



LSC TRANSPORTATION CONSULTANTS, INC.

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December 6, 2021

Mr. Eric Clore
Lowe
5299 DTC Boulevard, Suite 1260
Greenwood Village, CO 80111

Re: Canyons South
Castle Rock, CO
LSC #210310

Dear Mr. Clore:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Canyons South development to address Town comments and to evaluate the local access points to the proposed collector streets. As shown on Figure 1, the site is located northeast of Founders Parkway (SH 86) and is proposed for annexation into the Town of Castle Rock, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; an adjustment to account for the ongoing pandemic; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the growth in background traffic or the impact of the site.

LAND USE AND ACCESS

The site is proposed to include about 474 single-family detached dwelling units, about 30,000 square feet of retail space, and about 20,000 square feet of office space. Access is proposed from several locations as shown in the conceptual site plan in Figure 2. The proposed collector street system will provide connectivity between Founders Parkway (SH 86), Crowfoot Valley Road, and Castle Oaks Drive.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Founders Parkway (SH 86)** is a four-lane arterial roadway southwest of the site. The intersections with Allen Way, Front Street, Woodlands Boulevard, Crowfoot Valley Road, and 5th Street/SH 86 are signalized with auxiliary turn lanes. The posted speed limit is 50 mph in the vicinity of the site. It is classified by CDOT as RA (Regional Highway). The CDOT Straight Line Diagram is attached.
- **Crowfoot Valley Road** is a north-south, four-lane major arterial north of the site. The intersection with Founders Parkway (SH 86) is signalized with auxiliary turn lanes. The posted speed limit is 40 mph in the vicinity of Founders Parkway but increases to 45 mph to the north. It is planned to be a four-lane roadway from Castle Rock to Parker over time.
- **Castle Oaks Drive** is a two-lane collector roadway east of the site with a 40 mph posted speed limit. The proposed Community Collector roadway (Minor Collector) is planned to connect east to Castle Oaks Drive and northwest towards Crowfoot Valley Road.

Existing Traffic Conditions

Figure 3a shows the existing traffic volumes, lane geometry, and traffic control in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes and average daily traffic volumes are from the attached traffic counts conducted in April, May, and June, 2021 by Counter Measures, Inc.

Pandemic Adjustment

Figure 3b shows the existing traffic volumes adjusted for the ongoing pandemic. The traffic volumes at Intersection #8 are based on the higher of the traffic volumes in Figure 3a and the 2019 traffic volumes provided by Town staff (attached for reference) grown for two years at an annual rate of four percent. The traffic volumes at Intersection #7 were increased by five percent to maintain a conservative analysis because the traffic volumes at Intersection #8 were generally higher than the historic 2019 traffic volumes. Intersections #1, #2, #3, #4, and #6 were adjusted based on the higher of the traffic volumes in Figure 3a and the 2018 traffic volumes in Figure 3 of the *Pine Canyon TIA* by Kimley Horn grown for three years at an annual rate of three percent.

2025 and 2041 Background Traffic

Figure 4 shows the estimated 2025 background traffic and Figure 5 shows the estimated 2041 background traffic. The 2025 background traffic in Figure 4 assumes four years of growth at an annual rate of three percent plus half of the 2041 background traffic passing through the site. Little or no growth was assumed for movements serving built out developments. The 2041 background traffic in Figure 5 assumes the 2041 total traffic volumes in Figure 9 less the total site-generated trips in Figure 7d with the following exception: Intersection #8 is based on the 2040 traffic projections provided by Town staff (attached) grown for one year at an annual rate of three percent. This was done because the Canyons South development was not included in the modeling that resulted in the 2040 traffic volumes provided. The volumes on the south leg of Intersection #6 are based on the traffic volumes in Figure 7a from the 2017 *Pine Canyon TIA*.

by LSC. The buildout lane geometry at Intersection #8 is based on the figure provided by Town staff (attached). The side road volumes at Intersections #1, #2, #3, and #4 are based on the 2040 total traffic volumes from Figure 12 of the 2020 *Pine Canyon TIA* by Kimley Horn with some adjustments based on the recent traffic counts.

About 30 percent of Castle Oaks Drive traffic at Intersection #7 is expected to divert to the proposed minor collector roadway through the site.

Existing, 2025, and 2041 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3b, 4, and 5 were analyzed to determine the existing, 2025, and 2041 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached. CDOT and the Town plan to implement adaptive traffic signal control between I-25 and Crowfoot Valley Road so those intersections were optimized with a 120-second cycle length per coordination with CDOT and Town staff.

- 1. Founders Parkway (SH 86)/Allen Way:** This signalized intersection currently operates at an overall LOS “C” during both morning and afternoon peak-hours and is expected to do so through 2025. By 2041, this intersection is expected to operate at LOS “C” during the morning peak-hour and LOS “D” during the afternoon peak-hour.
- 2. Founders Parkway (SH 86)/Front Street:** This signalized intersection currently operates at an overall LOS “C” during the morning peak-hour and LOS “D” during the afternoon peak-hour. By 2025, it is expected to operate at LOS “B” during the morning peak-hour and LOS “D” during the afternoon peak-hour. By 2041, this intersection is expected to operate at LOS “C” during the morning peak-hour and LOS “D” during the afternoon peak-hour.
- 3. Founders Parkway (SH 86)/Woodlands Boulevard:** This signalized intersection currently operates at an overall LOS “B” during both morning and afternoon peak-hours. By 2025, it is expected to operate at LOS “B” during the morning peak-hour and LOS “C” during the afternoon peak-hour. By 2041, this intersection is expected to operate at LOS “C” during the morning peak-hour and LOS “E” during the afternoon peak-hour. With implementation of the recommended mitigation the afternoon peak-hour can be improved to LOS “C”.
- 4. Founders Parkway (SH 86)/Crowfoot Valley Road:** This signalized intersection currently operates at an overall LOS “C” during the morning peak-hour and LOS “B” during the afternoon peak-hour and is expected to operate at LOS “C” through 2041.
- 5. Connector Collector Road/Internal Collector Roadway:** This future roundabout controlled intersection is expected to operate at an overall LOS “A” during both morning and afternoon peak-hours through 2041.

6. **Founders Parkway/Pioneer Ranch Access/Connector Collector Roadway:** This future signalized intersection is expected to operate at an overall LOS “B” or better through 2041.
7. **Castle Oaks Drive/Internal Community Collector:** This future roundabout controlled intersection is expected to operate at an overall LOS “A” during both morning and afternoon peak-hours through 2041.
8. **Founders Parkway (SH 86)/Ridge Road/5th Street/SH 86:** This signalized intersection currently operates at an overall LOS “C” during both morning and afternoon peak-hours and is expected to operate at LOS “D” or better through 2041.
9. **Connector Collector Roadway/Commercial Access:** This intersection was only analyzed in the total traffic scenarios.
10. **Internal Collector Roadway/Site Access #10:** This intersection was only analyzed in the total traffic scenarios.
11. **Internal Collector Roadway/Site Access #11:** This intersection was only analyzed in the total traffic scenarios.
12. **Internal Collector Roadway/Site Access #12:** This intersection was only analyzed in the total traffic scenarios.
13. **Internal Collector Roadway/Site Access #13:** This intersection was only analyzed in the total traffic scenarios.
14. **Internal Collector Roadway/Site Access #14:** This intersection was only analyzed in the total traffic scenarios.
15. **Internal Collector Roadway/Site Access #15:** This intersection was only analyzed in the total traffic scenarios.

TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 7,321 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 125 vehicles would enter and about 277 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 407 vehicles would enter and about 309 vehicles would exit. Table 2 also shows the estimated pass-by trips.

TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of the primary site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, and activity centers; and the site's proposed land use.

TRIP ASSIGNMENT

Figures 7a and 7b show the estimated assignment of the residential site-generated traffic volumes based on the directional distribution percentages (from Figure 6) and the residential trip generation estimate (from Table 2).

Figures 7c and 7d show the assignment of primary non-residential site-generated traffic based on the directional distribution percentages (from Figure 6) and the non-residential trip generation estimate (from Table 2).

Figure 7e shows the assignment of the passby site-generated traffic.

Figure 7f shows the assignment of the total site-generated traffic which is the sum of the volumes in Figures 7a through 7e.

2025 AND 2041 TOTAL TRAFFIC

Figures 8a and 8b show the 2025 total traffic which is the sum of the 2025 background traffic volumes (from Figure 4) and the total site-generated traffic volumes (from Figure 7f). Figures 8a and 8b also shows the recommended 2025 lane geometry and traffic control.

Figures 9a and 9b shows the 2041 total traffic which is the sum of the 2041 background traffic volumes (from Figure 5) and the total site-generated traffic volumes (from Figure 7f). Figures 9a and 9b also shows the recommended 2041 lane geometry and traffic control.

PROJECTED LEVELS OF SERVICE

The intersections in Figures 8a through 9b were analyzed to determine the 2025 and 2041 total traffic levels of service. Table 1 shows the level of service analysis results.

1. **Founders Parkway (SH 86)/Allen Way:** This signalized intersection is expected to operate at an overall LOS "D" or better during both morning and afternoon peak-hours through 2041.
2. **Founders Parkway (SH 86)/Front Street:** This signalized intersection is expected to operate at an overall LOS "D" or better during both morning and afternoon peak-hours through 2041.
3. **Founders Parkway (SH 86)/Woodlands Boulevard:** This signalized intersection is expected to operate at an overall LOS "B" during the morning peak-hour and LOS "C" during the

afternoon peak-hour through 2025. By 2041, this intersection is expected to operate at LOS “C” during the morning peak-hour and LOS “D” during the afternoon peak-hour.

4. **Founders Parkway (SH 86)/Crowfoot Valley Road:** This signalized intersection is expected to operate at an overall LOS “C” during both morning and afternoon peak-hours through 2025. By 2041, this intersection is expected to operate at LOS “D” during the morning peak-hour and LOS “C” during the afternoon peak-hour.
5. **Connector Collector Road/Internal Collector Roadway:** This future roundabout controlled intersection is expected to operate at an overall LOS “A” during both morning and afternoon peak-hours through 2041.
6. **Founders Parkway (SH 86)/Pioneer Ranch Access/Connector Collector Roadway:** This future signalized intersection is expected to operate at an overall LOS “C” or better through 2041.
7. **Castle Oaks Drive/Internal Community Collector:** This future roundabout controlled intersection is expected to operate at an overall LOS “A” during both morning and afternoon peak-hours through 2041.
8. **Founders Parkway (SH 86)/Ridge Road/5th Street/SH 86:** This signalized intersection is expected to operate at an overall LOS “D” or better during both morning and afternoon peak-hours through 2041.
9. **Connector Collector Roadway/Commercial Access:** All movements at this future stop-sign controlled intersection are expected to operate at LOS “C” or better during both morning and afternoon peak-hours through 2041.
10. **Internal Collector Roadway/Site Access #10:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.
11. **Internal Collector Roadway/Site Access #11:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.
12. **Internal Collector Roadway/Site Access #12:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.
13. **Internal Collector Roadway/Site Access #13:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.
14. **Internal Collector Roadway/Site Access #14:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.
15. **Internal Collector Roadway/Site Access #15:** All movements at this unsignalized intersection are expected to operate at LOS “B” or better through 2041.

TRAFFIC SIGNAL WARRANT ANALYSIS

The projected traffic volumes at Intersection #6 (Founders Parkway (SH 86)/Pioneer Ranch Access/Connector Collector Roadway) shown in Figure 8a (2025 Total Traffic) and Figure 9a (2041 Total Traffic) are sufficient to warrant traffic signal control over time based on the 70 percent reduced criteria due to the posted speed limit being over 40 mph on Founders Parkway (SH 86).

95th PERCENTILE QUEUING ANALYSIS

The estimated 2025 and 2041 95th percentile queue lengths for the signalized intersections in the study area are shown in Table 3 along with the recommended turn lane lengths.

PEDESTRIAN AND BICYCLE ACCOMMODATION

The site plan will include an east-west multi-use path through the site along the prominent drainage as well as a multi-use path along the site's frontage to Founders Parkway.

RECOMMENDED IMPROVEMENTS

Table 4 shows the 2025 and 2041 recommended improvements to the public street network.

CONCLUSIONS AND RECOMMENDATIONS**Trip Generation**

1. The site is projected to generate about 7,321 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 125 vehicles would enter and about 277 vehicles would exit the site. During the afternoon peak-hour, about 407 vehicles would enter and about 309 vehicles would exit. Table 2 also shows the estimated pass-by trips.

Projected Levels of Service

2. The two future roundabout controlled intersections are expected to operate at an overall LOS "A" through 2041.
3. All movements at the unsignalized intersections are expected to operate at LOS "C" or better through 2041.
4. All of the signalized intersections are expected to operate at an overall LOS "D" or better with implementation of the recommended improvements shown in Figures 8a through 9b and in Tables 3 and 4.

Conclusions

5. The impact of the site can be accommodated by the existing and planned roadway improvements with the recommended improvements.

Recommendations

6. The recommended improvements are shown in Figures 8a through 9b and in Tables 3 and 4.

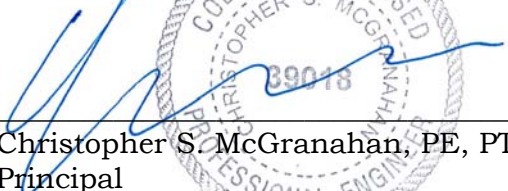
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We trust our findings will assist you in gaining approval of the Canyons South development. Please contact me if you have any questions or need further assistance.

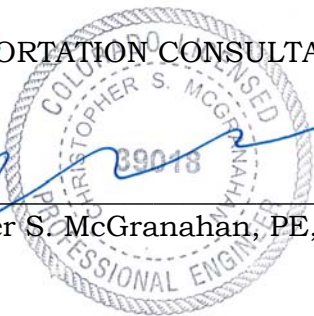
Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By



Christopher S. McGranahan, PE, PTOE
Principal



CSM/wc

12-6-21

Enclosures: Tables 1 - 4
Figures 1 - 9b
CDOT Straight Line Diagram
Traffic Counts
2019 Traffic Volumes provided by Town Staff
Figure 3 from 2020 *Pine Canyon TIA* by Kimley Horn
2040 Traffic Projections provided by Town Staff
Figure 7a from 2017 *Pine Canyon TIA* by LSC
Buildout Lane Geometry of Founders Parkway/Ridge Road/5th Street/SH 86
provided by Town Staff
Figure 12 from 2020 *Pine Canyon TIA* by Kimley Horn
Level of Service Definitions
Level of Service Reports
Queuing Reports

Table 1 (Page 1 of 4)
Intersection Levels of Service Analysis
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Intersection No. & Location	Traffic Control	Existing Traffic		2025 Background Traffic		2025 Total Traffic		2041 Background Traffic		2041 Background Mitigated ⁽¹⁾		2041 Total Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1) <u>Founders Parkway/Allen Way</u>	Signalized												
EB Left		E	E	D	E	E	E	E	E			E	E
EB Through/Right		A	B	A	C	B	C	B	E			B	E
WB Left		A	A	A	B	A	B	A	B			A	B
WB Through		C	B	C	C	B	C	D	C			D	C
WB Right		A	A	A	A	A	A	A	A			A	A
NB Left		D	E	D	D	E	E	E	E			E	E
NB Through/Right		C	D	C	C	C	C	C	D			C	D
SB Left		D	D	D	D	D	E	D	E			D	E
SB Through		D	E	D	D	D	D	D	D			D	D
SB Right		E	E	B	C	C	D	D	D			D	D
Entire Intersection Delay (sec /veh)		26.3	30.0	19.9	32.2	20.1	33.4	31.5	46.2			39.6	49.7
Entire Intersection LOS		C	C	B	C	C	D	C	D			D	D
2) <u>Founders Parkway/Front Street</u>	Signalized												
SEB Left		B	B	C	D	C	D	C	E			C	E
SEB Through/Right		B	B	B	D	B	D	B	E			C	E
NWB Left		A	E	A	D	A	D	A	E			B	E
NWB Through/Right		B	B	B	C	B	B	C	B			C	B
NEB Left		E	F	D	E	D	E	D	E			D	E
NEB Through		D	E	D	D	D	D	D	D			D	D
NEB Right		A	D	A	C	A	C	A	C			A	C
SWB Left		D	D	D	C	C	D	C	D			C	D
SWB Right or Through/Right		C	D	C	D	C	D	C	D			C	D
Entire Intersection Delay (sec /veh)		20.0	47.4	19.1	41.2	20.2	42.9	26.6	51.0			30.4	54.1
Entire Intersection LOS		C	D	B	D	C	D	C	D			C	D
3) <u>Founders Parkway/Woodlands Boulevard</u>	Signalized												
EB Left		A	A	A	A	A	A	A	A	A	A	A	A
EB Through		B	B	B	C	B	D	--	--	--	--	--	--
EB Through/Right or Right		A	A	A	A	A	A	C	D	C	D	C	D
WB Left		B	D	B	D	B	D	D	E	D	D	D	D
WB Through		B	A	B	B	B	B	--	--	--	--	--	--
WB Through/Right or Right		A	A	A	A	A	A	B	B	B	A	B	A
NB Left		D	D	D	D	D	D	D	D	E	E	E	E
NB Through or Through/Right		D	E	D	D	D	E	B	F	D	E	D	E
NB Right		B	A	A	A	A	D	--	--	A	E	A	E
SB Left		D	E	D	E	D	D	D	E	D	E	D	E
SB Through/Right		D	D	D	D	D	D	D	D	D	D	D	D
Entire Intersection Delay (sec /veh)		14.2	16.4	15.1	23.5	15.7	32.6	24.3	66.4	22.8	34.2	23.7	41.7
Entire Intersection LOS		B	B	B	C	B	C	C	E	C	C	C	D

(1) Recommended mitigation is a short 75-foot northbound right-turn lane with overlap phasing with the westbound left-turn movement.

Table 1 (Page 2 of 4)
Intersection Levels of Service Analysis
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Intersection No. & Location	Traffic Control	Existing Traffic		2025 Background Traffic		2025 Total Traffic		2041 Background Traffic		2041 Background Mitigated ⁽¹⁾		2041 Total Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
4) <u>Founders Parkway/Crowfoot Valley Road</u>	Signalized												
EB Left		D	D	D	D	E	D	E	D			E	D
EB Through		A	A	A	A	A	A	A	A			A	A
WB Through		B	C	C	C	C	C	D	D			D	D
WB Right		A	A	A	A	A	A	A	A			A	A
SB Left		E	C	C	C	C	C	D	C			D	C
SB Right		A	A	A	A	A	A	A	A			A	A
Entire Intersection Delay (sec /veh)		20.7	18.4	21.3	20.6	22.3	20.4	31.0	24.5			36.1	27.4
Entire Intersection LOS		C	B	C	C	C	C	C	C			D	C
5) <u>Connector Collector Roadway/Internal Collector Roadway</u>	Roundabout												
EB Approach		--	--	A	A	A	A	A	A			A	A
WB Approach		--	--	A	A	A	A	A	A			A	A
NB Approach		--	--	A	A	A	A	A	A			A	A
Entire Intersection Delay (sec /veh)		--	--	3.2	3.3	4.4	4.6	3.5	3.8			4.8	5.2
Entire Intersection LOS		--	--	A	A	A	A	A	A			A	A
6) <u>Founders Parkway/Pioneer Ranch Access/Connector Collector Roadway</u>	Signalized												
EB Left		--	--	A	A	A	B	B	A			D	D
EB Through		--	--	A	A	A	A	A	A			B	B
EB Right		--	--	--	--	--	--	A	A			A	A
WB Left		--	--	--	--	--	--	A	A			A	A
WB Through		--	--	A	A	B	B	B	B			D	C
WB Right		--	--	A	A	A	A	A	A			A	A
NB Left		--	--	--	--	--	--	E	E			D	D
NB Through/Right		--	--	--	--	--	--	A	A			C	D
SB Left		--	--	E	E	D	E	D	D			C	D
SB Right or Through/Right		--	--	A	A	D	B	B	A			D	C
Entire Intersection Delay (sec /veh)		--	--	4.9	4.0	15.2	11.6	16.5	10.3			32.0	21.0
Entire Intersection LOS		--	--	A	A	B	B	B	B			C	C
7) <u>Castle Oaks Drive/Internal Community Collector</u>	Roundabout												
EB Approach		--	--	A	A	A	A	A	A			A	A
NB Approach		--	--	A	A	A	A	A	A			A	A
SB Approach		--	--	A	A	A	A	A	A			A	A
Entire Intersection Delay (sec /veh)		--	--	4.1	4.1	4.2	4.2	5.1	5.1			5.2	5.2
Entire Intersection LOS		--	--	A	A	A	A	A	A			A	A

Table 1 (Page 3 of 4)
Intersection Levels of Service Analysis
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Intersection No. & Location	Traffic Control	Existing Traffic		2025 Background Traffic		2025 Total Traffic		2041 Background Traffic		2041 Background Mitigated ⁽¹⁾		2041 Total Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
8) <u>Founders Parkway/Ridge Road/5th Street/SH 86</u>	Signalized												
EB Left		B	C	C	C	C	C	B	C			B	C
EB Through		C	D	C	E	C	E	C	D			C	D
EB Right		A	A	A	A	A	A	A	A			A	A
WB Left		B	C	B	E	B	E	B	C			B	D
WB Through		C	D	C	D	D	D	C	C			C	C
WB Right		A	A	A	A	A	A	A	A			A	A
NB Left		C	C	C	C	C	C	E	D			E	D
NB Through		D	D	D	E	D	E	D	D			D	D
NB Right		A	A	A	A	A	A	A	A			A	A
SB Left		C	E	D	E	D	E	E	D			E	D
SB Through		D	D	D	C	D	C	D	C			D	C
SB Right		A	A	A	A	A	A	A	A			A	A
Entire Intersection Delay (sec /veh)		24.3	31.9	26.0	37.9	26.8	38.4	27.4	30.9			27.6	31.1
Entire Intersection LOS		C	C	C	D	C	D	C	C			C	C
9) <u>Connector Collector Roadway/Commercial Access</u>	TWSC												
WB Left		--	--	--	--	B	B	--	--			B	C
WB Right		--	--	--	--	A	A	--	--			A	B
SB Left		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	11.5	14.0	--	--			12.4	15.8
10) <u>Internal Collector Roadway/Site Access #10</u>	TWSC												
WB Approach		--	--	--	--	A	A	--	--			B	A
SB Left/Through		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	9.9	9.3	--	--			10.3	9.5
11) <u>Internal Collector Roadway/Site Access #11</u>	TWSC												
NB Left		--	--	--	--	A	A	--	--			A	A
EB Approach		--	--	--	--	A	B	--	--			A	B
WB Approach		--	--	--	--	B	B	--	--			B	B
SB Left		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	11.2	11.8	--	--			11.7	12.6
12) <u>Internal Collector Roadway/Site Access #12</u>	TWSC												
WB Approach		--	--	--	--	B	A	--	--			B	A
SB Left		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	10.2	9.6	--	--			10.6	9.9

Table 1 (Page 4 of 4)
Intersection Levels of Service Analysis
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Intersection No. & Location	Traffic Control	Existing Traffic		2025 Background Traffic		2025 Total Traffic		2041 Background Traffic		2041 Background Mitigated ⁽¹⁾		2041 Total Traffic	
		Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service	Level of Service
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
13) <u>Internal Collector Roadway/Site Access #13</u>	TWSC												
EB Left		--	--	--	--	A	A	--	--			A	A
SB Approach		--	--	--	--	A	A	--	--			B	A
Critical Movement Delay (sec/veh)		--	--	--	--	9.9	9.4	--	--			10.3	9.7
14) <u>Internal Collector Roadway/Site Access #14</u>	TWSC												
NB Approach		--	--	--	--	B	B	--	--			B	B
WB Left/Through		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	10.1	10.4	--	--			10.7	11.2
15) <u>Internal Collector Roadway/Site Access #15</u>	TWSC												
NB Approach		--	--	--	--	A	A	--	--			A	A
EB Approach		--	--	--	--	A	B	--	--			B	B
WB Approach		--	--	--	--	B	A	--	--			B	A
SB Approach		--	--	--	--	A	A	--	--			A	A
Critical Movement Delay (sec/veh)		--	--	--	--	10.3	10.2	--	--			10.8	10.6

Table 2
ESTIMATED TRAFFIC GENERATION
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Trip Generating Category	Quantity	Trip Generation Rates ⁽¹⁾					Total Trips Generated				
		Average Weekday	AM Peak-Hour		PM Peak-Hour		Average Weekday	AM Peak-Hour		PM Peak-Hour	
			In	Out	In	Out		In	Out	In	Out
CURRENTLY PROPOSED LAND USE											
Single-Family Detached ⁽²⁾	474 DU ⁽³⁾	9.44	0.185	0.555	0.624	0.366	4,475	88	263	296	174
Shopping Center ⁽⁴⁾	30 KSF ⁽⁵⁾	88.38	0.583	0.357	3.567	3.864	2,651	17	11	107	116
Office ⁽⁶⁾	20 KSF ⁽⁵⁾	9.74	0.998	0.162	0.184	0.966	195	20	3	4	19
Total =							7,321	125	277	407	309
Passby Trips ⁽⁷⁾ =							901	5	5	38	38
Net External Trips =							6,420	120	272	369	271

Notes:

- (1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
- (2) ITE Land Use No. 210 - Single-Family Detached Housing
- (3) DU = Dwelling Unit
- (4) ITE Land Use No. 820 - Shopping Center - formula rates for daily and afternoon peak-hour; average rates for morning peak-hour
- (5) KSF = 1,000 square feet
- (6) ITE Land Use No. 710 - General Office Building
- (7) A passby rate of 34% was assumed for the shopping center land use.

