcat Reserve Parkway at Highlands Ranch Parkway. Trailblazer has a maximum Capacity of 800 students but the largest enrollment since 2013 is 508 students.

School bus service is provided for individuals within Trailblazer's attendance boundary but is restricted to individuals living more than one mile from the school. **Figure 3** depicts Trailblazer's local attendance boundary in grey with the orange circle representing the walking radius. As depicted, the entire local attendance boundary is within one mile, so no local bus service is provided. However, Trailblazer does serve a portion of the developing Sterling Ranch neighborhood to the southwest and one school bus route is provided from that neighborhood to Trailblazer. As of November 2024, 20 individuals are eligible to receive bus service, and 14 individuals have used the bus service which is a 70 percent rate. Most of the students attending Trailblazer do not live within 1 mile of Coyote Creek. Therefore, they would qualify for bus service to Coyote Creek.

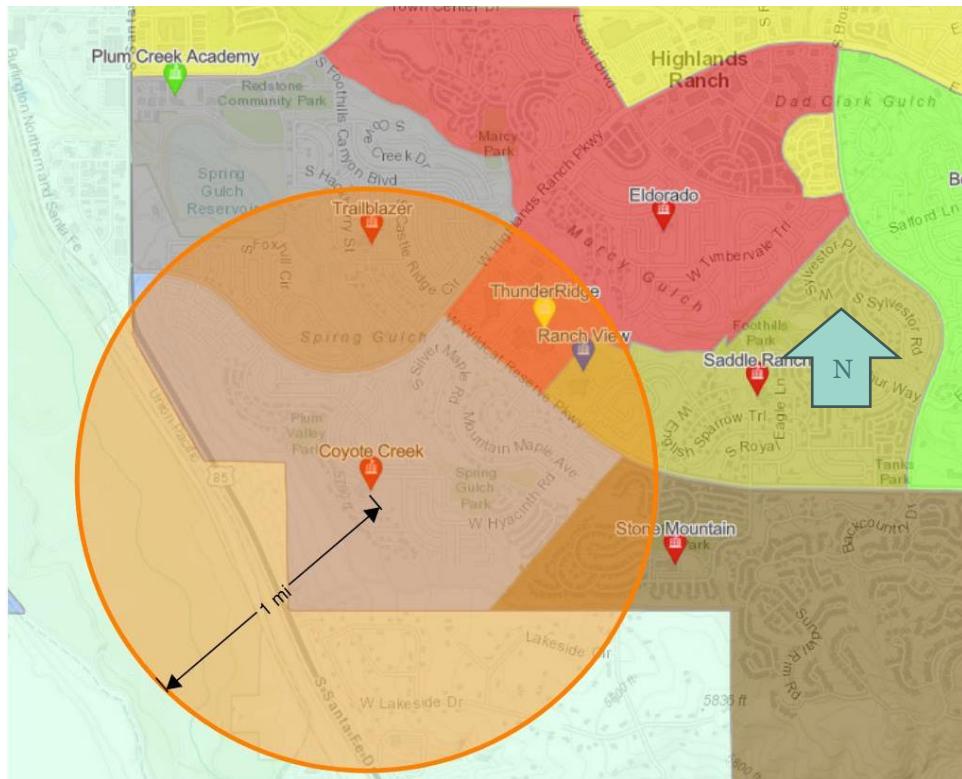


Figure 2 – Coyote Creek Bus Service Radius Map

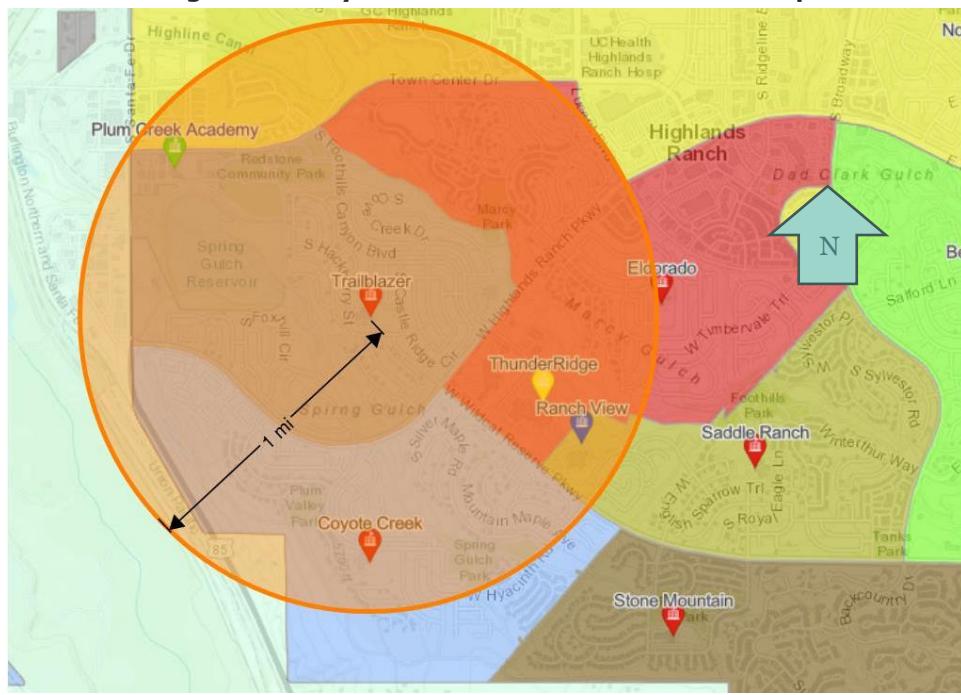


Figure 3 – Trailblazer Bus Service Radius Map

2. EXISTING CONDITIONS

2.1 Site Observation

A site observation was performed at Coyote Creek on November 12, 2024. Field notes from the site observation are included in **Appendix A**. The morning site observation was conducted from 8:00 AM through 9:30 AM and the afternoon site observation was conducted from 2:45 PM through 4:15 PM. Key observations included:

- Congestion on Westridge Village Parkway
- Vehicles Parked in bike lanes
- Sight visibility challenges for vehicles exiting parking lot

2.2 Roadway Network

The Highlands Ranch roadway network is maintained by Douglas County. Coyote Creek is situated within a built-out neighborhood and is surrounded by local and neighborhood collector streets. The primary access to the neighborhood is from Highlands Ranch Parkway at Westridge Village Parkway with Highlands Ranch Parkway being the main arterial street closest to the school. Westridge Village Parkway extends from the school entrance to a signalized intersection at Highlands Ranch Parkway.

Trailblazer traffic driving to Coyote Creek will mainly use Spring Hill Parkway, Highlands Ranch Parkway, and Westridge Village Parkway. **Figure 4** depicts the most likely route that would be taken from Trailblazer to Coyote Creek.

School zone flashers operate from 8:10 to 8:50 AM and from 3:20 to 4:00PM. Three school zone flashers are in the vicinity of Coyote Creek. One is on Baneberry Court approximately 100 feet south of the school property line. Two flashers are on Westridge Village Parkway: one at Baneberry Court and another at Hyacinth Street.



Figure 4 – Route from Trailblazer to Coyote Creek

Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street

The intersection of Highlands Ranch Parkway at Westridge Village Parkway/Deer Creek Street is signalized with protected/permisive left-turn lanes/phases for Highlands Ranch Parkway Traffic and permissive movements for Westridge Village Parkway. **Figure 5** shows an aerial of the intersection with the current intersection layout.

The Highlands Ranch Parkway left-turn lanes have approximately 100 feet of storage length and 100 feet of taper length before transitioning to a striped median. There are two through lanes and bike lanes provided for each direction of traffic with no dedicated right-turn lanes.

Westridge Village Parkway extends to the south and Deer Creek Street extends to the north. Deer Creek Street at the intersection does not widen, but striping is provided for a through/right-turn lane in each direction and a left-turn lane to eastbound Highlands Ranch Parkway. Westridge Village Parkway widens to provide a dedicated right-turn lane, through lane, and left-turn lane with approximately 100 feet of storage. Bike lanes are provided on Westridge Village Parkway, but merge with traffic prior to the intersection.



Figure 5 – Highlands Ranch Parkway at Westridge Village Parkway

Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway

The intersection of Highlands Ranch Parkway at Wildcat Reserve Parkway is signalized with protected left-turn lanes/phases for all approaches. **Figure 6** shows an aerial of the intersection with the current intersection layout.

Eastbound Highlands Ranch Parkway has a dedicated right-turn lane with approximately 200-feet of storage and a dedicated left-turn lane with approximately 120-feet of storage. Westbound Highlands Ranch Parkway has a dedicated right-turn lane that is a drop-lane extending from the Foothills Canyon Boulevard intersection. There are also dual dedicated left-turn lanes with approximately 220 feet of storage length per lane. The left-turn lanes were updated from a single lane to dual lanes in 2024. There are two through lanes and bike lanes provided for each direction of traffic with no dedicated right-turn lanes.

Wildcat Reserve Parkway extends southeast from the intersection and includes a dedicated right-turn lane that is a drop lane, a dedicated through lane, and dual dedicated left-turn lanes with approximately 250feet of storage length per lane. The left-turn lanes were updated from a single lane to dual lanes in 2024.

Spring Hill Parkway extends to the northwest from the intersection and widens out slightly at the intersection to allow for a through/right-turn lane and a dedicated left-turn lane. The left-turn lane is striped with 150-feet of storage length. Bike lanes are provided on Spring Hill Parkway, but the southeast bound lane merges with traffic as it approaches the intersection.

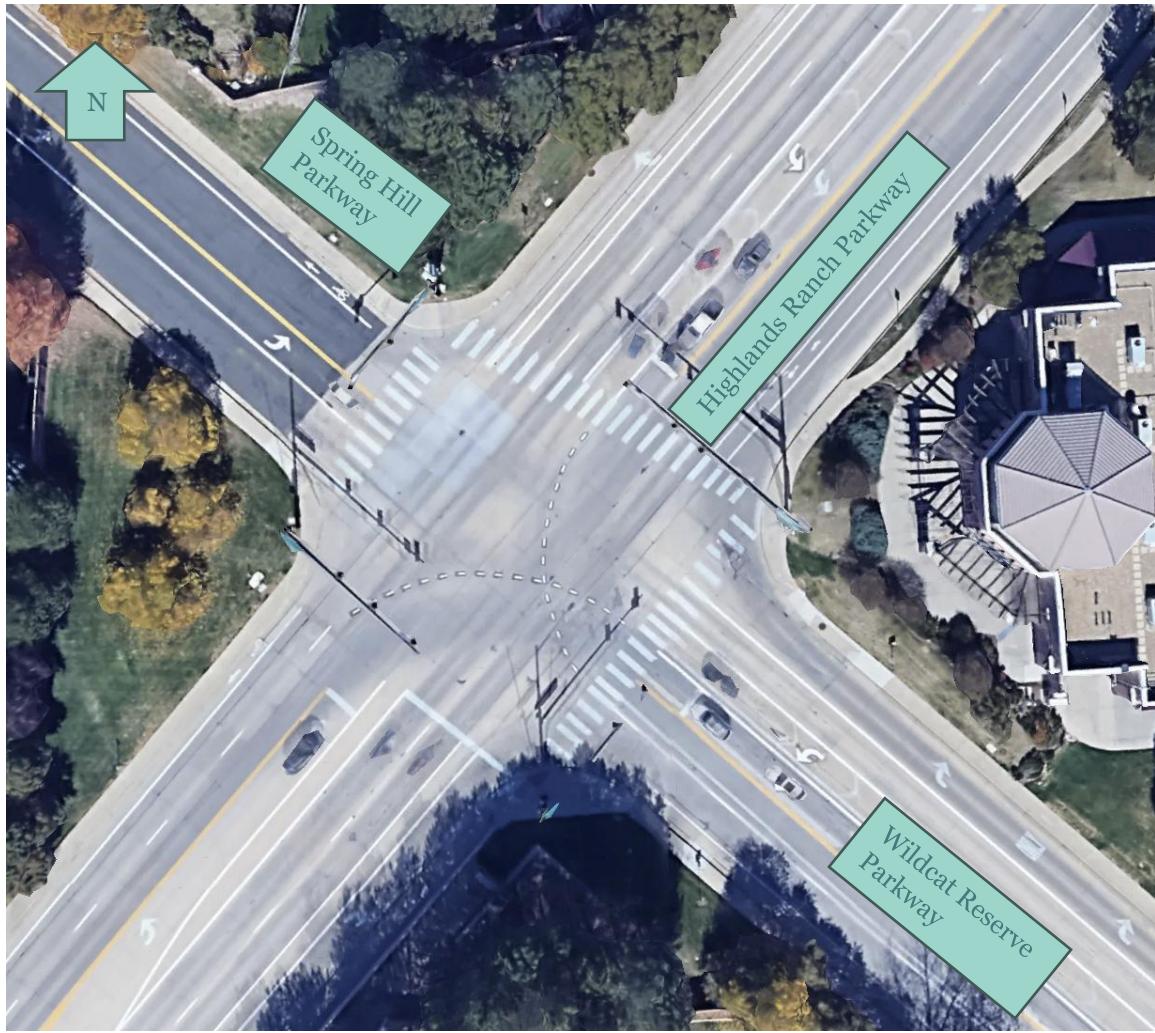


Figure 6– Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway

Roadway Characteristics

General features of the roadways along the most likely route from Trailblazer to Coyote Creek are summarized in **Table 1**.

Table 1 – Roadway Characteristics

Roadway	Westridge Village Parkway	Highlands Ranch Parkway	Wildcat Reserve Parkway	Spring Hill Parkway
Speed Limit	25 mph	45 mph	45 mph	25 mph
Number of Through Lanes	2	4	4	2
Lane Width	11 feet	12 feet	12 feet	12 feet
Bike Lane Width	5 feet	5 feet	5 feet	5 feet
Median	None	Striped	Striped	None
On-Street Parking	Yes, West Side	None	None	None

2.3 Traffic Volumes

Traffic data collection was conducted by Rekor Systems (All Traffic Data) on Wednesday, November 13, 2024. Traffic volumes were collected at the following applicable intersections:

- Highlands Ranch Parkway at Westridge Village Parkway
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Westridge Village Parkway at Baneberry Court
- Baneberry Place at Baneberry Court
- Westridge Village Pkwy & E Bus Access
- Westridge Village Pkwy & W Bus Access

Traffic count data is summarized in **Table 2** and is included in **Appendix B**. The existing traffic is shown in **Figure 107**.

2.4 Existing Level of Service

The existing capacity analysis for the key intersections included in **Table 2** was evaluated using Synchro 11 Software (Synchro). The resulting level of service (LOS) and delay are summarized in **Table 9** provided in **Section 4** of this report for comparison to the future projected traffic capacity analysis.

Existing traffic signal timing plans provided by Douglas County are included in **Appendix C**.

Level of service reports from Synchro are included in **Appendix D**.

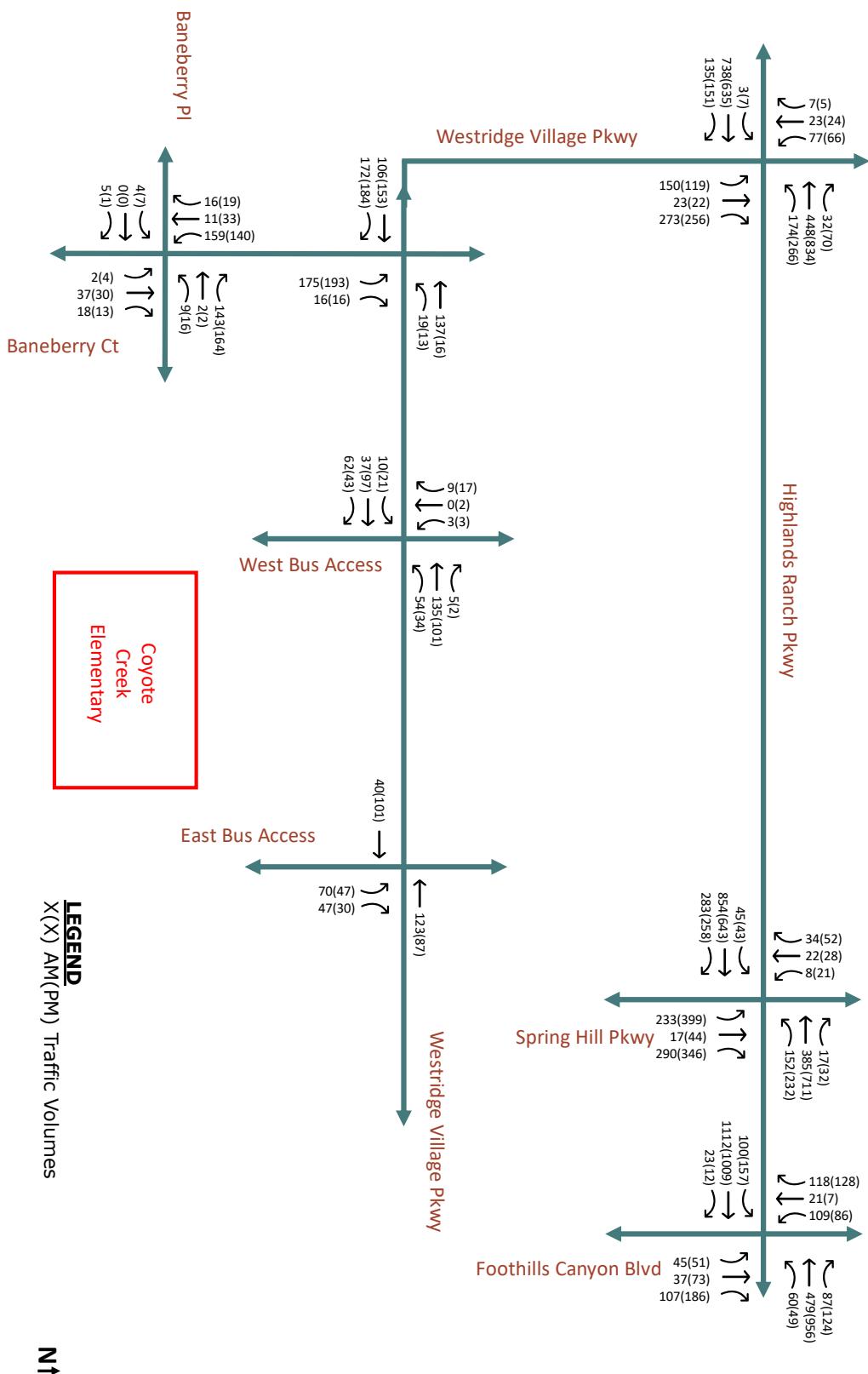


Figure 7 – Existing Traffic

Table 2 – Traffic Volume Summary

Intersection	Peak Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Highlands Ranch Pkwy & Westridge Village Pkwy	AM	3	743	108	98	451	36	123	5	197	82	5	7
	PM	7	637	122	185	841	78	90	3	175	69	5	5
Highlands Ranch Pkwy & Springhill Pkwy	AM	15	813	283	152	344	32	233	25	290	26	34	6
	PM	15	599	258	232	667	50	399	53	346	46	41	29
Highlands Ranch Pkwy & Foothills Canyon Blvd	AM	77	1112	23	60	479	87	45	37	107	109	21	92
	PM	138	1009	12	49	956	124	51	73	186	86	7	102
Westridge Village Pkwy & Baneberry Ct	AM	-	70	88	19	101	-	91	-	16	-	-	-
	PM	-	114	94	13	77	-	103	-	16	-	-	-
Baneberry Pl & Baneberry Ct	AM	4	0	5	9	2	62	2	37	18	78	11	16
	PM	7	0	1	16	2	77	4	30	13	53	33	19
Westridge Village Pkwy & E Bus Access	AM	-	40	-	-	108	-	44	-	32	-	-	-
	PM	-	101	-	-	71	-	19	-	14	-	-	-
Westridge Village Pkwy & W Bus Access	AM	10	37	36	39	109	5	-	-	-	3	0	9
	PM	21	97	15	18	73	2	-	-	-	3	2	17

2.5 Traffic Safety Analysis

Intersection Crash Analysis

Crash history was reviewed at the intersections of Highlands Ranch Parkway at Westridge Village Parkway and Highlands Ranch Parkway at Wildcat Reserve Parkway. Crashes were reviewed for the period between 2019 and 2024. **Table 3** Summarizes the year-by-year crash data for the intersections.

Crash diagrams and a listing of crashes are provided in **Appendix E**.

Highlands Ranch Parkway and Wildcat Reserve Parkway

There was a total of 42 crashes at Highlands Ranch Parkway and Wildcat Reserve Parkway over the course of the study period. Nine of these involved injuries. Of the 42 crashes, 22 involved a left turn, and 6 were at night. Two of these accidents involved a 3rd vehicle and one involved a bicycle.

Highlands Ranch Parkway and Westridge Village Parkway

There was a total of 18 crashes at Highlands Ranch Parkway and Wildcat Reserve Parkway over the course of the study period. Five of these involved injuries. It is not known how many of these accidents involved a left turn, how many were at night, or how many involved a 3rd vehicle or bicycle.

Table 3 – Annual Crash Summary

Year	Highlands Ranch Pkwy & Wildcat Reserve Pkwy	Highlands Ranch Pkwy & Westridge Village Pkwy
2019	8	3
2020	5	2
2021	8	2
2022	10	4
2023	6	3
2024	5	4

School Safety

Students are picked up and dropped off primarily via the parking lot to the south of the school building. A one-way aisle facilitates traffic. On-street parking is provided for both sides of Baneberry Court and on the south side of Westridge Village Parkway near the school. Bike lanes are not present. In the morning hours, drivers exiting the parking lot appeared to have trouble turning right onto Hackberry Street, due to the low sun and the limited visibility from the on-street parking.

3. TRIP PROJECTIONS

3.1 Projected Traffic

Douglas County School District (DCSD) is considering a potential school consolidation option that would consolidate Trailblazer Elementary into Coyote Creek. The consolidation option includes moving 6th Grade to the separate middle school. **Table 4** provides data on student enrollment for Trailblazer and Coyote Creek without 6th Grade.

Table 4 – School Enrollment

School	Ideal Capacity per DCSD	Maximum Historic Enrollment	2023-2024 Enrollment Count**	Projected 2028-2029 Enrollment**
Trailblazer	437	508	271	349
Coyote Creek	506	502	520	703
Combined	-	-		1,052

**Enrollment values include Pre-School through 5th Grade. 6th Grade enrollment was assumed to be 1/7 of Kindergarten through 6th Grade enrollment.

The projected 2028-2029 combined enrollment is 1,052 students without 6th Grade. This projected combined enrollment is 110 percent more than the previous maximum enrollment.

3.2 Trip Generation

Trip generation calculations were performed based on the number of additional students that will be transferring from Trailblazer to Coyote Creek. For the purposes of this report, it is assumed the existing 2024 Coyote Creek traffic and enrollment will see negligible changes by the 2025-2026 school year. Therefore, the trip generation calculations do not focus on the total future enrollment for Coyote Creek with the addition of Trailblazer students. The trip generation calculations are therefore only based on the Trailblazer existing traffic and enrollment. The trip generation was calculated multiple ways to account for the transfer of Trailblazer students to Coyote Creek. First the Institute of Transportation Engineers (ITE) Trip Generation web-based application was used to calculate the trip generation for three different types of elementary schools or land use codes (LUC) as follows:

- Public Elementary School (LUC 520)
- Private School K-8 (LUC 530)
- Charter School (LUC 536)

The relocation of students from one elementary school to the other has similarities to each of the three land uses evaluated using the ITE Trip Generation approach, however, this is a unique scenario and therefore the three land uses are not entirely representative of this scenario. A unique approach was therefore evaluated using existing traffic data and field observations at Trailblazer to understand the current traffic demand at the school and how that traffic demand is anticipated to change when relocated to Coyote Creek. The following considerations were taken into account to determine the anticipated number of trips added to Coyote Creek for this scenario:

- Calculate the existing ingress and egress traffic for parent drop-off and pick-up in the designated parking areas (parking lot and bus areas) using the existing traffic data collected
- Field observations of street parking adjacent to the school for drop-off and pick-up of students
- Students walking or riding a bike to/from the school using the existing traffic data collected
- Current bus ridership
- New bus ridership eligibility (outside 1 mile radius)
- Anticipated number of students “carpooling” with siblings or classmates after subtracting trips accounted for with existing traffic data, bus ridership, pedestrians/bicyclists and estimated street parking drop-off/pick-up from the student population.
- Reduce enrollment by 1/7th and subtract the 6th grade traffic from the trip generation numbers

The results of these considerations are summarized in the following table:

Table 5 – Trailblazer Existing Traffic Considerations

Peak Hour	Enrollment	Existing Bus Riders	Traffic Data Ingress/Egress	Ped & Bike	Estimated Street Parking	Calculated Carpooling
AM	314	14	137	39	49	75
PM			112	83		56

When the existing traffic is relocated to the new school, additional students will be eligible to take the bus. It is anticipated that about **1/3** of the Trailblazer students will be newly eligible to take the bus to school. Assuming the ridership percentage remains the same as the current bus ridership, ridership for these newly eligible students will also be about **70%** which results in an additional **63** students riding the bus to school for a total of **77** students from Trailblazer taking the bus to Coyote Creek.