Table 3
95th Percentile Queue Lengths
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Intersection No. & Location	Existing Turn Lane Lengths (feet)	2025 Queue Length			2041 Queue Length		
		AM Peak (feet)	PM Peak (feet)	Recommended Lane Length (feet)	AM Peak (feet)	PM Peak (feet)	Recommended Lane Length (feet)
1) Founders Parkway/Allen Way							
EB Left	2 @ 290	154	309		198	260	
EB Through/Right	--	263	1,146		317	1,295	
WB Left	320	m9	m15		m6	m11	
WB Through	--	910	* m712		1,107	m780	
WB Right	175	m6	m18		m1	m9	
NB Left	100	65	87	2 @ 100	90	139	2 @ 100
NB Through/Right	--	63	98		68	125	
SB Left	140	84	143		98	210	
SB Through	--	31	60		33	67	
SB Right	1 @ 105; 1 @ 265	83	147		143	175	
2) Founders Parkway/Front Street							
SEB Left	465	76	m132		82	m135	
SEB Through/Right	--	150	m544		357	m522	
NWB Left	195	34	207		39	195	
NWB Through/Right	--	530	411		993	464	
NEB Left	1 @ 285; 1 Continuous	210	381		258	297	
NEB Through	--	77	136		103	187	
NEB Right	Continuous	9	166		0	171	
SWB Left	225	14	52		13	59	
SWB Right or Through/Right	--	48	71		65	102	
3) Founders Parkway/Woodlands Boulevard							
EB Left	450	6	7		6	6	
EB Through or Through/Right	--	264	960		279	887	
EB Right	Continuous	17	46		--	--	
WB Left	500	192	290		564	293	
WB Through or Through/Right	--	1,066	600		629	331	
WB Right	Continuous	20	20		--	--	
NB Left	220	157	127		240	184	2 @ 250
NB Through or Through/Right	--	52	74		57	74	
NB Right	Continuous	0	0		77	582	75
SB Left	125	59	201	200	65	202	200
SB Through/Right	--	18	42		19	41	
4) Founders Parkway/Crowfoot Valley Road							
EB Left	1 @ 475; 1 Continuous	195	494		288	553	
EB Through	--	122	367		122	466	
WB Through	--	865	510		998	735	
WB Right	Continuous	56	40		62	69	
SB Left	1 @ 140; 1 Continuous	168	115		249	240	
SB Right	Continuous	0	0		0	0	
6) Founders Parkway/Pioneer Ranch Access/Connector Collector Roadway							
EB Left	--	25	247	655	143	443	655
EB Through	--	36	281		218	676	
EB Right	--	--	--		0	28	380
WB Left	--	--	--		6	9	400
WB Through	--	476	372		881	521	
WB Right	--	14	24	380	0	21	380
NB Left	--	--	--		129	92	150
NB Through/Right	--	--	--		20	24	
SB Left	--	103	131	150	94	121	150
SB Through/Right	--	0	0		252	109	
8) Founders Parkway/Ridge Road/5th Street/SH 86							
EB Left	360	74	153		52	155	300
EB Through	--	229	560		83	281	
EB Right	410	0	0		0	0	300
WB Left	600	80	154		78	146	250
WB Through	--	444	265		178	146	
WB Right	450	0	0		0	0	Continuous
NB Left	425	285	135		186	131	2 @ 250
NB Through	--	429	473		287	266	
NB Right	450	0	0		0	0	Continuous
SB Left	600	265	661	675	176	414	2 @ 600
SB Through	--	180	469		96	311	
SB Right	Continuous	0	0		0	0	600

m = metered by adjacent intersection

Table 4 (Page 1 of 2)
Recommended Improvements to Public Street Network
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Inter-
section

No.	Intersection Location	Recommended Improvements by 2025 ⁽¹⁾	Responsibility	Recommended Improvements by 2041 ⁽¹⁾	Responsibility
#1	Founders Parkway/Allen Way	NB LT - Add second left-turn lane (2 @ 100 feet)	Others		
#2	Founders Parkway/Front Street	None			
#3	Founders Parkway/Woodlands Boulevard	SB LT - Restripe from 125 feet to 200 feet	Others	NB LT - Add second lane (2 @ 250 feet)	Others
				NB RT - construct lane - 1 @ 75 feet + Overlap Phasing	Others
#4	Founders Parkway/Crowfoot Valley Road	None			
#5	Connector Collector Roadway/ Internal Collector Roadway	Construct single-lane modern roundabout	Applicant		
#6	Founders Parkway/Pioneer Ranch Access/Connector Collector Roadway	EB LT - construct lane - 1 @ 655 feet and 180-foot transition taper	Applicant	WB LT - construct lane - 1 @ 400 feet and 180-foot transition taper	Others
		WB RT - construct lane - 1 @ 320 feet and 180-foot transition taper	Applicant	EB RT - construct lane - 1 @ 320 feet and 180-foot transition taper	Others
		SB LT - construct lane - 1 @ 150 feet and 120-foot transition taper	Applicant	NB LT - construct lane - 1 @ 150 feet and 120-foot transition taper	Others
		SB to WB Accel Lane - 1 @ 580 feet and 180-foot transition taper	Applicant	NB to EB Accel Lane - 580 feet and 180-foot transition taper	Others
		Traffic signal installation when warranted	Applicant/Others		
#7	Castle Oaks Drive/Connector Collector	Construct single-lane modern roundabout	Applicant/Others		
#8	Founders Parkway/Ridge Road/ 5th Street/SH 86	SB LT - lengthen lane from 600' to 675'	Others	Intersection Reconstruction by Town including:	
				EB LT - construct lane - 1 @ 300 feet	Others
				EB Through - construct 2 lanes	Others
				EB RT - construct lane - 1 @ 300 feet	Others
				WB LT - construct lane - 1 @ 250 feet	Others
				WB Through - construct 2 lanes	Others
				WB RT - construct continuous lane	Others
				NB LT - construct lanes - 2 @ 250 feet	Others
				NB Through - construct 2 lanes	Others
				NB RT - construct continuous lane	Others
				SB LT - construct lanes - 2 @ 600 feet	Others
				SB Through - construct 2 lanes	Others
				SB RT - construct lane - 1 @ 600 feet	Others
				Traffic Signal Modification	Others

(1) An appropriate redirect taper for 50 mph is 50:1; for 35 mph is 20:1, and for 30 mph or less is 15:1.

(2) Percent indicate the site's percentage of the movement or intersection based on the 2041 volumes.

Table 4 (Page 2 of 2)
Recommended Improvements to Public Street Network
Canyons South
Castle Rock, CO
LSC #210310; December, 2021

Inter-section No.	Intersection Location	Recommended Improvements by 2025 ⁽¹⁾	Responsibility	Recommended Improvements by 2041 ⁽¹⁾	Responsibility
#9	Connector Collector Roadway/ Commercial Access	NB RT - construct lane - 1 @ 190 feet and 120-foot transition taper	Applicant		
		SB LT - construct lane - 1 @ 220 feet and 120-foot transition taper	Applicant		
		WB LT - construct lane - 1 @ 150 feet and 90-foot transition taper	Applicant		
#10	Internal Connector Collector Roadway/Site Access #10	None			
#11	Internal Connector Collector Roadway/Site Access #11	EB LT - construct lane - 1 @ 205 feet and 120-foot transition taper	Applicant		
		WB LT - construct lane - 1 @ 250 feet and 120-foot transition taper	Applicant		
#12	Internal Connector Collector Roadway/Site Access #15	EB LT - construct lane - 1 @ 245 feet and 120-foot transition taper	Applicant		
#13	Internal Connector Collector Roadway/Site Access #13	EB LT - construct lane - 1 @ 265 feet and 120-foot transition taper	Applicant		
#14	Internal Connector Collector Roadway/Site Access #14	EB RT - construct lane - 1 @ 190 feet and 120-foot transition taper	Applicant		
#15	Internal Connector Collector Roadway/Site Access #15	None			

(1) An appropriate redirect taper for 50 mph is 50:1; for 35 mph is 20:1, and for 30 mph or less is 15:1.

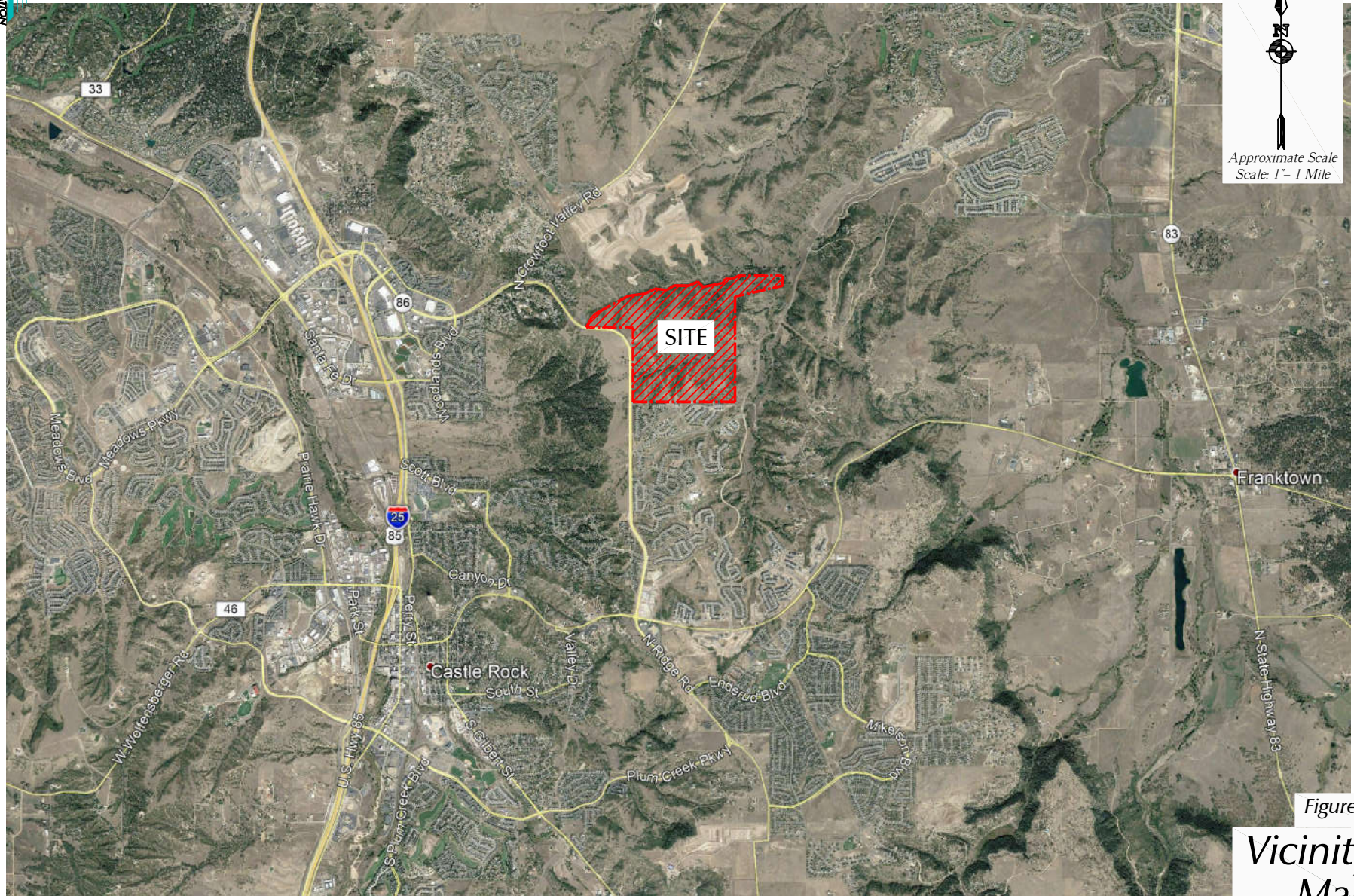


Figure 1

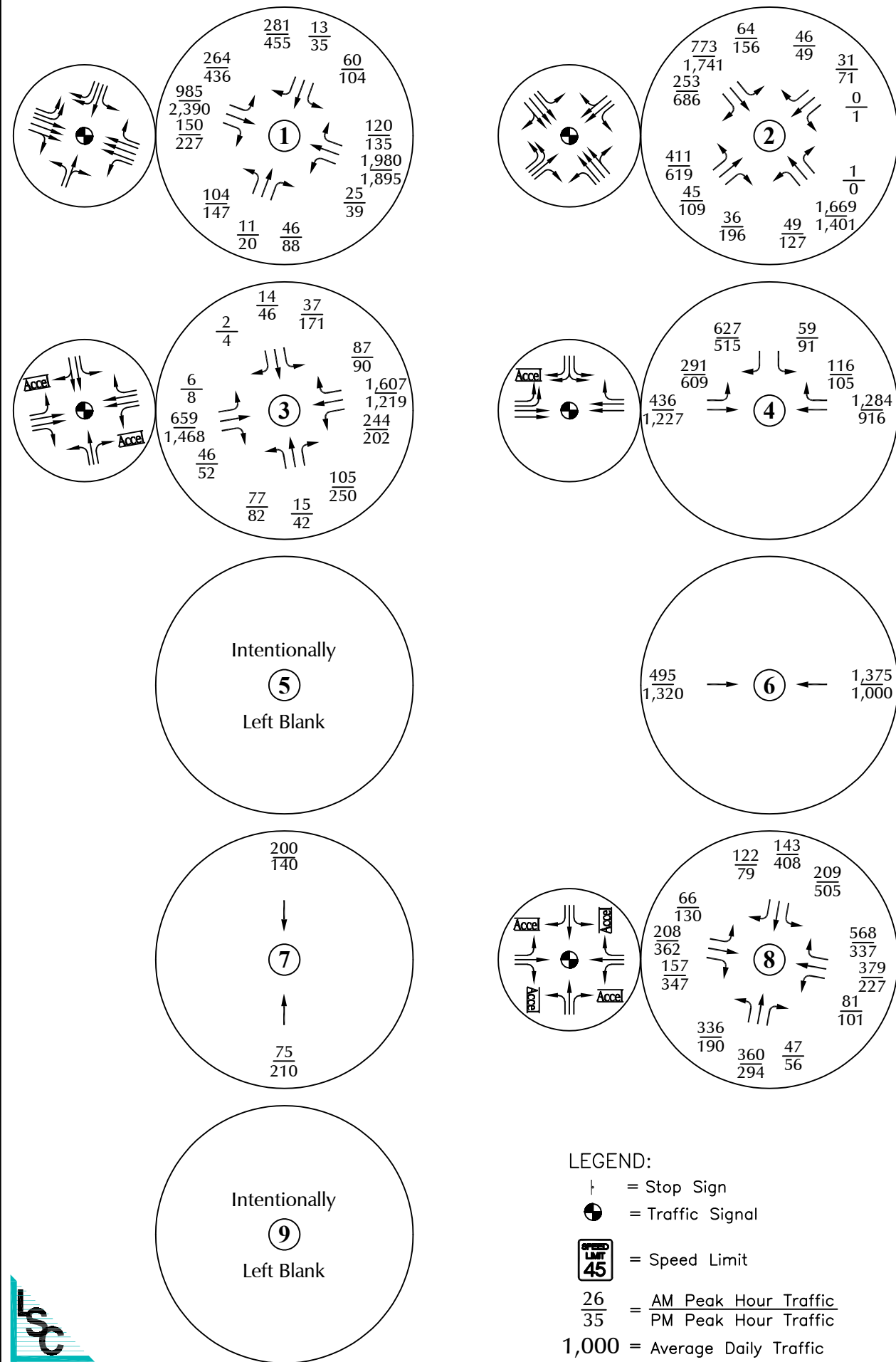
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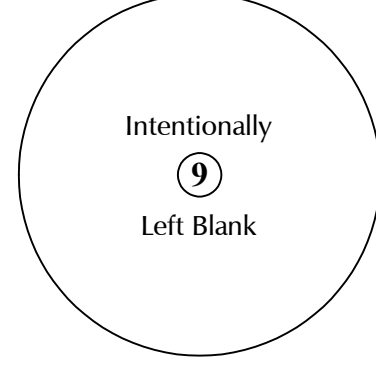
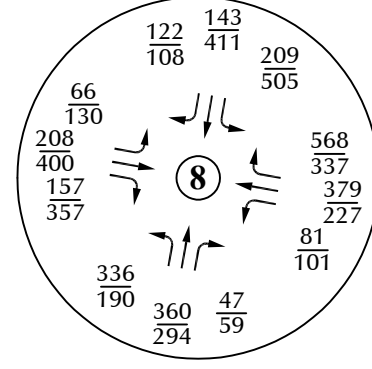
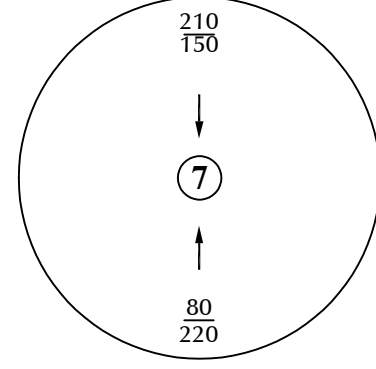
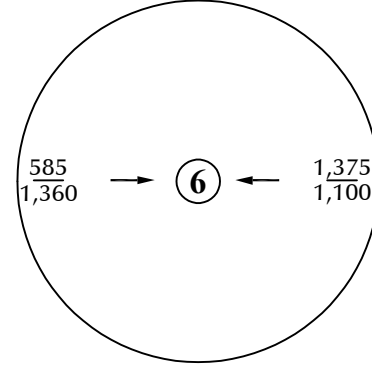
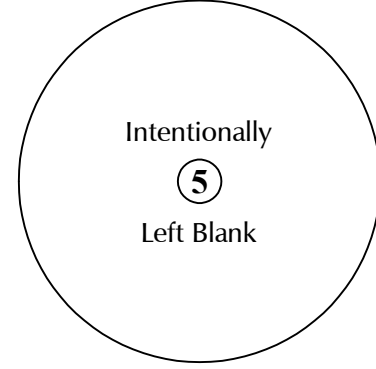
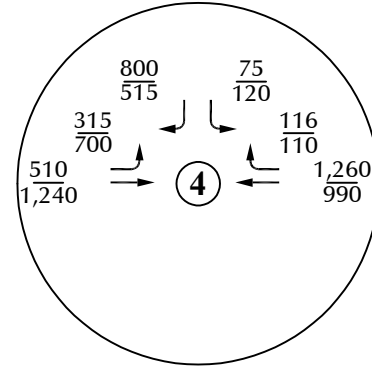
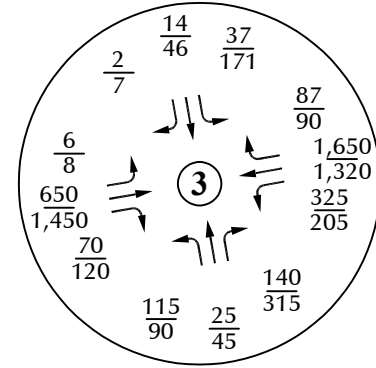
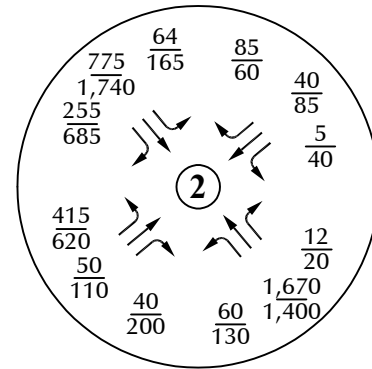
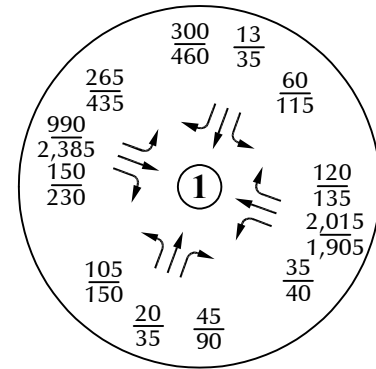
Canyons South (LSC #210310)

Topographic map of the Castle Oaks Estates Phase 1A Sanitary Collection System project area. The map shows the project boundary, proposed sanitary collection system (dashed line), and various features including Founders Pkwy, Canyon Blvd, and the Tishman Ranch. Key areas labeled include PA1, PA2, PA3, PA4, and PA5. The project is situated in the Canyon Blvd area, south of the Tishman Ranch and north of the McMurdo Gulch. The map includes a north arrow and a scale bar.

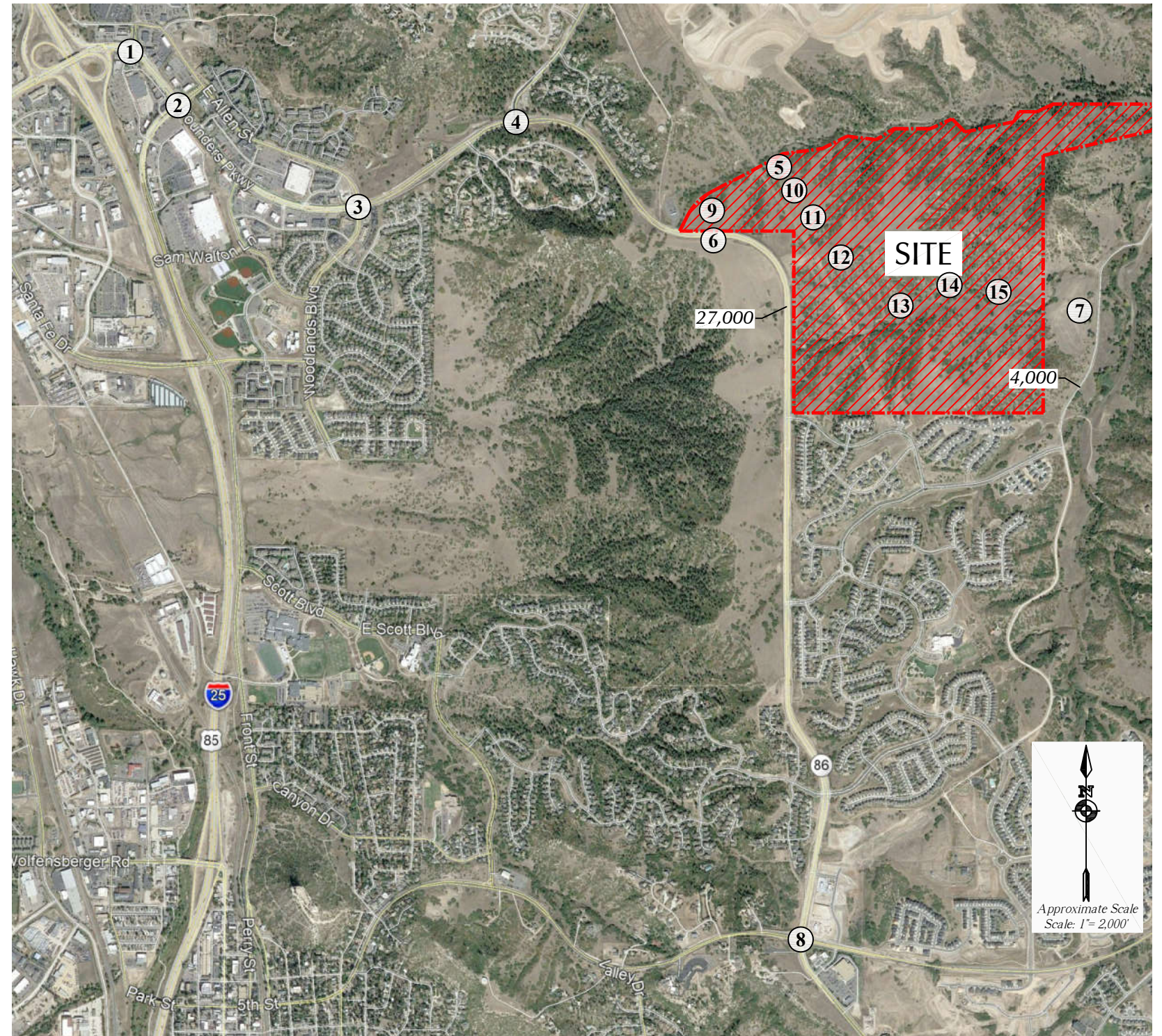
Site Plan

Canyons South (LSC #210310)





LEGEND:
 $\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$
 1,000 = Average Daily Traffic

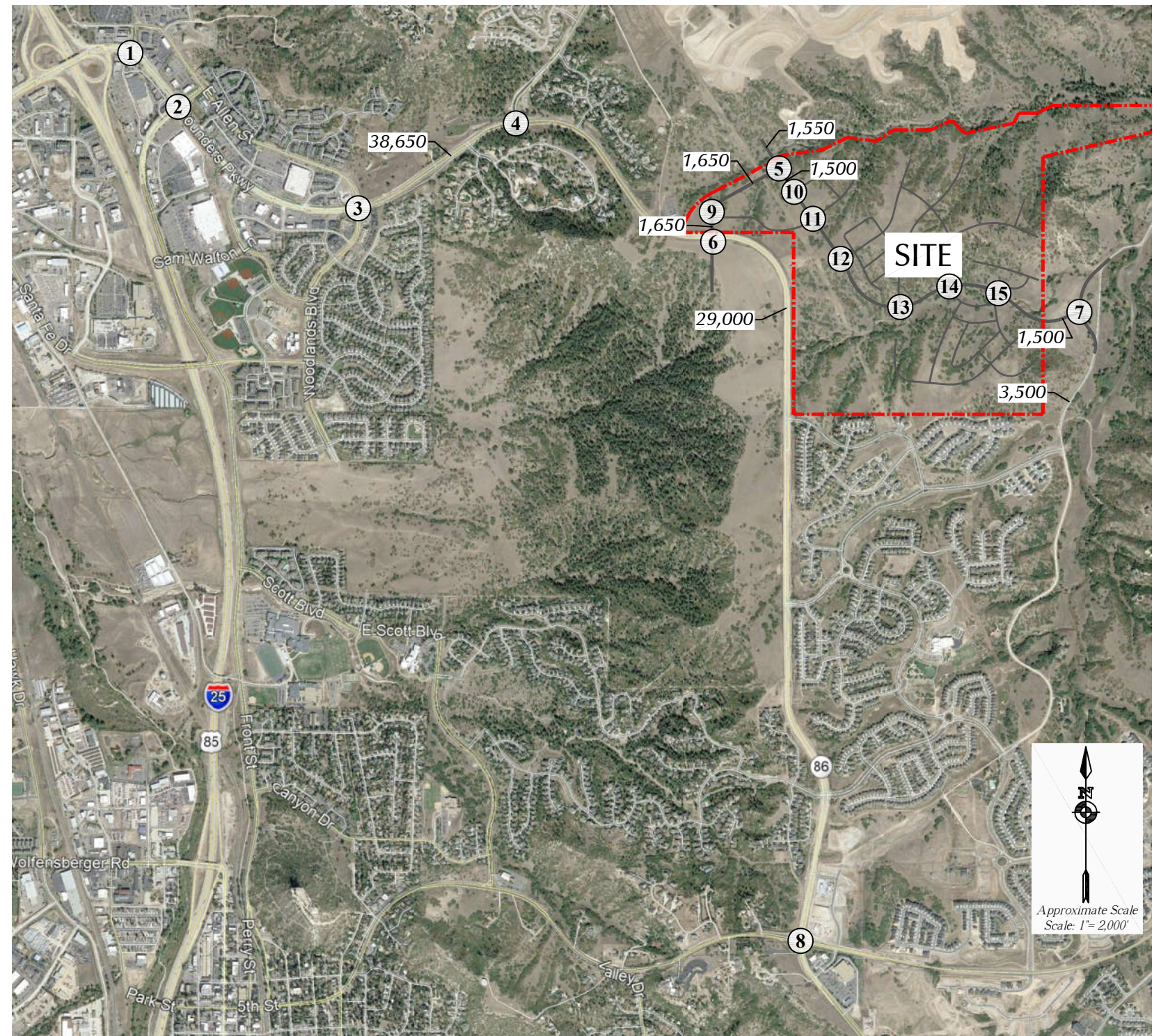
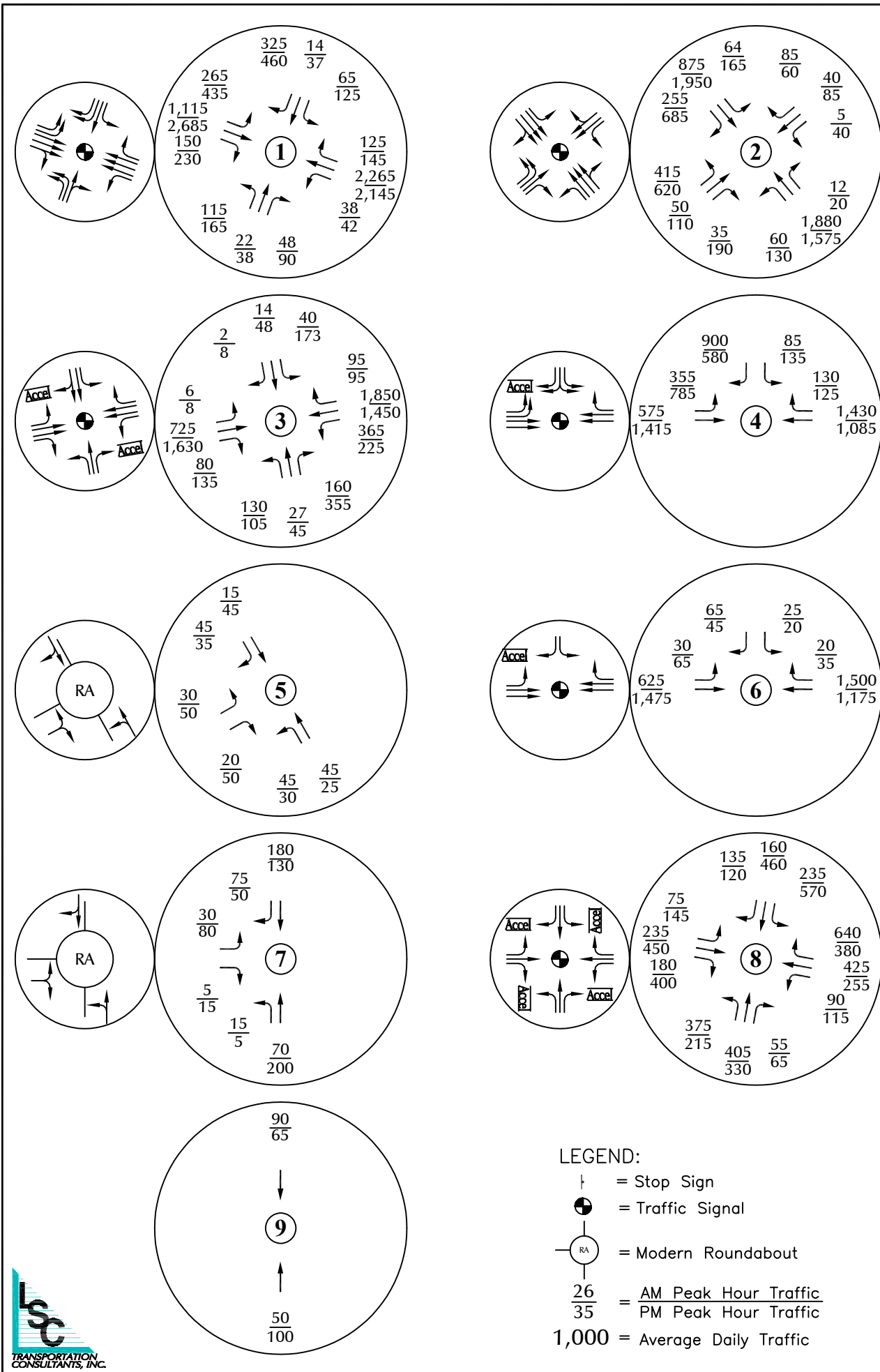


Notes:

1. Volumes at #8 are based on the higher of the volumes in Figure 3a and the 2019 volumes provided by Town staff grown for two years at an annual rate of four percent.
2. Volumes at #7 were increased by five percent to maintain a conservative analysis because the volumes at #8 were generally higher than the historic 2019 counts.
3. Intersections #1, #2, #3, #4 and #6 were adjusted based on the higher of the volumes in Figure 3a and the 2018 volumes in Figure 3 from the 2020 Pine Canyon TIA by Kimley Horn grown for three years at an annual rate of three percent.

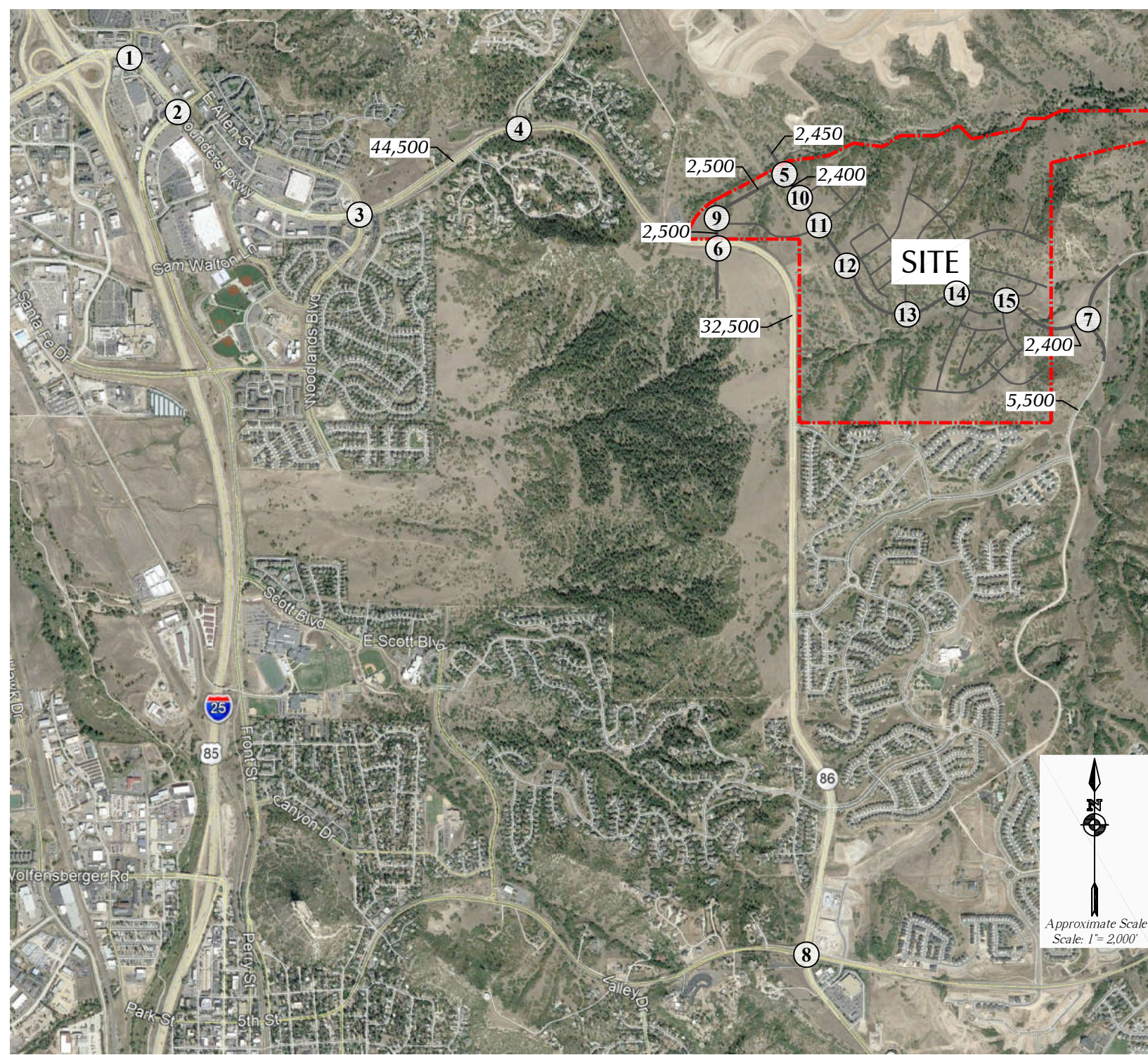
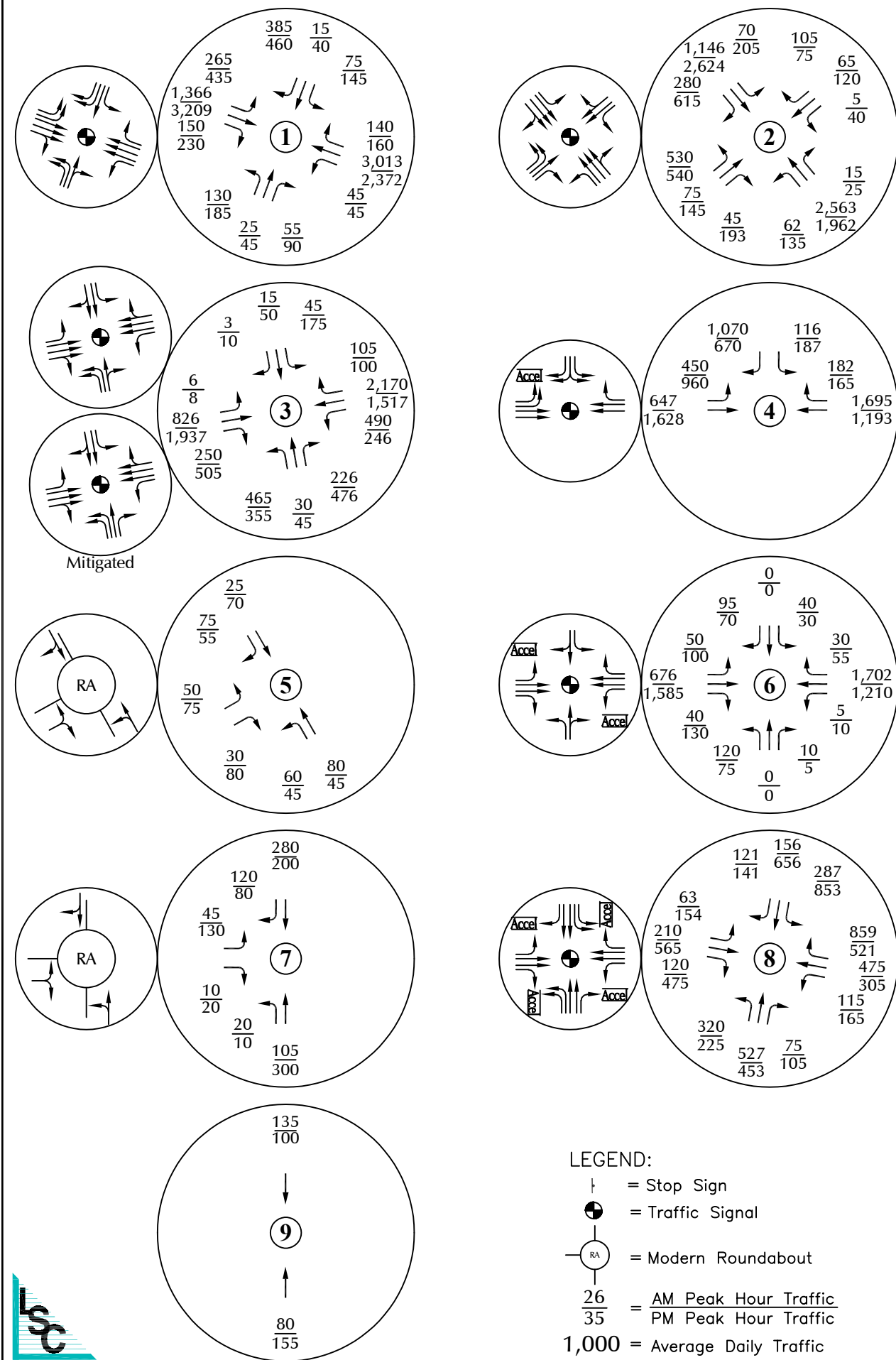
Figure 3b

**Existing Traffic
Adjusted for Pandemic**
 Canyons South (LSC #210310)



Note: Assumes four years of growth at an annual rate of three percent plus a portion of the 2041 Background traffic passing through the site. Little or no growth was assumed for movements serving built-out developments.

Figure 4
**Year 2025 Background Traffic,
 Lane Geometry and Traffic Control**
 Canyons South (LSC #210310)



Notes:

1. These volumes are the 2041 total traffic volumes in Figure 9 less the total site-generated trips in Figure 7d with the exception of Note 2 below.
2. Intersection #8 is based on the 2040 projections provided by Town staff grown for one year at an annual rate of three percent.

Figure 5
Year 2041 Background Traffic, Lane Geometry and Traffic Control
 Canyons South (LSC #210310)

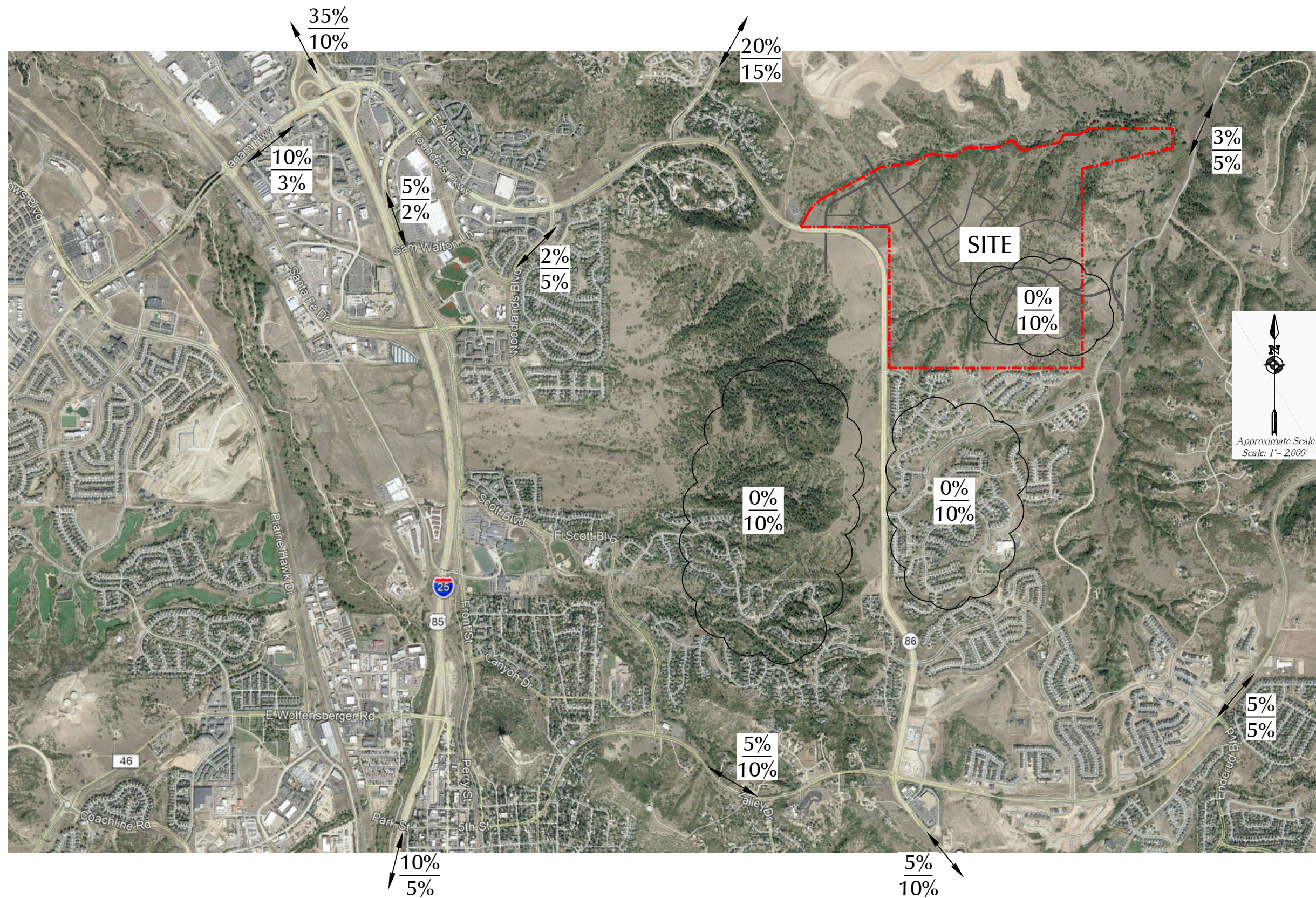
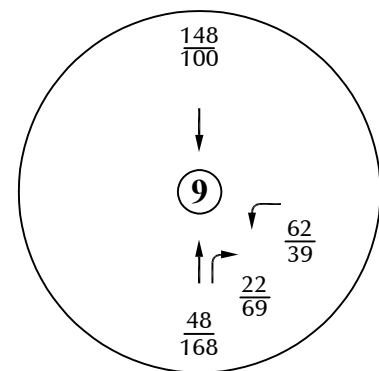
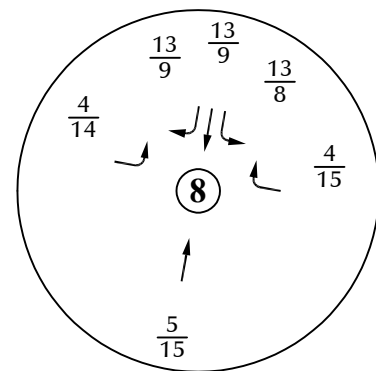
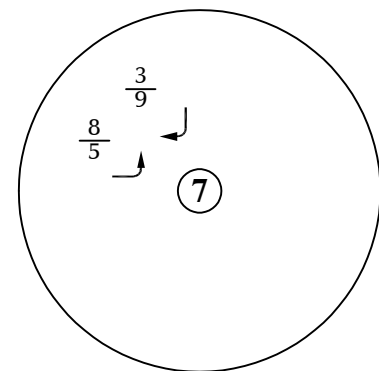
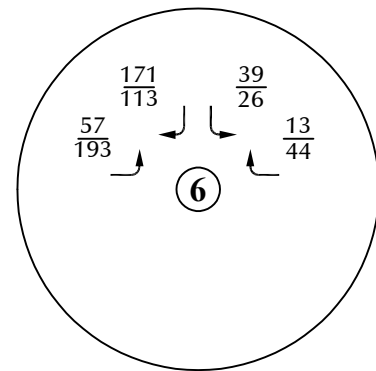
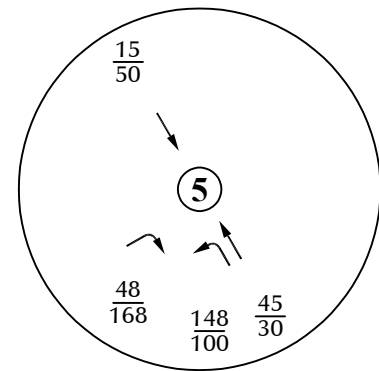
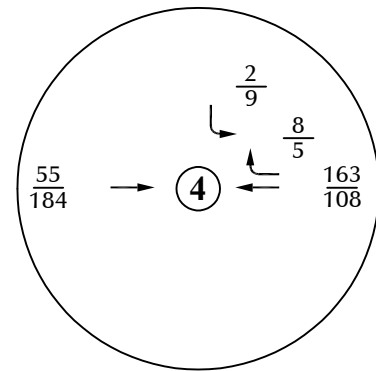
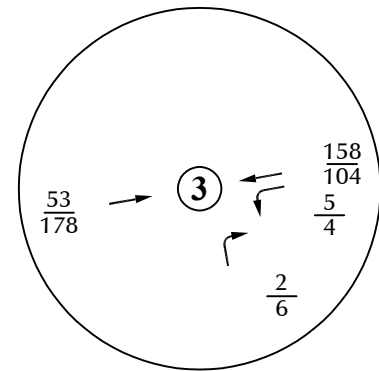
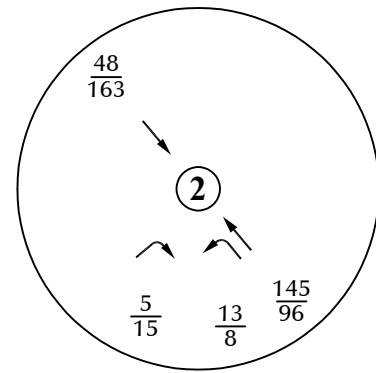
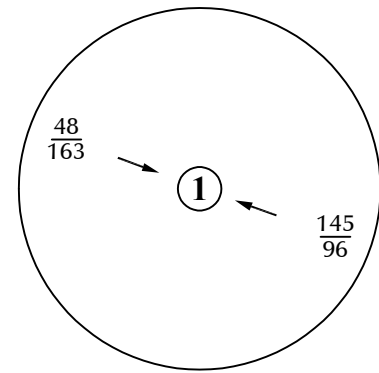


Figure 6
*Directional Distribution
of Primary Site-Generated Traffic*
Canyons South (LSC #210310)



LEGEND:
 $\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{22}{69}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic

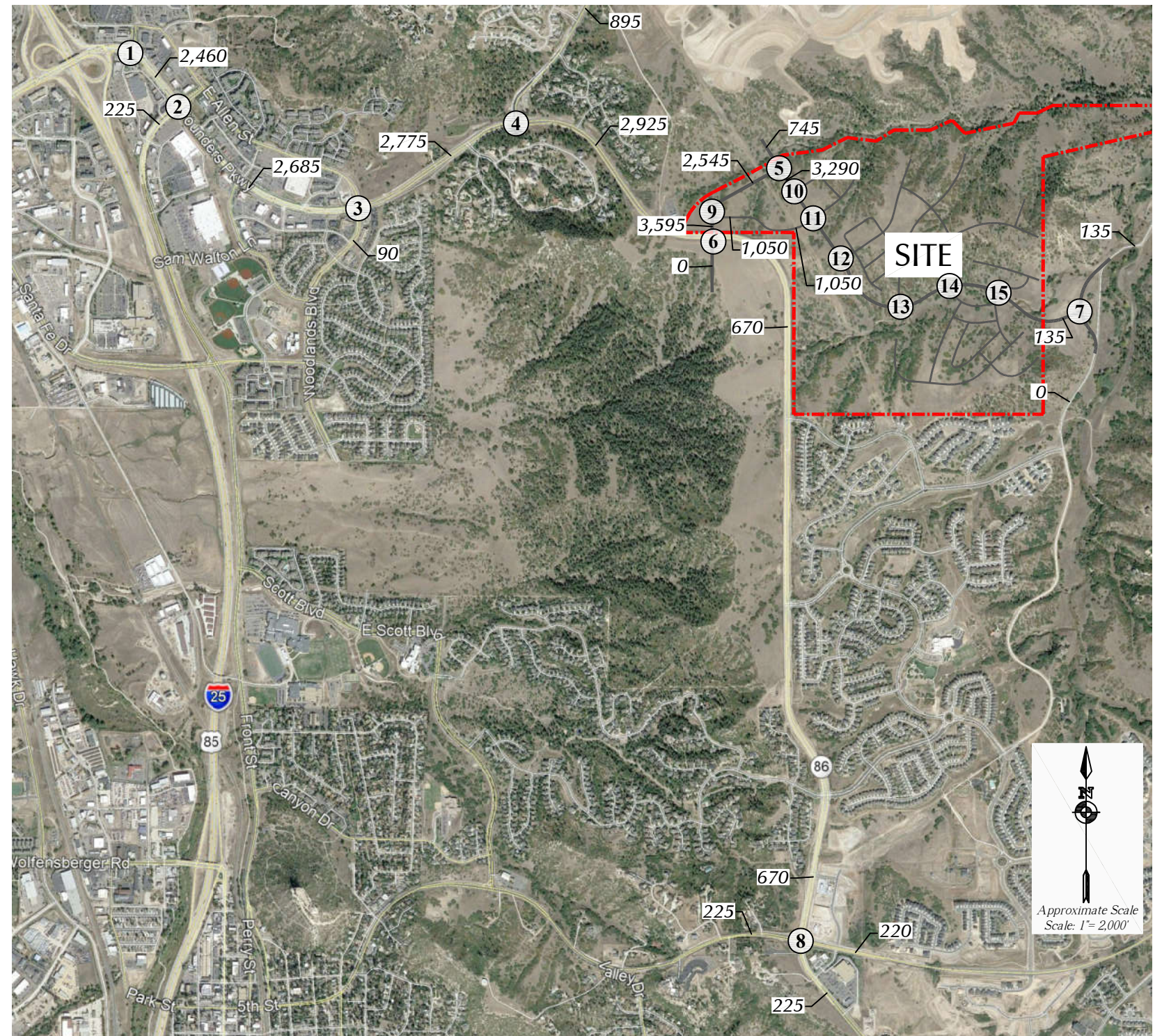
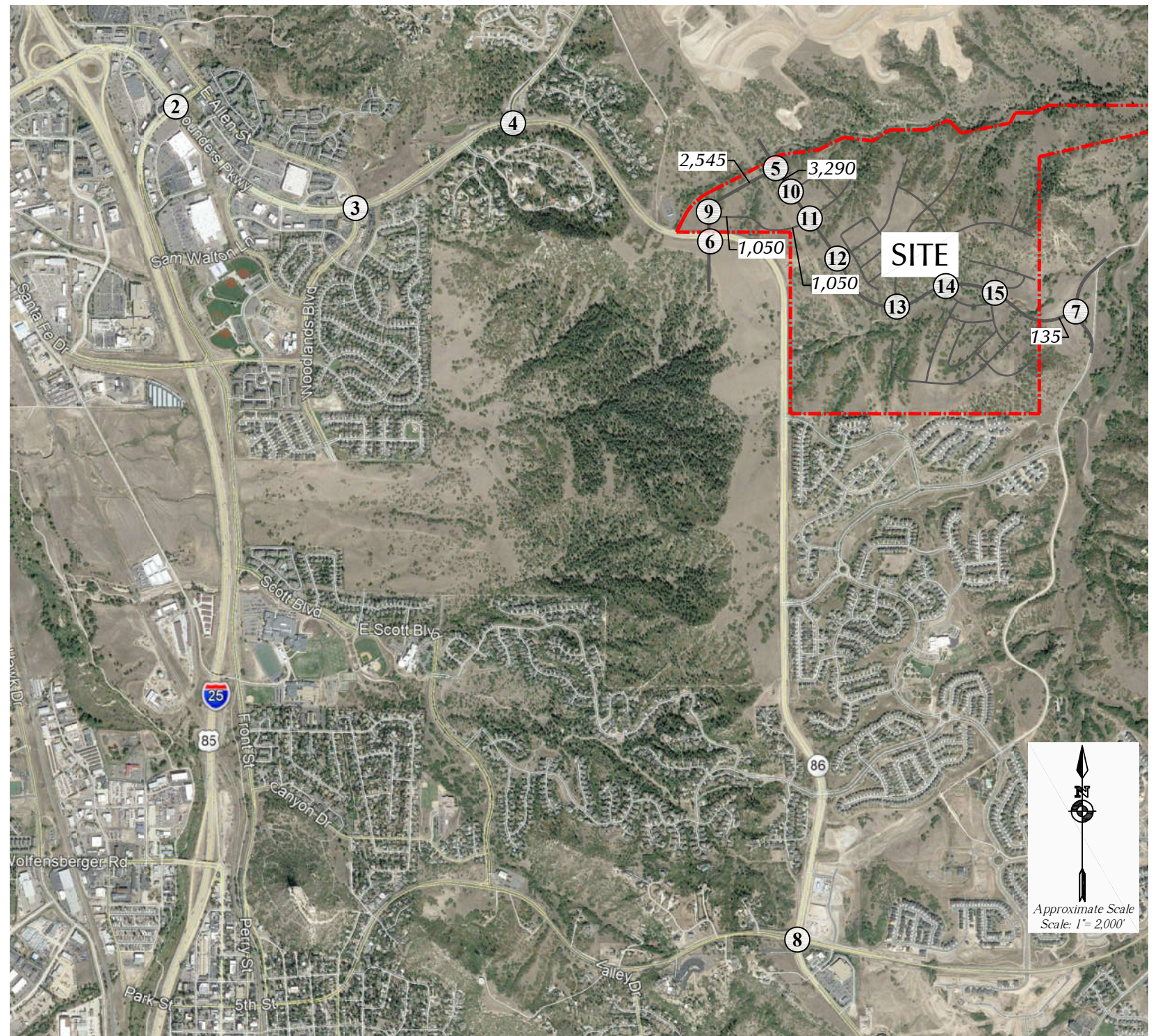
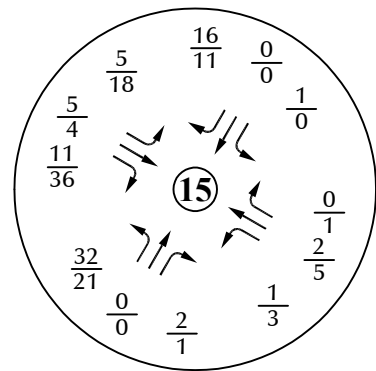
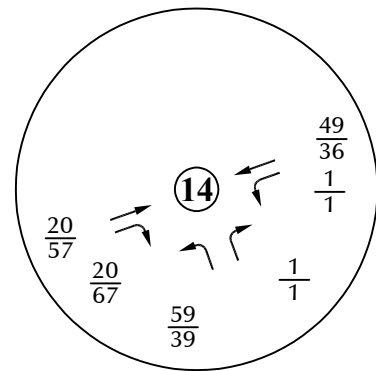
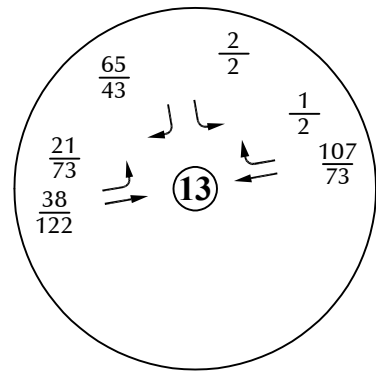
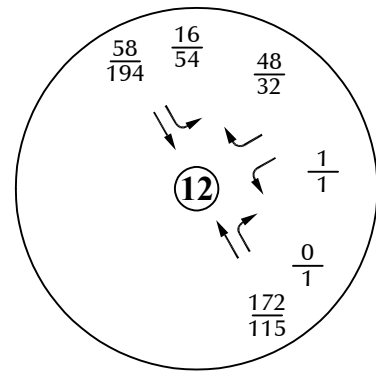
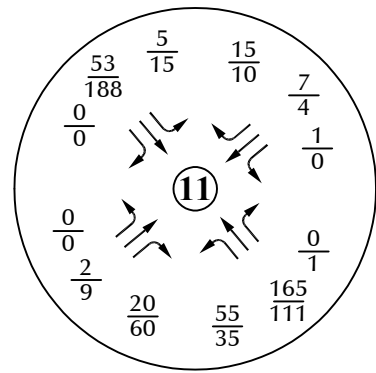
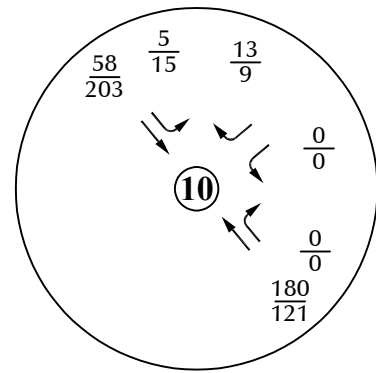


Figure 7a

**Major Intersections -
 Assignment of Residential Site-Generated Traffic**
 Canyons South (LSC #210310)

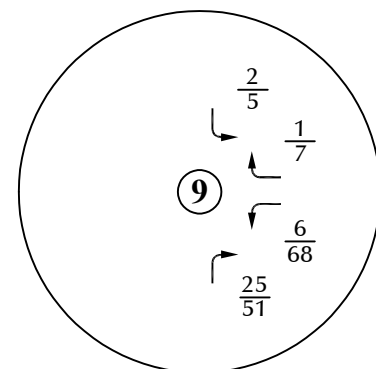
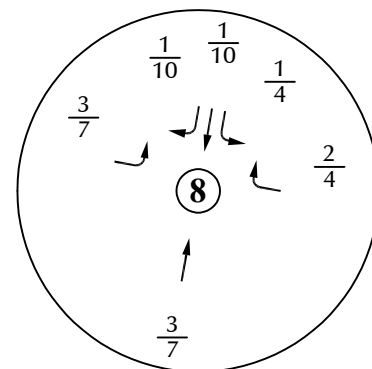
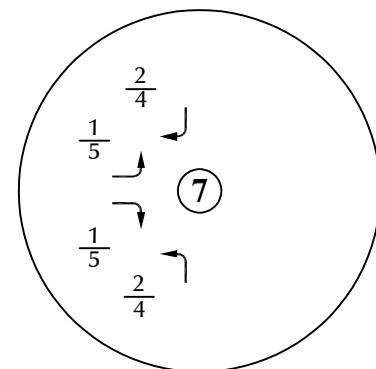
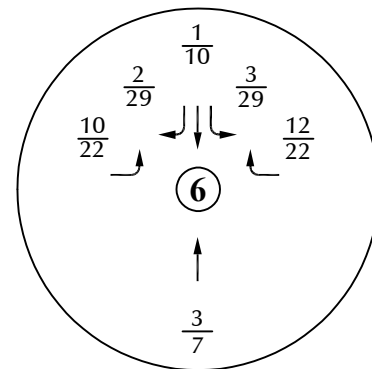
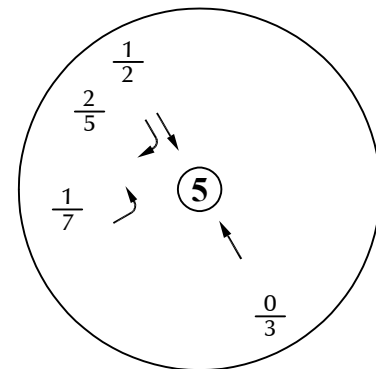
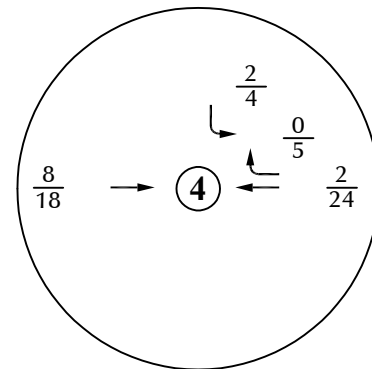
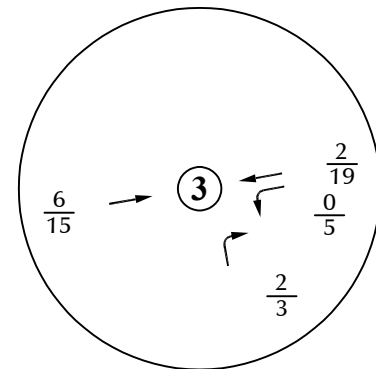
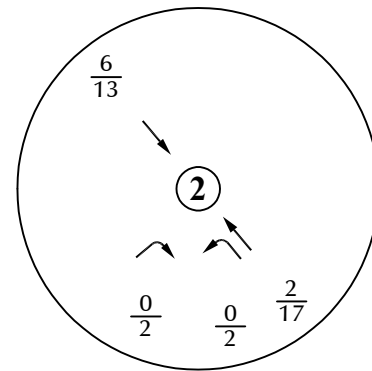
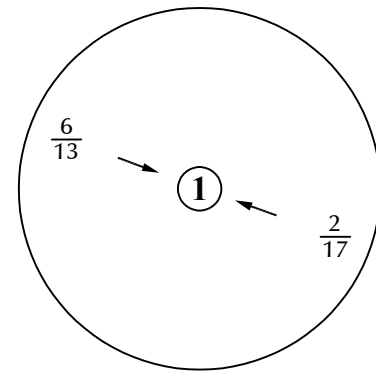


LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 PM Peak Hour Traffic
 1,000 = Average Daily Traffic

Figure 7b

*Access/Minor Intersections -
 Assignment of Residential Site-Generated Traffic*
 Canyons South (LSC #210310)



LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{26}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic

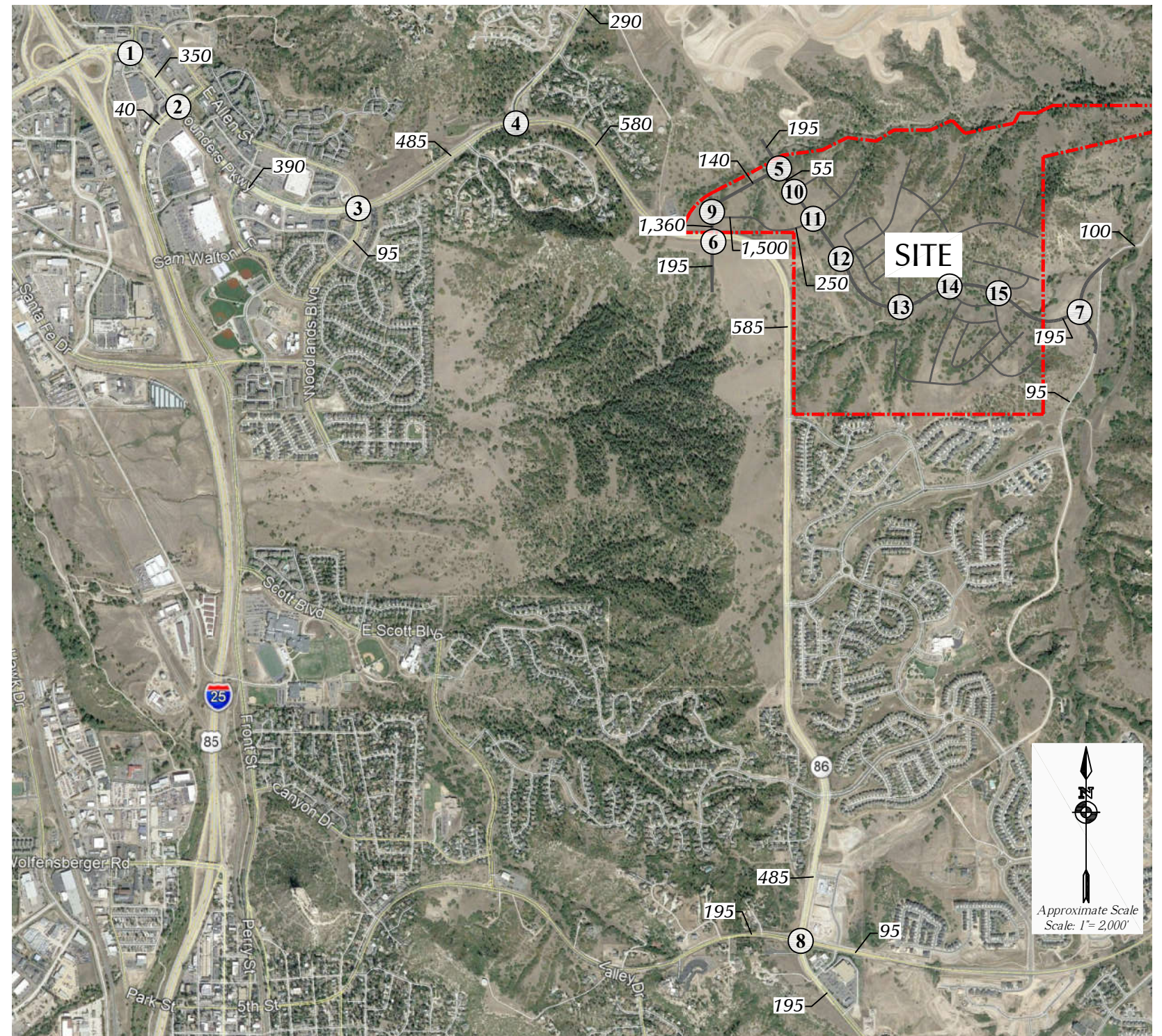
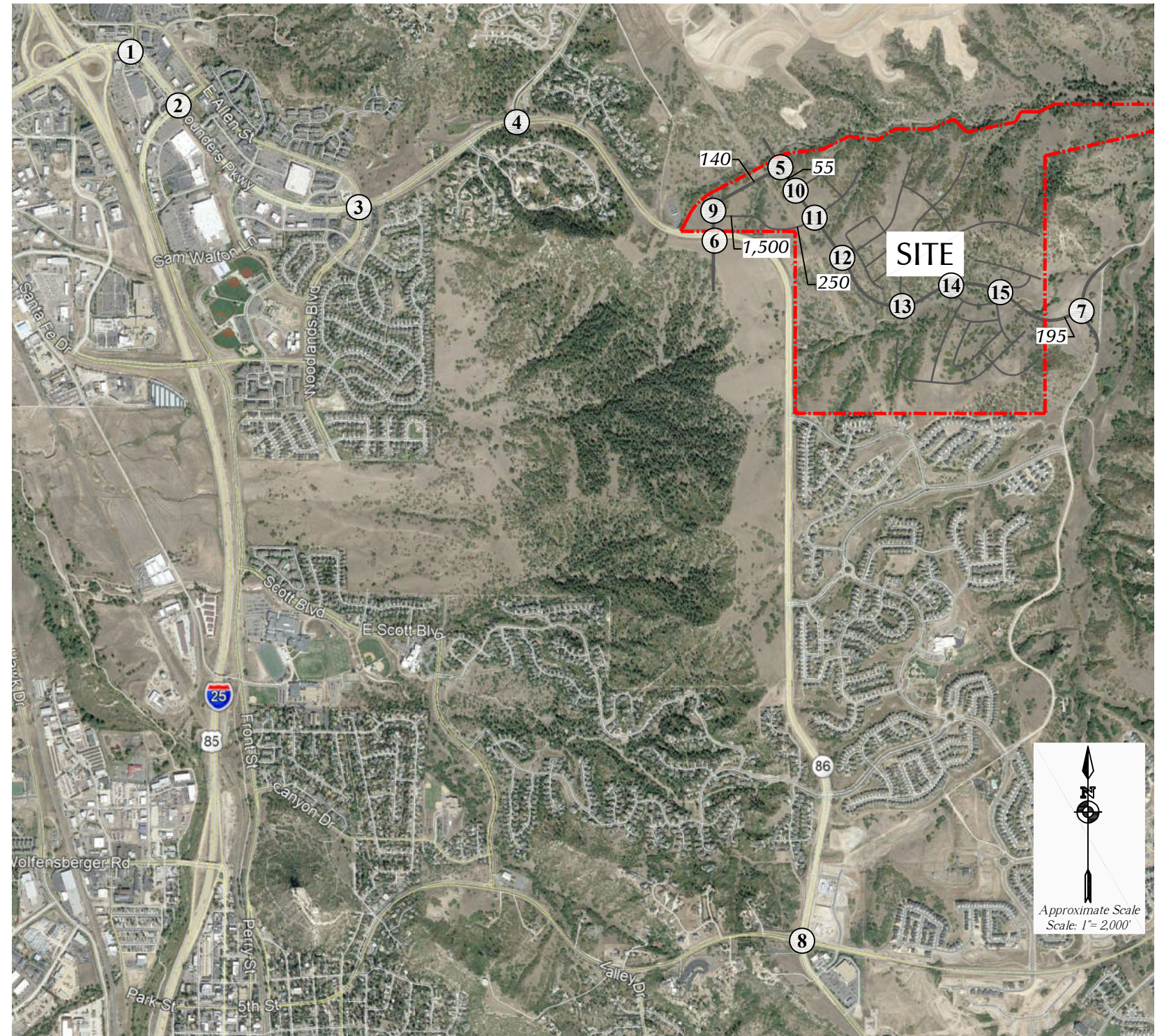
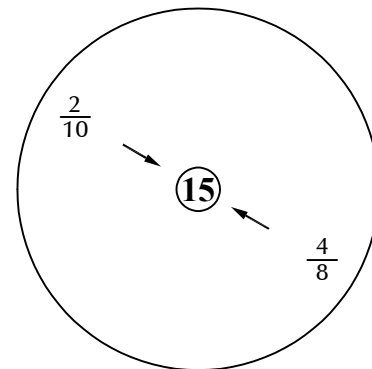
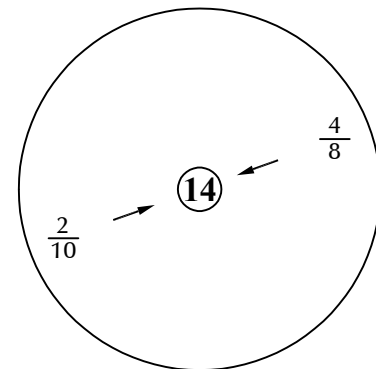
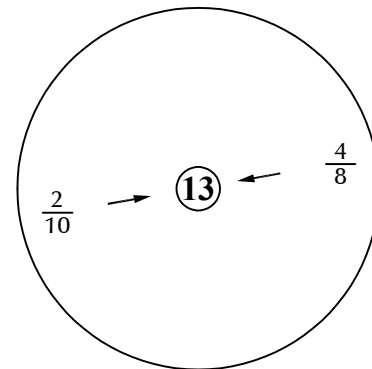
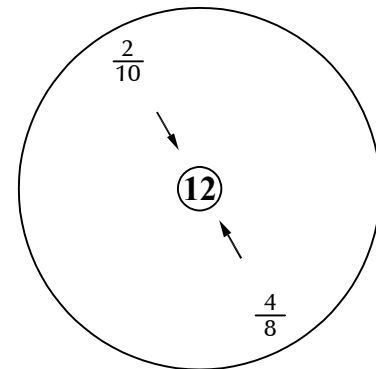
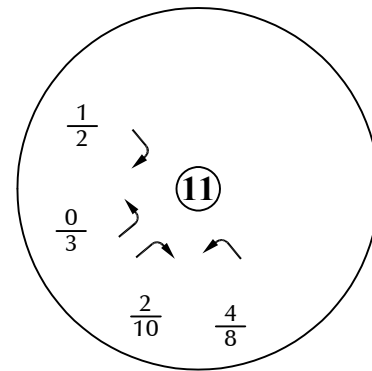
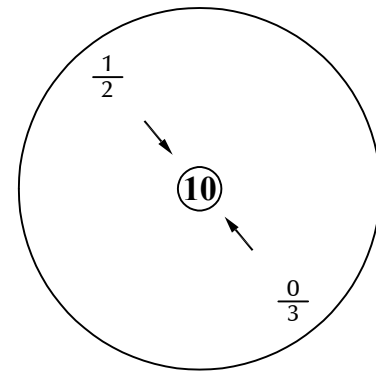


Figure 7c

Major Intersections - Assignment of Primary Non-Residential Site-Generated Traffic

Canyons South (LSC #210310)