Students who currently walk to Trailblazer are unlikely to walk to Coyote Creek due to distance and crossing a major roadway, therefore, it is assumed that these students will now be driven to school and count as a new vehicular trip to Coyote Creek. Taking into account the estimated street parking trips, the ingress/egress trips, pedestrians and bicyclists converted to vehicle trips, anticipated carpooling and the subtraction of new bus ridership, the resulting increase in trip demand for Coyote Creek is about **231** trips during the morning peak hour and **249** trips during the afternoon peak hour.

A summary of the trip generation comparison is summarized in **Table 6**.

Table 6 – Trip Generation Comparison

ITE LUC	Description	Units	Quant	AM Peak - Generator Peak			PM Peak - Generator Peak		
				Total	Ingress	Egress	Total	Ingress	Egress
-	Existing Data Based Calculation	Students	269	231	116	116	249	124	124
520	Public Elementary School	Students	269	202	109	93	121	56	65
530	Private School (K-8)	Students	269	272	152	120	161	76	86
536	Charter Elementary School	Students	269	288	153	135	194	95	99

3.3 Trip Distribution/Assignment

The trip distribution and assignment were evaluated by first reviewing the attendance boundaries for Trailblazer to get an idea of the population density within the boundary limits. Then the distribution of traffic within the Trailblazer boundary and the directions of approach for arriving at Coyote Creek was estimated by percentage. Note a small percentage of traffic was assumed to come from outside the Trailblazer boundaries based on the existing traffic trends. The resulting Trip Distribution percentages are shown in **Figure 8**.



Figure 8 – Trip Distribution

Based on the Trip Distribution, the trips turning movements were then assigned to the key intersections evaluated in as a part of this TIS.

- Highlands Ranch Parkway at Westridge Village Parkway
- Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway
- Highlands Ranch Parkway at Foothills Canyon Boulevard
- Westridge Village Parkway at Baneberry Court
- Baneberry Place at Baneberry Court
- Westridge Village Pkwy & E Bus Access
- Westridge Village Pkwy & W Bus Access

The resulting trip assignment is shown in **Figure 9**.

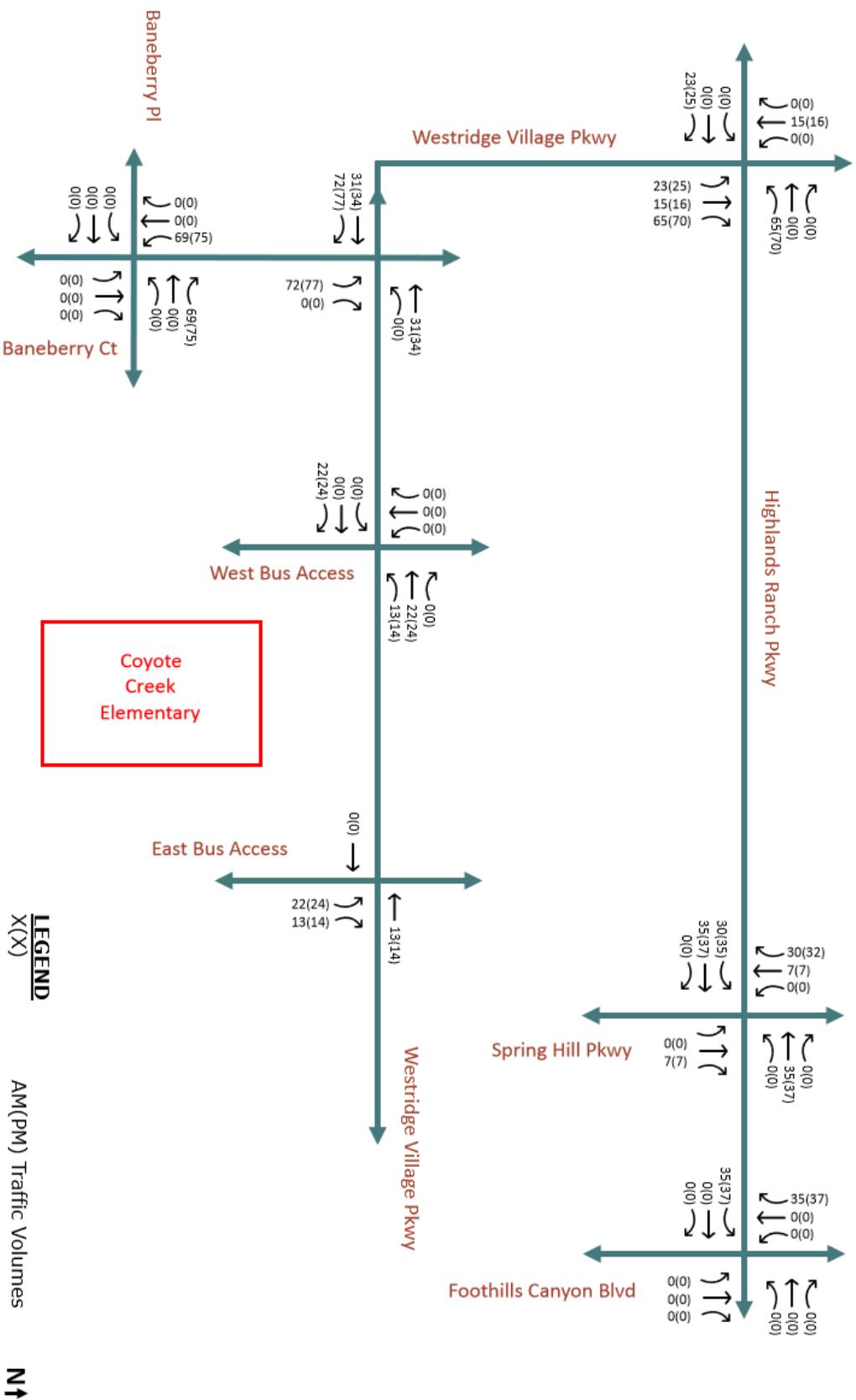


Figure 9 – Trip Assignment

In addition to the new anticipated trips for Trailblazer students transferring to Coyote Creek, the existing trips to Trailblazer will also be removed for a few of the key intersections. Certain turning movements accounting for the current arrival of drivers to Trailblazer would be reduced in this new scenario. Using the trip distribution and the existing distribution of ingress and egress trips for Trailblazer, the estimated reduction for certain turning movements was estimated. The resulting reductions are summarized in **Table 7**.

Table 7 – Trailblazer Turning Movement Reductions

Intersection	Peak Hour	EBL	EBT	WBT	WBR	NBT	SBL	SBT	SBR
Spring Hill Pkwy & Highlands Ranch Pkwy	AM	-5			-15	-16	-18	-20	-7
	PM	-10			-18	-18	-25	-22	-15
Westridge Village Pkwy & Highland Ranch Pkwy	AM		-5	-3	-4		-5		-5
	PM		-2	-7	-8		-3		-2
Highlands Ranch Pkwy & Foothills Canyon Blvd	AM	-18							-15
	PM	-25							-18

Additional turning movement reductions were estimated for the Coyote Creek 6th grade traffic that travel to the middle school and no longer travel to Coyote Creek. As with Trailblazer, it is assumed that the 6th grade class accounts for 1/7th of the traffic. Therefore, the ingress traffic will be reduced by 28 trips during the morning peak and 17 during the afternoon peak while the egress traffic is anticipated to be reduced by 23 trips during the morning peak and 17 during the afternoon peak. These reductions were distributed across the intersections based on the anticipated trip distribution for the traffic within the existing Coyote Creek boundaries. The resulting reductions are summarized in **Table 8**. These reductions were also incorporated into the Total traffic calculation.

Table 8 – Coyote Creek Turning Movement Reductions

Intersection	Peak Hour	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL
Westridge Village Pkwy & Bus Ingress	AM	-1	-5	-6	-6				
	PM	-1	-2	-3	-3				
Westridge Village Pkwy & Bus Egress	AM	-1		-6			-6	-5	
	PM	-1		-3			-3	-2	
Baneberry Pl & Baneberry Ct	AM			-1		-9		-3	-11
	PM			-2		-11		-2	-8
Westridge Village Pkwy & Baneberry Ct	AM	-5	-9	-2	-6				
	PM	-2	-7	-1	-3				
Spring Hill Pkwy & Highlands Ranch Pkwy	AM						-6		
	PM						-5		
Westridge Village Pkwy & Highland Ranch Pkwy	AM		-8	-6			-5	-9	
	PM		-4	-5			-4	-9	

3.4 Total Traffic (2028-2029 School Year)

The total anticipated future traffic for the 2028 to 2029 school year for Coyote Creek with the addition of Trailblazer students was calculated by adding the trip assignment to the existing Coyote Creek traffic data and then subtracting the anticipated turning movement reductions. The resulting total traffic is shown in **Figure 10**.

3.5 Projected Level of Service

The capacity analysis for the total projected traffic from the transfer of Trailblazer students to Coyote Creek was evaluated using the Synchro. The resulting LOS and delay are summarized in **Table 9** for both the existing conditions (without Trailblazer traffic) and for the total traffic conditions (with Trailblazer traffic). Project level of service reports from Synchro are included in **Appendix F**.

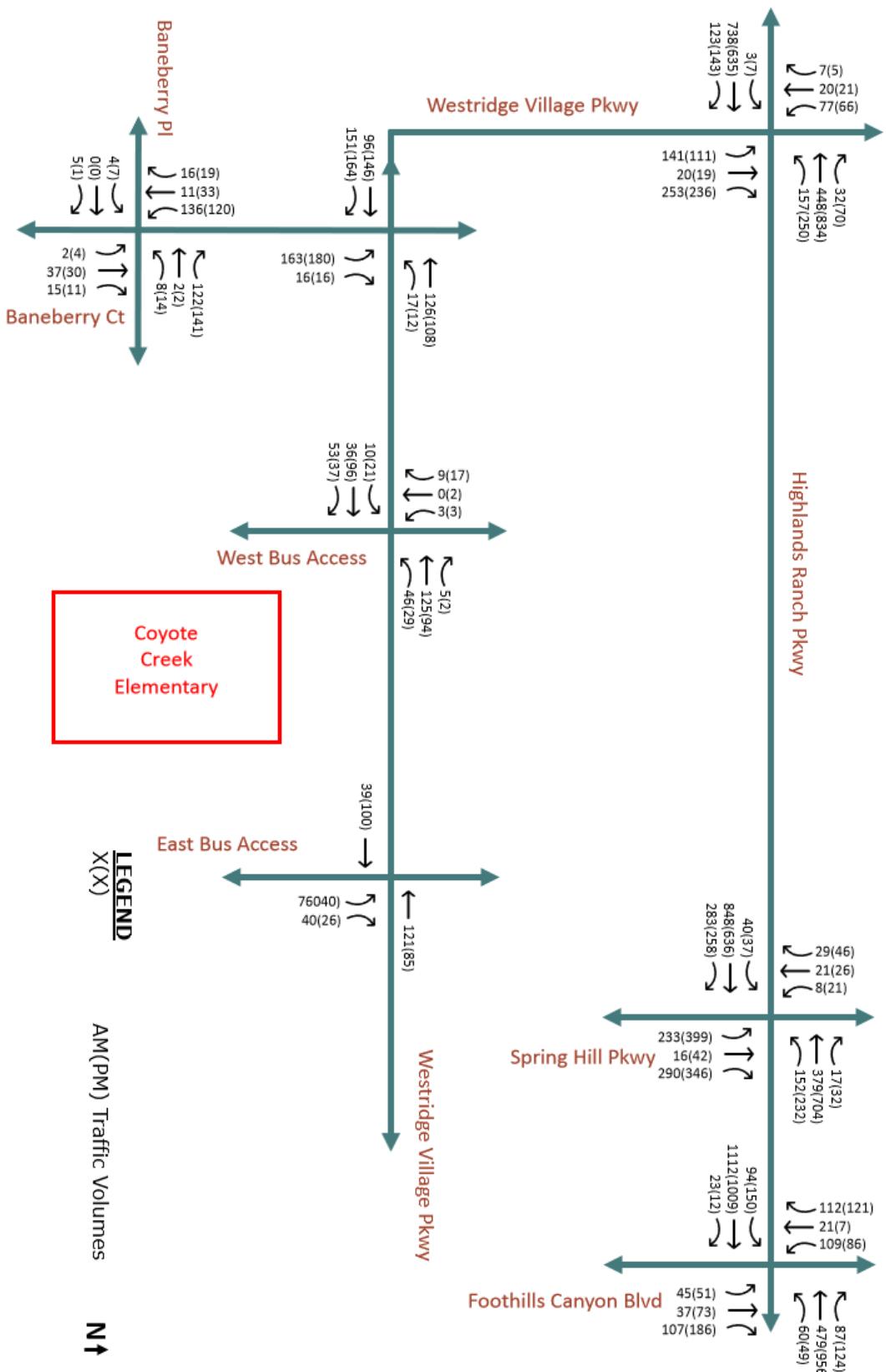


Figure 10 – Total Traffic

Table 9 – LOS and Delay Results

Intersection	Control	Movement	Existing						Total Traffic					
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Highlands Ranch Pkwy & Westridge Village Pkwy	Signal	Overall	C	B	20.1	19.0	-	-	C	B	22.0	19.6	+1.9	+0.6
		NBL	D	C	36.7	30.2	95	72	D	C	43.4	33.6	+6.7	+3.4
		NBT	C	C	22.8	22.7	9	6	C	C	23.6	23.5	+0.8	+0.8
		NBR	A	A	9.1	6.2	1	0	B	A	17.0	9.6	+7.9	+3.4
		SBL	C	C	27.0	27.2	74	54	C	C	26.9	27.1	-0.1	-0.1
		SBT	B	B	16.2	17.0	15	7	B	C	19.0	20.2	+2.8	+3.2
		SBR	C	B	26.2	17.0	15	7	B	C	19.0	20.2	-7.2	+3.2
		EBL	A	A	5.3	5.6	3	6	A	A	5.3	5.6	0.0	0.0
		EBT	C	B	22.7	19.3	244	212	C	B	22.9	19.4	+0.2	+0.1
		EBR	C	B	22.7	19.3	244	212	C	B	22.9	19.4	+0.2	+0.1
		WBL	A	A	8.3	9.9	36	64	B	B	13.7	15.1	+5.4	+5.2
		WBT	B	C	16.8	21.8	129	279	B	C	16.8	21.6	0.0	-0.2
		WBR	B	C	16.8	21.8	129	279	B	C	16.8	21.6	0.0	-0.2
		Overall	A	A			-	-	D	C	47.0	29.9	+47.0	+29.9
Highlands Ranch Pkwy & Springhill Pkwy	Signal	NBL	C	C	21.5	23.1	87	151	C	C	21.5	23.2	0.0	+0.1
		NBT	C	C	29.8	30.5	36	65	C	C	29.5	30.2	-0.3	-0.3
		NBR	A	A	5.4	6.4	1	45	A	A	5.3	5.4	-0.1	-1.0
		SBL	C	C	24.4	25.3	26	43	C	C	23.0	23.7	-1.4	-1.6
		SBT	D	D	50.8	46.6	54	80	D	C	36.5	32.5	-14.3	-14.1
		SBR	D	D	50.8	46.6	54	7	D	C	36.5	32.5	-14.3	-14.1
		EBL	C	C	20.3	20.5	21	21	C	C	21.1	21.7	+0.8	+1.2
		EBT	F	D	83.6	48.5	541	325	F	D	96.2	50.1	+12.6	+1.6
		EBR	C	B	20.8	10.9	178	105	C	B	20.8	12.6	0.0	+1.7
		WBL	C	C	20.8	21.9	60	91	C	C	20.8	22.0	0.0	+0.1
		WBT	C	D	33.1	39.4	164	343	C	D	33.6	40.4	+0.5	+1.0
		WBR	A	A	0.2	0.3	0	0	A	A	0.1	0.2	-0.1	-0.1
		Overall	C	B	20.7	19.3	-	-	C	B	20.6	19.3	-0.1	0.0
Highlands Ranch Pkwy & Foothills Canyon Blvd	Signal	NBL	C	C	27.8	25.5	35	43	C	C	28.6	25.9	+0.8	+0.4
		NBT	C	C	23.9	24.5	29	56	C	C	23.9	24.5	0.0	0.0
		NBR	B	B	18.9	18.6	9	51	B	B	18.9	18.6	0.0	0.0
		SBL	C	C	27.2	26.0	94	76	C	C	27.2	26.0	0.0	0.0
		SBT	A	A	8.1	6.4	41	32	A	A	7.6	6.2	-0.5	-0.2
		SBR	A	A	8.1	6.4	41	32	A	A	7.6	6.2	-0.5	-0.2
		EBL	A	B	8.7	17.2	37	58	A	B	9.0	19.8	+0.3	+2.6
		EBT	C	C	25.3	20.8	372	297	C	C	25.3	20.8	0.0	0.0
		EBR	C	C	25.3	20.8	372	297	C	C	25.3	20.8	0.0	0.0
		WBL	B	A	12.3	9.7	29	26	B	A	12.3	9.7	0.0	0.0
		WBT	B	C	15.5	20.4	122	284	B	C	15.5	20.4	0.0	0.0
		WBR	A	A	3.6	4.7	25	37	A	A	3.6	4.7	0.0	0.0
		Overall	C	B	20.7	19.3	-	-	C	B	20.6	19.3	-0.1	0.0

Intersection	Control	Movement	Existing						Total Traffic							
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)		Queue Length (ft)	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Westridge Village Pkwy & Baneberry Ct	Unsignalized (TWSC or AWSC)	Overall					-	-	-	-	-	-	-	-	-	-
		NBL	C	B	17.0	14.9	56	36	F	E	76.2	36.1	+59.2	+21.2	288	146
		NBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		NBR	C	B	17.0	14.9	56	36	F	E	76.2	36.1	+59.2	+21.2	288	146
		SBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		EBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		EBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		EBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		WBL	A	A	7.9	8.0	2	2	A	A	8.3	8.5	+0.4	+0.5	2	2
		WBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		WBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baneberry Pl & Baneberry Ct	Unsignalized (TWSC or AWSC)	Overall					-	-							-	-
		NBL	A	A	7.3	7.4	0	0	A	A	7.3	7.4	0.0	0.0	0	0
		NBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		NBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		SBL	A	A	7.7	7.5	6	4	A	A	7.8	7.7	+0.1	+0.2	10	10
		SBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		SBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		EBL	B	B	11.5	12.8	4	2	B	C	16.4	20.6	+4.9	+7.8	6	4
		EBT	B	B	11.5	12.8	4	2	B	C	16.4	20.6	+4.9	+7.8	6	4
		EBR	B	B	11.5	12.8	4	2	B	C	16.4	20.6	+4.9	+7.8	6	4
		WBL	B	B	10.6	10.2	20	18	B	B	12.4	11.6	+1.8	+1.4	46	36
		WBT	B	B	10.6	10.2	20	18	B	B	12.4	11.6	+1.8	+1.4	46	36
		WBR	B	B	10.6	10.2	20	18	B	B	12.4	11.6	+1.8	+1.4	46	36
Westridge Village Pkwy & E Bus Access	Unsignalized (TWSC or AWSC)	Overall		-	-	-	-	-		-	-	-	-	-	-	-
		NBL	B	B	10.2	10.2	14	8	B	B	10.8	11.3	+0.6	+1.1	18	20
		NBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		NBR	B	B	10.2	10.2	1	0	B	B	10.8	11.3	+0.6	+1.1	18	20
		SBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		EBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		EBT	A	A	0.0	0.0	14	8	A	A	0.0	0.0	0.0	0.0	0	0
		EBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		WBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		WBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0	0	0
		WBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection	Control	Movement	Existing						Total Traffic					
			LOS		Delay (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Westridge Village Pkwy & W Bus Access	Unsignalized (TWSC or AWSC)	Overall	-	-	-	-	-	-	-	-	0.0	0.0	-	-
		NBL	-	-	-	-	-	-	-	-	-	-	-	-
		NBT	-	-	-	-	-	-	-	-	-	-	-	-
		NBR	-	-	-	-	-	-	-	-	-	-	-	-
		SBL	A	A	9.9	9.3	2	2	B	A	10.1	9.5	+0.2	+0.2
		SBT	A	A	9.9	9.3	2	2	B	A	10.1	9.5	+0.2	+0.2
		SBR	A	A	9.9	9.3	2	2	B	A	10.1	9.5	+0.2	+0.2
		EBL	A	A	7.6	7.5	0	2	A	A	7.7	7.5	+0.1	0.0
		EBT	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0
		EBR	A	A	0.0	0.0	0	0	A	A	0.0	0.0	0.0	0.0
		WBL	A	A	7.6	7.6	2	2	A	A	7.7	7.7	+0.1	+0.1
		WBT	A	A	0.0	0.0	2	0	A	A	0.0	0.0	0.0	0.0
		WBR	A	A	0.0	0.0	2	0	A	A	0.0	0.0	0.0	0.0

Table 10 – Mitigation LOS and Delay Results

Intersection	Control	Movement	Total Traffic – Existing Intersection Conditions						Total Traffic - Mitigation Option								Mitigation	
			LOS		Delay (s)		Delay Delta (s)		Queue Length (ft)		LOS		Delay (s)		Delay Delta (s)			
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
Westridge Village Pkwy & Baneberry Ct	Unsignalized (TWSC or AWSC)	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Convert intersection to an all-way stop	
		NBL	F	E	76.2	36.1	+59.2	+21.2	288	146	D	C	30.7	18.2	-45.5	-17.9	168	84
		NBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		NBR	F	E	76.2	36.1	+59.2	+21.2	288	146	D	C	30.7	18.2	-45.5	-17.9	168	84
		SBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		SBT	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		SBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		EBL	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		EBT	A	A	0.0	0.0	0.0	0.0	0	0	C	C	20.0	21.1	+20.0	+21.1	106	130
		EBR	A	A	0.0	0.0	0.0	0.0	0	0	C	C	20.0	21.1	+20.0	+21.1	106	130
		WBL	A	A	8.3	8.5	+0.4	+0.5	2	2	B	B	13.9	11.7	+5.6	+3.2	40	26
		WBT	A	A	0.0	0.0	0.0	0.0	0	0	B	B	13.9	11.7	+13.9	+11.7	40	26
		WBR	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

3.6 Mitigation

Capacity Analysis

The capacity analysis results show that the relocation of Trailblazer to Coyote Creek causes an increase in delay and an undesirable level of service for the northbound turning movements at the intersection of Westridge Village Parkway at Baneberry Court. One mitigation option was evaluated in an effort to improve level of service and delay. The option considered the conversion of the two-way stop control at the intersection to all-way stop control. As shown in **Table 10**, this option does significantly improve the northbound turning movement to a more desirable level of service, decreasing delay by about 90 seconds during the morning peak and about 30 during the afternoon peak. This is also achieved without causing the other intersection approaches to have an undesirable level of service. It should be noted that this improvement helps to mitigate a capacity concern for one to two hours of the day while school is in session during pick-up and drop-off at the school, but it will also impact the intersection for the remainder of the day outside of pick-up and drop-off and when school is not in session as this would be a permanent improvement.