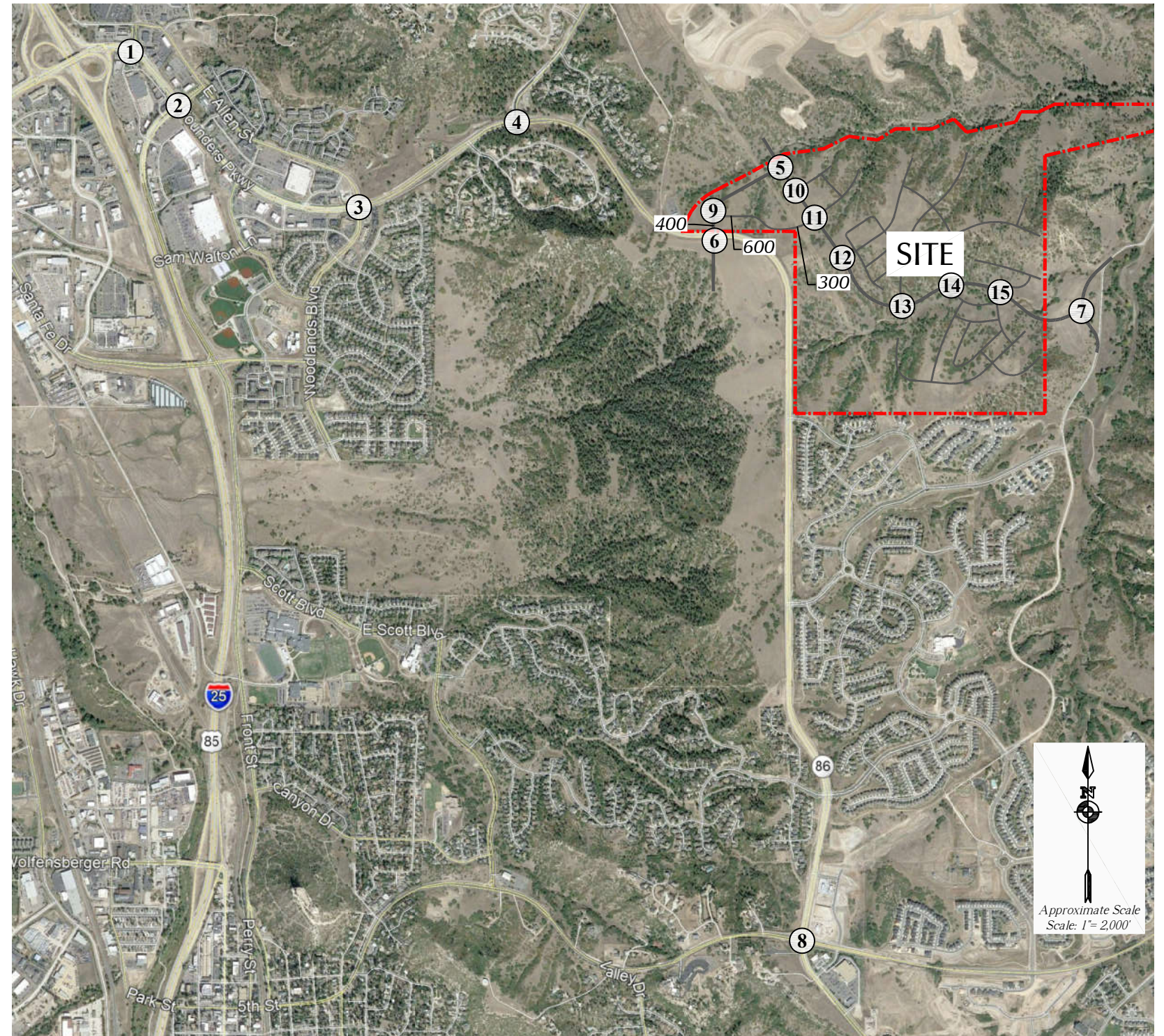
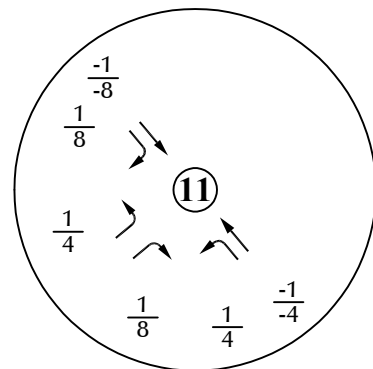
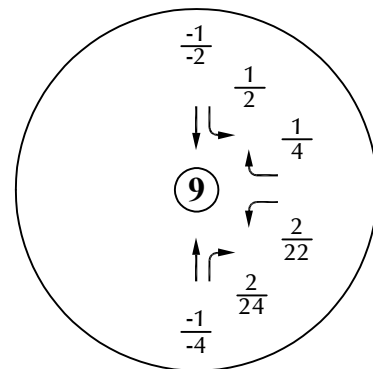
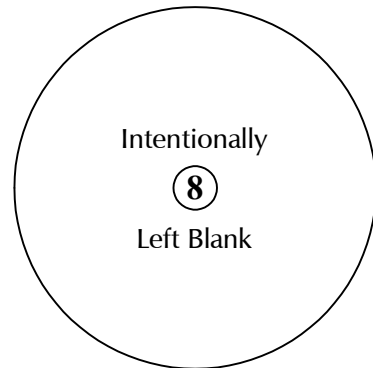
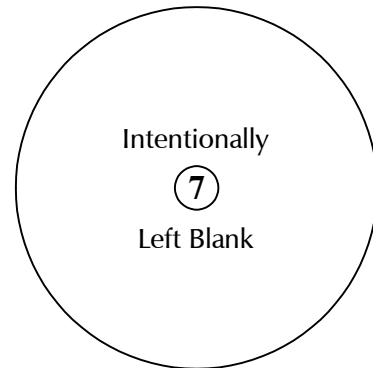
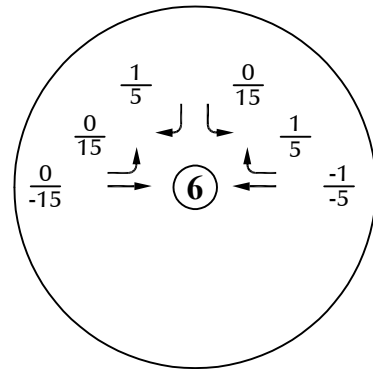
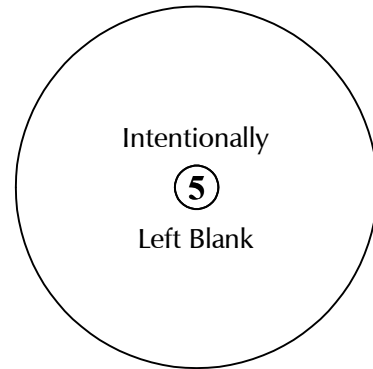
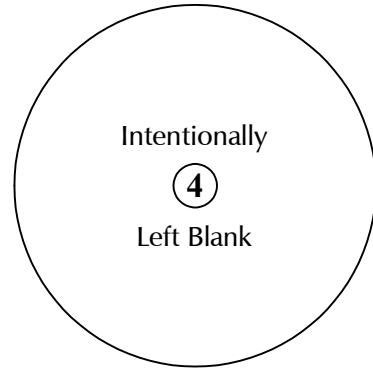
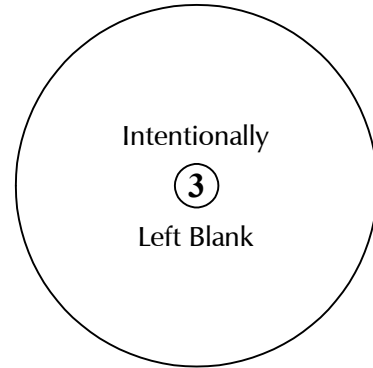
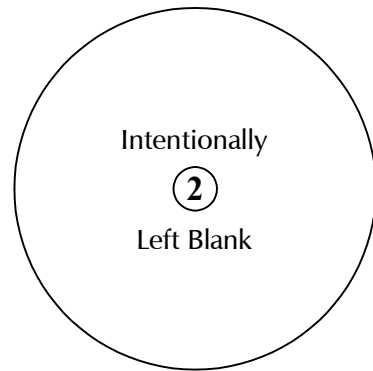
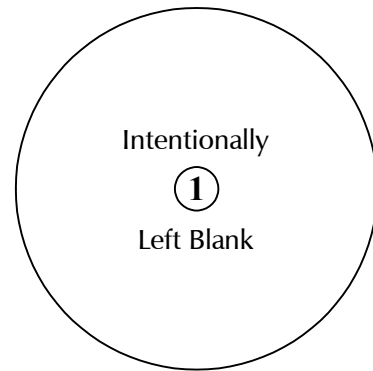
LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 PM Peak Hour Traffic

1,000 = Average Daily Traffic

Access/Minor Intersections - Assignment of Primary Non-Residential Site-Generated Traffic

Canyons South (LSC #210310)

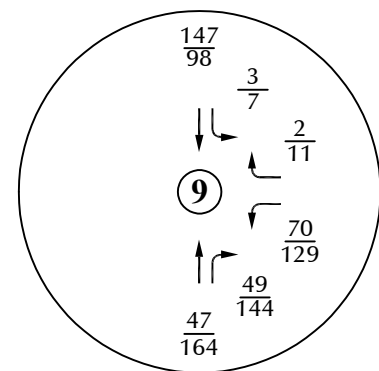
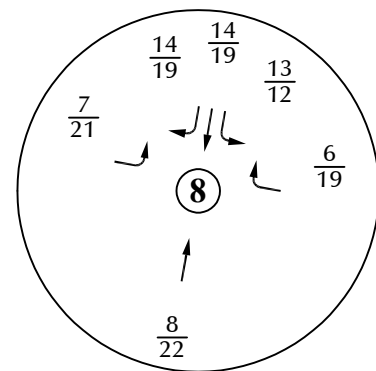
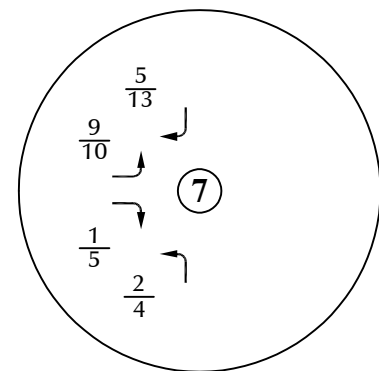
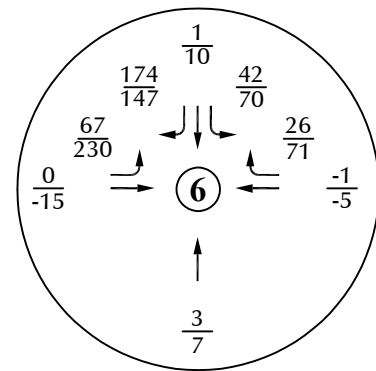
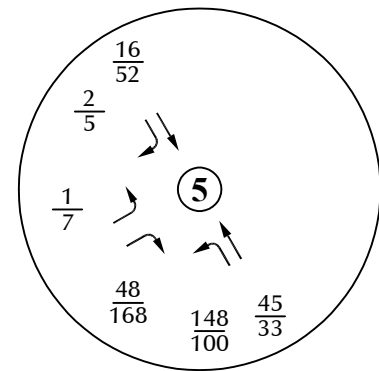
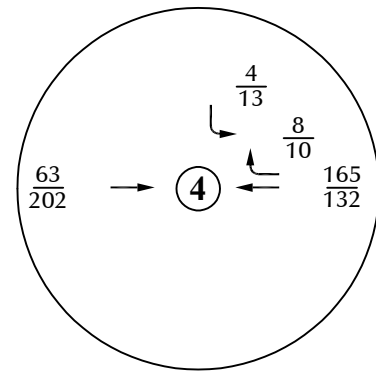
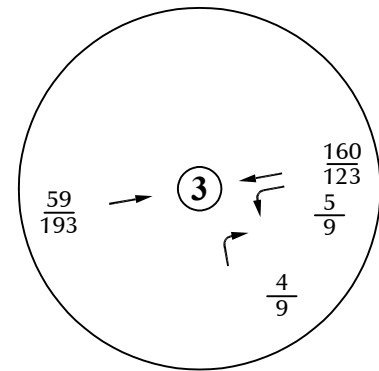
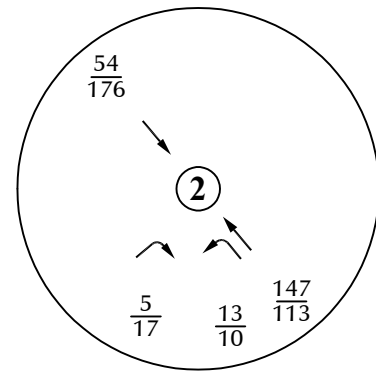
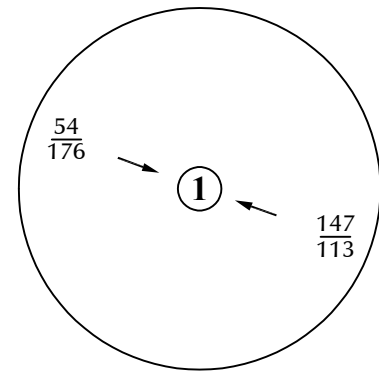


LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{1,000}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic

Figure 7e

*Assignment of
Passby Site-Generated Traffic*
 Canyons South (LSC #210310)



LEGEND:
 $\frac{26}{35}$ = AM Peak Hour Traffic
 $\frac{35}{26}$ = PM Peak Hour Traffic
 1,000 = Average Daily Traffic

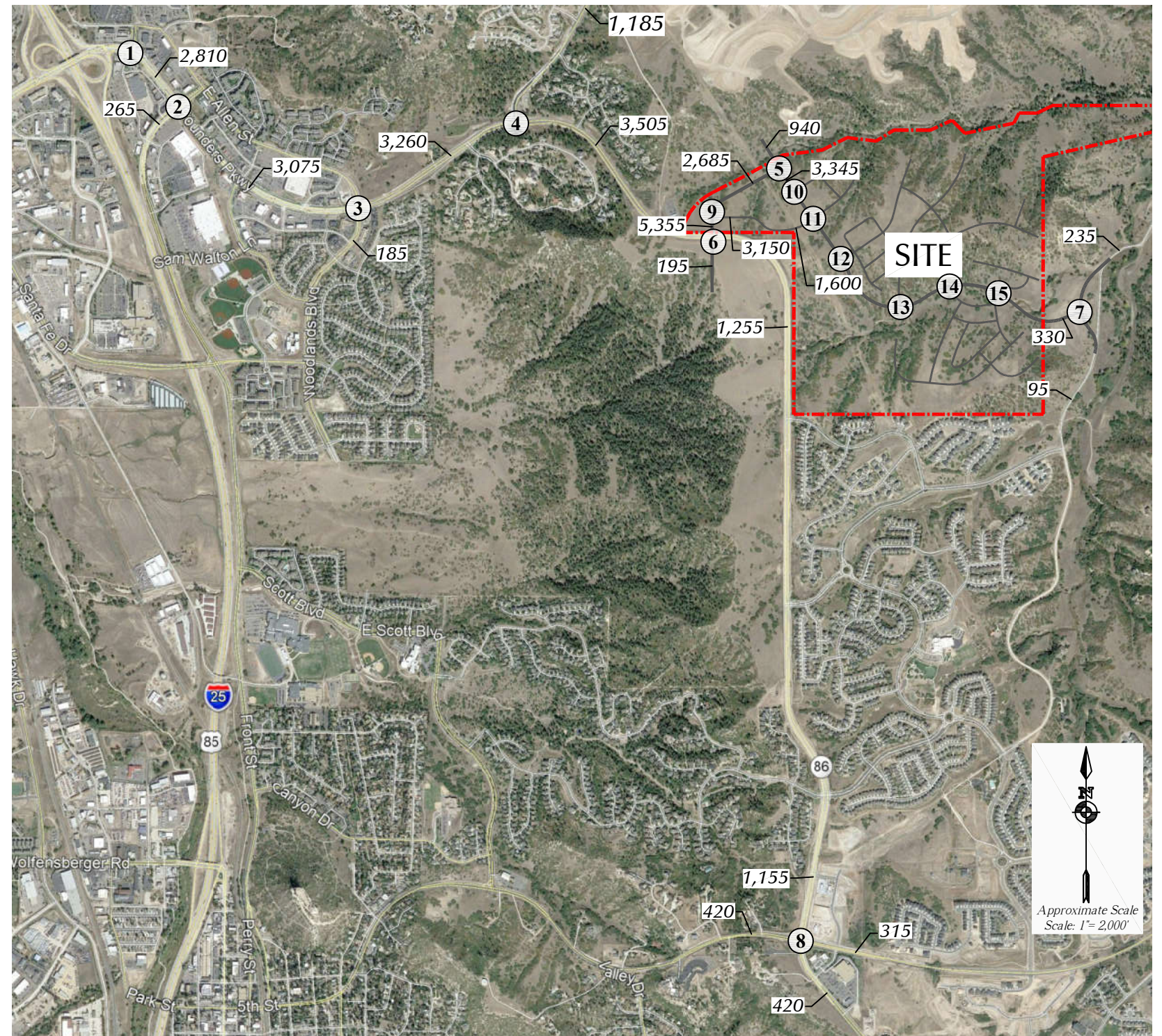
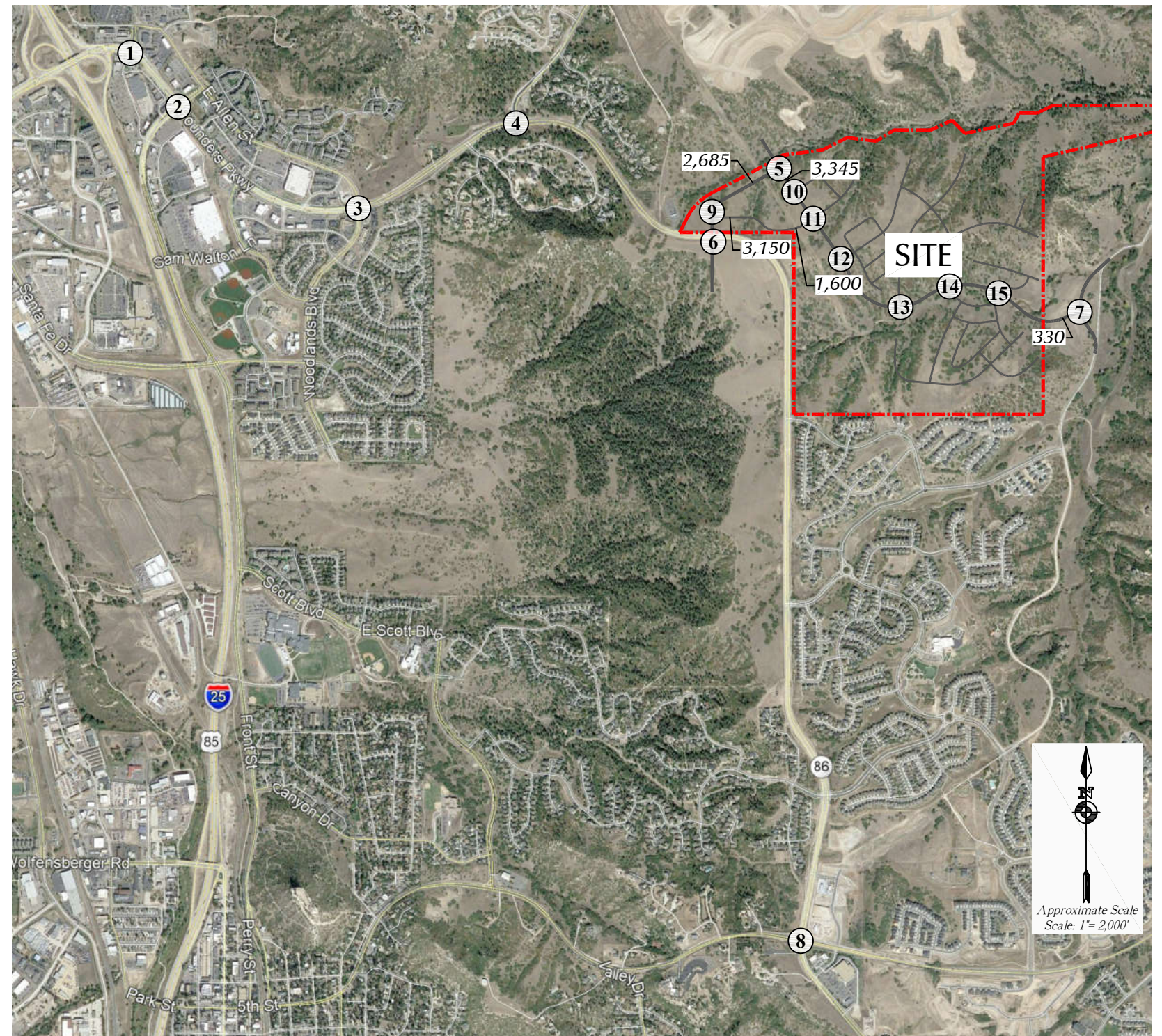
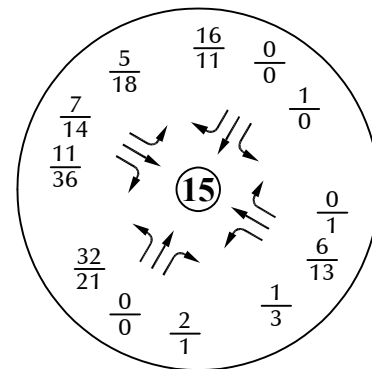
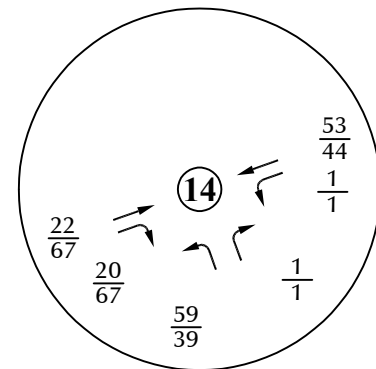
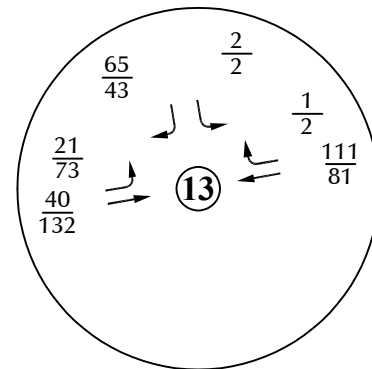
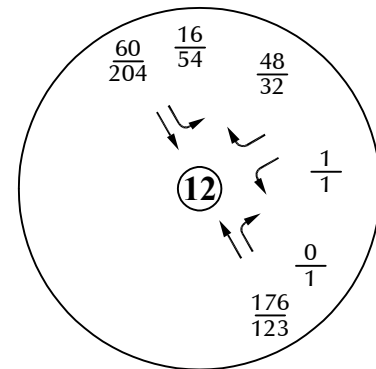
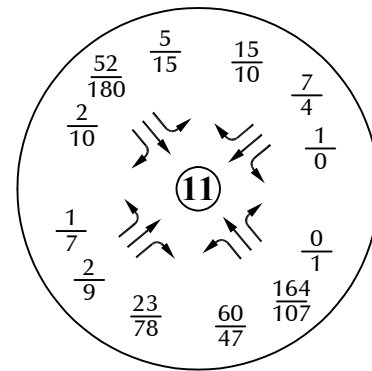
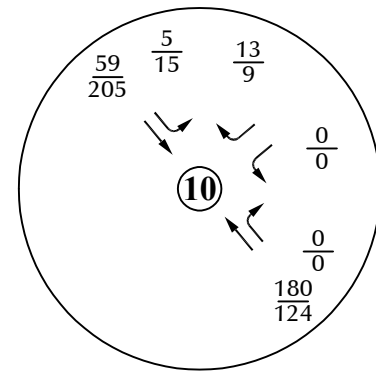


Figure 7f
**Major Intersections -
 Assignment of
 Total Site-Generated Traffic**
 Canyons South (LSC #210310)

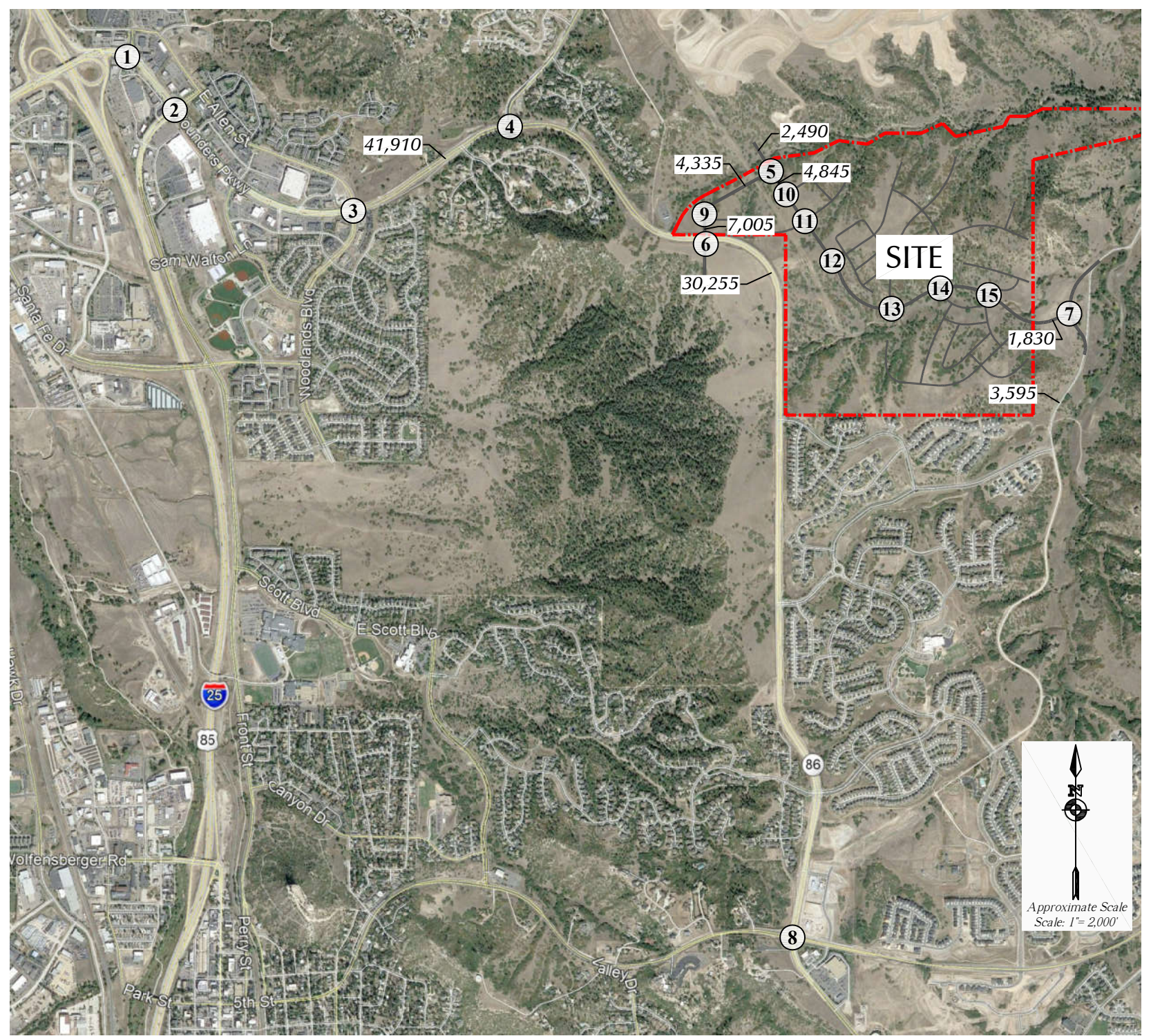
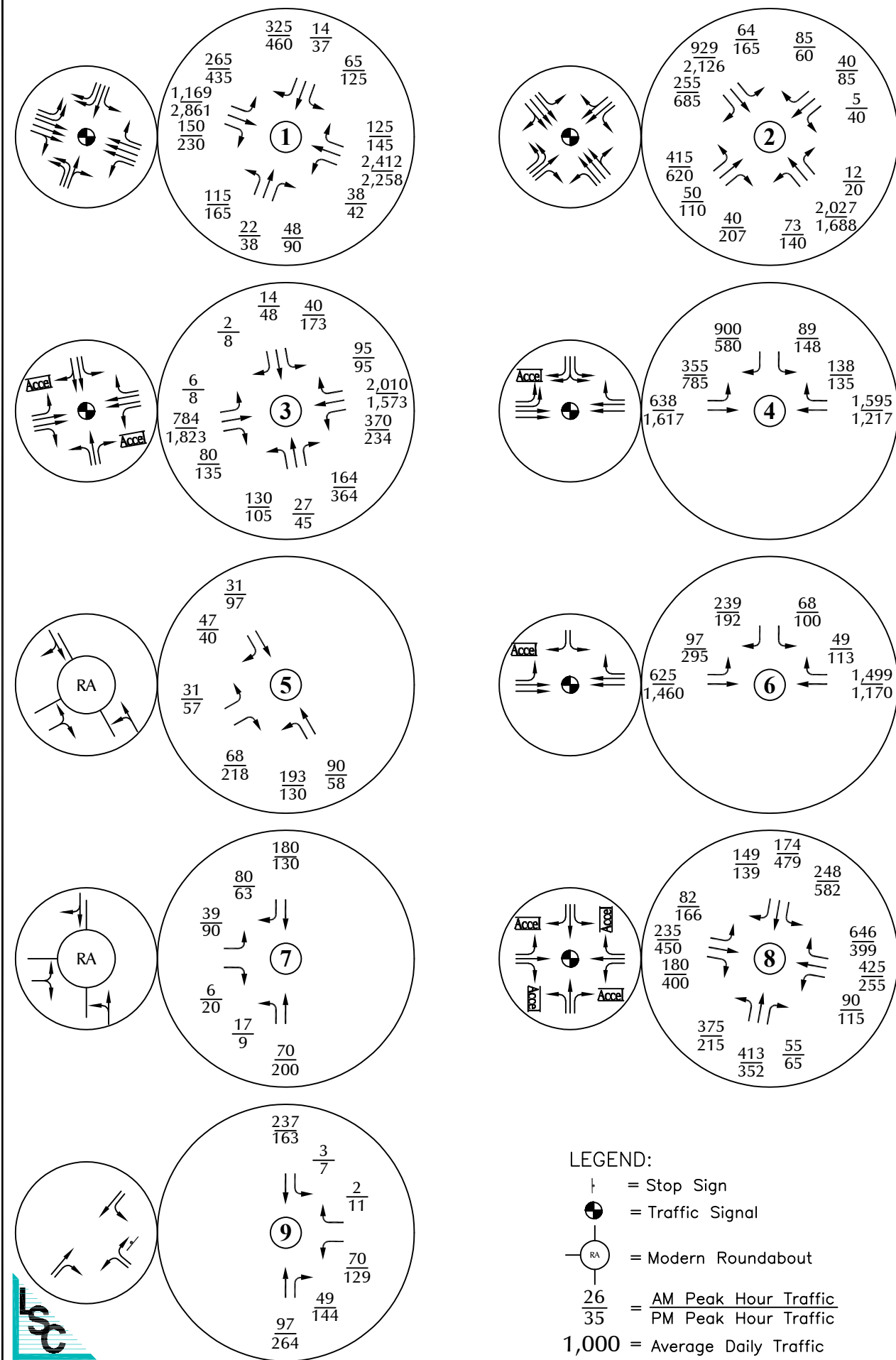


LEGEND:

$\frac{26}{35}$ = AM Peak Hour Traffic
 = PM Peak Hour Traffic
 1,000 = Average Daily Traffic

Access/Minor Intersections -
 Assignment of
 Total Site-Generated Traffic

Canyons South (LSC #210310)

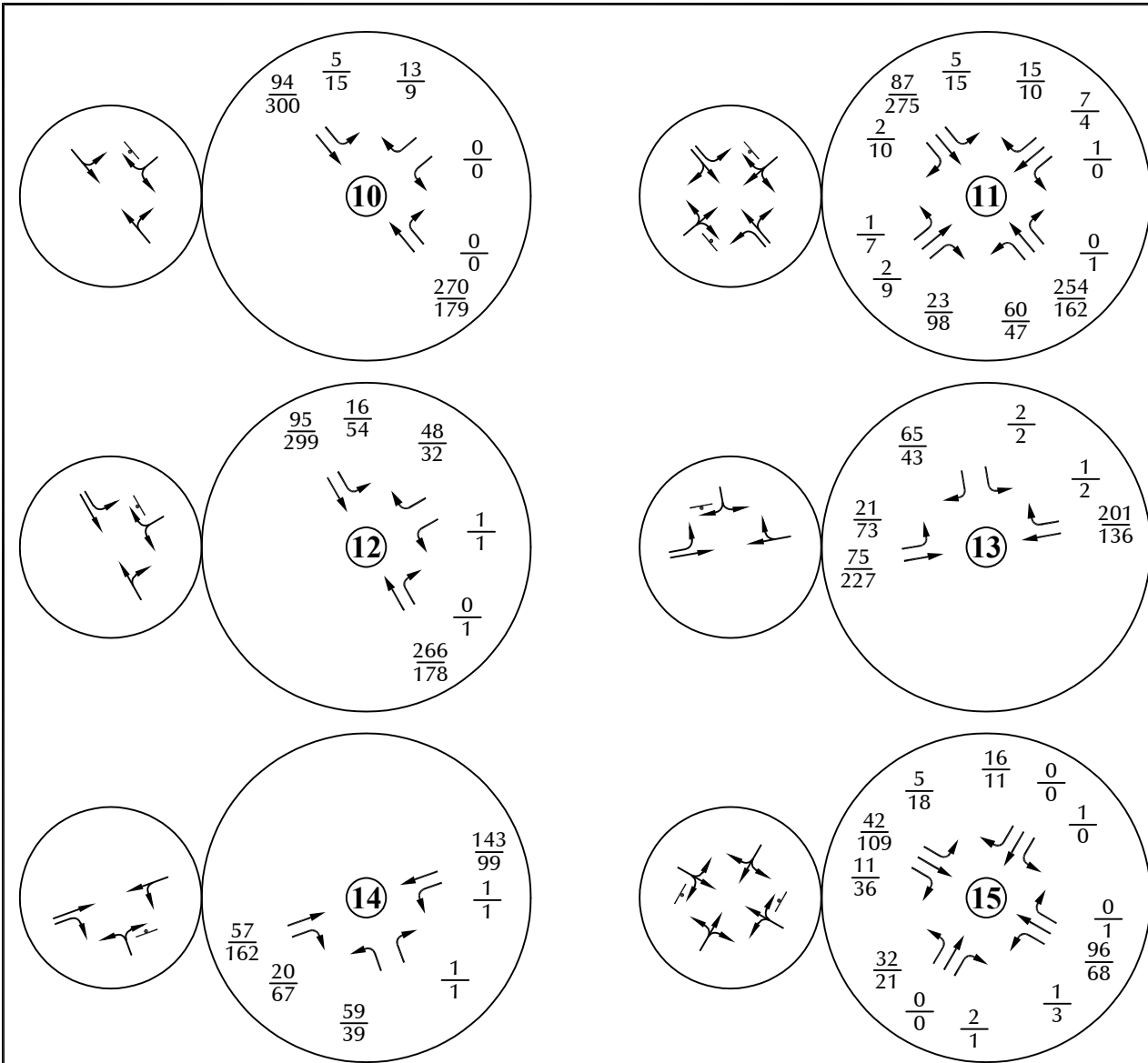


Note: These volumes are the sum of the volumes in Figure 4 and Figure 7f.

Figure 8a

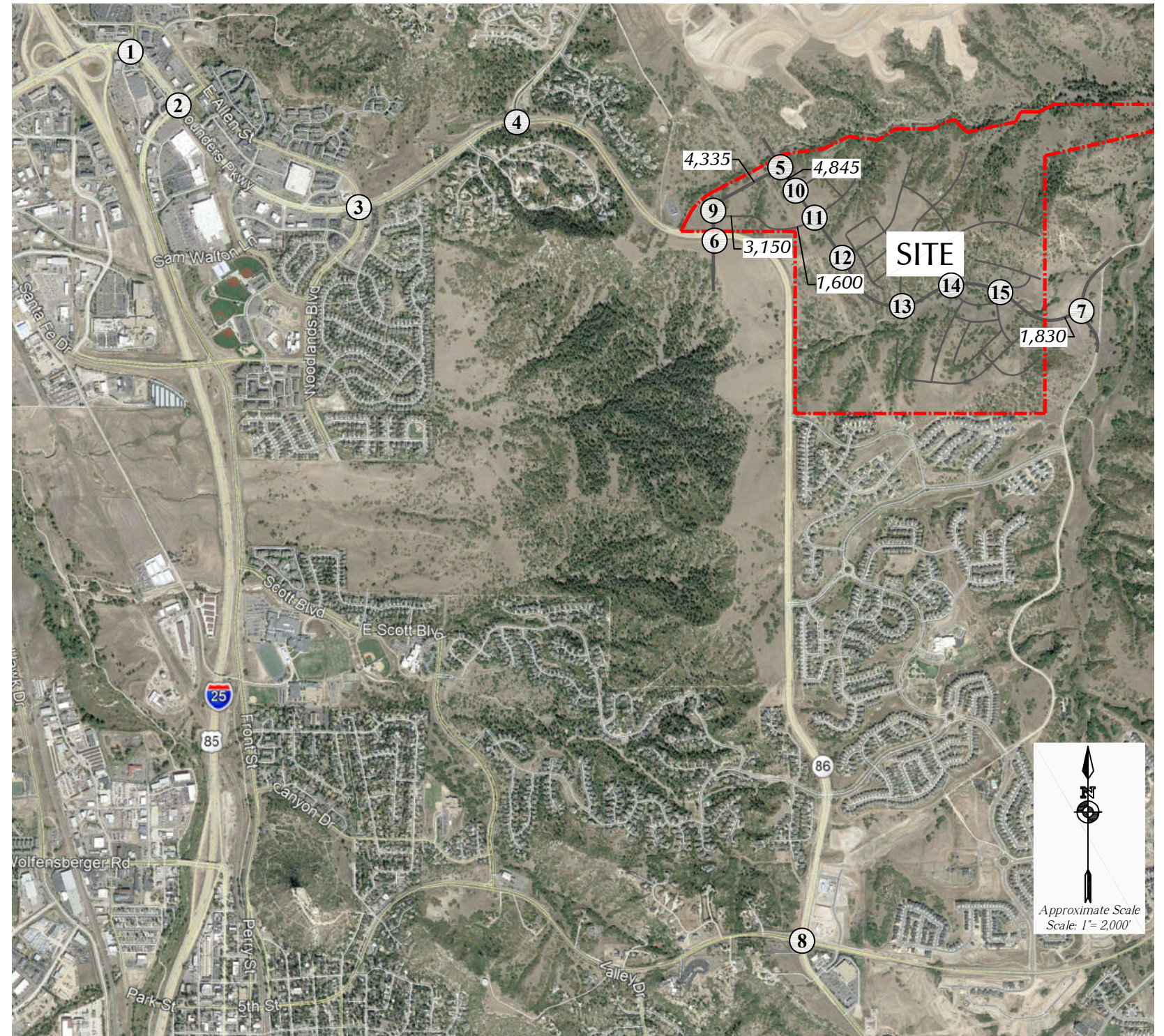
Major Intersections - Year 2025 Total Traffic, Lane Geometry and Traffic Control

Canyons South (LSC #210310)



LEGEND:

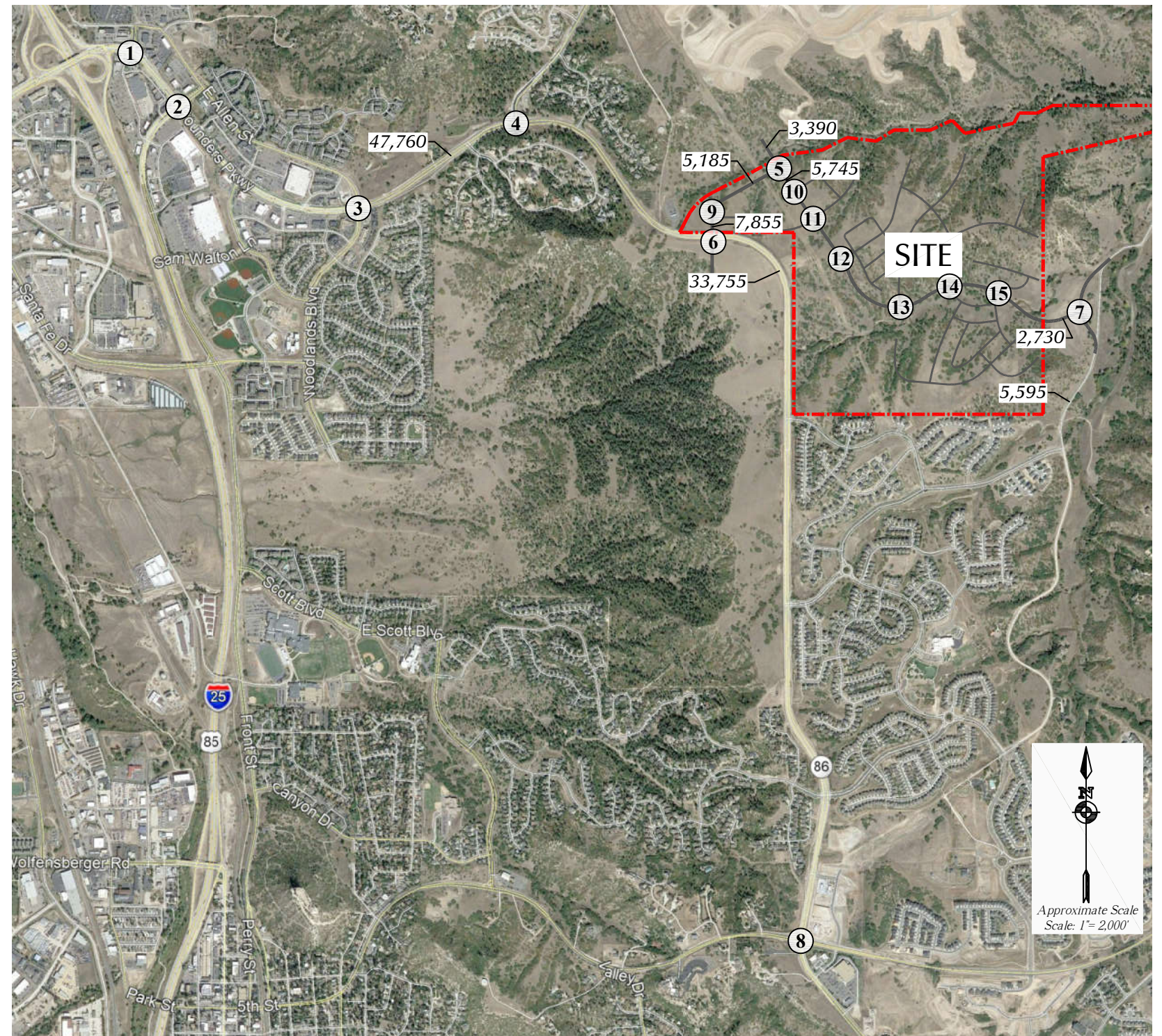
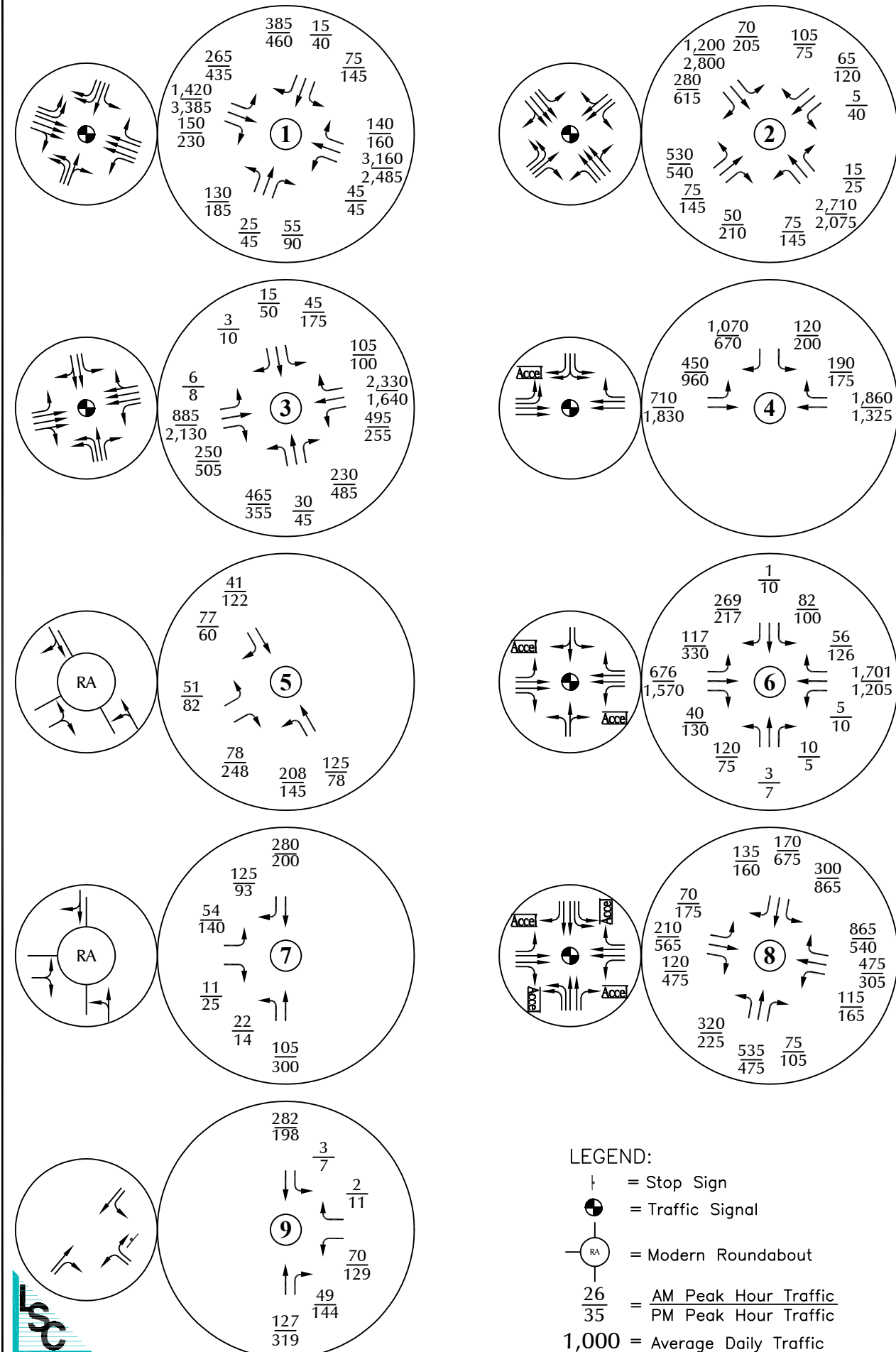
- = Stop Sign
- = Traffic Signal
- = Modern Roundabout
- $\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$
- 1,000 = Average Daily Traffic



Note: These volumes are the sum of the volumes in Figure 4 and Figure 7g.

Figure 8b

**Access/Minor Intersections -
Year 2025 Total Traffic,
Lane Geometry and Traffic Control**
Canyons South (LSC #210310)



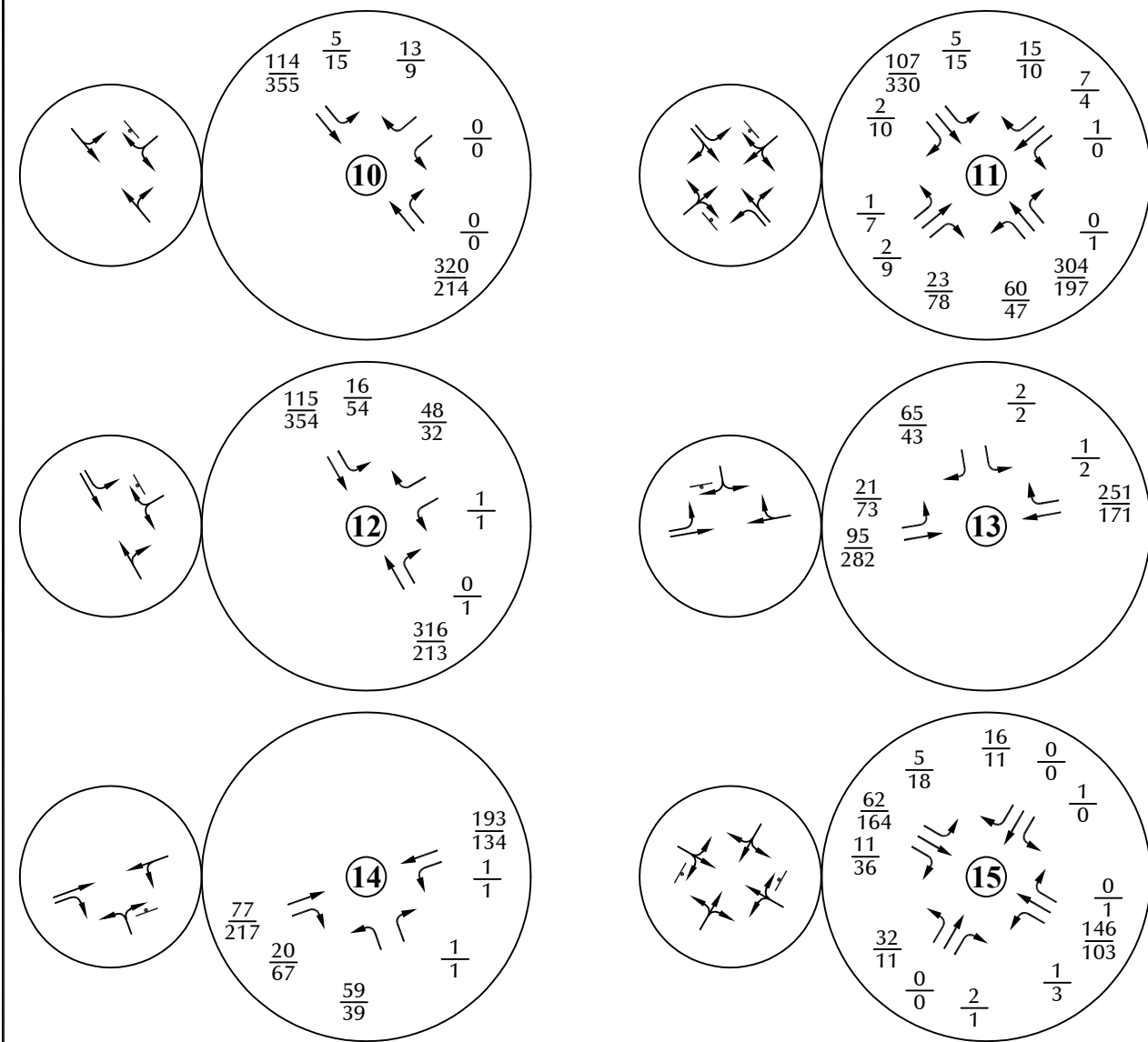
Notes:

- #8 based on 2040 projections from Town grown for one year at an annual rate of three percent plus site-generated trips.
- South leg of #6 based on build-out volumes from Figure 7a of the 2017 Pine Canyon Update TIA by LSC.
- Side Road volumes at #1, #2, #3 and #4 are based on the 2040 total traffic volumes from Figure 12 of the 2020 Pine Canyon TIA by Kimley Horn with some adjustments based on the recent traffic counts.
- Through traffic at #7 based on three percent annual growth rate.
- These volumes are the sum of the volumes in Figure 5 and Figure 7f.