Auxiliary Lane Analysis

Right turn lanes were evaluated for the intersections of Highlands Ranch Parkway at Wildcat Reserve Parkway/Spring Hill Parkway, Highlands Ranch Parkway at Westridge Village Parkway, and Highlands Ranch Parkway at Foothills Canyon Boulevard. A right-turn lane is recommended on an arterial street when the LOS operates at an unacceptable level.

The existing traffic data collected shows that the westbound approach of Highlands Ranch Parkway at Westridge Village Parkway has 36 right turns during the morning peak hour and 78 during the afternoon peak hour while the eastbound approach has 108 right turns during the morning peak and 122 during the afternoon peak. However, these turning movements are operating at an LOS of A and no right-turn lane is warranted.

Site Analysis

Based on site observations and feedback from the Coyote Creek Administration, Coyote Creek faces the following challenges:

- Congestion on Westridge Village Parkway
- Vehicles Parked in bike lanes on Westridge Village Parkway
- Sight visibility challenges for vehicles exiting parking lot

There are no recommended improvements for Coyote Creek based on queuing analysis and safety. While congestion occurs on Westridge Village Parkway at times, it is not significant to warrant any improvements. There are no significant safety concerns that require attention.

4. CONCLUSIONS/RECOMMENDATIONS

This Traffic Impact Study addresses existing traffic patterns and potential traffic challenges at Coyote Creek Elementary School, while considering the anticipated increase in traffic due to possible consolidations with Trailblazer Elementary while moving 6th grade students to a middle school.

Traffic will be increased with the additional enrollment, but additional bus service will be offered, limiting the impact of the increased enrollment. Consolidation of the schools will increase traffic at Coyote Creek with more vehicles using on-street parking, the school parking lot, and the pick-off/drop-off lanes. This will increase impacts to the surrounding roadways during pick-up and drop-off times.

Although increased traffic is expected around Coyote Creek with the increased enrollment, no traffic mitigation measures are recommended. Douglas County recognizes there will be increased delays around the school during 15-minute peak periods at pick-up and drop-off times.

Minor grammatical changes were made on April 8, 2025 to provide additional clarity.

Appendix A Site Observation Notes

TRAFFIC OBSERVATION REPORT

Project Name	DCSD HR TIS	Project No.	1124175					
Observer	Derek Williams, EI							
Location	Coyote Creek Elementary School							
Time	8:00 - 9:30	AM						
		DATE	11/12/2024					
		M	T	W	Th	F	S	S

Queueing Data

Start Time: 8:25 AM

End Time: 8:50 AM

Maximum Queueing Length: 300 feet (Main Loop), 500 feet (Bus Lane)

Total Storage Length Available: 650 feet (Main Loop), 300 ft (Bus Lane)

Comments:

On-Street Parking Locations and Availability

Comments:

On-street parking is available on Baneberry Court except near intersections. Parking is not permitted along Westridge Village Parkway, however a designated parking lane is provided on this street in front of the school. Additionally vehicles were observed dropping students off on Woodrose Way across from the bus lane entrance. Students and parents utilized a crosswalk at this location to cross Westridge Village Parkway.

Crosswalk Locations and Usage

Comments:

Crosswalks are located at the school parking lot entrance and crossing Baneberry Court at Westridge Village Parkway. Another crosswalk crosses Westridge Village Parkway near the bus lane entrance. Button activated flashing beacons are provided at this crosswalk. A crossing guard was stationed at this location during the drop-off time.

Roadway Characteristics

Speed Limit(s) and Location(s):

Both Westridge Village Parkway and Baneberry Court have posted speed limits of 25 mph. A reduced speed of 15 mph in the school zone is used when flashers are on.

Signage:

No parking signs along Westridge Village Parkway. Reduced speed flashers located on Baneberry Court and Westridge Village Parkway. Bus lane signed as one-way. No U-turn in school zone signs located on Baneberry Court.

Bike Lanes:

Bike lanes are located along both sides of Westridge Village Parkway.

Other Comments:

No additional comments to note.

Sight Visibility Challenges

Comments:

No potential sight visibility conflicts are noted.

Congestion Areas

Comments:

Some congestion occurred on Westridge Village Parkway at the bus lane entrance when queueing backed-up to the road. At times vehicles were unable to turn into the bus lane until the queue shortened. No more than 5 vehicles in either direction were observed to be queued on Westridge Village Parkway at any time. This did not have an affect on traffic coming from Baneberry Court or prevent vehicles from exiting the bus lane.

General Traffic Observations

Comments:

Many parents utilized the parking lane on Westridge Village parkway to drop the students off at the school. One vehicle was parked in the bike lane in front of the bus lane.

TRAFFIC OBSERVATION REPORT

Project Name	DCSD HR TIS	Project No.	1124175					
Observer	Derek Williams, EI							
Location	Coyote Creek Elementary School							
Time	2:45-3:30	PM						
		DATE	11/12/2024					
		M	T	W	Th	F	S	S

Queueing Data

Start Time: 3:00 PM

End Time: 3:40 PM

Maximum Queueing Length: 400 feet (Loop), 300 feet (Bus Lane)

Total Storage Length Available: 650 feet (Main Loop), 300 ft (Bus Lane)

Comments:

Queueing in both the drop-off loop and bus lane began approximately at 3:00. By 3:15 the bus lane reached its queueing capacity. The drop-off loop did not reach queueing capacity during pick-up.

On-Street Parking Locations and Availability

Comments:

Most parents used on-street parking on Baneberry Court, Woodrose Way, and the parking lane on Westridge Village Parkway. Many vehicles were parked in the bike lanes on Westridge Village Parkway during pick-up.

Crosswalk Locations and Usage

Comments:

Crosswalks on Baneberry Court and Westridge Village parkway were used by parents and students. The school placed crossing guards at the crosswalks on Westridge Village Court and at the parking lot/loop entrance.

Roadway Characteristics

Speed Limit(s) and Location(s):

Both Westridge Village Parkway and Baneberry Court have posted speed limits of 25 mph. A reduced speed of 15 mph in the school zone is used when flashers are on.

Signage:

No parking signs along Westridge Village Parkway. Reduced speed flashers located on Baneberry Court and Westridge Village Parkway. Bus lane signed as one-way. No U-turn in school zone signs located on Baneberry Court.

Bike Lanes:

Bike lanes are located along both sides of Westridge Village Parkway.

Other Comments:

No additional comments to note.

Sight Visibility Challenges

Comments:

Vehicles parked in the bike lanes on Westridge Village Parkway create potential sight visibility challenges for vehicles exiting the bus lane.

Congestion Areas

Comments:

No congestion areas noted.

General Traffic Observations

Comments:

Vehicles seemed to flow in and out of the drop-off loop and bus lane smoothly. Buses have a designated pick-up lane in the drop-off loop and did not use the bus lane. Talked with the school Principle while observing traffic, she said that there were only three buses running today and I was observing a day with heavier vehicle traffic.

TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175					
Observer	Nate Hittle							
Location	Trailblazer Elementary School							
Time	7:45 - 9:15 AM	AM / PM						
		DATE	###					
		M	T	W	Th	F	S	S

Queueing Data

Start Time: 8:05 AM

End Time: 8:39 AM

Maximum Queueing Length: 550 ft

Total Storage Length Available: 430 ft

Comments:

The main drop-off point was the parking lot to the southeast of the building, on the north side of S Hackberry St. This parking lot contains a two-lane, one-way, drop-off aisle. The right lane is intended for drop-off and pick-up, while the left lane is intended for through traffic. The first vehicles were observed entering the queue at 8:05 AM. By 8:22 AM, a steady stream of traffic was entering the lot. The queue reached its maximum length around 8:35 AM. At this time there were three cars waiting to turn left into the parking lot from S Hackberry St.

On-Street Parking Locations and Availability

Comments:

Street parking is available on both sides of S Hackberry St. Parking on the north and east sides of the street was mostly full by 8:10 AM. Parking on the south and west sides was utilized during drop-off by. Some parents parked on the street with their hazards on and walked the students across the street. Street parking is available on the nearby side streets but was seldom used.

Crosswalk Locations and Usage

Comments:

There are four locations within the immediate vicinity of the school to cross S Hackberry St. These are located at S Spring Hill Pkwy, Spring Hill Dr, Golden Eagle Ave, and at the northern access of the bus loop. There are also crosswalks across the parking lot and two across the drop-off aisle. Crossing guards were present at several of these crosswalks. Crosswalks were generally used appropriately to cross S Hackberry St. However, one crossing guard stated that the crosswalks across the drop-off aisle are often not used.

Roadway Characteristics

Speed Limit(s) and Location(s):

The speed limit on S Hackberry St is 25 mph. Two school zone speed limit signs are present, with a flasher that operates from 8:10 to 8:50 AM. The school zone speed limit is 20 mph.

Signage:

Signage present on the public roads includes speed limit signs, school zone speed limit signs, stop signs, No Parking signs, and school crossing signs. Signs in the drop-off aisle indicate how the lanes are intended to be used.

Bike Lanes:

Bike lanes are not present on S Hackberry St.

Other Comments:

There is a bus drop-off zone to the west of the school. Standard passenger cars are not permitted here.

Sight Visibility Challenges

Comments:

Drivers exiting the parking lot were observed shielding their eyes from the sun, as they were required to look east to be able to make a turn. Adjacent parking also obstructs the sight line looking east.

Congestion Areas

Comments:

The intersection of S Hackberry St and S Spring Hill Pkwy, at the entrance of the parking lot, experienced mild congestions. Queues formed on eastbound S Hackberry St, on northbound S Spring Hill Pkwy, consisting of vehicles waiting to enter the parking lot.

General Traffic Observations

Comments:

TRAFFIC OBSERVATION REPORT

Project Name	DCSD Traffic Study	Project No.	1124175					
Observer	Nick Westphal							
Location	Trailblazer Elementary School							
Time	2:45 - 4:00 PM	AM / PM						
		DATE	19-Nov-24					
		M	T	W	Th	F	S	S

Queueing Data

Start Time: 3:05 PM

End Time: 3:37 AM

Maximum Queueing Length: 500 ft

Total Storage Length Available: 430 ft

Comments:

The main drop-off point was the parking lot to the southeast of the building, on the north side of S Hackberry St. This parking lot contains a two-lane, one-way, drop-off aisle. The right lane is intended for drop-off and pick-up, while the left lane is intended for through traffic. The first vehicles were observed entering the queue at 3:05. The pickup lane became full at 3:32, just after the bell rang. More vehicles park on the street and walk to pickup their students at the door than drive through the pick-up lane. There is also a bus loop that is signed as student pick-up. This is not as heavily used, but some pick-up at this location.

On-Street Parking Locations and Availability

Comments:

Street parking is available on both sides of S Hackberry St. Parking on the north and east sides of the street was mostly full by 3:30, but there was still parking available.

Crosswalk Locations and Usage

Comments:

There are four locations within the immediate vicinity of the school to cross S Hackberry St. These are located at S Spring Hill Pkwy, Spring Hill Dr, Golden Eagle Ave, and at the northern access of the bus loop. There are also crosswalks across the parking lot and two across the drop-off aisle. Crossing guards were present at the west exit from the parking lot and at the entrance to the bus loop. Most people used the crosswalks, but some crossed the street at unmarked locations. A crossing guard was also present at the internal crosswalk across the drop off loop.

Roadway Characteristics

Speed Limit(s) and Location(s):

The speed limit on S Hackberry St is 25 mph. Two school zone speed limit signs are present, with a flasher that operates from 8:10 to 8:50 AM. The school zone speed limit is 20 mph.

Signage:

Signage present on the public roads includes speed limit signs, school zone speed limit signs, stop signs, No Parking signs, and school crossing signs. Signs in the drop-off aisle indicate how the lanes are intended to be used.

Bike Lanes:

Bike lanes are not present on S Hackberry St.

Other Comments:

There is a bus drop-off zone to the west of the school. This appears to be signed for student drop off and pick-up as well.

Sight Visibility Challenges

Comments:

No major sight visibility issues were observed in the afternoon.

Congestion Areas

Comments:

There was some back up on Spring Hill Parkway at the stop sign, presumably from the Wildcat intersection. Most of the congestion was after the pick-up lane started exiting at the west exit of the parking lot. The main congestion lasted about 5 minutes.

General Traffic Observations

Comments:

More vehicles appear to park on the street than use the pick-up lane. There appears to be plenty of parking and queueing capacity with good sight lines. The sidewalk and curb ramps adjacent to school property appear to be fairly new. It was noted that high school/middle school students use the school property as a cut through rather than staying on the roadway sidewalk.

Appendix B Traffic Volume Counts

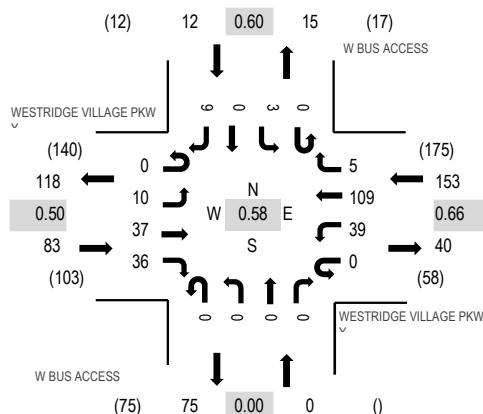
Location: 37 W BUS ACCESS & WESTRIDGE VILLAGE PKWY AM

Date: Wednesday, November 13, 2024

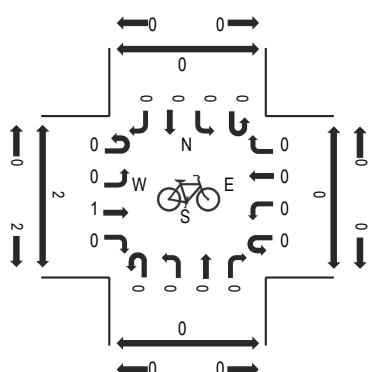
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

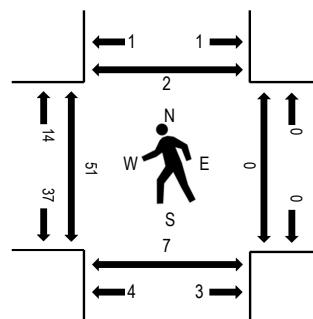
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKWY				WESTRIDGE VILLAGE PKWY				W BUS ACCESS				W BUS ACCESS				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
8:00 AM	0	1	5	0	0	1	23	0	0	0	0	0	0	0	0	0	31	248	0	0	0	
8:15 AM	0	2	10	14	0	27	29	1	0	0	0	0	0	0	0	0	86	235	30	0	2	
8:30 AM	0	6	15	22	0	11	43	4	0	0	0	0	0	1	0	4	106	173	20	0	1	
8:45 AM	0	1	7	0	0	0	14	0	0	0	0	0	0	0	2	0	1	25	1	0	4	0
9:00 AM	0	1	8	0	0	0	9	0	0	0	0	0	0	0	0	0	0	18	0	0	1	0
9:15 AM	0	1	10	0	0	0	13	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0
Count Total	0	12	55	36	0	39	131	5	0	0	0	0	0	3	0	9	290	51	0	8	2	
Peak Hour	0	10	37	36	0	39	109	5	0	0	0	0	0	3	0	9	248	51	0	7	2	

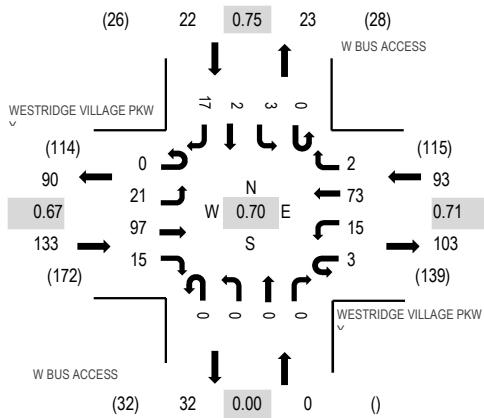
Location: 37 W BUS ACCESS & WESTRIDGE VILLAGE PKWY PM

Date: Wednesday, November 13, 2024

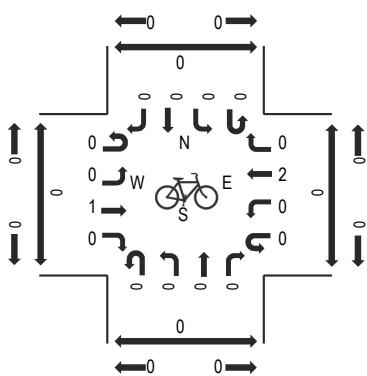
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

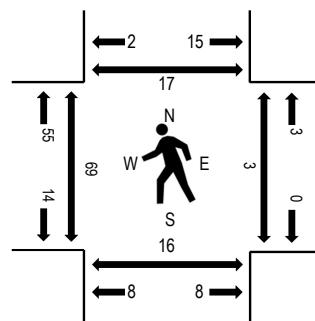
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKWY				WESTRIDGE VILLAGE PKWY				W BUS ACCESS				W BUS ACCESS				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
2:45 PM	0	3	16	0	0	0	14	0	0	0	0	0	0	1	0	0	34	236	1	2	0	0
3:00 PM	0	4	19	1	0	0	14	0	0	0	0	0	0	1	0	0	39	248	0	3	3	2
3:15 PM	0	5	22	6	3	9	19	2	0	0	0	0	0	1	2	5	74	240	17	0	9	2
3:30 PM	0	8	35	7	0	5	28	0	0	0	0	0	0	0	0	6	89	47	0	4	12	
3:45 PM	0	4	21	1	0	1	12	0	0	0	0	0	0	1	0	6	46	5	0	0	0	1
4:00 PM	0	2	18	0	0	0	8	0	0	0	0	0	0	1	0	2	31	0	0	0	0	0
Count Total	0	26	131	15	3	15	95	2	0	0	0	0	0	5	2	19	313	70	5	16	17	
Peak Hour	0	21	97	15	3	15	73	2	0	0	0	0	0	3	2	17	248	69	3	16	17	

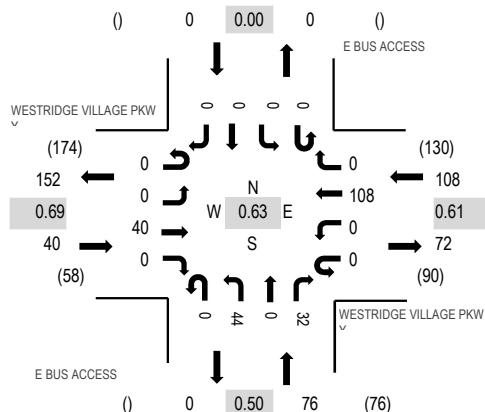
Location: 38 E BUS ACCESS & WESTRIDGE VILLAGE PKWY AM

Date: Wednesday, November 13, 2024

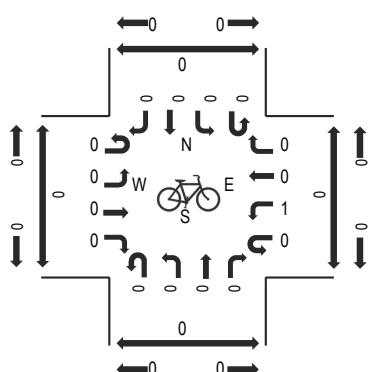
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

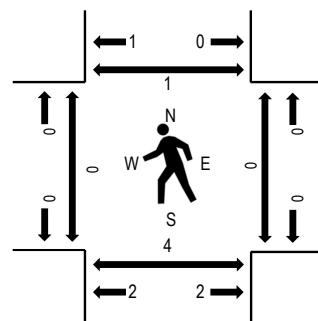
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKWY				WESTRIDGE VILLAGE PKWY				E BUS ACCESS				E BUS ACCESS				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	
8:00 AM	0	0	5	0	0	0	23	0	0	0	1	0	0	0	0	0	29	224	0	0	0	0
8:15 AM	0	0	9	0	0	0	44	0	0	0	17	0	19	0	0	0	89	212	0	0	0	0
8:30 AM	0	0	16	0	0	0	29	0	0	25	0	13	0	0	0	0	83	146	0	0	1	1
8:45 AM	0	0	10	0	0	0	12	0	0	1	0	0	0	0	0	0	23	0	0	0	3	0
9:00 AM	0	0	8	0	0	0	9	0	0	0	0	0	0	0	0	0	17	0	0	1	0	0
9:15 AM	0	0	10	0	0	0	13	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0
Count Total	0	0	58	0	0	0	130	0	0	44	0	32	0	0	0	0	264	0	0	5	1	0
Peak Hour	0	0	40	0	0	0	108	0	0	44	0	32	0	0	0	0	224	0	0	4	1	0

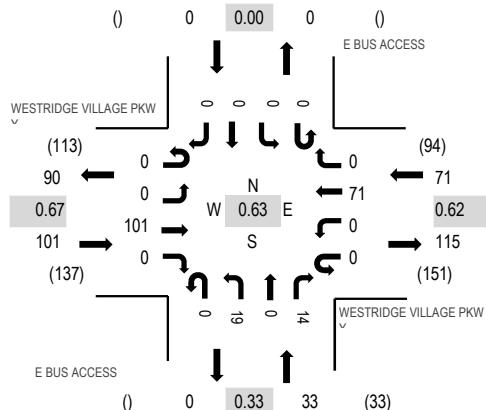
Location: 38 E BUS ACCESS & WESTRIDGE VILLAGE PKWY PM

Date: Wednesday, November 13, 2024

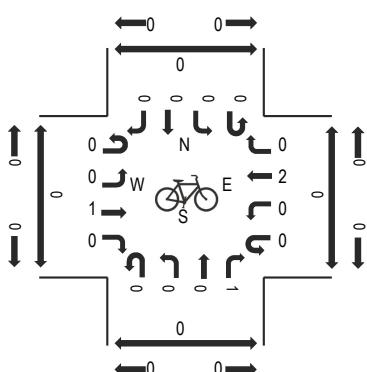
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

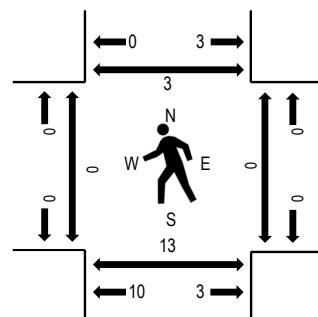
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKW				WESTRIDGE VILLAGE PKW				E BUS ACCESS				E BUS ACCESS				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	
2:45 PM	0	0	17	0	0	0	15	0	0	0	0	0	0	0	0	0	32	201	0	0	3	0
3:00 PM	0	0	16	0	0	0	12	0	0	0	0	0	0	0	0	0	28	205	0	0	9	2
3:15 PM	0	0	24	0	0	0	30	0	0	2	0	4	0	0	0	0	60	204	0	0	3	0
3:30 PM	0	0	39	0	0	0	17	0	0	16	0	9	0	0	0	0	81	0	0	0	1	0
3:45 PM	0	0	22	0	0	0	12	0	0	1	0	1	0	0	0	0	36	0	0	0	0	1
4:00 PM	0	0	19	0	0	0	8	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0
Count Total	0	0	137	0	0	0	94	0	0	19	0	14	0	0	0	0	264	0	0	16	3	
Peak Hour	0	0	101	0	0	0	71	0	0	19	0	14	0	0	0	0	205	0	0	13	3	

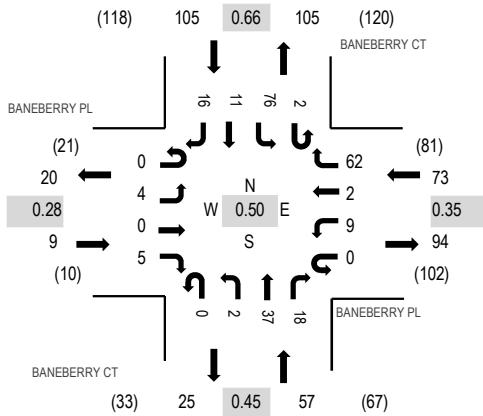
Location: 39 BANEBERRY CT & BANEBERRY PL AM

Date: Wednesday, November 13, 2024

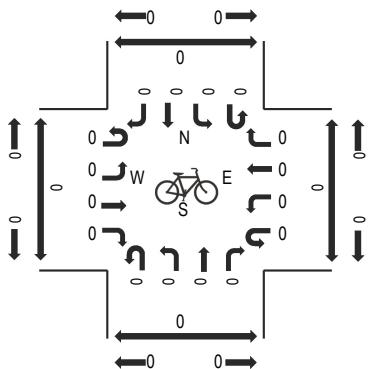
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

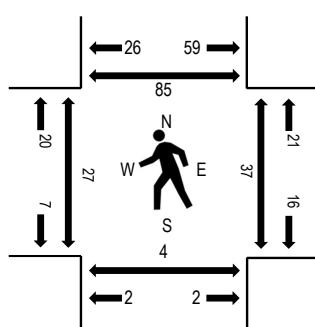
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BANEBERRY PL				BANEBERRY PL				BANEBERRY CT				BANEBERRY CT				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			West	East	South	North	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total					
8:00 AM	0	0	0	0	0	1	0	3	0	0	6	0	1	26	4	0	41	244	0	0	0	0
8:15 AM	0	0	0	1	0	1	0	11	0	2	9	4	0	28	5	7	68	223	9	6	0	35
8:30 AM	0	4	0	4	0	7	2	43	0	0	18	14	1	20	1	9	123	167	16	31	4	47
8:45 AM	0	0	0	0	0	0	0	5	0	0	4	0	0	2	1	0	12		2	0	0	3
9:00 AM	0	0	0	0	0	0	1	2	0	0	6	1	0	5	5	0	20		0	0	0	1
9:15 AM	0	0	1	0	0	1	0	4	0	0	3	0	0	1	2	0	12		0	0	0	0
Count Total	0	4	1	5	0	10	3	68	0	2	46	19	2	82	18	16	276		27	37	4	86
Peak Hour	0	4	0	5	0	9	2	62	0	2	37	18	2	76	11	16	244		27	37	4	85

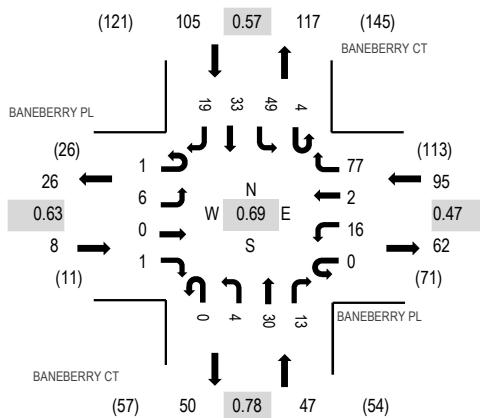
Location: 39 BANEBERRY CT & BANEBERRY PL PM

Date: Wednesday, November 13, 2024

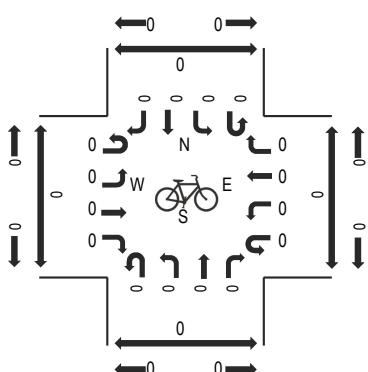
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

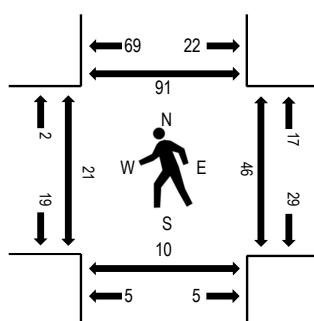
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BANEBERRY PL				BANEBERRY PL				BANEBERRY CT				BANEBERRY CT				Rolling Hour	Pedestrian Crossings				
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North
2:45 PM	0	2	0	0	0	0	0	4	0	0	3	0	0	5	0	0	19	231	1	0	0	1
3:00 PM	0	2	0	0	0	0	0	5	0	1	5	6	2	16	7	3	47	255	1	0	1	0
3:15 PM	1	0	0	1	0	3	0	8	0	0	8	6	2	26	12	6	73	233	3	20	6	29
3:30 PM	0	4	0	0	0	12	2	41	0	3	12	0	0	3	8	7	92	17	24	3	62	
3:45 PM	0	0	0	0	0	1	0	23	0	0	5	1	0	4	6	3	43	0	2	0	0	0
4:00 PM	0	1	0	0	0	0	0	14	0	0	4	0	0	4	2	0	25		2	2	1	2
Count Total	1	9	0	1	0	16	2	95	0	4	37	13	4	58	40	19	299		24	48	11	94
Peak Hour	1	6	0	1	0	16	2	77	0	4	30	13	4	49	33	19	255		21	46	10	91

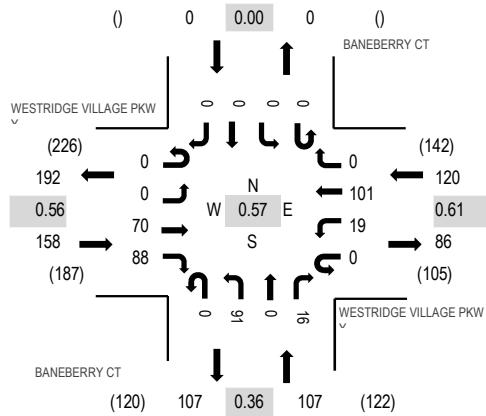
Location: 40 BANEERRY CT & WESTRIDGE VILLAGE PKWY AM

Date: Wednesday, November 13, 2024

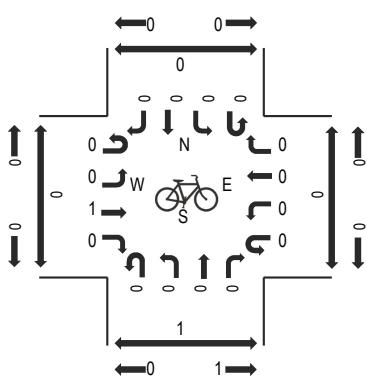
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

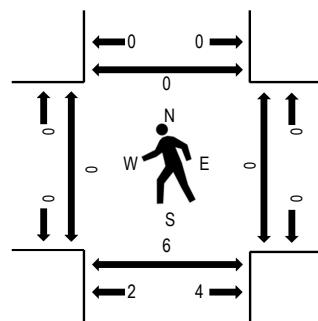
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKWY				WESTRIDGE VILLAGE PKWY				BANEERRY CT				BANEERRY CT				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
8:00 AM	0	0	8	24	0	10	15	0	0	0	8	0	0	0	0	0	65	385	0	0	0
8:15 AM	0	0	28	43	0	3	28	0	0	0	14	0	1	0	0	0	117	352	0	0	3
8:30 AM	0	0	26	19	0	6	43	0	0	0	59	0	15	0	0	0	168	269	0	0	2
8:45 AM	0	0	8	2	0	0	15	0	0	0	10	0	0	0	0	0	35		0	0	1
9:00 AM	0	0	6	9	0	1	8	0	0	0	6	0	2	0	0	0	32		0	0	0
9:15 AM	0	0	11	3	0	0	13	0	0	0	7	0	0	0	0	0	34		0	0	0
Count Total	0	0	87	100	0	20	122	0	0	0	104	0	18	0	0	0	451		0	0	6
Peak Hour	0	0	70	88	0	19	101	0	0	0	91	0	16	0	0	0	385		0	0	6

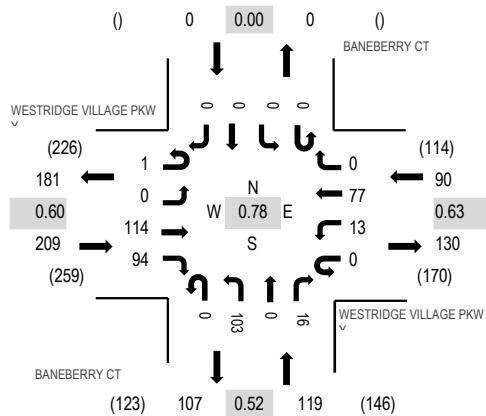
Location: 40 BANEERRY CT & WESTRIDGE VILLAGE PKWY PM

Date: Wednesday, November 13, 2024

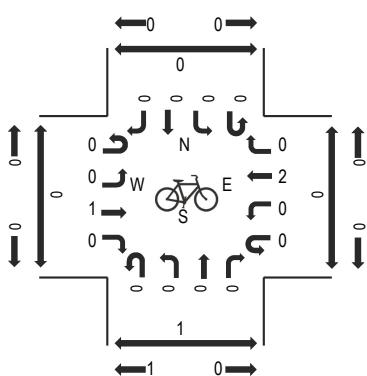
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

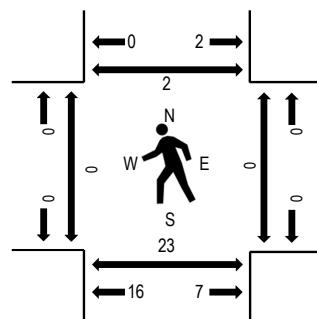
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTRIDGE VILLAGE PKWY				WESTRIDGE VILLAGE PKWY				BANEERRY CT				BANEERRY CT				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	
2:45 PM	0	0	20	9	0	1	13	0	0	0	7	0	0	0	0	0	50	391	0	0	0	0
3:00 PM	0	0	29	26	0	6	8	0	0	0	9	0	1	0	0	0	79	418	0	0	3	2
3:15 PM	1	0	40	46	0	5	18	0	0	0	16	0	2	0	0	0	128	390	0	0	12	0
3:30 PM	0	0	25	11	0	2	34	0	0	0	54	0	8	0	0	0	134	0	0	5	0	0
3:45 PM	0	0	20	11	0	0	17	0	0	0	24	0	5	0	0	0	77	0	0	3	0	0
4:00 PM	0	0	15	6	0	0	10	0	0	0	15	0	5	0	0	0	51	0	0	0	0	0
Count Total	1	0	149	109	0	14	100	0	0	0	125	0	21	0	0	0	519	0	0	23	2	0
Peak Hour	1	0	114	94	0	13	77	0	0	0	103	0	16	0	0	0	418	0	0	23	2	0

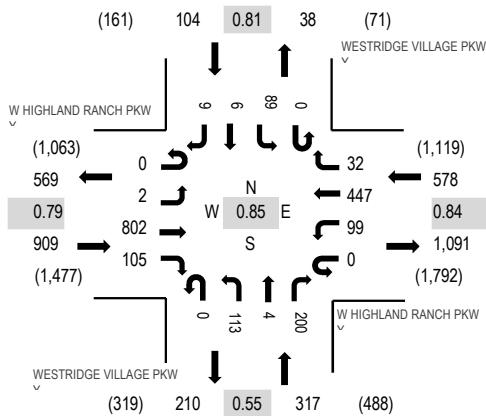
Location: 41 WESTRIDGE VILLAGE PKWY & W HIGHLAND RANCH PKWY AM

Date: Wednesday, November 13, 2024

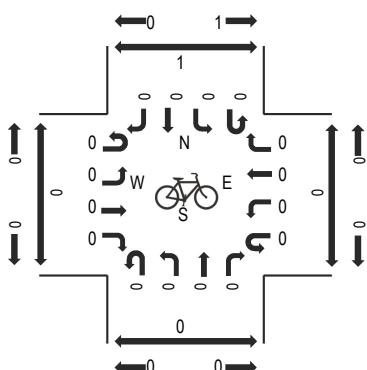
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

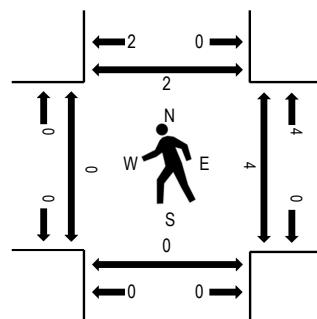
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

W HIGHLAND RANCH PKWY W HIGHLAND RANCH PKWY WESTRIDGE VILLAGE PKWY WESTRIDGE VILLAGE PKWY

Interval Start Time	Eastbound				Westbound				Northbound				Southbound				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
7:45 AM	0	0	227	7	0	19	116	4	0	12	0	34	0	22	1	2	444	1,908	0	0	0
8:00 AM	0	1	171	16	0	20	87	2	0	15	0	36	0	15	1	2	366	1,858	0	2	0
8:15 AM	0	1	223	62	0	33	105	10	0	21	1	49	0	29	1	2	537	1,819	0	0	0
8:30 AM	0	0	181	20	0	27	139	16	0	65	3	81	0	23	3	3	561	1,601	0	2	0
8:45 AM	0	1	168	10	0	18	120	8	0	22	1	31	0	15	0	0	394	1,337	0	0	0
9:00 AM	0	2	130	7	1	25	100	7	0	10	0	32	0	12	0	1	327	0	0	1	0
9:15 AM	0	0	115	6	0	17	122	6	0	15	0	26	0	11	0	1	319	0	3	0	0
9:30 AM	0	1	117	11	0	13	97	7	0	6	0	28	0	15	2	0	297	0	0	0	0
Count Total	0	6	1,332	139	1	172	886	60	0	166	5	317	0	142	8	11	3,245	0	7	1	2
Peak Hour	0	2	802	105	0	99	447	32	0	113	4	200	0	89	6	9	1,908	0	4	0	2

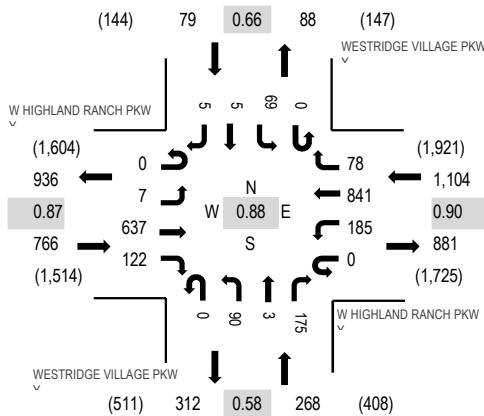
Location: 41 WESTRIDGE VILLAGE PKWY & W HIGHLAND RANCH PKWY PM

Date: Wednesday, November 13, 2024

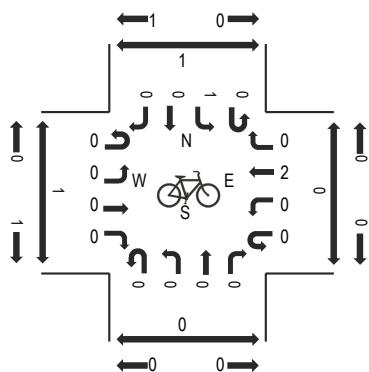
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

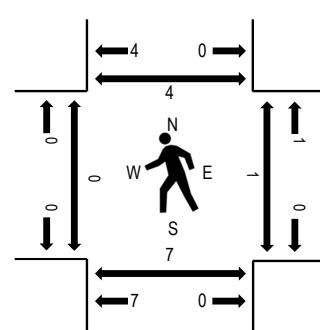
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

W HIGHLAND RANCH PKW W HIGHLAND RANCH PKW WESTRIDGE VILLAGE PKW WESTRIDGE VILLAGE PKW

Interval Start Time	Eastbound				Westbound				Northbound				Southbound				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	
2:30 PM	0	0	166	12	0	32	121	8	0	7	1	26	0	12	1	1	387	1,908	1	0	1	1
2:45 PM	0	1	166	17	0	40	164	15	0	8	1	23	0	14	0	1	450	2,150	0	3	0	0
3:00 PM	0	1	159	32	0	58	220	11	0	6	0	28	0	14	2	1	532	2,217	0	1	5	3
3:15 PM	0	2	171	56	0	49	173	16	0	9	0	33	0	26	3	1	539	2,162	0	0	0	0
3:30 PM	0	3	168	17	0	36	236	34	0	51	2	69	0	13	0	0	629	2,079	0	0	2	0
3:45 PM	0	1	139	17	0	42	212	17	0	24	1	45	0	16	0	3	517		0	0	0	1
4:00 PM	0	1	186	16	0	30	169	14	0	13	1	35	0	10	0	2	477		0	0	0	1
4:15 PM	0	2	166	15	0	36	173	15	0	8	0	17	0	23	0	1	456		0	0	1	0
Count Total	0	11	1,321	182	0	323	1,468	130	0	126	6	276	0	128	6	10	3,987		1	4	9	6
Peak Hour	0	7	637	122	0	185	841	78	0	90	3	175	0	69	5	5	2,217		0	1	7	4

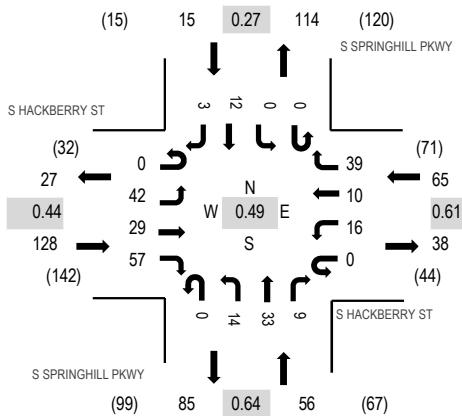
Location: 42 S SPRINGHILL PKWY & S HACKBERRY ST AM

Date: Wednesday, November 13, 2024

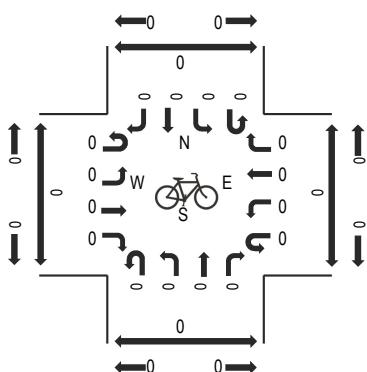
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

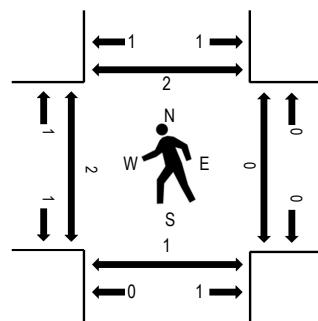
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S HACKBERRY ST				S HACKBERRY ST				S SPRINGHILL PKWY				S SPRINGHILL PKWY				Rolling Hour	Pedestrian Crossings					
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North	
7:45 AM	0	0	0	6	0	3	0	1	0	0	3	2	2	0	0	0	0	17	260	0	0	0	1
8:00 AM	0	2	1	6	0	7	1	2	0	0	3	6	2	0	0	0	0	30	264	1	0	0	1
8:15 AM	0	20	5	11	0	2	3	22	0	2	14	0	0	0	0	0	0	79	248	0	0	1	0
8:30 AM	0	19	19	35	0	5	6	14	0	7	10	5	0	0	11	3	134	0	0	0	0	1	
8:45 AM	0	1	4	5	0	2	0	1	0	2	3	2	0	0	1	0	0	21	1	0	0	0	0
9:00 AM	0	1	3	4	0	1	0	1	0	2	1	1	0	0	0	0	0	14	0	0	0	0	1
Count Total	0	43	32	67	0	20	10	41	0	19	36	12	0	0	12	3	295	2	0	1	4		
Peak Hour	0	42	29	57	0	16	10	39	0	14	33	9	0	0	12	3	264	2	0	1	2		

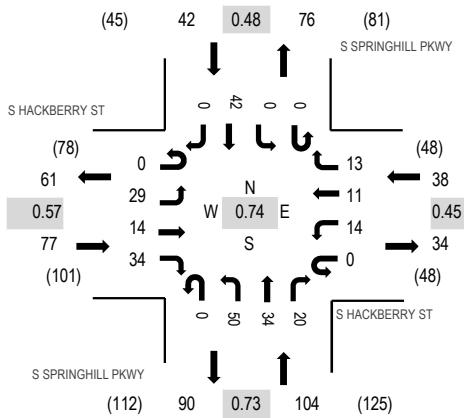
Location: 42 S SPRINGHILL PKWY & S HACKBERRY ST PM

Date: Wednesday, November 13, 2024

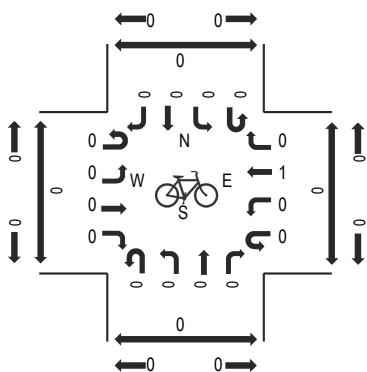
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

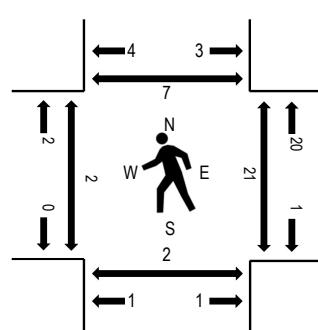
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S HACKBERRY ST				S HACKBERRY ST				S SPRINGHILL PKWY				S SPRINGHILL PKWY				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	
2:45 PM	0	1	2	4	0	4	2	0	0	7	0	6	0	0	0	0	26	249	0	1	3	0
3:00 PM	0	5	1	3	0	2	2	1	0	18	11	7	0	0	1	0	51	261	0	16	2	4
3:15 PM	0	19	2	6	0	5	7	10	0	16	16	3	0	0	0	0	84	242	2	4	0	2
3:30 PM	0	5	10	22	0	4	1	2	0	9	6	6	0	0	23	0	88	0	1	0	0	0
3:45 PM	0	0	1	3	0	3	1	0	0	7	1	4	0	0	0	18	0	38	0	0	0	1
4:00 PM	0	1	6	10	0	1	2	1	0	6	2	0	0	0	3	0	32	0	0	0	0	3
Count Total	0	31	22	48	0	19	15	14	0	63	36	26	0	0	45	0	319	2	22	5	10	
Peak Hour	0	29	14	34	0	14	11	13	0	50	34	20	0	0	42	0	261	2	21	2	7	

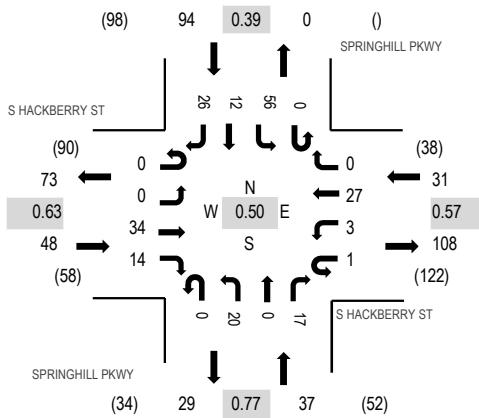
Location: 43 SPRINGHILL PKWY & S HACKBERRY ST AM

Date: Wednesday, November 13, 2024

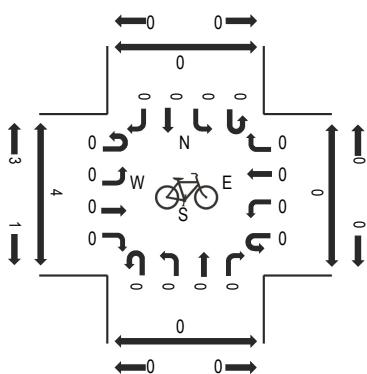
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

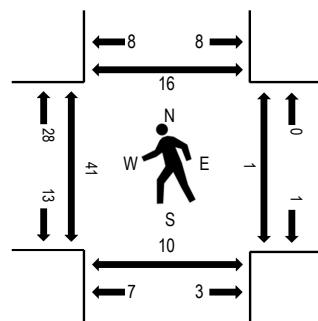
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S HACKBERRY ST				S HACKBERRY ST				SPRINGHILL PKWY				SPRINGHILL PKWY				Rolling Hour	Pedestrian Crossings					
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			West	East	South	North		
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total						
7:45 AM	0	0	5	1	0	1	3	0	0	0	3	0	3	0	0	0	17	208	0	0	0	2	
8:00 AM	0	0	5	2	0	0	4	0	0	0	5	0	1	0	0	3	21	210	0	0	0	0	
8:15 AM	0	0	15	5	0	1	9	0	0	0	7	0	5	0	0	16	65	208	10	1	4	3	
8:30 AM	0	0	12	5	1	2	11	0	0	0	4	0	9	0	0	34	9	18	105	31	0	6	12
8:45 AM	0	0	2	2	0	0	3	0	0	0	4	0	2	0	0	3	1	2	19	0	0	0	1
9:00 AM	0	0	3	1	0	1	2	0	0	0	6	0	3	0	0	0	1	2	19	0	0	0	1
Count Total	0	0	42	16	1	5	32	0	0	29	0	23	0	56	13	29	246	41	1	10	19		
Peak Hour	0	0	34	14	1	3	27	0	0	20	0	17	0	56	12	26	210	41	1	10	16		