Figure 9a

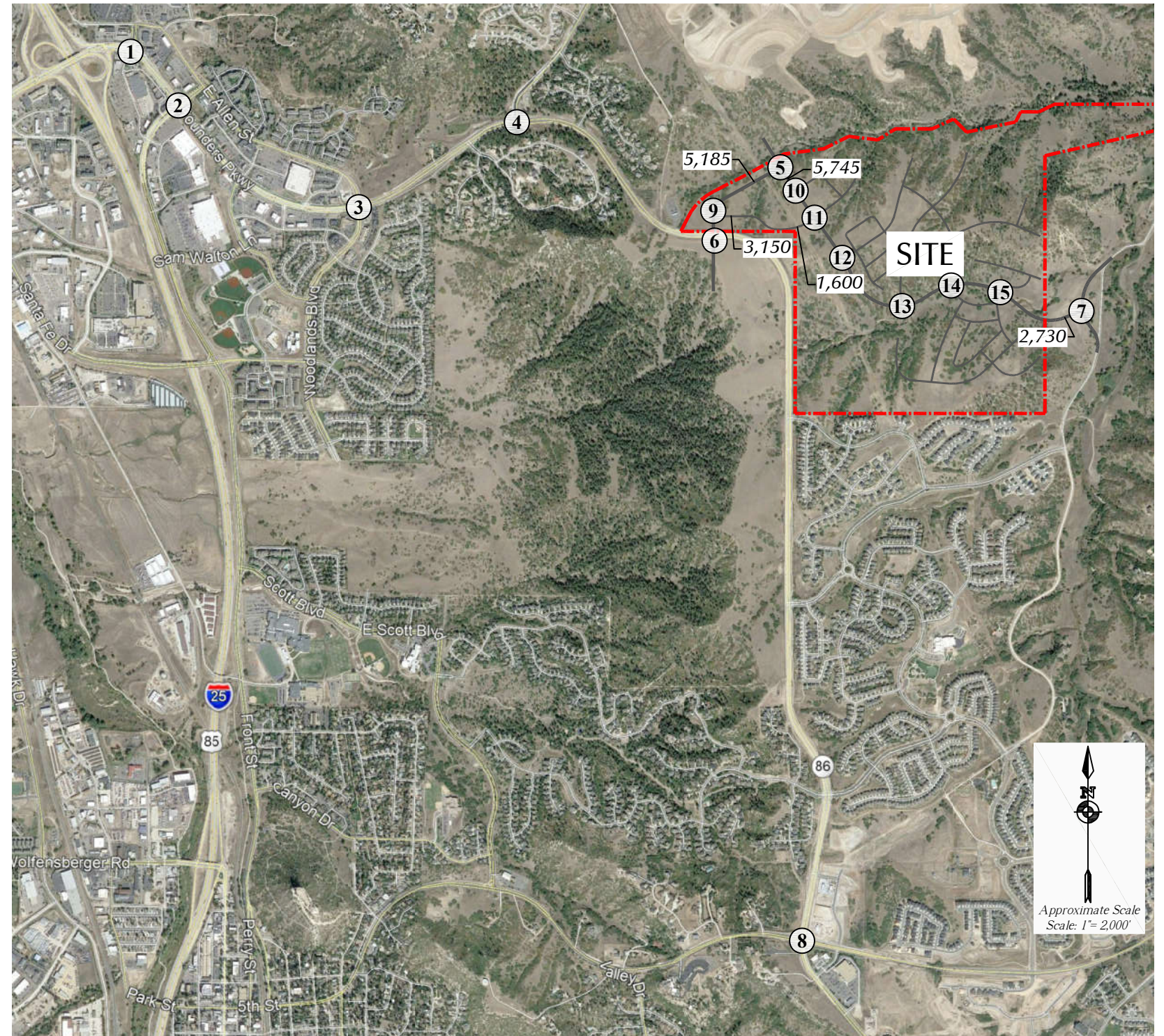
Major Intersections - Year 2041 Total Traffic, Lane Geometry and Traffic Control

Canyons South (LSC #210310)



LEGEND:

- = Stop Sign
- = Traffic Signal
- = Modern Roundabout
- $\frac{26}{35}$ = $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$
- 1,000 = Average Daily Traffic

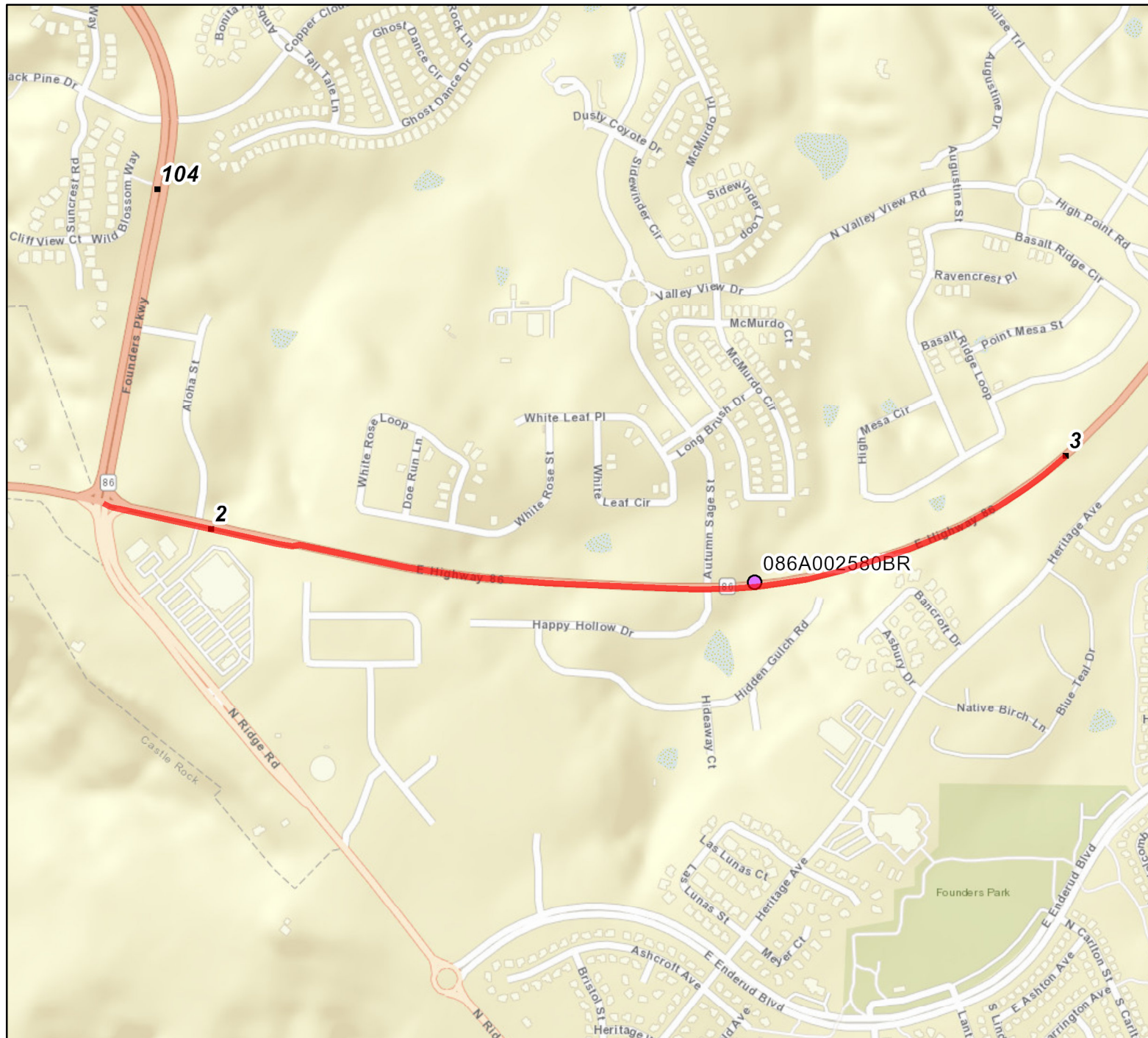


Note: These volumes are the sum of the volumes in Figure 5 and Figure 7g.

Figure 9b

**Access/Minor Intersections -
Year 2041 Total Traffic,
Lane Geometry and Traffic Control**
Canyons South (LSC #210310)

Route 086A From 1 to 3



Legend

Route

Milepoint

Structures

Major Structure

Minor Structure

Created:

Date: 6/17/2021

Time: 9:52:59 AM

0 0.08 0.16 0.24 0.32
Miles



The information contained in this map is based on the most currently available data and has been checked for accuracy. CDOT does not guarantee the accuracy of any information presented, is not liable in any respect for any errors or omissions, and is not responsible for determining "fitness for use".



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ALLEN WAY
E/W STREET: FOUNDERS PKWY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : ALLEN WAY FOUNDERS PKWY 6-3-21
Site Code : 00000022
Start Date : 6/3/2021
Page No : 1

Groups Printed- VEHICLES

	ALLEN WAY Southbound				FOUNDERS PKWY Westbound				ALLEN WAY Northbound				FOUNDERS PKWY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	15	2	37	0	5	292	28	0	14	2	11	0	35	131	18	0	590
06:45 AM	10	3	47	0	11	344	28	0	22	0	11	0	60	155	35	0	726
Total	25	5	84	0	16	636	56	0	36	2	22	0	95	286	53	0	1316
07:00 AM	6	2	73	0	10	324	53	0	22	7	14	0	37	145	30	0	723
07:15 AM	13	5	76	0	8	352	43	1	19	1	12	0	74	167	20	0	791
07:30 AM	15	3	72	0	3	430	30	0	26	1	12	0	64	186	29	0	871
07:45 AM	17	3	63	0	7	402	26	0	20	3	14	0	71	279	55	0	960
Total	51	13	284	0	28	1508	152	1	87	12	52	0	246	777	134	0	3345
08:00 AM	17	2	80	0	5	360	33	0	30	5	12	1	64	227	36	0	872
08:15 AM	11	5	66	1	10	356	31	0	28	2	8	0	65	233	30	0	846
Total	28	7	146	1	15	716	64	0	58	7	20	1	129	460	66	0	1718
04:00 PM	35	9	122	0	7	399	45	1	39	10	19	0	111	513	74	0	1384
04:15 PM	20	11	117	0	9	449	37	0	43	3	20	0	107	440	50	0	1306
04:30 PM	23	8	107	0	7	363	34	0	40	12	22	0	112	504	54	0	1286
04:45 PM	33	7	103	0	1	458	31	0	35	2	33	0	117	517	55	0	1392
Total	111	35	449	0	24	1669	147	1	157	27	94	0	447	1974	233	0	5368
05:00 PM	22	13	137	0	14	402	31	0	34	5	19	0	111	536	65	0	1389
05:15 PM	26	7	108	0	17	439	39	0	38	1	14	0	96	549	53	0	1387
05:30 PM	19	7	121	0	10	383	45	0	39	11	11	0	89	470	47	0	1252
05:45 PM	14	13	114	0	8	391	24	0	34	10	14	0	105	424	48	1	1200
Total	81	40	480	0	49	1615	139	0	145	27	58	0	401	1979	213	1	5228
Grand Total	296	100	1443	1	132	6144	558	2	483	75	246	1	1318	5476	699	1	16975
Apprch %	16.1	5.4	78.4	0.1	1.9	89.9	8.2	0.0	60.0	9.3	30.6	0.1	17.6	73.1	9.3	0.0	
Total %	1.7	0.6	8.5	0.0	0.8	36.2	3.3	0.0	2.8	0.4	1.4	0.0	7.8	32.3	4.1	0.0	

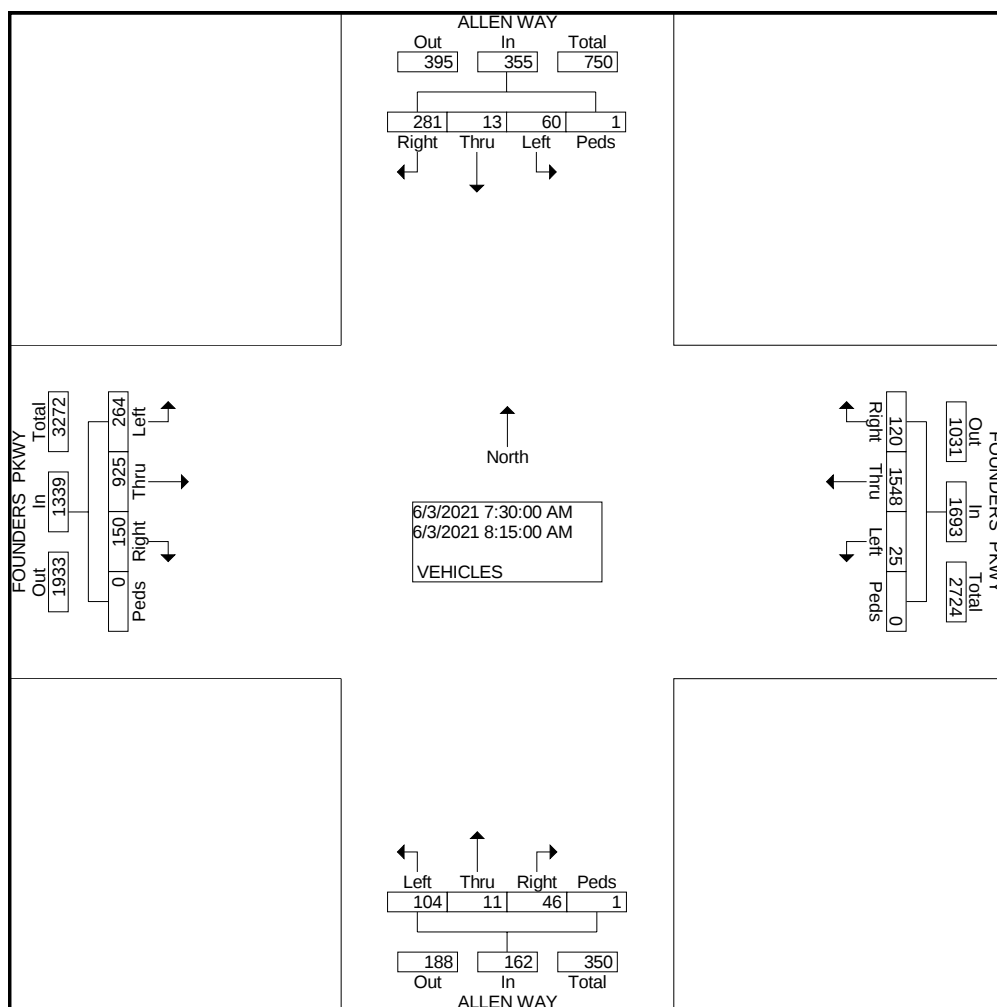
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ALLEN WAY
E/W STREET: FOUNDERS PKWY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : ALLEN WAY FOUNDERS PKWY 6-3-21
Site Code : 00000022
Start Date : 6/3/2021
Page No : 2

	ALLEN WAY Southbound					FOUNDERS PKWY Westbound					ALLEN WAY Northbound					FOUNDERS PKWY Eastbound					Int. Total
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:30 AM to 08:15 AM - Peak 1 of 1	07:30 AM																				
Volume	60	13	281	1	355	25	154	120	0	1693	104	11	46	1	162	264	925	150	0	1339	3549
Percent	16.9	3.7	79.2	0.3		1.5	91.4	7.1	0.0		64.2	6.8	28.4	0.6		19.7	69.1	11.2	0.0		
07:45 Volume	17	3	63	0	83	7	402	26	0	435	20	3	14	0	37	71	279	55	0	405	960
Peak Factor																					0.924
High Int.	08:00 AM					07:30 AM					08:00 AM					07:45 AM					
Volume	17	2	80	0	99	3	430	30	0	463	30	5	12	1	48	71	279	55	0	405	
Peak Factor	0.896					0.914					0.844					0.827					



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
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N/S STREET: ALLEN WAY
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File Name : ALLEN WAY FOUNDERS PKWY 6-3-21
Site Code : 00000022
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Page No : 2

	ALLEN WAY Southbound					FOUNDERS PKWY Westbound					ALLEN WAY Northbound					FOUNDERS PKWY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	104	35	455	0	594	39	166	135	0	1836	147	20	88	0	255	436	210	227	0	2769	5454
Percent	17.5	5.9	76.6	0.0		2.1	90.5	7.4	0.0		57.6	7.8	34.5	0.0		15.7	76.1	8.2	0.0		
04:45 Volume	33	7	103	0	143	1	458	31	0	490	35	2	33	0	70	117	517	55	0	689	1392
Peak Factor																					0.980
High Int. Volume	05:00 PM					05:15 PM					04:30 PM					05:00 PM					
Peak Factor	22	13	137	0	172	17	439	39	0	495	40	12	22	0	74	111	536	65	0	712	

COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: FRONT STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FRONTFOUND
Site Code : 00000020
Start Date : 5/4/2021
Page No : 1

Groups Printed- VEHICLES

	FRONT STREET Southbound				FOUNDERS PARKWAY Westbound				FRONT STREET Northbound				FOUNDERS PARKWAY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	1	2	13	0	8	282	0	0	55	3	4	0	7	105	42	0	522
06:45 AM	0	0	11	0	9	339	0	0	62	6	5	0	5	148	49	4	638
Total	1	2	24	0	17	621	0	0	117	9	9	0	12	253	91	4	1160
07:00 AM	0	0	14	0	12	343	0	0	78	8	6	0	3	126	44	0	634
07:15 AM	0	11	11	0	13	448	0	0	107	12	5	0	10	142	70	0	829
07:30 AM	0	6	12	1	10	458	1	0	106	14	13	0	8	180	51	0	860
07:45 AM	0	6	10	0	11	418	0	0	107	9	6	0	26	231	69	0	893
Total	0	23	47	1	46	1667	1	0	398	43	30	0	47	679	234	0	3216
08:00 AM	0	8	13	0	15	345	0	0	91	10	12	0	20	220	63	0	797
08:15 AM	0	9	17	0	8	331	0	0	64	9	8	0	12	230	73	4	765
Total	0	17	30	0	23	676	0	0	155	19	20	0	32	450	136	4	1562
04:00 PM	0	20	14	0	25	316	0	0	163	30	38	0	41	410	167	0	1224
04:15 PM	1	18	12	1	37	373	0	0	157	34	50	0	38	437	187	0	1345
04:30 PM	0	22	9	0	31	340	0	0	139	20	44	0	33	408	163	1	1210
04:45 PM	0	17	15	1	33	339	0	0	175	23	49	0	48	443	172	0	1315
Total	1	77	50	2	126	1368	0	0	634	107	181	0	160	1698	689	1	5094
05:00 PM	0	14	13	1	26	349	0	0	148	32	53	0	37	453	164	0	1290
05:15 PM	0	18	14	0	31	317	0	0	143	27	48	0	40	400	173	0	1211
05:30 PM	0	23	9	0	25	279	0	0	176	34	45	0	43	514	169	0	1317
05:45 PM	0	14	7	0	23	306	0	0	126	23	48	0	37	410	145	0	1139
Total	0	69	43	1	105	1251	0	0	593	116	194	0	157	1777	651	0	4957
Grand Total	2	188	194	4	317	5583	1	0	1897	294	434	0	408	4857	1801	9	15989
Apprch %	0.5	48.5	50.0	1.0	5.4	94.6	0.0	0.0	72.3	11.2	16.5	0.0	5.8	68.7	25.5	0.1	
Total %	0.0	1.2	1.2	0.0	2.0	34.9	0.0	0.0	11.9	1.8	2.7	0.0	2.6	30.4	11.3	0.1	

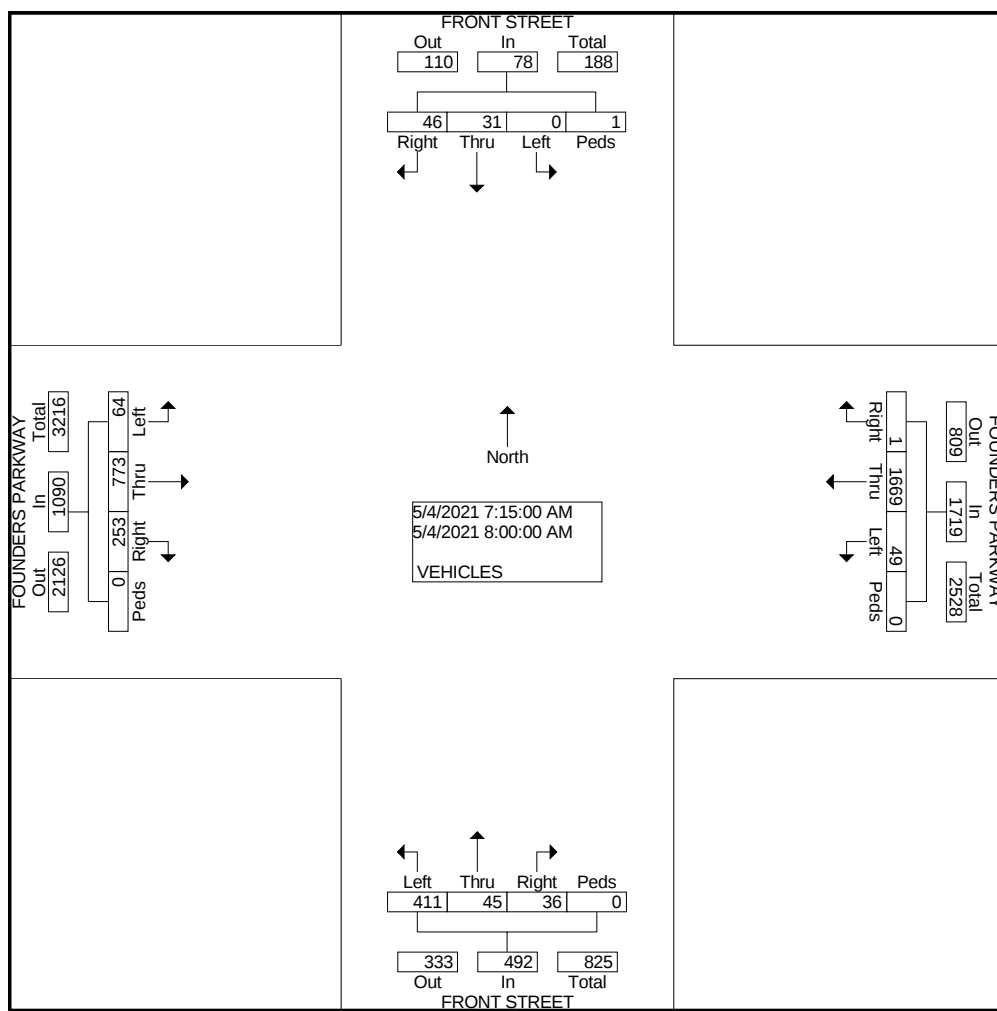
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: FRONT STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FRONTFOUND
Site Code : 00000020
Start Date : 5/4/2021
Page No : 2

	FRONT STREET Southbound					FOUNDERS PARKWAY Westbound					FRONT STREET Northbound					FOUNDERS PARKWAY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	0	31	46	1	78	49	166	1	0	1719	411	45	36	0	492	64	773	253	0	1090	3379
Percent	0.0	39.7	59.0	1.3		2.9	97.1	0.1	0.0		83.5	9.1	7.3	0.0		5.9	70.9	23.2	0.0		
07:45 Volume	0	6	10	0	16	11	418	0	0	429	107	9	6	0	122	26	231	69	0	326	893
Peak Factor																					0.946
High Int. Volume	07:15 AM					07:30 AM					07:30 AM					07:45 AM					
Peak Factor	0	11	11	0	22	10	458	1	0	469	106	14	13	0	133	26	231	69	0	326	
	0.88					0.91					0.92					0.83					
	6					6					5					6					



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: FRONT STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FRONTFOUND
Site Code : 00000020
Start Date : 5/4/2021
Page No : 2