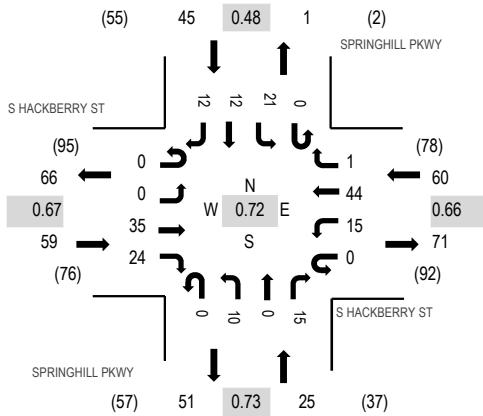
Location: 43 SPRINGHILL PKWY & S HACKBERRY ST PM

Date: Wednesday, November 13, 2024

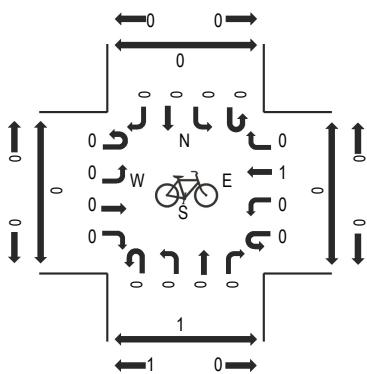
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

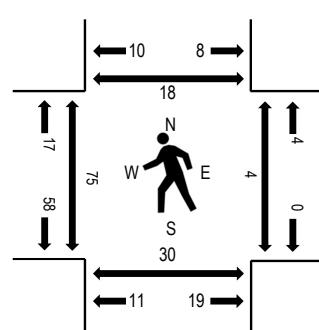
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S HACKBERRY ST				S HACKBERRY ST				SPRINGHILL PKWY				SPRINGHILL PKWY				Rolling Hour	Pedestrian Crossings						
	Eastbound		Westbound		Northbound		Southbound		U-Turn		Left		Thru		Right			Total	West	East	South	North		
2:45 PM	0	0	7	0	0	0	10	0	1	4	1	1	1	1	0	1	0	1	26	183	2	1	2	2
3:00 PM	0	0	5	5	0	2	14	1	0	3	0	3	0	3	0	1	1	1	36	189	3	0	7	5
3:15 PM	0	0	8	3	0	4	20	0	0	4	0	6	0	5	4	1	55	184	26	2	7	4		
3:30 PM	0	0	18	4	0	6	6	0	0	1	0	5	0	14	6	6	66	41	1	14	5	5		
3:45 PM	0	0	4	12	0	3	4	0	0	2	0	1	0	1	1	4	32	5	1	2	4	4		
4:00 PM	0	0	7	3	0	2	6	0	0	3	0	2	0	3	0	5	31	2	1	3	4	4		
Count Total	0	0	49	27	0	17	60	1	1	17	1	18	0	25	12	18	246	79	6	35	24			
Peak Hour	0	0	35	24	0	15	44	1	0	10	0	15	0	21	12	12	189	75	4	30	18			

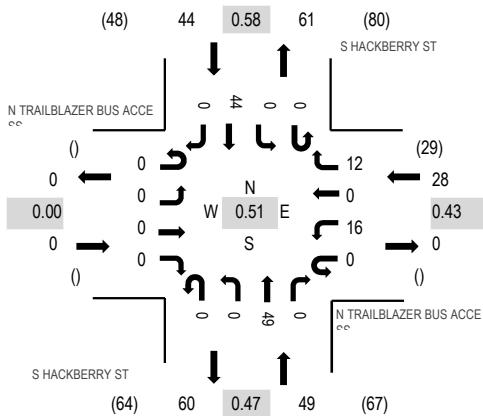
Location: 44 S HACKBERRY ST & N TRAILBLAZER BUS ACCESS AM

Date: Wednesday, November 13, 2024

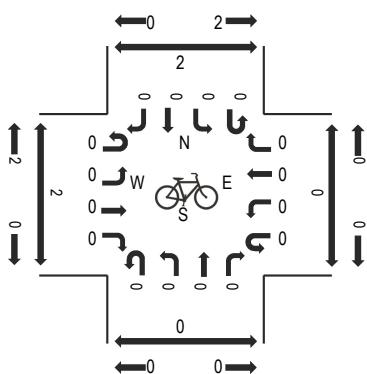
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

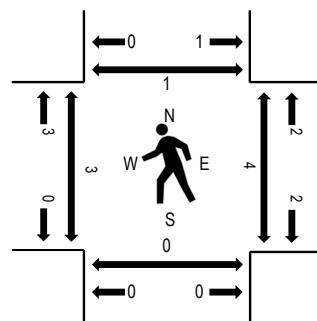
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	N TRAILBLAZER BUS ACCESS				N TRAILBLAZER BUS ACCESS				S HACKBERRY ST				S HACKBERRY ST				Rolling Hour	Pedestrian Crossings					
	Eastbound	U-Turn	Left	Thru	Right	Eastbound	U-Turn	Left	Thru	Right	Northbound	U-Turn	Left	Thru	Right	Southbound	West	East	South	North			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	121	1	2	0	0	
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	12	120	0	0	0	0	
8:15 AM	0	0	0	0	0	0	6	0	4	0	0	8	0	0	0	0	37	119	0	1	0	0	
8:30 AM	0	0	0	0	0	9	0	8	0	0	29	0	0	0	0	13	0	59	2	1	0	1	
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	9	0	0	0	0	12	1	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	2	0	11	0	0	0	0
Count Total	0	0	0	0	0	16	0	13	0	0	67	0	0	0	0	48	0	144	4	4	0	1	
Peak Hour	0	0	0	0	0	16	0	12	0	0	49	0	0	0	0	44	0	121	3	4	0	1	

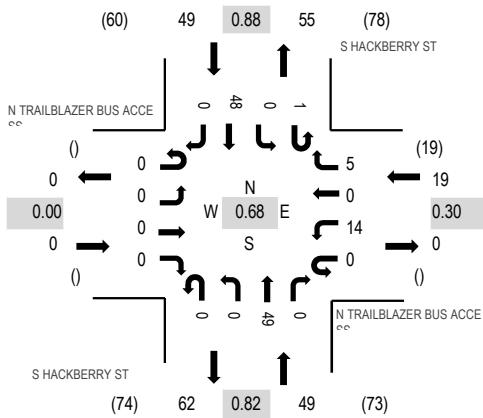
Location: 44 S HACKBERRY ST & N TRAILBLAZER BUS ACCESS PM

Date: Wednesday, November 13, 2024

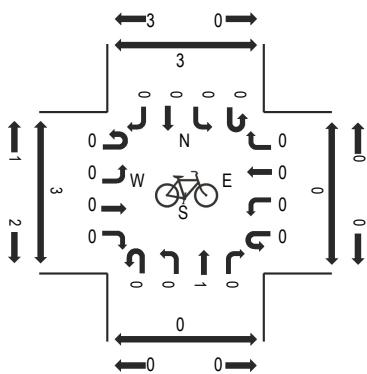
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

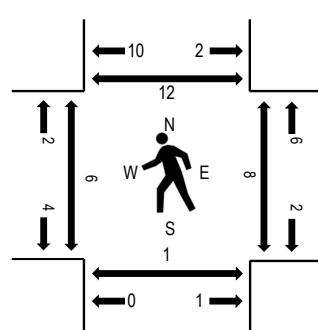
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	N TRAILBLAZER BUS ACCESS				N TRAILBLAZER BUS ACCESS				S HACKBERRY ST				S HACKBERRY ST				Rolling Hour	Pedestrian Crossings						
	Eastbound	U-Turn	Left	Thru	Right	Eastbound	U-Turn	Left	Thru	Right	Northbound	U-Turn	Left	Thru	Right	Southbound	West	East	South	North				
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	106	1	1	0	0		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	117	0	3	0	0		
3:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	6	0	1	0	13	0	22	111	2	3	1	2
3:30 PM	0	0	0	0	0	11	0	5	0	0	15	0	0	0	0	0	12	0	43	4	2	0	10	
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	14	0	0	0	14	0	29	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	10	0	0	0	0	6	0	17	1	2	0	1	
Count Total	0	0	0	0	0	14	0	5	1	0	72	0	1	0	59	0	152	8	11	1	13			
Peak Hour	0	0	0	0	0	14	0	5	0	0	49	0	1	0	48	0	117	6	8	1	12			

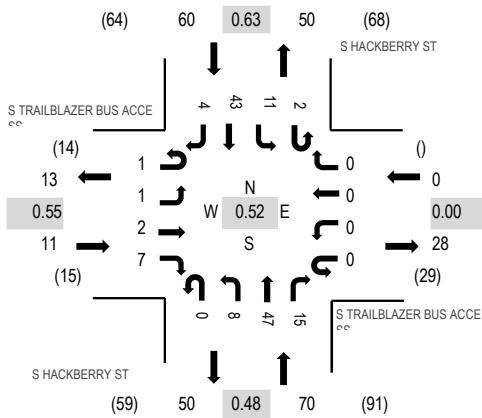
Location: 45 S HACKBERRY ST & S TRAILBLAZER BUS ACCESS AM

Date: Wednesday, November 13, 2024

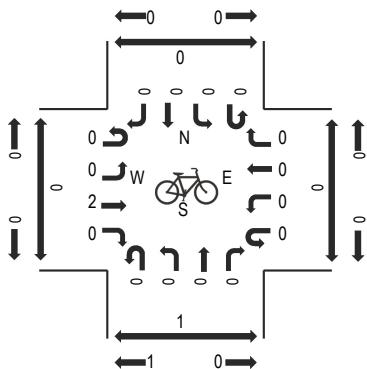
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

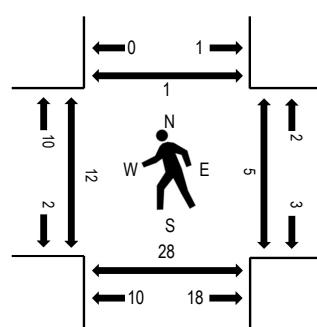
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S TRAILBLAZER BUS ACCESS				S TRAILBLAZER BUS ACCESS				S HACKBERRY ST				S HACKBERRY ST				Rolling Hour	Pedestrian Crossings				
	Eastbound	Westbound	Eastbound	Westbound	Northbound	Southbound	Northbound	Southbound	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
7:45 AM	0	0	0	2	0	0	0	0	0	1	5	0	2	0	4	1	15	141	1	2	2	0
8:00 AM	1	0	0	1	0	0	0	0	0	2	6	1	0	0	6	0	17	141	0	2	1	0
8:15 AM	0	0	1	1	0	0	0	0	0	0	8	7	0	5	19	0	41	138	0	0	7	1
8:30 AM	0	1	1	3	0	0	0	0	0	5	28	7	0	6	14	3	68	11	1	18	0	
8:45 AM	0	0	0	2	0	0	0	0	0	1	9	1	0	0	2	0	15	1	0	0	0	
9:00 AM	0	0	0	2	0	0	0	0	1	0	9	0	0	0	2	0	14	0	0	0	0	
Count Total	1	1	2	11	0	0	0	0	1	9	65	16	2	11	47	4	170	13	5	28	1	
Peak Hour	1	1	2	7	0	0	0	0	0	8	47	15	2	11	43	4	141	12	5	28	1	

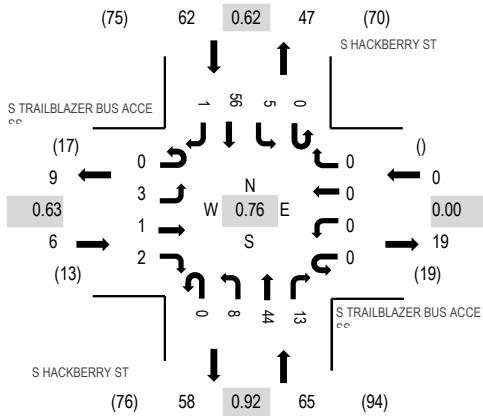
Location: 45 S HACKBERRY ST & S TRAILBLAZER BUS ACCESS PM

Date: Wednesday, November 13, 2024

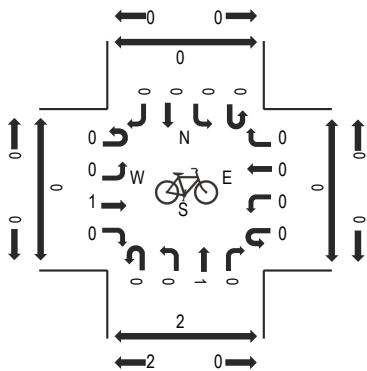
Peak Hour: 03:00 PM - 04:00 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

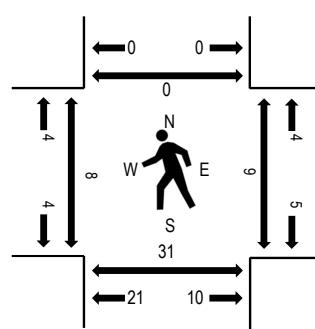
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	S TRAILBLAZER BUS ACCESS				S TRAILBLAZER BUS ACCESS				S HACKBERRY ST				S HACKBERRY ST				Rolling Hour	Pedestrian Crossings					
	Eastbound	Westbound	Eastbound	Westbound	Northbound	Southbound	Northbound	Southbound	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North		
2:45 PM	0	1	0	2	0	0	0	0	0	0	4	11	0	0	0	6	0	24	128	1	1	1	0
3:00 PM	0	0	0	0	0	0	0	0	0	3	14	1	0	0	0	9	0	27	133	1	0	3	0
3:15 PM	0	0	1	1	0	0	0	0	0	2	6	10	0	0	1	12	0	33	131	2	4	9	0
3:30 PM	0	0	0	0	0	0	0	0	0	3	15	1	0	0	4	20	1	44	5	5	16	0	
3:45 PM	0	3	0	1	0	0	0	0	0	0	9	1	0	0	0	15	0	29	0	0	3	0	
4:00 PM	0	0	0	4	0	0	0	0	0	3	11	0	0	0	0	6	1	25	1	2	3	0	
Count Total	0	4	1	8	0	0	0	0	0	15	66	13	0	0	5	68	2	182	10	12	35	0	
Peak Hour	0	3	1	2	0	0	0	0	0	8	44	13	0	0	5	56	1	133	8	9	31	0	

Appendix C Existing Traffic Signal Timing Plans

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Phase [1.1.1]

	$\phi 1$ (SWL)	$\phi 2$ (NET)	$\phi 3$ (NWL)	$\phi 4$ (SET)	$\phi 5$ (NEL)	$\phi 6$ (SWT)	$\phi 7$	$\phi 8$ (NWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Walk	0	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	19	0	0	0	20	0	27	0	0	0	0	0	0	0	0
Min Green	5	15	5	13	5	15	5	13	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	2.5	2.5	1.5	3	1.5	2.5	0	0	0	0	0	0	0	0
Max1	25	40	40	25	15	40	15	40	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	3	4.5	3	4.5	3	4.5	3	3	3	3	3	3	3	3
Red Clr	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Red Revert	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry			ON					ON								
Auto Flash Exit		ON						ON								
Non-Actuated 1																
Non-Actuated 2																

Phase Option [1.1.2]

	$\phi 1$ (SWL)	$\phi 2$ (NET)	$\phi 3$ (NWL)	$\phi 4$ (SET)	$\phi 5$ (NEL)	$\phi 6$ (SWT)	$\phi 7$	$\phi 8$ (NWT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																

Phase Option+ [1.1.3]/[1.1.5]

	$\phi 1$	$\phi 2$	$\phi 3$	$\phi 4$	$\phi 5$	$\phi 6$	$\phi 7$	$\phi 8$	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time	5					5		5								
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1																
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5																
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Ring Sequence [1.2.4]

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	RingAlgo
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF		1	OFF	OFF		

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
	60		

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON		ON	ON	ON	ON	
Added Initial	ON	ON	ON	ON	ON		ON	ON	ON	ON		ON	ON	ON	ON	
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	
Switch Phase	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	
Delay Time	0	0	0	0	0	0	3	0	12	0	0	0	0	0	0	

Detector, Vehicle Parameters 17-32 [5.1]

Detector, Ped Detectors 1-16 [5.4]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

Overlap General Parameters [1.5.1]

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

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases				Modifier Phases				Type	Green	Yellow	Red
Overlap 1	1				2				FYA-4	4.5		
Overlap 2	3				4				FYA-4	4.5		
Overlap 3	5				6				FYA-4	3		
Overlap 4	7				8				FYA-4	3		
Overlap 5	1								NORMAL	3	2	
Overlap 6	3								NORMAL	3	2	
Overlap 7									NORMAL	3.5	1.5	
Overlap 8									NORMAL	3.5	1.5	

Overlap Conflict Parameters+ [1.5.2.2]

Overlap Program Parameters+ [1.5.2.3]

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

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

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	3	3	3	3
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	3
Dwell Cyc Veh 2	0	0	5	7	6	8
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	4	4	4
Exit 2	0	0	7	7	7	7
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

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

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	1	1	1	1
DwellCyc Over 2	0	0	2	2	2	2
DwellCyc Over 3	0	0	3	3	3	3
DwellCyc Over 4	0	0	4	4	4	4
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+												
Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.4]

Coordination, Pattern 17-32 [2.4]

Coordination, Pattern+ 1-8 [2.5]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Coordination, Splits [2.7.1]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

TB Coor, Advanced Scheduler [4.3]

TB Coor, Day Plan [4.4]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

[1.1.6.3]

Douglas County

Timing Sheet

11/27/2024 10:54:27 AM

Station : 19 - HR Pkwy & WR Pkwy/Springhill Pkwy (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

User Input map [1.8.9.1]

User Output map [1.8.9.2]

Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Phase [1.1.1]

	$\phi 1$ (WL)	$\phi 2$ (ET)	$\phi 3$	$\phi 4$ (ST)	$\phi 5$ (EL)	$\phi 6$ (WT)	$\phi 7$	$\phi 8$ (NT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	13	0	23	0	11	0	22	0	0	0	0	0	0	0	0
Min Green	5	20	0	5	5	20	0	5	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	0	2	1.5	3	0	2	0	0	0	0	0	0	0	0
Max1	15	40	0	25	15	40	0	25	0	0	0	0	0	0	0	0
Max2	8	30	0	20	8	30	0	20	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	0	3	3	4.5	0	3	3	3	3	3	3	3	3	3
Red Clr	1	2	0	2	1	2	0	2	2	2	2	2	2	2	2	2
Red Revert	5	5	0	5	5	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																

Phase Option [1.1.2]

	$\phi 1$ (WL)	$\phi 2$ (ET)	$\phi 3$	$\phi 4$ (ST)	$\phi 5$ (EL)	$\phi 6$ (WT)	$\phi 7$	$\phi 8$ (NT)	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Enable	ON	ON		ON	ON	ON		ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON														
Cond Service																
Add Init Calc																

Phase Option+ [1.1.3]/[1.1.5]

	$\phi 1$	$\phi 2$	$\phi 3$	$\phi 4$	$\phi 5$	$\phi 6$	$\phi 7$	$\phi 8$	$\phi 9$	$\phi 10$	$\phi 11$	$\phi 12$	$\phi 13$	$\phi 14$	$\phi 15$	$\phi 16$
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time																
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1		ON														
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5							ON									
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Redirect P Calls From 1																
Redirect P Calls To 1																
Redirect P Calls From 2																
Redirect P Calls To 2																
Redirect P Calls From 3																
Redirect P Calls To 3																
Redirect P Calls From 4																
Redirect P Calls To 4																

Prepared By / Date

Reviewed By / Date

Douglas County

Timing Sheet

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Ring Sequence [1.2.4]

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	Ring Algo	
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF	1	OFF	OFF				

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
--------	-----	------	--------

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON			ON	ON	ON	ON
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

Detector, Ped Detectors 1-16 [5.4]

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

Overlap General Parameters [1.5.1]

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

Overlap Program Parameters [1.5.2.1]

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

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

Overlap Program Parameters+ [1.5.2.3]

Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)**Preemption Times[3.1]/Phases[3.2]/Options[3.3]**

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	8
Dwell Cyc Veh 2	0	0	5	0	6	0
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

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

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	0	0	0	0
DwellCyc Over 2	0	0	0	0	0	0
DwellCyc Over 3	0	0	0	0	0	0
DwellCyc Over 4	0	0	0	0	0	0
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCP Yield Sign	Closed Loop Active
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON OFF

Coordination, Pattern 1-16 [2.4]

Coordination, Pattern 17-32 [2.4]

Coordination, Pattern+ 1-8 [2.5]

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Coordination, Splits [2.7.1]

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

TB Coor, Advanced Scheduler [4.3]

TB Coor, Day Plan [4.4]

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

[1.1.6.3]

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Station : 33 - HR Pkwy & Deer Creek/Westridge Village Pkwy (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

User Input map [1.8.9.1]

User Output map [1.8.9.2]

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Phase [1.1.1]

	φ1 (SWL)	φ2 (NET)	φ3	φ4 (SET)	φ5 (NEL)	φ6 (SWT)	φ7	φ8 (NWT)	φ9	φ10	φ11	φ12	φ13	φ14	φ15	φ16
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clearance	0	15	0	26	0	15	0	27	0	0	0	0	0	0	0	0
Min Green	5	25	0	5	5	25	0	5	0	0	0	0	0	0	0	0
Gap Ext	1.5	3	0	3	1.5	3	0	3	0	0	0	0	0	0	0	0
Max1	10	45	0	30	10	45	0	30	0	0	0	0	0	0	0	0
Max2	8	25	0	15	8	25	0	15	0	0	0	0	0	0	0	0
Yellow Clr	3	4.5	3	3	3	4.5	3	3	3	3	3	3	3	3	3	3
Red Clr	2	2	3	2	2	2	4	2	2	2	2	2	2	2	2	2
Red Revert	5	5	0	5	5	5	0	5	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Flash Entry			ON					ON								
Auto Flash Exit		ON			ON											
Non-Actuated 1																
Non-Actuated 2																

Phase Option [1.1.2]

	φ1 (SWL)	φ2 (NET)	φ3	φ4 (SET)	φ5 (NEL)	φ6 (SWT)	φ7	φ8 (NWT)	φ9	φ10	φ11	φ12	φ13	φ14	φ15	φ16
Enable	ON	ON		ON	ON	ON		ON								
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON			ON											
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON			ON											
Cond Service																
Add Init Calc																

Phase Option+ [1.1.3]/[1.1.5]

	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8	φ9	φ10	φ11	φ12	φ13	φ14	φ15	φ16
Reserve																
Ped Clr Thru Yellow																
Skip Red-NoCall																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conflicting P																
Green Ped Delay Time				15				15								
Omit Yel																
Ped Out																
Start Yel																
Inhibit P1		ON														
Inhibit P2					ON											
Inhibit P3						ON										
Inhibit P4							ON									
Inhibit P5								ON								
Inhibit P6									ON							
Inhibit P7										ON						
Inhibit P8											ON					
Call Phs1												ON				
Call Phs2													ON			
Redirect P Calls From 1														ON		
Redirect P Calls To 1															ON	
Redirect P Calls From 2																ON
Redirect P Calls To 2																ON
Redirect P Calls From 3																ON
Redirect P Calls To 3																ON
Redirect P Calls From 4																ON
Redirect P Calls To 4																ON

Prepared By / Date

Reviewed By / Date

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Ring Sequence [1.2.4]

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Allow < 3 sec Yel	Allow Skip Yel	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Startup Calls	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time	Ring Algo	
OFF	5	RST	OFF	OFF	ON	6	STD8	OFF	4PH	OFF	1	OFF	OFF				

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
--------	-----	------	--------

Detector, Vehicle Parameters 1-16 [5.1]

Detector #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Yellow Lock																
Red Lock																
Extend	ON	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON
Added Initial																
Call	ON	ON	ON	ON		ON	ON	ON	ON	ON		ON	ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	7.5	0	3	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

Detector, Ped Detectors 1-16 [5.4]

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Timing Sheet

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Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Channels/SDLC, Assign to Phases [1.8.1]

Channel/SDLC +, Assign to Phases [1.8.4]

Overlap General Parameters [1.5.1]

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

Overlap Program Parameters [1.5.2.1]

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

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases		Conflicting Overlaps		Conflicting Peds	
Overlap 1						
Overlap 2						
Overlap 3						
Overlap 4						
Overlap 5						
Overlap 6						
Overlap 7						
Overlap 8						

Overlap Program Parameters+ [1.5.2.3]

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)**Preemption Times[3.1]/Phases[3.2]/Options[3.3]**

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON				
Override Higher Preempt	ON	ON				
Flash in Dwell						
Link to Preempt	0	0	0	0	0	0
Delay	0	0	0	0	0	0
Min Duration	0	0	5	5	5	5
Min Green	0	0	5	5	5	5
Min Walk	0	0	0	0	0	0
Ped Clear	0	0	3	3	3	3
Track Green	0	0	0	0	0	0
Min Dwell	0	0	0	0	0	0
Max Presence	0	0	120	120	120	120
Track Veh 1	0	0	0	0	0	0
Track Veh 2	0	0	0	0	0	0
Track Veh 3	0	0	0	0	0	0
Track Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 1	0	0	2	4	1	8
Dwell Cyc Veh 2	0	0	5	0	6	0
Dwell Cyc Veh 3	0	0	0	0	0	0
Dwell Cyc Veh 4	0	0	0	0	0	0
Dwell Cyc Veh 5	0	0	0	0	0	0
Dwell Cyc Veh 6	0	0	0	0	0	0
Dwell Cyc Veh 7	0	0	0	0	0	0
Dwell Cyc Veh 8	0	0	0	0	0	0
Dwell Cyc Veh 9	0	0	0	0	0	0
Dwell Cyc Veh 10	0	0	0	0	0	0
Dwell Cyc Veh 11	0	0	0	0	0	0
Dwell Cyc Veh 12	0	0	0	0	0	0
Dwell Cyc Ped1	0	0	0	0	0	0
Dwell Cyc Ped2	0	0	0	0	0	0
Dwell Cyc Ped3	0	0	0	0	0	0
Dwell Cyc Ped4	0	0	0	0	0	0
Dwell Cyc Ped5	0	0	0	0	0	0
Dwell Cyc Ped6	0	0	0	0	0	0
Dwell vPed7	0	0	0	0	0	0
Dwell Cyc Ped8	0	0	0	0	0	0
Exit 1	0	0	4	0	4	0
Exit 2	0	0	8	0	8	0
Exit 3	0	0	0	0	0	0
Exit 4	0	0	0	0	0	0

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

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell	0	0	0	0	0	0
Pattern	0	0	0	0	0	0
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1	0	0	0	0	0	0
Track Over 2	0	0	0	0	0	0
Track Over 3	0	0	0	0	0	0
Track Over 4	0	0	0	0	0	0
Track Over 5	0	0	0	0	0	0
Track Over 6	0	0	0	0	0	0
Track Over 7	0	0	0	0	0	0
Track Over 8	0	0	0	0	0	0
Track Over 9	0	0	0	0	0	0
Track Over 10	0	0	0	0	0	0
Track Over 11	0	0	0	0	0	0
Track Over 12	0	0	0	0	0	0
DwellCyc Over 1	0	0	1	1	1	1
DwellCyc Over 2	0	0	2	2	2	2
DwellCyc Over 3	0	0	3	3	3	3
DwellCyc Over 4	0	0	4	4	4	4
DwellCyc Over 5	0	0	0	0	0	0
DwellCyc Over 6	0	0	0	0	0	0
DwellCyc Over 7	0	0	0	0	0	0
DwellCyc Over 8	0	0	0	0	0	0
DwellCyc Over 9	0	0	0	0	0	0
DwellCyc Over 10	0	0	0	0	0	0
DwellCyc Over 11	0	0	0	0	0	0
DwellCyc Over 12	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0
Yellow	0	0	0	0	0	0
Red	0	0	0	0	0	0
Return Max	0	0	0	0	0	0

Preemption Adv Times[3.8]/Init Dwell [3.9]

Preempt	1	2	3	4	5	6
All Red B4 Preempt						
Reset Ext Dwell						
Reservice Preempt						
End Dwell						
DsblDwellCalls						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dynamic Exit Threshold	0	0	0	0	0	0
Initial Dwell Phase 1	0	0	0	0	0	0
Initial Dwell Phase 2	0	0	0	0	0	0
Initial Dwell Phase 3	0	0	0	0	0	0
Initial Dwell Phase 4	0	0	0	0	0	0
Ped 1	0	0	0	0	0	0
Ped 2	0	0	0	0	0	0
Ped 3	0	0	0	0	0	0
Ped 4	0	0	0	0	0	0
Initial Dwell Overlap 1	0	0	0	0	0	0
Initial Dwell Overlap 2	0	0	0	0	0	0
Initial Dwell Overlap 3	0	0	0	0	0	0
Initial Dwell Overlap 4	0	0	0	0	0	0
Initial Dwell Overlap 5	0	0	0	0	0	0
Initial Dwell Overlap 6	0	0	0	0	0	0
Initial Dwell Overlap 7	0	0	0	0	0	0
Initial Dwell Overlap 8	0	0	0	0	0	0
Initial Dwell Overlap 9	0	0	0	0	0	0
Initial Dwell Overlap 10	0	0	0	0	0	0
Initial Dwell Overlap 11	0	0	0	0	0	0
Initial Dwell Overlap 12	0	0	0	0	0	0
Initial Dwell Overlap 13	0	0	0	0	0	0
Initial Dwell Overlap 14	0	0	0	0	0	0
Initial Dwell Overlap 15	0	0	0	0	0	0

Initial Dwell Overlap 16 0 0 0 0 0 0 0 0

Coordination, Modes, + [2.1]

Modes

Modes+

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

modes												
Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Link Sign	Closed Loop Active	
RESERVED	TIMED	TIMED	NO RECYLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.4]

Coordination, Pattern 17-32 [2.4]

Coordination, Pattern+ 1-8 [2.5]

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Coordination, Pattern+ 9-16 [2.5]

Coordination, Pattern+ 17 - 24 [2.5]

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Coordination, Splits [2.7.1]

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON															
Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

TB Coor, Advanced Scheduler [4.3]

TB Coor, Day Plan [4.4]

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)**TB Coor, Action Table [4.5]**

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11	11				0	0						
12	12				0	0						
13	13				0	0						
14	14				0	0						
15	15				0	0						
16	16				0	0						
17	17				0	0						
18	18				0	0						
19	19				0	0						
20	20				0	0						
21	21				0	0						
22	22				0	0						
23	23				0	0						
24	24				0	0						
25	25				0	0						
26	26				0	0						
27	27				0	0						
28	28				0	0						
29	29				0	0						
30	30				0	0						
31	31				0	0						
32	32				0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54					0	0						
55					0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
99	254				0	0						
100	255				0	0						

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Alternate Phase Program 1, Interval Times [1.1.6.1]

Alternate Phase Program 2, Interval Times [1.1.6.1]

Alternate Phase Program 1, >Phase Options [1.1.6.2]

Alternate Phase Program 2, Phase Options [1.1.6.2]

Alternate Phase Program 3, Phase Options [1.1.6.2]

Alternate Phase Program 1, Calls and Redirection

[1.1.6.3]

Alternate Phase Program 2, Calls and Redirection

[1.1.6.3]

Douglas County

Timing Sheet

11/27/2024 10:55:24 AM

Station : 66 - HR Pkwy & Foothills Canyon (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

Detector Alternate Program 2, Vehicle Parameters [5.5.1]

User Input map [1.8.9.1]

User Output map [1.8.9.2]

Appendix D Existing Level of Service Reports

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/12/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	77	1112	23	60	479	87	45	37	107	109	21	92
Future Volume (vph)	77	1112	23	60	479	87	45	37	107	109	21	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850			0.850		0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3539	1583	1770	1863	1583	1770	1635	0
Flt Permitted	0.448			0.104			0.666			0.682		
Satd. Flow (perm)	835	3529	0	194	3539	1583	1241	1863	1583	1270	1635	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				92			146		114	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1593			794			600			737	
Travel Time (s)		36.2			18.0			13.6			16.8	
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.32	0.32	0.32	0.81	0.81	0.81
Adj. Flow (vph)	89	1278	26	63	504	92	141	116	334	135	26	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	1304	0	63	504	92	141	116	334	135	140	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			12			12	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	
v/c Ratio	0.18	0.81		0.32	0.31	0.12	0.39	0.21	0.59	0.36	0.25	

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.7	25.3		12.3	15.5	3.6	27.8	23.9	18.9	27.2	8.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.7	25.3		12.3	15.5	3.6	27.8	23.9	18.9	27.2	8.1	
LOS	A	C		B	B	A	C	C	B	C	A	
Approach Delay		24.2			13.5			22.0			17.4	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)	19	305		13	86	0	60	46	82	57	10	
Queue Length 95th (ft)	37	372		29	122	25	35	29	9	94	41	
Internal Link Dist (ft)		1513			714			520			657	
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	497	1600		195	1602	767	365	547	568	373	561	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.18	0.81		0.32	0.31	0.12	0.39	0.21	0.59	0.36	0.25	

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 38.5 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 20.7

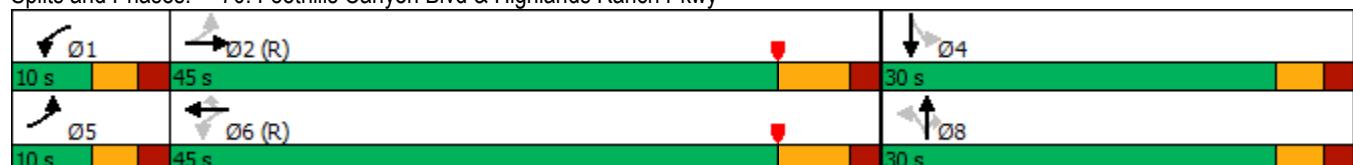
Intersection LOS: C

Intersection Capacity Utilization 62.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd & Highlands Ranch Pkwy



Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/12/2024

	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	2	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	15	813	283	152	344	32	233	25	290	26	34	6
Future Volume (vph)	15	813	283	152	344	32	233	25	290	26	34	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1822	0
Flt Permitted	0.532			0.104			0.550			0.734		
Satd. Flow (perm)	991	3539	1583	376	3539	1583	1988	1863	1583	1367	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197			155			412			6
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.70	0.70	0.70	0.45	0.45	0.45
Adj. Flow (vph)	17	934	325	163	370	34	333	36	414	58	76	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	934	325	163	370	34	333	36	414	58	89	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.04	1.03	0.59	0.25	0.31	0.05	0.25	0.06	0.52	0.17	0.34	

Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Control Delay	20.3	83.6	20.8	20.8	33.1	0.2	21.5	29.8	5.4	24.4	50.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	20.3	83.6	20.8	20.8	33.1	0.2	21.5	29.8	5.4	24.4	50.8		
LOS	C	F	C	C	C	A	C	C	A	C	C	D	
Approach Delay					66.8			27.6				13.4	40.4
Approach LOS				E			C		B				D
Queue Length 50th (ft)	8	~440	91	39	121	0	84	21	1	27	64		
Queue Length 95th (ft)	21	#541	178	60	164	0	87	36	1	26	54		
Internal Link Dist (ft)			625			1513			551			572	
Turn Bay Length (ft)	140			165	240			250				150	
Base Capacity (vph)	402	911	554	643	1184	632	1306	623	803	346	264		
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	1.03	0.59	0.25	0.31	0.05	0.25	0.06	0.52	0.17	0.34		

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 42.3

Intersection LOS: D

Intersection Capacity Utilization 59.6%

ICU Level of Service B

Analysis Period (min) 15

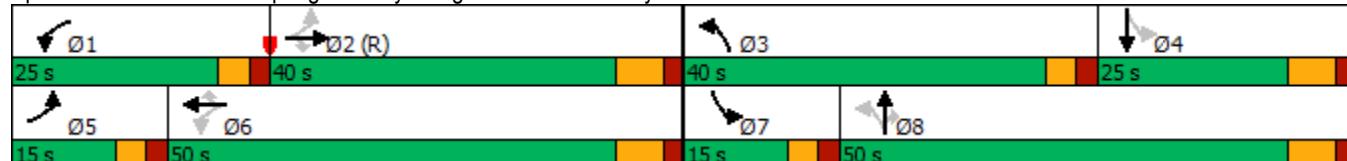
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 67: Springhill Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/12/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	3	743	108	98	451	36	123	5	197	82	5	7
Future Volume (vph)	3	743	108	98	451	36	123	5	197	82	5	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.989				0.850		0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3500	0	1770	1863	1583	1770	1695	0
Flt Permitted	0.395			0.147			0.748			0.752		
Satd. Flow (perm)	736	3472	0	274	3500	0	1393	1863	1583	1401	1695	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)		25			13				310		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			629			741			129	
Travel Time (s)		8.8			14.3			16.8			2.9	
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.55	0.55	0.55	0.81	0.81	0.81
Adj. Flow (vph)	4	941	137	117	537	43	224	9	358	101	6	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1078	0	117	580	0	224	9	358	101	15	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.0	26.5		9.0	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.01	0.73		0.32	0.39		0.64	0.02	0.57	0.29	0.03	

Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.3	22.7		8.3	16.8		36.7	22.8	9.1	27.0	16.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.3	22.7		8.3	16.8		36.7	22.8	9.1	27.0	16.2	
LOS	A	C		A	B		D	C	A	C	B	
Approach Delay		22.6			15.4			19.8			25.6	
Approach LOS		C			B			B			C	
Queue Length 50th (ft)	1	225		20	100		100	3	19	41	2	
Queue Length 95th (ft)	3	244		36	129		95	9	1	74	15	
Internal Link Dist (ft)		306			549			661			49	
Turn Bay Length (ft)	100			100			100		100	50		
Base Capacity (vph)	574	1468		366	1473		348	465	628	350	430	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.01	0.73		0.32	0.39		0.64	0.02	0.57	0.29	0.03	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.1

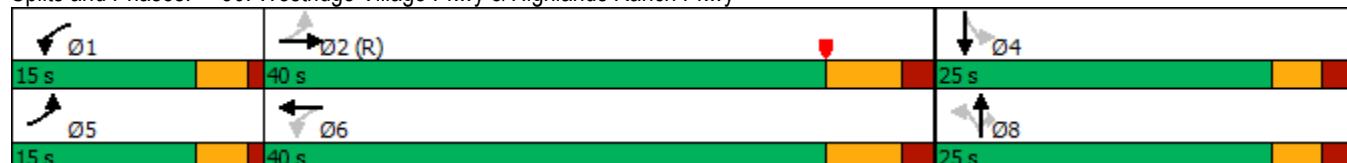
Intersection LOS: C

Intersection Capacity Utilization 55.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/12/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	138	1009	12	49	956	124	51	73	186	86	7	102
Future Volume (vph)	138	1009	12	49	956	124	51	73	186	86	7	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850			0.850		0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3539	1583	1770	1863	1583	1770	1602	0
Flt Permitted	0.177			0.164			0.669			0.666		
Satd. Flow (perm)	330	3532	0	305	3539	1583	1246	1863	1583	1241	1602	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				111			167		128	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	1593			794			600			737		
Travel Time (s)	36.2			18.0			13.6			16.8		
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.52	0.52	0.52	0.80	0.80	0.80
Adj. Flow (vph)	145	1062	13	53	1039	135	98	140	358	108	9	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	1075	0	53	1039	135	98	140	358	108	137	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	24			24			12			12		
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm		NA	Perm	Perm	NA
Protected Phases	5	2		1	6				8			4
Permitted Phases	2			6		6	8			8	4	
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	0
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.56	0.67		0.21	0.65	0.17	0.27	0.26	0.61	0.30	0.24	

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	17.2	20.8		9.7	20.4	4.7	25.5	24.5	18.6	26.0	6.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	17.2	20.8		9.7	20.4	4.7	25.5	24.5	18.6	26.0	6.4	
LOS	B	C		A	C	A	C	C	B	C	A	
Approach Delay		20.4				18.2			21.1			15.0
Approach LOS		C				B			C			B
Queue Length 50th (ft)	32	228		11	217	7	40	57	84	44	3	
Queue Length 95th (ft)	58	297		26	284	37	43	56	51	76	32	
Internal Link Dist (ft)		1513				714			520			657
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	259	1600		247	1602	777	366	547	583	365	561	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.56	0.67		0.21	0.65	0.17	0.27	0.26	0.61	0.30	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 13 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.3

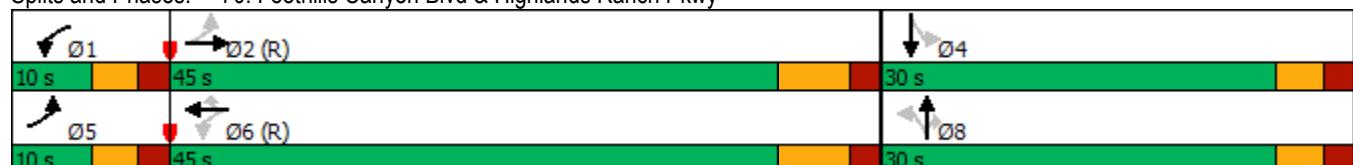
Intersection LOS: B

Intersection Capacity Utilization 59.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd & Highlands Ranch Pkwy



Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/12/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	15	599	258	232	667	50	399	53	346	46	41	29
Future Volume (vph)	15	599	258	232	667	50	399	53	346	46	41	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1747	0
Flt Permitted	0.282			0.191			0.498			0.714		
Satd. Flow (perm)	525	3539	1583	690	3539	1583	1800	1863	1583	1330	1747	0
Right Turn on Red		Yes			Yes		Yes		Yes		Yes	
Satd. Flow (RTOR)		232			155				413		23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.80	0.80	0.80	0.59	0.59	0.59
Adj. Flow (vph)	16	637	274	261	749	56	499	66	433	78	69	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	637	274	261	749	56	499	66	433	78	118	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
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)	60		60	60		60	60		60	60	60	60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.06	0.70	0.47	0.35	0.63	0.09	0.39	0.11	0.54	0.23	0.44	

Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.5	48.5	10.9	21.9	39.4	0.3	23.1	30.5	6.4	25.3	46.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	48.5	10.9	21.9	39.4	0.3	23.1	30.5	6.4	25.3	46.6	
LOS	C	D	B	C	D	A	C	C	A	C	C	D
Approach Delay									16.4			38.1
Approach LOS							C		B			D
Queue Length 50th (ft)	7	256	27	64	279	0	134	38	11	36	74	
Queue Length 95th (ft)	21	325	105	91	343	0	151	65	45	43	80	
Internal Link Dist (ft)						1513			551			572
Turn Bay Length (ft)	140			165	240			250				150
Base Capacity (vph)	277	911	580	740	1184	632	1270	623	804	340	268	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.70	0.47	0.35	0.63	0.09	0.39	0.11	0.54	0.23	0.44	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 13 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 29.3

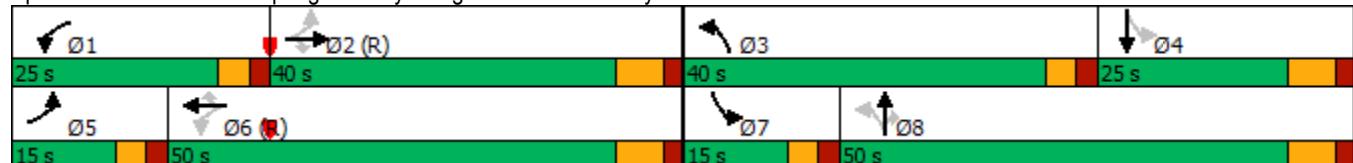
Intersection LOS: C

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 67: Springhill Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/12/2024

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑		↑	↑↑		↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	7	637	122	185	841	78	90	3	175	69	5	5
Future Volume (vph)	7	637	122	185	841	78	90	3	175	69	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50	0	0
Storage Lanes	1		0	1		0	1		1	1	0	0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.987				0.850		0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3493	0	1770	1863	1583	1770	1723	0
Flt Permitted	0.169			0.234			0.747			0.754		
Satd. Flow (perm)	315	3454	0	436	3493	0	1391	1863	1583	1405	1723	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)		34			15				302		8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		386			629			741			129	
Travel Time (s)		8.8			14.3			16.8			2.9	
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.58	0.58	0.58	0.66	0.66	0.66
Adj. Flow (vph)	8	732	140	206	934	87	155	5	302	105	8	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	872	0	206	1021	0	155	5	302	105	16	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.5	26.5		9.5	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.02	0.59		0.47	0.69		0.45	0.01	0.49	0.30	0.04	

Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.6	19.3		9.9	21.8		30.2	22.7	6.2	27.2	17.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.6	19.3		9.9	21.8		30.2	22.7	6.2	27.2	17.0	
LOS	A	B		A	C		C	C	A	C	B	
Approach Delay		19.2			19.8			14.4			25.8	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	1	164		37	210		66	2	0	43	3	
Queue Length 95th (ft)	6	212		64	279		72	6	0	60	12	
Internal Link Dist (ft)		306			549			661			49	
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	385	1466		439	1471		347	465	622	351	436	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.59		0.47	0.69		0.45	0.01	0.49	0.30	0.04	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 19.0

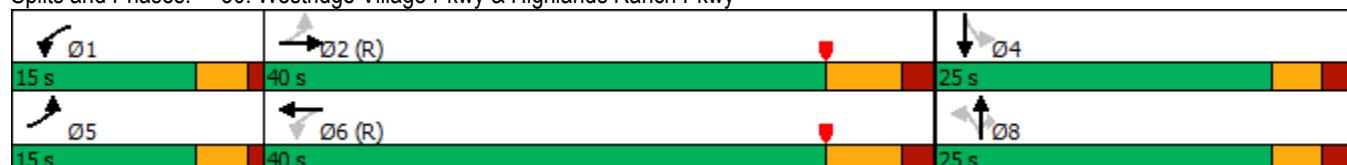
Intersection LOS: B

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy & Highlands Ranch Pkwy



Intersection

Int Delay, s/veh 6.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	70	88	19	101	91	16
Future Vol, veh/h	70	88	19	101	91	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	61	61	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	157	31	166	253	44

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	282	0	432	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	228	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1280	-	581	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1280	-	565	837
Mov Cap-2 Maneuver	-	-	-	-	565	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	788	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	1.2	17
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HCM LOS	C		
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Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	594	-	-	1280	-
HCM Lane V/C Ratio	0.5	-	-	0.024	-
HCM Control Delay (s)	17	-	-	7.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.8	-	-	0.1	-

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	37	36	39	109	5	0	0	0	3	0	9
Future Vol, veh/h	10	37	36	39	109	5	0	0	0	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	66	66	66	25	25	25	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	74	72	59	165	8	0	0	0	5	0	15

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	173	0	0	146	0	0	437 473	
Stage 1	-	-	-	-	-	-	287 287	
Stage 2	-	-	-	-	-	-	150 186	
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018
Pot Cap-1 Maneuver	1404	-	-	1436	-	-	577	490
Stage 1	-	-	-	-	-	-	762	674
Stage 2	-	-	-	-	-	-	878	746
Platoon blocked, %	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1404	-	-	1436	-	-	542	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	542	0
Stage 1	-	-	-	-	-	-	750	0
Stage 2	-	-	-	-	-	-	838	0

Approach	EB	WB	SB
HCM Control Delay, s	0.9	1.9	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1404	-	-	1436	-	-	758
HCM Lane V/C Ratio	0.014	-	-	0.041	-	-	0.026
HCM Control Delay (s)	7.6	0	-	7.6	0	-	9.9
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.1

Intersection

Int Delay, s/veh 4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	
Traffic Vol, veh/h	40	0	0	108	44	32
Future Vol, veh/h	40	0	0	108	44	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	61	61	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	0	0	177	88	64

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	235 58
Stage 1	-	-	-	-	58 -
Stage 2	-	-	-	-	177 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	0	-	753 1008
Stage 1	-	0	0	-	965 -
Stage 2	-	0	0	-	854 -
Platoon blocked, %	-				
Mov Cap-1 Maneuver	-	-	-	-	753 1008
Mov Cap-2 Maneuver	-	-	-	-	753 -
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	854 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	843	-	-
HCM Lane V/C Ratio	0.18	-	-
HCM Control Delay (s)	10.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	4	0	5	9	2	62	2	37	18	78	11	16
Future Vol, veh/h	4	0	5	9	2	62	2	37	18	78	11	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	28	28	28	35	35	35	45	45	45	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	0	18	26	6	177	4	82	40	118	17	24
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	467	395	29	384	387	102	41	0	0	122	0	0
Stage 1	265	265	-	110	110	-	-	-	-	-	-	-
Stage 2	202	130	-	274	277	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	506	542	1046	574	547	953	1568	-	-	1465	-	-
Stage 1	740	689	-	895	804	-	-	-	-	-	-	-
Stage 2	800	789	-	732	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	382	495	1046	527	500	953	1568	-	-	1465	-	-
Mov Cap-2 Maneuver	382	495	-	527	500	-	-	-	-	-	-	-
Stage 1	738	632	-	892	802	-	-	-	-	-	-	-
Stage 2	645	787	-	660	624	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.5			10.6			0.3			5.7		
HCM LOS	B			B			A			A		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1568	-	-	590	848	1465	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.054	0.246	0.081	-	-				
HCM Control Delay (s)	7.3	0	-	11.5	10.6	7.7	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	1	0.3	-	-				

Intersection

Int Delay, s/veh 5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	114	94	13	77	103	16
Future Vol, veh/h	114	94	13	77	103	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	63	63	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	157	21	122	198	31

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	347	0	433	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1212	-	580	770
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1212	-	569	770
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	849	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	1.2	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	590	-	-	1212	-
HCM Lane V/C Ratio	0.388	-	-	0.017	-
HCM Control Delay (s)	14.9	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-

Intersection

Int Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	97	15	18	73	2	0	0	0	3	2	17
Future Vol, veh/h	21	97	15	18	73	2	0	0	0	3	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	0	-	-
Peak Hour Factor	67	67	67	71	71	71	25	25	25	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	145	22	25	103	3	0	0	0	4	3	23

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	106	0	0	167	0	0	373	
Stage 1	-	-	-	-	-	-	155	155
Stage 2	-	-	-	-	-	-	218	229
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018
Pot Cap-1 Maneuver	1485	-	-	1411	-	-	628	550
Stage 1	-	-	-	-	-	-	873	769
Stage 2	-	-	-	-	-	-	818	715
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1485	-	-	1411	-	-	602	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	602	0
Stage 1	-	-	-	-	-	-	853	0
Stage 2	-	-	-	-	-	-	802	0

Approach	EB	WB				SB	
HCM Control Delay, s	1.2	1.5				9.3	
HCM LOS						A	
<hr/>							
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1485	-	-	1411	-	-	873
HCM Lane V/C Ratio	0.021	-	-	0.018	-	-	0.034
HCM Control Delay (s)	7.5	0	-	7.6	0	-	9.3
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.1

Intersection

Int Delay, s/veh 2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	
Traffic Vol, veh/h	101	0	0	71	19	14
Future Vol, veh/h	101	0	0	71	19	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	62	62	33	33
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	0	115	58	42

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	266 151
Stage 1	-	-	-	-	151 -
Stage 2	-	-	-	-	115 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	0	-	723 895
Stage 1	-	0	0	-	877 -
Stage 2	-	0	0	-	910 -
Platoon blocked, %	-				-
Mov Cap-1 Maneuver	-	-	-	-	723 895
Mov Cap-2 Maneuver	-	-	-	-	723 -
Stage 1	-	-	-	-	877 -
Stage 2	-	-	-	-	910 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	787	-	-
HCM Lane V/C Ratio	0.127	-	-
HCM Control Delay (s)	10.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	7	0	1	16	2	77	4	30	13	53	35	19
Future Vol, veh/h	7	0	1	16	2	77	4	30	13	53	35	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	47	47	47	78	78	78	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	2	34	4	164	5	38	17	93	61	33
Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	405	329	78	322	337	47	94	0	0	55	0	0
Stage 1	264	264	-	57	57	-	-	-	-	-	-	-
Stage 2	141	65	-	265	280	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	556	590	983	631	584	1022	1500	-	-	1550	-	-
Stage 1	741	690	-	955	847	-	-	-	-	-	-	-
Stage 2	862	841	-	740	679	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	440	550	983	598	545	1022	1500	-	-	1550	-	-
Mov Cap-2 Maneuver	440	550	-	598	545	-	-	-	-	-	-	-
Stage 1	739	646	-	952	844	-	-	-	-	-	-	-
Stage 2	718	838	-	692	636	-	-	-	-	-	-	-
Approach	EB		WB			NB		SB				
HCM Control Delay, s	12.8		10.2			0.6		3.7				
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1500	-	-	473	898	1550	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.027	0.225	0.06	-	-				
HCM Control Delay (s)	7.4	0	-	12.8	10.2	7.5	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0.2	-	-				

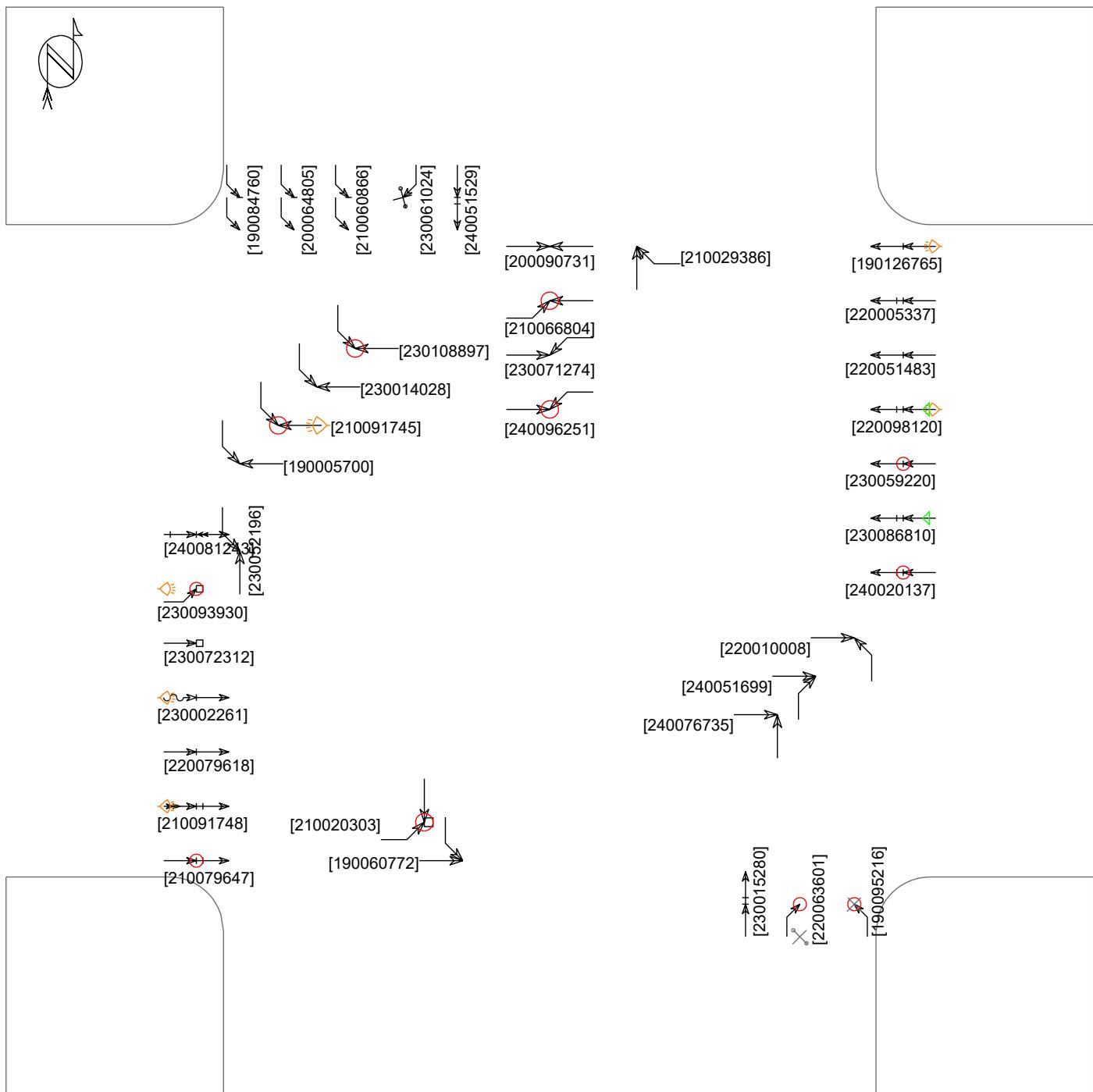
Appendix E Crash Diagrams and Listings

HIGHLANDS RANCH PKWY & FOOTHILLS CANYON BLVD

2019 - 2024

37 Crashes

Clear



- ← Straight
- ↔ Stopped
- ↖ Unknown
- ↙ Backing
- ↖ Overtaking
- ↖ Sideswipe

- Parked
- ↔ Weaving
- ↔ Changing Ln
- ↗ Right turn
- ↘ Left turn
- ↙ U-turn

- ✗ Pedestrian
- ✖ Bicycle
- Injury
- Fatality
- ⚠ Nighttime
- ⚡ DUI

- ◁ 3rd Vehicle
- ↔ M Motorcycle
- ↔ O Overturn
- Fixed objects:**
- General
- ☒ Animal
- Public Obj
- ☒ Private Obj

Crash Magic Online 11/14/2024

HIGHLANDS RANCH PKWY & FOOTHILLS CANYON BLVD

2019 - 2024

37 Crashes

Clear

Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
190005700	11:10 am	1/14/2019	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
190060772	7:18 am	5/24/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
190084760	11:23 am	7/24/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
190095216	3:47 pm	8/21/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Pedestrian
190126765	5:23 pm	11/11/2019	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
200064805	3:55 pm	7/8/2020	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
200090731	2:56 pm	10/4/2020	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210020303	4:29 pm	3/11/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Curb
210029386	2:25 pm	4/13/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210060866	4:03 pm	7/27/2021	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
210066804	5:20 pm	8/17/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Front
210079647	3:06 pm	10/1/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
210091745	5:39 pm	11/15/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
210091748	5:37 pm	11/15/2021	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220005337	1:39 pm	1/22/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220010008	3:12 pm	2/8/2022	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
220051483	5:30 pm	6/29/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220063601	7:47 am	8/11/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Bicycle / Motorized Bicycle
220079618	3:04 pm	10/5/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
220098120	6:08 pm	12/14/2022	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230002261	5:43 pm	1/10/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230014028	11:47 am	2/20/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
230015280	2:07 pm	2/24/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
230052196	11:35 am	6/19/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Front
230059220	5:28 pm	7/10/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Front to Rear
230061024	10:31 am	7/16/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Bicycle / Motorized Bicycle
230071274	7:34 am	8/17/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side

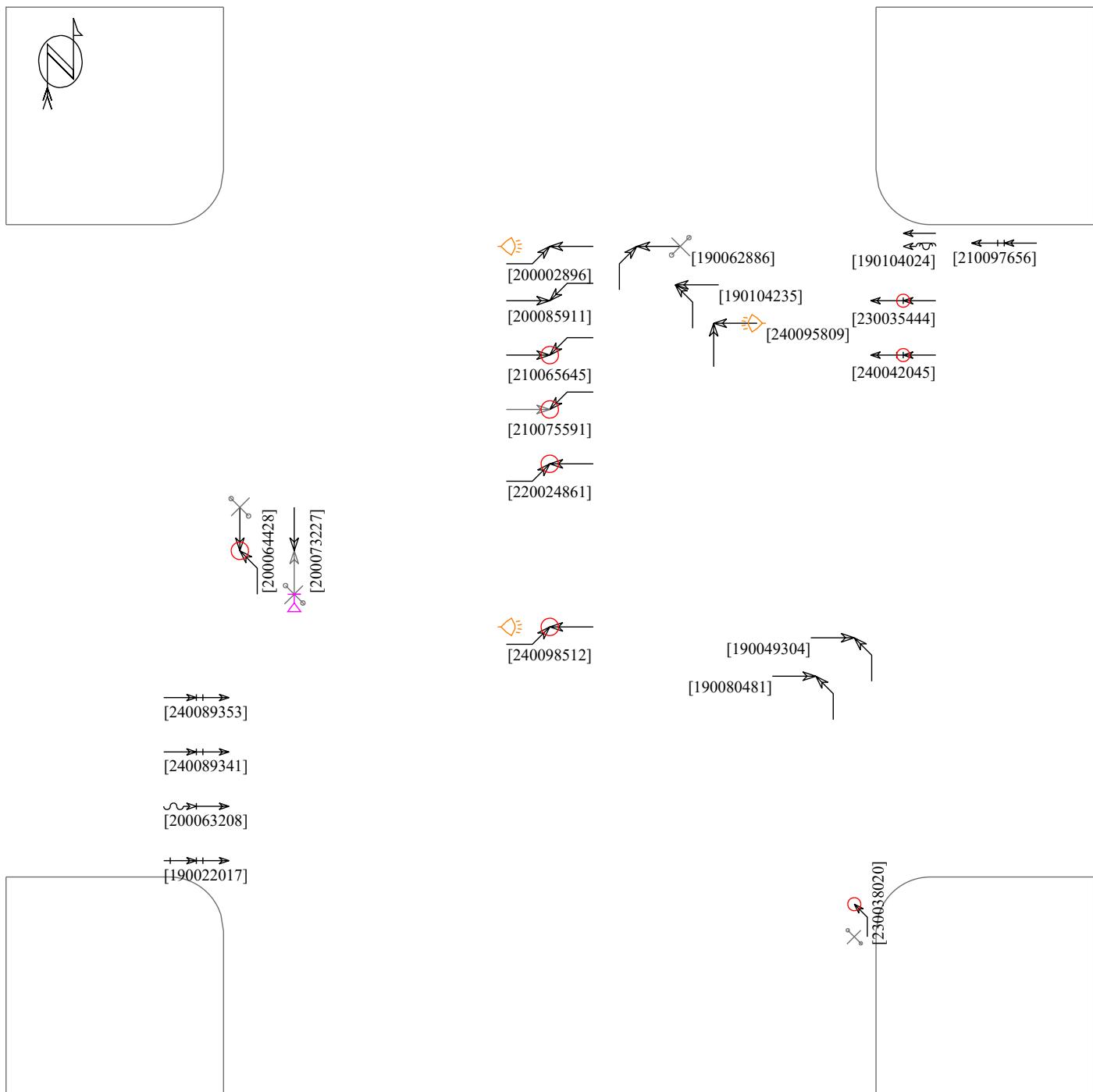
Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
230072312	4:42 pm	8/20/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD	-2000	0	0	Curb
230086810	3:58 pm	10/6/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
230093930	8:01 pm	10/31/2023	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		2	0	Curb
230108897	3:20 pm	12/21/2023	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		1	0	Front to Side
240020137	6:13 pm	2/28/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
240051529	11:06 am	6/3/2024	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Rear
240051699	4:40 pm	6/3/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side
240076735	6:19 pm	8/15/2024	FOOTHILLS CANYON BLVD	HIGHLANDS RANCH PKWY		0	0	Front to Side
240081243	1:46 pm	8/29/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Rear
240096251	10:54 am	10/17/2024	HIGHLANDS RANCH PKWY	FOOTHILLS CANYON BLVD		0	0	Front to Side

HIGHLANDS RANCH PKWY & WESTRIDGE KNOLLS AVE

2019 - 2024

22 Crashes

Clear



- ← Straight
- ↔ Stopped
- ↖ Unknown
- ↙ Backing
- ↖ Overtaking
- ↖ Sideswipe

- ↔ Parked
- ↔ Weaving
- ↔ Changing Ln
- ↗ Right turn
- ↘ Left turn
- ↗ U-turn

- ✗ Pedestrian
- ✗ Bicycle
- Injury
- Fatality
- ◇ Nighttime
- ✖ DUI

- ⬧ 3rd Vehicle
- ↔_M_ Motorcycle
- ↔_O_ Overturn
- Fixed objects:
- General
- Public Obj
- ☒ Animal
- ☒ Private Obj

Crash Magic Online 11/14/2024

HIGHLANDS RANCH PKWY & WESTRIDGE KNOLLS AVE

2019 - 2024

22 Crashes

Clear

Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
190022017	11:38 am	2/20/2019	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Rear
190049304	12:23 pm	4/25/2019	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Side
190062886	2:22 pm	5/29/2019	WESTRIDGE KNOLLS AVE	HIGHLANDS RANCH PKWY		0	0	Front to Side
190080481	7:18 am	7/12/2019	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Side
190104024	6:35 pm	9/13/2019	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		0	0	Side to Side - Same Direction
190104235	2:08 pm	9/14/2019	DESERT WILLOW RD	HIGHLANDS RANCH PKWY		0	0	Front to Side
200002896	8:26 pm	1/8/2020	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		0	0	Front to Side
200063208	11:14 am	7/4/2020	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Rear
200064428	7:15 pm	7/7/2020	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		1	0	Bicycle / Motorized Bicycle
200073227	1:01 pm	8/6/2020	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		0	0	Bicycle / Motorized Bicycle
200085911	9:14 am	9/18/2020	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Side
210065645	3:05 pm	8/13/2021	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Side
210075591	3:24 pm	9/17/2021	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		3	0	Front to Side
210097656	1:23 pm	12/7/2021	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		0	0	Front to Rear
220024861	3:44 pm	3/31/2022	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Front
230035444	5:09 pm	4/26/2023	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Rear
230038020	6:35 pm	5/4/2023	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		1	0	Bicycle / Motorized Bicycle
240042045	5:02 pm	5/6/2024	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		2	0	Front to Rear
240089341	3:08 pm	9/27/2024	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Rear
240089353	3:41 pm	9/24/2024	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Rear
240095809	10:11 pm	10/15/2024	HIGHLANDS RANCH PKWY	WESTRIDGE KNOLLS AVE		0	0	Front to Side
240098512	8:54 pm	10/24/2024	HIGHLANDS RANCH PKWY	DESERT WILLOW RD		1	0	Front to Front

HIGHLANDS RANCH PKWY & WESTRIDGE VILLAGE PKWY

2019 - 2024

18 Crashes

Clear

Casetrackingid	Accidenttime	Accidentdate	Primarystreet	Crossstreet	Onroadaddress	Numberinjured	Numberkilled	Harmfulevent1
190018334	7:52 am	2/12/2019	DEER CREEK ST	HIGHLANDS RANCH PKWY		0	0	Front to Rear
190116520	5:48 pm	10/15/2019	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Bicycle / Motorized Bicycle
190122567	8:32 am	10/31/2019	WESTRIDGE VILLAGE PKWY	HIGHLANDS RANCH PKWY		0	0	Front to Rear
200074616	5:10 pm	8/11/2020	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Rear
200110918	6:08 pm	12/15/2020	HIGHLANDS RANCH PKWY	DEER CREEK ST		1	0	Pedestrian
210013207	8:38 am	2/15/2021	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Side
210069654	2:42 pm	8/27/2021	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Rear
220003461	10:16 am	1/15/2022	WESTRIDGE VILLAGE PKWY	HIGHLANDS RANCH PKWY		0	0	Front to Rear
220012167	2:56 pm	2/15/2022	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Side
220030817	7:29 am	4/21/2022	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Side to Side - Opposite Direction
220050172	12:12 pm	6/25/2022	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		1	0	Front to Rear
230014534	7:50 am	2/22/2023	HIGHLANDS RANCH PKWY	DEER CREEK ST		0	0	Side to Side - Same Direction
230097045	11:03 pm	11/10/2023	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		3	0	Curb
230111137	8:22 am	12/30/2023	HIGHLANDS RANCH PKWY	DEER CREEK ST		0	0	Side to Side - Opposite Direction
240013037	8:26 am	2/9/2024	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Front
240057926	11:53 am	6/21/2024	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		2	0	Front to Front
240080192	3:02 pm	8/26/2024	WESTRIDGE VILLAGE PKWY	HIGHLANDS RANCH PKWY		2	0	Front to Side
240099612	3:49 pm	10/28/2024	HIGHLANDS RANCH PKWY	WESTRIDGE VILLAGE PKWY		0	0	Front to Rear

Appendix F Projected Level of Service Reports

Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	3	738	123	157	448	32	141	20	253	77	20	7
Future Volume (vph)	3	738	123	157	448	32	141	20	253	77	20	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.990				0.850		0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3504	0	1770	1863	1583	1770	1788	0
Flt Permitted	0.401			0.143			0.735			0.734		
Satd. Flow (perm)	747	3465	0	266	3504	0	1369	1863	1583	1367	1788	0
Right Turn on Red		Yes				Yes			Yes			Yes
Satd. Flow (RTOR)	29			11					311		9	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	386			629			741			129		
Travel Time (s)	8.8			14.3			16.8			2.9		
Peak Hour Factor	0.79	0.79	0.79	0.84	0.84	0.84	0.55	0.55	0.55	0.81	0.81	0.81
Adj. Flow (vph)	4	934	156	187	533	38	256	36	460	95	25	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1090	0	187	571	0	256	36	460	95	34	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.0	26.5		9.0	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)	5.0			5.0			5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	8.5			6.5			19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)	0			0			0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.01	0.74		0.52	0.39		0.75	0.08	0.73	0.28	0.08	

Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.3	22.9		13.7	16.8		43.4	23.6	17.0	26.9	19.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.3	22.9		13.7	16.8		43.4	23.6	17.0	26.9	19.0	
LOS	A	C		B	B		D	C	B	C	B	
Approach Delay		22.8			16.0				26.3			24.8
Approach LOS		C			B				C			C
Queue Length 50th (ft)	1	228		33	98		118	14	62	38	10	
Queue Length 95th (ft)	3	247		69	127		108	22	28	70	27	
Internal Link Dist (ft)		306			549				661			49
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	579	1467		363	1473		342	465	629	341	453	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.01	0.74		0.52	0.39		0.75	0.08	0.73	0.28	0.08	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 22.0

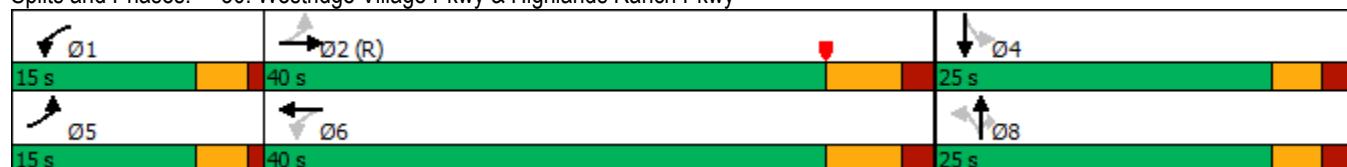
Intersection LOS: C

Intersection Capacity Utilization 60.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑	↑	↑↑	
Traffic Volume (vph)	40	848	283	152	379	17	233	16	290	8	22	29
Future Volume (vph)	40	848	283	152	379	17	233	16	290	8	22	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1704	0
Flt Permitted	0.512			0.104			0.510			0.742		
Satd. Flow (perm)	954	3539	1583	376	3539	1583	1843	1863	1583	1382	1704	0
Right Turn on Red		Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		197				155			414		42	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.70	0.70	0.70	0.45	0.45	0.45
Adj. Flow (vph)	46	975	325	163	408	18	333	23	414	18	49	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	975	325	163	408	18	333	23	414	18	113	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.12	1.07	0.59	0.25	0.34	0.03	0.26	0.04	0.51	0.05	0.41	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.1	96.2	20.8	20.8	33.6	0.1	21.5	29.5	5.3	23.0	36.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	96.2	20.8	20.8	33.6	0.1	21.5	29.5	5.3	23.0	36.5	
LOS	C	F	C	C	C	A	C	C	A	C	D	
Approach Delay			75.4			29.0			13.0			34.7
Approach LOS			E			C			B			C
Queue Length 50th (ft)	21	~478	91	39	135	0	84	13	0	8	54	
Queue Length 95th (ft)	43	#577	178	60	181	0	87	26	0	11	38	
Internal Link Dist (ft)			625			1513			551			572
Turn Bay Length (ft)	140			165	240			250				150
Base Capacity (vph)	393	911	554	643	1184	632	1278	623	805	348	278	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	1.07	0.59	0.25	0.34	0.03	0.26	0.04	0.51	0.05	0.41	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 47.0

Intersection LOS: D

Intersection Capacity Utilization 60.6%

ICU Level of Service B

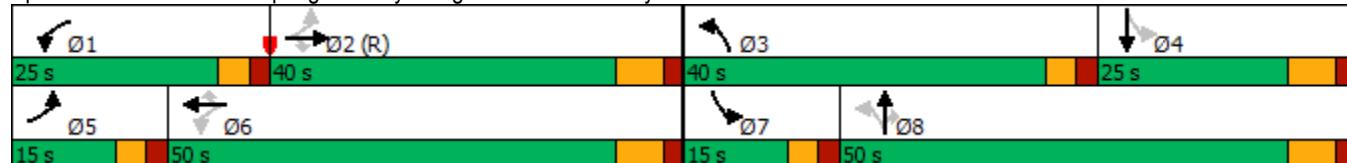
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 67: Springhill Pkwy & Highlands Ranch Pkwy

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	94	1112	23	60	479	87	45	37	107	109	21	112
Future Volume (vph)	94	1112	23	60	479	87	45	37	107	109	21	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850			0.850		0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3529	0	1770	3539	1583	1770	1863	1583	1770	1628	0
Flt Permitted	0.448			0.104			0.627			0.682		
Satd. Flow (perm)	835	3529	0	194	3539	1583	1168	1863	1583	1270	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				92			146		138	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1593			794			600			737	
Travel Time (s)		36.2			18.0			13.6			16.8	
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.32	0.32	0.32	0.81	0.81	0.81
Adj. Flow (vph)	108	1278	26	63	504	92	141	116	334	135	26	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	1304	0	63	504	92	141	116	334	135	164	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			12			12	
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	
v/c Ratio	0.22	0.81		0.32	0.31	0.12	0.41	0.21	0.59	0.36	0.28	

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	9.0	25.3		12.3	15.5	3.6	28.6	23.9	18.9	27.2	7.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.0	25.3		12.3	15.5	3.6	28.6	23.9	18.9	27.2	7.6	
LOS	A	C		B	B	A	C	C	B	C	A	
Approach Delay		24.0				13.5			22.2			16.4
Approach LOS		C				B			C			B
Queue Length 50th (ft)	23	305		13	86	0	60	46	82	57	10	
Queue Length 95th (ft)	43	372		29	122	25	35	29	9	94	43	
Internal Link Dist (ft)		1513				714			520			657
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	497	1600		195	1602	767	343	547	568	373	576	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.81		0.32	0.31	0.12	0.41	0.21	0.59	0.36	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 38.5 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 20.6

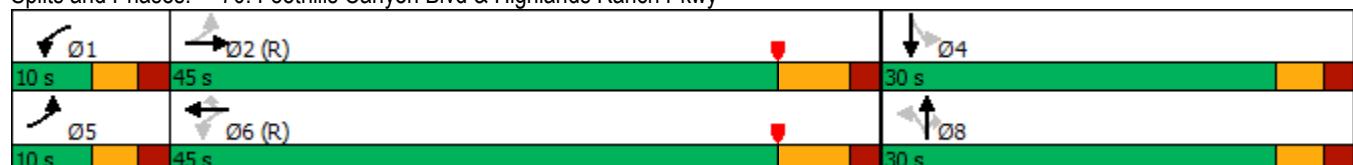
Intersection LOS: C

Intersection Capacity Utilization 65.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 70: Foothills Canyon Blvd & Highlands Ranch Pkwy



Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓		↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	7	635	143	250	834	70	111	19	236	66	21	5
Future Volume (vph)	7	635	143	250	834	70	111	19	236	66	21	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		100	50		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.988				0.850		0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3440	0	1770	3497	0	1770	1863	1583	1770	1807	0
Flt Permitted	0.176			0.224			0.731			0.736		
Satd. Flow (perm)	328	3440	0	417	3497	0	1362	1863	1583	1371	1807	0
Right Turn on Red		Yes				Yes			Yes		Yes	
Satd. Flow (RTOR)	41			13				351			8	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	386			629			741			129		
Travel Time (s)	8.8			14.3			16.8			2.9		
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.58	0.58	0.58	0.66	0.66	0.66
Adj. Flow (vph)	8	730	164	278	927	78	191	33	407	100	32	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	894	0	278	1005	0	191	33	407	100	40	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	12			12			12			12		
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Minimum Split (s)	9.5	26.5		9.5	26.5		29.0	29.0	29.0	30.0	30.0	
Total Split (s)	15.0	40.0		15.0	40.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.8%	50.0%		18.8%	50.0%		31.3%	31.3%	31.3%	31.3%	31.3%	
Maximum Green (s)	11.0	33.5		11.0	33.5		20.0	20.0	20.0	20.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5		4.0	6.5		5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		8.5			6.5		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	47.0	33.5		47.0	33.5		20.0	20.0	20.0	20.0	20.0	
Actuated g/C Ratio	0.59	0.42		0.59	0.42		0.25	0.25	0.25	0.25	0.25	
v/c Ratio	0.02	0.61		0.65	0.68		0.56	0.07	0.62	0.29	0.09	

Lanes, Volumes, Timings

30: Westridge Village Pkwy & Highlands Ranch Pkwy

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	5.6	19.4		15.1	21.6		33.6	23.5	9.6	27.1	20.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	5.6	19.4		15.1	21.6		33.6	23.5	9.6	27.1	20.2	
LOS	A	B		B	C		C	C	A	C	C	
Approach Delay		19.3			20.2				17.6			25.2
Approach LOS		B			C				B			C
Queue Length 50th (ft)	1	169		53	205		83	13	22	40	12	
Queue Length 95th (ft)	6	218		99	274		88	22	5	58	25	
Internal Link Dist (ft)		306			549				661			49
Turn Bay Length (ft)	100			100			100		100		50	
Base Capacity (vph)	390	1464		431	1471		340	465	659	342	457	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.61		0.65	0.68		0.56	0.07	0.62	0.29	0.09	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.5 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.6

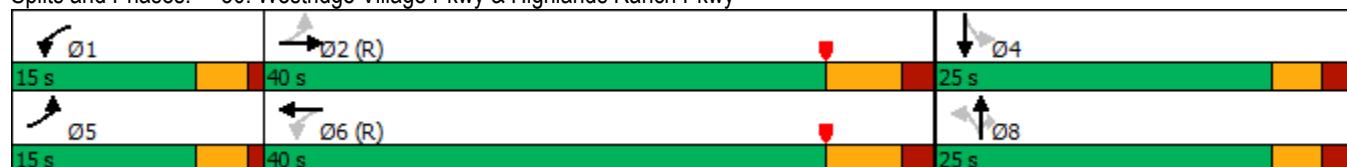
Intersection LOS: B

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 30: Westridge Village Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑↑	↑	↑	↑	↑↑	
Traffic Volume (vph)	37	636	258	232	704	32	399	42	346	21	26	46
Future Volume (vph)	37	636	258	232	704	32	399	42	346	21	26	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		165	240		0	250		0	150		0
Storage Lanes	1		1	2		1	2		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.904	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	1863	1583	1770	1684	0
Flt Permitted	0.252			0.166			0.488			0.722		
Satd. Flow (perm)	469	3539	1583	600	3539	1583	1763	1863	1583	1345	1684	0
Right Turn on Red		Yes			Yes		Yes		Yes		Yes	
Satd. Flow (RTOR)		218			155				433		57	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			1593			631			652	
Travel Time (s)		16.0			36.2			14.3			14.8	
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.80	0.80	0.80	0.59	0.59	0.59
Adj. Flow (vph)	39	677	274	261	791	36	499	53	433	36	44	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	677	274	261	791	36	499	53	433	36	122	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
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)	60		60	60		60	60		60	60	60	60
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Minimum Split (s)	10.0	30.5	30.5	10.0	31.5	31.5	10.0	38.5	38.5	10.0	24.5	
Total Split (s)	15.0	40.0	40.0	25.0	50.0	50.0	40.0	50.0	50.0	15.0	25.0	
Total Split (%)	11.5%	30.8%	30.8%	19.2%	38.5%	38.5%	30.8%	38.5%	38.5%	11.5%	19.2%	
Maximum Green (s)	10.0	33.5	33.5	20.0	43.5	43.5	35.0	43.5	43.5	10.0	18.5	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	6.5	5.0	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes											
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0			
Flash Dont Walk (s)		19.0	19.0		20.0	20.0		27.0	27.0			
Pedestrian Calls (#/hr)		0	0		0	0		0	0			
Act Effct Green (s)	45.0	33.5	33.5	60.0	43.5	43.5	60.0	43.5	43.5	30.0	18.5	
Actuated g/C Ratio	0.35	0.26	0.26	0.46	0.33	0.33	0.46	0.33	0.33	0.23	0.14	
v/c Ratio	0.15	0.74	0.48	0.37	0.67	0.06	0.40	0.09	0.53	0.10	0.42	

Lanes, Volumes, Timings

67: Springhill Pkwy & Highlands Ranch Pkwy

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.7	50.1	12.6	22.0	40.4	0.2	23.2	30.2	5.4	23.7	32.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	50.1	12.6	22.0	40.4	0.2	23.2	30.2	5.4	23.7	32.5	
LOS	C	D	B	C	D	A	C	C	A	C	C	
Approach Delay						34.7			15.7			30.5
Approach LOS					D		C		B			C
Queue Length 50th (ft)	18	276	37	64	299	0	134	31	0	16	50	
Queue Length 95th (ft)	39	348	118	91	365	0	151	55	33	24	55	
Internal Link Dist (ft)					625		1513		551			572
Turn Bay Length (ft)	140			165	240			250				150
Base Capacity (vph)	262	911	569	712	1184	632	1263	623	817	343	288	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.74	0.48	0.37	0.67	0.06	0.40	0.09	0.53	0.10	0.42	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 13 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 29.9

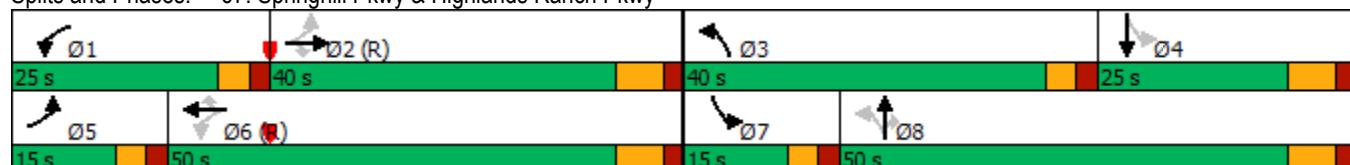
Intersection LOS: C

Intersection Capacity Utilization 58.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 67: Springhill Pkwy & Highlands Ranch Pkwy



Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/20/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↓		↑	↑↓	↑	↑	↑	↑	↑	↑↓	
Traffic Volume (vph)	150	1009	12	49	956	124	51	73	186	86	7	121
Future Volume (vph)	150	1009	12	49	956	124	51	73	186	86	7	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		0	170		120	170		170	100		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850			0.850		0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3532	0	1770	3539	1583	1770	1863	1583	1770	1598	0
Flt Permitted	0.177			0.164			0.633			0.666		
Satd. Flow (perm)	330	3532	0	305	3539	1583	1179	1863	1583	1241	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				111			167		151	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	1593			794			600			737		
Travel Time (s)	36.2			18.0			13.6			16.8		
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.52	0.52	0.52	0.80	0.80	0.80
Adj. Flow (vph)	158	1062	13	53	1039	135	98	140	358	108	9	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	1075	0	53	1039	135	98	140	358	108	160	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	24			24			12			12		
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)	60		60	60		60	60		60	60		60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		
Minimum Split (s)	10.0	31.5		10.0	31.5	31.5	34.0	34.0	34.0	33.0	33.0	
Total Split (s)	10.0	45.0		10.0	45.0	45.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	11.8%	52.9%		11.8%	52.9%	52.9%	35.3%	35.3%	35.3%	35.3%	35.3%	35.3%
Maximum Green (s)	5.0	38.5		5.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5		5.0	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Walk Time (s)		5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		10.5			10.5	10.5	24.0	24.0	24.0	23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0	0	0	0	0	0	0	0
Act Effct Green (s)	45.0	38.5		45.0	38.5	38.5	25.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.53	0.45		0.53	0.45	0.45	0.29	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.61	0.67		0.21	0.65	0.17	0.28	0.26	0.61	0.30	0.28	

Lanes, Volumes, Timings

70: Foothills Canyon Blvd & Highlands Ranch Pkwy

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	19.8	20.8		9.7	20.4	4.7	25.9	24.5	18.6	26.0	6.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	19.8	20.8		9.7	20.4	4.7	25.9	24.5	18.6	26.0	6.2	
LOS	B	C		A	C	A	C	C	B	C	A	
Approach Delay		20.7			18.2				21.2			14.1
Approach LOS		C			B			C				B
Queue Length 50th (ft)	35	228		11	217	7	40	57	84	44	3	
Queue Length 95th (ft)	#65	297		26	284	37	44	56	51	76	34	
Internal Link Dist (ft)		1513			714			520			657	
Turn Bay Length (ft)	135			170		120	170		170	100		
Base Capacity (vph)	259	1600		247	1602	777	346	547	583	365	576	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.61	0.67		0.21	0.65	0.17	0.28	0.26	0.61	0.30	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 85

Offset: 13 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.3

Intersection LOS: B

Intersection Capacity Utilization 64.7%

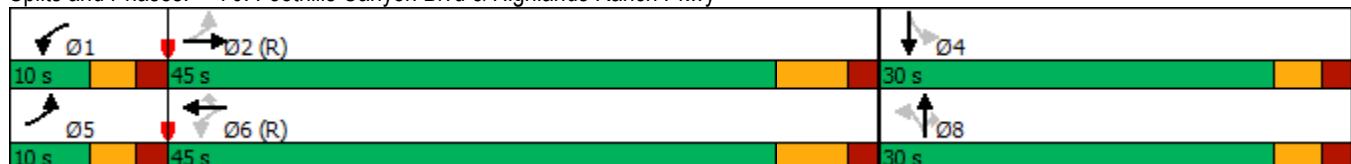
ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 70: Foothills Canyon Blvd & Highlands Ranch Pkwy



Intersection

Int Delay, s/veh 32.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	96	151	17	126	163	16
Future Vol, veh/h	96	151	17	126	163	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	61	61	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	270	28	207	453	44

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	441	0	569	306
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1119	-	484	734
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	781	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1119	-	470	734
Mov Cap-2 Maneuver	-	-	-	-	470	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	1	76.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	1119	-
HCM Lane V/C Ratio	1.023	-	-	0.025	-
HCM Control Delay (s)	76.2	-	-	8.3	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	14.4	-	-	0.1	-

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	36	53	46	125	5	0	0	0	3	0	9
Future Vol, veh/h	10	36	53	46	125	5	0	0	0	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	66	66	66	25	25	25	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	72	106	70	189	8	0	0	0	5	0	15

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	197	0	0	178	0	0	498	
Stage 1	-	-	-	-	-	-	333	333
Stage 2	-	-	-	-	-	-	165	218
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018
Pot Cap-1 Maneuver	1376	-	-	1398	-	-	532	442
Stage 1	-	-	-	-	-	-	726	644
Stage 2	-	-	-	-	-	-	864	723
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1376	-	-	1398	-	-	494	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	494	0
Stage 1	-	-	-	-	-	-	714	0
Stage 2	-	-	-	-	-	-	816	0

Approach	EB	WB				SB	
HCM Control Delay, s	0.8	2				10.1	
HCM LOS						B	
<hr/>							
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1376	-	-	1398	-	-	720
HCM Lane V/C Ratio	0.015	-	-	0.05	-	-	0.028
HCM Control Delay (s)	7.7	0	-	7.7	0	-	10.1
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.2	-	-	0.1

Intersection

Int Delay, s/veh 4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	
Traffic Vol, veh/h	39	0	0	121	60	40
Future Vol, veh/h	39	0	0	121	60	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	61	61	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	0	0	198	120	80

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	255 57
Stage 1	-	-	-	-	57 -
Stage 2	-	-	-	-	198 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	0 0	-	734	1009
Stage 1	-	0 0	-	966	-
Stage 2	-	0 0	-	835	-
Platoon blocked, %	-				
Mov Cap-1 Maneuver	-	-	-	734	1009
Mov Cap-2 Maneuver	-	-	-	734	-
Stage 1	-	-	-	966	-
Stage 2	-	-	-	835	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	824	-	-
HCM Lane V/C Ratio	0.243	-	-
HCM Control Delay (s)	10.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-

Intersection												
Int Delay, s/veh	8.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	4	0	5	8	2	122	2	37	15	136	11	16
Future Vol, veh/h	4	0	5	8	2	122	2	37	15	136	11	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	28	28	28	35	35	35	45	45	45	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	0	18	23	6	349	4	82	33	206	17	24
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	725	564	29	557	560	99	41	0	0	115	0	0
Stage 1	441	441	-	107	107	-	-	-	-	-	-	-
Stage 2	284	123	-	450	453	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	340	435	1046	441	437	957	1568	-	-	1474	-	-
Stage 1	595	577	-	898	807	-	-	-	-	-	-	-
Stage 2	723	794	-	589	570	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	190	371	1046	385	373	957	1568	-	-	1474	-	-
Mov Cap-2 Maneuver	190	371	-	385	373	-	-	-	-	-	-	-
Stage 1	593	494	-	895	805	-	-	-	-	-	-	-
Stage 2	455	792	-	496	488	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.4		12.4		0.3		6.5					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1568	-	-	348	859	1474	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.092	0.439	0.14	-	-				
HCM Control Delay (s)	7.3	0	-	16.4	12.4	7.8	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	2.3	0.5	-	-				

Intersection

Int Delay, s/veh 12.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	146	164	12	108	180	16
Future Vol, veh/h	146	164	12	108	180	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	63	63	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	243	273	19	171	346	31

Major/Minor	Major1	Major2	Minor1		
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Conflicting Flow All	0	0	516	0	589	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	209	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1050	-	471	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1050	-	462	667
Mov Cap-2 Maneuver	-	-	-	-	462	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	0.8	36.1
HCM LOS		E	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	474	-	-	1050	-
HCM Lane V/C Ratio	0.795	-	-	0.018	-
HCM Control Delay (s)	36.1	-	-	8.5	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	7.3	-	-	0.1	-

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	96	37	29	94	2	0	0	0	3	2	17
Future Vol, veh/h	21	96	37	29	94	2	0	0	0	3	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	0	-	-
Peak Hour Factor	67	67	67	71	71	71	25	25	25	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	143	55	41	132	3	0	0	0	4	3	23

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	135	0	0	198	0	0	449 476	
Stage 1	-	-	-	-	-	-	216	216
Stage 2	-	-	-	-	-	-	233	260
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018
Pot Cap-1 Maneuver	1449	-	-	1375	-	-	568	488
Stage 1	-	-	-	-	-	-	820	724
Stage 2	-	-	-	-	-	-	806	693
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1449	-	-	1375	-	-	537	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	537	0
Stage 1	-	-	-	-	-	-	800	0
Stage 2	-	-	-	-	-	-	780	0

Approach	EB	WB				SB	
HCM Control Delay, s	1	1.8				9.5	
HCM LOS						A	
<hr/>							
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	1375	-	-	828
HCM Lane V/C Ratio	0.022	-	-	0.03	-	-	0.035
HCM Control Delay (s)	7.5	0	-	7.7	0	-	9.5
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.1

Intersection

Int Delay, s/veh 4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	
Traffic Vol, veh/h	100	0	0	85	40	26
Future Vol, veh/h	100	0	0	85	40	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	62	62	33	33
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	0	0	137	121	79

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	-	286 149
Stage 1	-	-	-	-	149 -
Stage 2	-	-	-	-	137 -
Critical Hdwy	-	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	-	0	0	-	704 898
Stage 1	-	0	0	-	879 -
Stage 2	-	0	0	-	890 -
Platoon blocked, %	-				
Mov Cap-1 Maneuver	-	-	-	-	704 898
Mov Cap-2 Maneuver	-	-	-	-	704 -
Stage 1	-	-	-	-	879 -
Stage 2	-	-	-	-	890 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	769	-	-
HCM Lane V/C Ratio	0.26	-	-
HCM Control Delay (s)	11.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	1	-	-

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	7	0	1	14	2	141	4	30	11	120	33	19
Future Vol, veh/h	7	0	1	14	2	141	4	30	11	120	33	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	47	47	47	78	78	78	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	2	30	4	300	5	38	14	211	58	33
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	704	559	75	553	568	45	91	0	0	52	0	0
Stage 1	497	497	-	55	55	-	-	-	-	-	-	-
Stage 2	207	62	-	498	513	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	352	438	986	444	432	1025	1504	-	-	1554	-	-
Stage 1	555	545	-	957	849	-	-	-	-	-	-	-
Stage 2	795	843	-	554	536	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	219	374	986	393	368	1025	1504	-	-	1554	-	-
Mov Cap-2 Maneuver	219	374	-	393	368	-	-	-	-	-	-	-
Stage 1	553	467	-	954	846	-	-	-	-	-	-	-
Stage 2	558	840	-	473	459	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.6		11.6		0.7		5.4					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1504	-	-	243	879	1554	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.052	0.38	0.135	-	-				
HCM Control Delay (s)	7.4	0	-	20.6	11.6	7.7	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	1.8	0.5	-	-				

Mitigation Scenario

Intersection

Intersection Delay, s/veh 23.3

Intersection LOS C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	96	151	17	126	163	16
Future Vol, veh/h	96	151	17	126	163	16
Peak Hour Factor	0.56	0.56	0.61	0.61	0.36	0.36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	270	28	207	453	44
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left			NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0		1	
HCM Control Delay	20		13.9		30.7	
HCM LOS	C		B		D	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	91%	0%	12%
Vol Thru, %	0%	39%	88%
Vol Right, %	9%	61%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	179	247	143
LT Vol	163	0	17
Through Vol	0	96	126
RT Vol	16	151	0
Lane Flow Rate	497	441	234
Geometry Grp	1	1	1
Degree of Util (X)	0.82	0.683	0.416
Departure Headway (Hd)	5.938	5.575	6.384
Convergence, Y/N	Yes	Yes	Yes
Cap	607	640	567
Service Time	4.017	3.669	4.384
HCM Lane V/C Ratio	0.819	0.689	0.413
HCM Control Delay	30.7	20	13.9
HCM Lane LOS	D	C	B
HCM 95th-tile Q	8.4	5.3	2

Intersection

Intersection Delay, s/veh 18.4

Intersection LOS C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	146	164	12	108	180	16
Future Vol, veh/h	146	164	12	108	180	16
Peak Hour Factor	0.60	0.60	0.63	0.63	0.52	0.52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	243	273	19	171	346	31
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left			NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0		1	
HCM Control Delay	21.1		11.7		18.2	
HCM LOS	C		B		C	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	92%	0%	10%
Vol Thru, %	0%	47%	90%
Vol Right, %	8%	53%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	196	310	120
LT Vol	180	0	12
Through Vol	0	146	108
RT Vol	16	164	0
Lane Flow Rate	377	517	190
Geometry Grp	1	1	1
Degree of Util (X)	0.619	0.735	0.313
Departure Headway (Hd)	5.91	5.122	5.914
Convergence, Y/N	Yes	Yes	Yes
Cap	611	703	604
Service Time	3.961	3.176	3.982
HCM Lane V/C Ratio	0.617	0.735	0.315
HCM Control Delay	18.2	21.1	11.7
HCM Lane LOS	C	C	B
HCM 95th-tile Q	4.2	6.5	1.3