	FRONT STREET Southbound					FOUNDERS PARKWAY Westbound					FRONT STREET Northbound					FOUNDERS PARKWAY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	1	71	49	3	124	127	140	0	0	1528	619	109	196	0	924	156	174	686	1	2584	5160
Percent	0.8	57.3	39.5	2.4		8.3	91.7	0.0	0.0		67.0	11.8	21.2	0.0		6.0	67.4	26.5	0.0		
04:15 Volume	1	18	12	1	32	37	373	0	0	410	157	34	50	0	241	38	437	187	0	662	1345
Peak Factor																					0.959
High Int. Volume	04:45 PM					04:15 PM					04:45 PM					04:45 PM					
Peak Factor	0	17	15	1	33	37	373	0	0	410	175	23	49	0	247	48	443	172	0	663	
																					0.974

COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 1

Groups Printed- 1 - VEHICLES

	CROWFOOT VALLEY ROAD Southbound				FOUNDERS PARKWAY Westbound				Northbound				FOUNDERS PARKWAY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	8	0	71	0	0	252	11	0	0	0	0	0	50	65	0	0	457
06:45 AM	15	0	122	0	0	242	18	0	0	0	0	0	53	92	0	0	542
Total	23	0	193	0	0	494	29	0	0	0	0	0	103	157	0	0	999
07:00 AM	19	0	144	0	0	273	26	0	0	0	0	0	61	77	0	0	600
07:15 AM	10	0	187	0	0	310	31	0	0	0	0	0	48	87	0	0	673
07:30 AM	12	0	162	0	0	389	46	0	0	0	0	0	91	100	0	0	800
07:45 AM	23	0	154	1	0	284	18	0	0	0	0	0	65	121	0	0	666
Total	64	0	647	1	0	1256	121	0	0	0	0	0	265	385	0	0	2739
08:00 AM	14	0	124	0	0	301	21	0	0	0	0	0	87	128	0	0	675
08:15 AM	28	0	108	0	0	250	19	0	0	0	0	0	80	137	0	0	622
Total	42	0	232	0	0	551	40	0	0	0	0	0	167	265	0	0	1297
04:00 PM	22	0	109	0	0	217	47	0	0	0	0	0	164	286	0	0	845
04:15 PM	23	0	149	0	0	271	27	0	0	0	0	0	129	270	0	0	869
04:30 PM	20	1	130	0	0	225	27	0	0	0	0	0	167	344	0	0	914
04:45 PM	32	0	123	1	0	226	25	0	0	0	0	0	137	263	0	0	807
Total	97	1	511	1	0	939	126	0	0	0	0	0	597	1163	0	0	3435
05:00 PM	16	0	113	0	0	194	26	0	0	0	0	0	176	350	0	0	875
05:15 PM	22	0	132	0	0	199	25	0	0	0	0	0	167	335	0	0	880
05:30 PM	30	0	119	0	0	182	18	0	0	0	0	0	195	336	0	0	880
05:45 PM	18	0	125	0	0	191	21	0	0	0	0	0	132	319	0	0	806
Total	86	0	489	0	0	766	90	0	0	0	0	0	670	1340	0	0	3441
Grand Total	312	1	2072	2	0	4006	406	0	0	0	0	0	1802	3310	0	0	11911
Apprch %	13.1	0.0	86.8	0.1	0.0	90.8	9.2	0.0	0.0	0.0	0.0	0.0	35.3	64.7	0.0	0.0	
Total %	2.6	0.0	17.4	0.0	0.0	33.6	3.4	0.0	0.0	0.0	0.0	0.0	15.1	27.8	0.0	0.0	

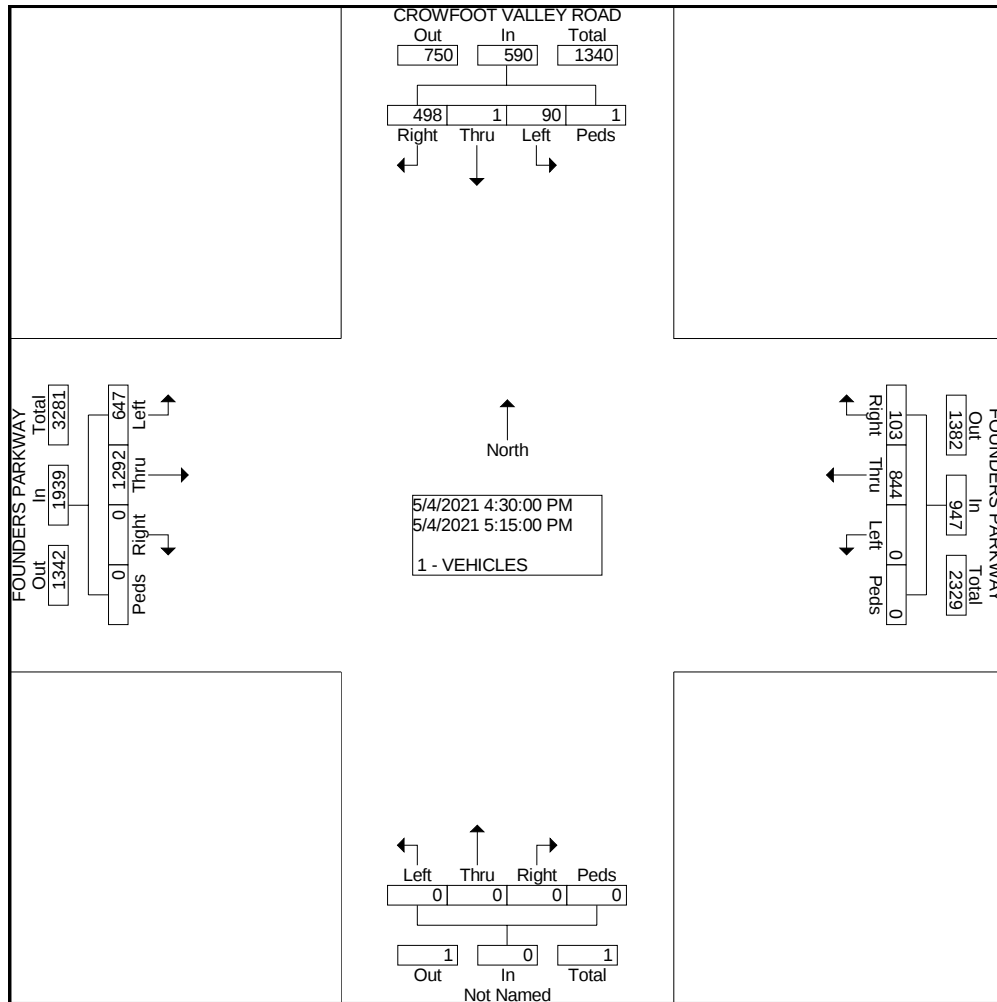
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 2

	CROWFOOT VALLEY ROAD Southbound					FOUNDERS PARKWAY Westbound					Northbound					FOUNDERS PARKWAY Eastbound					Int.
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:30 PM to 05:15 PM - Peak 1 of 1	04:30 PM																				
Volume	90	1	498	1	590	0	844	103	0	947	0	0	0	0	0	647	129	0	0	1939	3476
Percent	15.3	0.2	84.4	0.2		0.0	89.1	10.9	0.0		0.0	0.0	0.0	0.0		33.4	66.6	0.0	0.0		
04:30 Volume	20	1	130	0	151	0	225	27	0	252	0	0	0	0	0	167	344	0	0	511	914
Peak Factor																					0.951
High Int. Volume	04:45 PM					04:30 PM										05:00 PM					
Peak Factor	32	0	123	1	156	0	225	27	0	252	0	0	0	0	0	176	350	0	0	526	
					0.946					0.939										0.922	



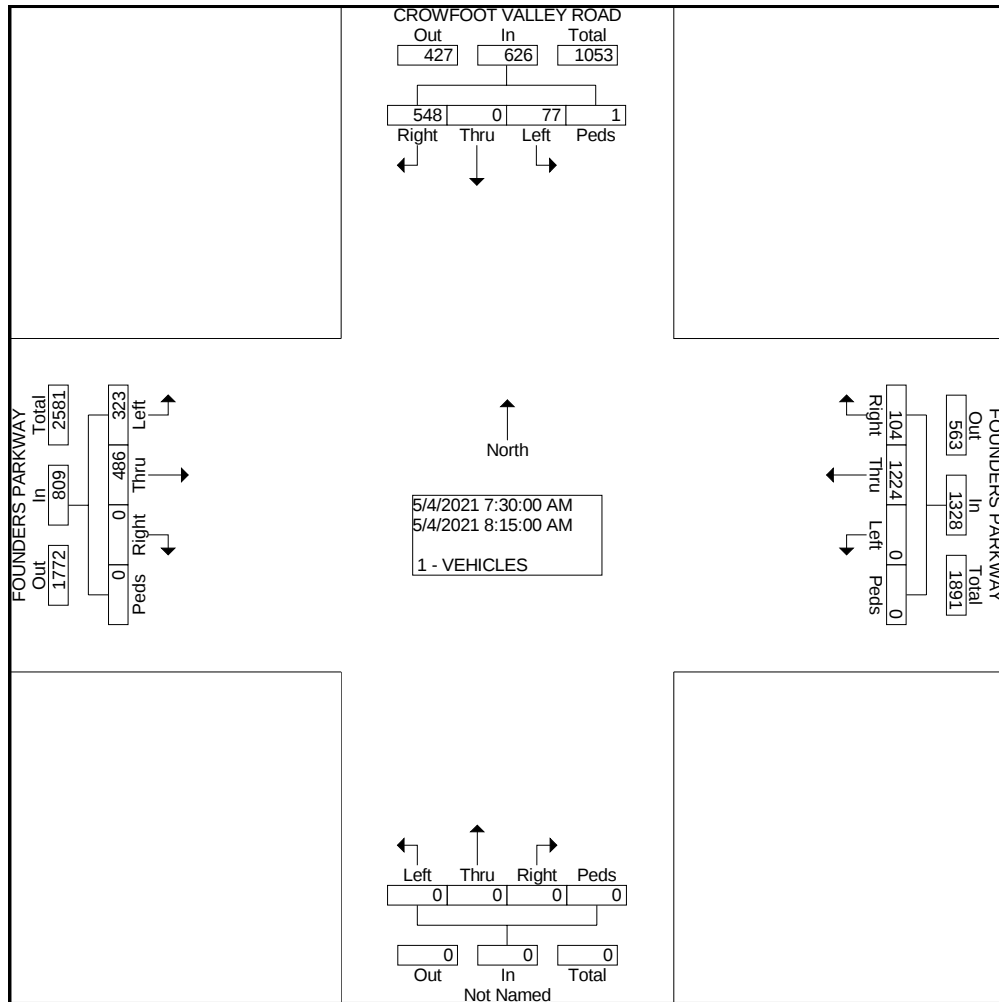
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 2

	CROWFOOT VALLEY ROAD Southbound					FOUNDERS PARKWAY Westbound					Northbound					FOUNDERS PARKWAY Eastbound					Int.
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Total
Peak Hour From 07:30 AM to 08:15 AM - Peak 1 of 1	07:30 AM					07:30 AM										08:15 AM					
Volume	77	0	548	1	626	0	122	104	0	1328	0	0	0	0	0	323	486	0	0	809	2763
Percent	12.3	0.0	87.5	0.2		0.0	92.2	7.8	0.0		0.0	0.0	0.0	0.0		39.9	60.1	0.0	0.0		
07:30 Volume	12	0	162	0	174	0	389	46	0	435	0	0	0	0	0	91	100	0	0	191	800
Peak Factor																					0.863
High Int. Volume	23	0	154	1	178	0	389	46	0	435	0	0	0	0	0	80	137	0	0	217	
Peak Factor					0.879					0.763										0.932	



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 1

Groups Printed- VEHICLES

	CROWFOOT VALLEY ROAD Southbound				FOUNDERS PARKWAY Westbound				Northbound				FOUNDERS PARKWAY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	8	0	71	0	0	252	11	0	0	0	0	0	50	65	0	0	457
06:45 AM	15	0	122	0	0	242	18	0	0	0	0	0	53	92	0	0	542
Total	23	0	193	0	0	494	29	0	0	0	0	0	103	157	0	0	999
07:00 AM	19	0	144	0	0	273	26	0	0	0	0	0	61	77	0	0	600
07:15 AM	10	0	187	0	0	310	31	0	0	0	0	0	48	87	0	0	673
07:30 AM	12	0	162	0	0	389	46	0	0	0	0	0	91	100	0	0	800
07:45 AM	23	0	154	1	0	284	18	0	0	0	0	0	65	121	0	0	666
Total	64	0	647	1	0	1256	121	0	0	0	0	0	265	385	0	0	2739
08:00 AM	14	0	124	0	0	301	21	0	0	0	0	0	87	128	0	0	675
08:15 AM	28	0	108	0	0	250	19	0	0	0	0	0	80	137	0	0	622
Total	42	0	232	0	0	551	40	0	0	0	0	0	167	265	0	0	1297
04:00 PM	22	0	109	0	0	217	47	0	0	0	0	0	164	286	0	0	845
04:15 PM	23	0	149	0	0	271	27	0	0	0	0	0	129	270	0	0	869
04:30 PM	20	1	130	0	0	225	27	0	0	0	0	0	167	344	0	0	914
04:45 PM	32	0	123	1	0	226	25	0	0	0	0	0	137	263	0	0	807
Total	97	1	511	1	0	939	126	0	0	0	0	0	597	1163	0	0	3435
05:00 PM	16	0	113	0	0	194	26	0	0	0	0	0	176	350	0	0	875
05:15 PM	22	0	132	0	0	199	25	0	0	0	0	0	167	335	0	0	880
05:30 PM	30	0	119	0	0	182	18	0	0	0	0	0	195	336	0	0	880
05:45 PM	18	0	125	0	0	191	21	0	0	0	0	0	132	319	0	0	806
Total	86	0	489	0	0	766	90	0	0	0	0	0	670	1340	0	0	3441
Grand Total	312	1	2072	2	0	4006	406	0	0	0	0	0	1802	3310	0	0	11911
Apprch %	13.1	0.0	86.8	0.1	0.0	90.8	9.2	0.0	0.0	0.0	0.0	0.0	35.3	64.7	0.0	0.0	
Total %	2.6	0.0	17.4	0.0	0.0	33.6	3.4	0.0	0.0	0.0	0.0	0.0	15.1	27.8	0.0	0.0	

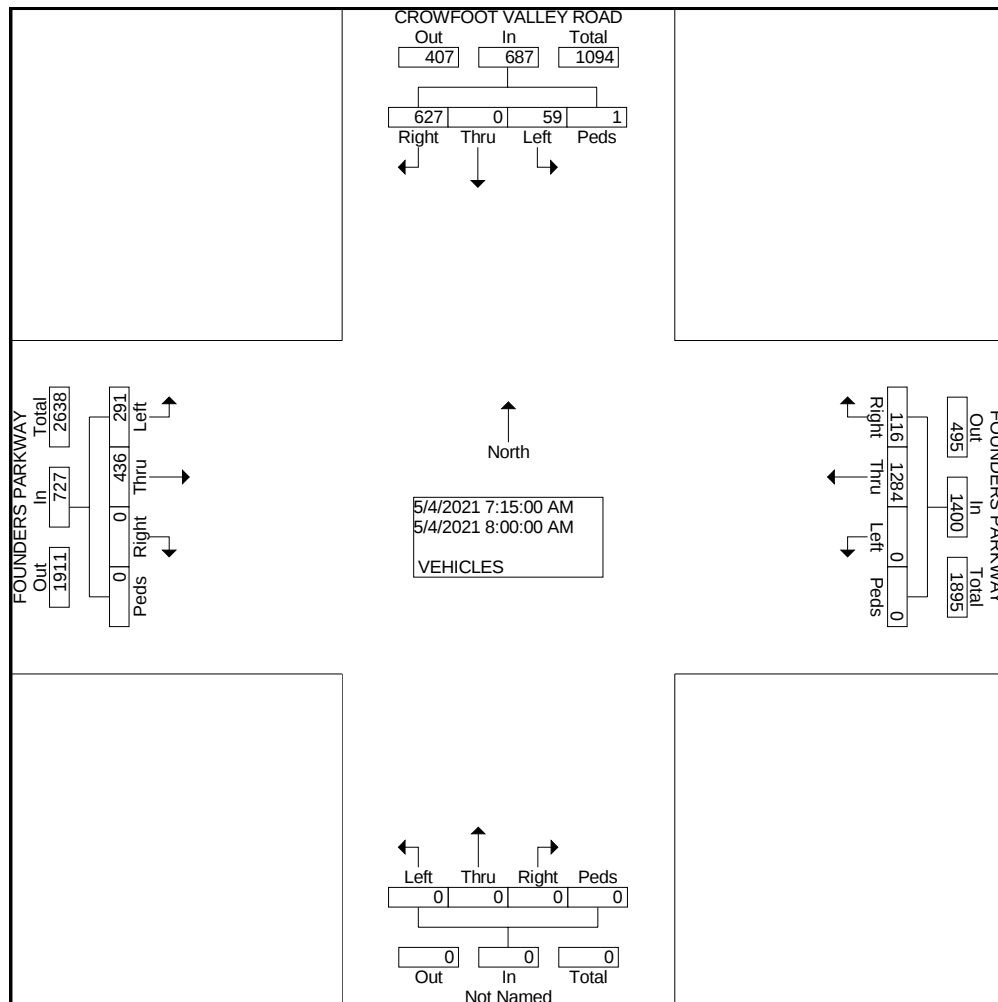
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 2

	CROWFOOT VALLEY ROAD Southbound					FOUNDERS PARKWAY Westbound					Northbound					FOUNDERS PARKWAY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1	07:15 AM					07:30 AM					08:00 AM					08:00 AM					
Intersection	07:15 AM					07:30 AM					08:00 AM					08:00 AM					
Volume	59	0	627	1	687	0	128	116	0	1400	0	0	0	0	0	291	436	0	0	727	2814
Percent	8.6	0.0	91.3	0.1		0.0	91.7	8.3	0.0		0.0	0.0	0.0	0.0		40.0	60.0	0.0	0.0		
07:30 Volume	12	0	162	0	174	0	389	46	0	435	0	0	0	0	0	91	100	0	0	191	800
Peak Factor																					0.879
High Int. Volume	10	0	187	0	197	0	389	46	0	435	0	0	0	0	0	87	128	0	0	215	
Peak Factor					0.872					0.805										0.845	



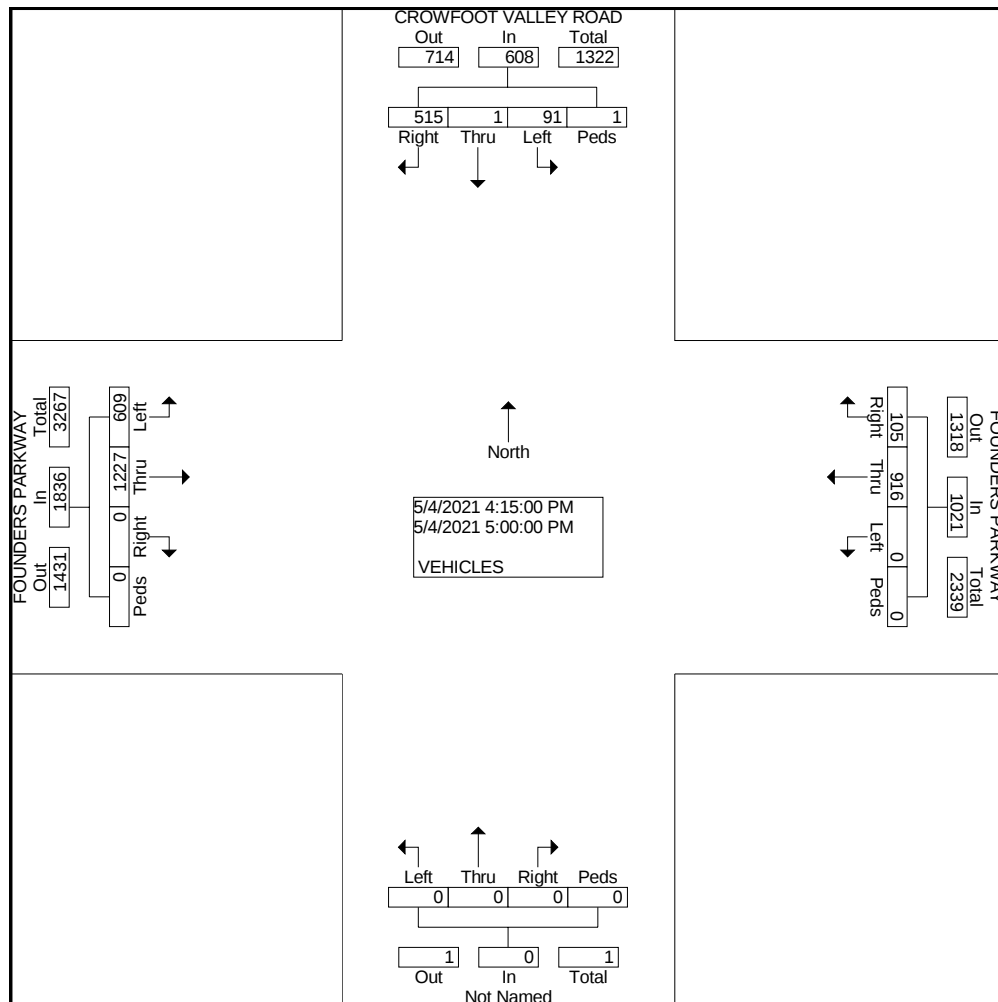
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: CROWFOOT VALLEY ROAD
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : CROWFOUND
Site Code : 00000016
Start Date : 5/4/2021
Page No : 2

	CROWFOOT VALLEY ROAD Southbound					FOUNDERS PARKWAY Westbound					Northbound					FOUNDERS PARKWAY Eastbound					Int.
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:15 PM to 05:00 PM - Peak 1 of 1	04:15 PM					04:15 PM										05:00 PM					
Volume	91	1	515	1	608	0	916	105	0	1021	0	0	0	0	0	609	1227	0	0	1836	3465
Percent	15.0	0.2	84.7	0.2		0.0	89.7	10.3	0.0		0.0	0.0	0.0	0.0		33.2	66.8	0.0	0.0		
04:30 Volume	20	1	130	0	151	0	225	27	0	252	0	0	0	0	0	167	344	0	0	511	914
Peak Factor	04:15 PM					04:15 PM										05:00 PM					0.948
High Int. Volume	23	0	149	0	172	0	271	27	0	298	0	0	0	0	0	176	350	0	0	526	
Peak Factor																					0.873



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: ALLEN STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : ALLENSTFOUND
Site Code : 00000016
Start Date : 4/29/2021
Page No : 1

Groups Printed- VEHICLES

	ALLEN STREET Southbound				FOUNDERS PARKWAY Westbound				ALLEN STREET Northbound				FOUNDERS PARKWAY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	7	1	1	0	17	261	8	0	12	1	19	0	1	112	2	0	442
06:45 AM	13	1	2	0	43	339	19	0	11	1	20	0	0	106	4	0	559
Total	20	2	3	0	60	600	27	0	23	2	39	0	1	218	6	0	1001
07:00 AM	8	1	0	0	49	311	15	0	13	5	23	0	0	124	6	0	555
07:15 AM	10	0	0	0	91	442	25	0	16	1	23	0	1	134	3	0	746
07:30 AM	5	5	2	0	36	434	22	0	23	5	38	0	1	165	5	0	741
07:45 AM	7	4	0	0	64	432	27	0	14	5	19	0	3	176	16	0	767
Total	30	10	2	0	240	1619	89	0	66	16	103	0	5	599	30	0	2809
08:00 AM	15	5	0	0	53	299	13	0	24	4	25	2	1	184	22	0	647
08:15 AM	8	7	1	0	71	321	24	0	13	3	41	0	1	195	20	1	706
Total	23	12	1	0	124	620	37	0	37	7	66	2	2	379	42	1	1353
04:00 PM	46	15	2	0	43	284	19	0	22	9	100	2	4	386	15	0	947
04:15 PM	45	7	2	0	57	330	23	0	16	8	38	3	0	371	5	2	907
04:30 PM	43	12	0	0	43	319	21	0	24	12	90	0	3	362	11	0	940
04:45 PM	28	10	0	0	54	302	20	0	21	9	61	0	4	363	26	0	898
Total	162	44	4	0	197	1235	83	0	83	38	289	5	11	1482	57	2	3692
05:00 PM	55	17	2	0	48	268	26	1	21	13	61	2	1	372	10	0	897
05:15 PM	46	18	0	0	38	356	23	0	27	13	51	0	2	367	16	0	957
05:30 PM	36	16	1	0	42	279	27	0	19	10	57	0	2	337	27	0	853
05:45 PM	24	7	0	0	44	248	23	0	8	4	38	0	3	367	26	0	792
Total	161	58	3	0	172	1151	99	1	75	40	207	2	8	1443	79	0	3499
Grand Total	396	126	13	0	793	5225	335	1	284	103	704	9	27	4121	214	3	12354
Apprch %	74.0	23.6	2.4	0.0	12.5	82.2	5.3	0.0	25.8	9.4	64.0	0.8	0.6	94.4	4.9	0.1	
Total %	3.2	1.0	0.1	0.0	6.4	42.3	2.7	0.0	2.3	0.8	5.7	0.1	0.2	33.4	1.7	0.0	

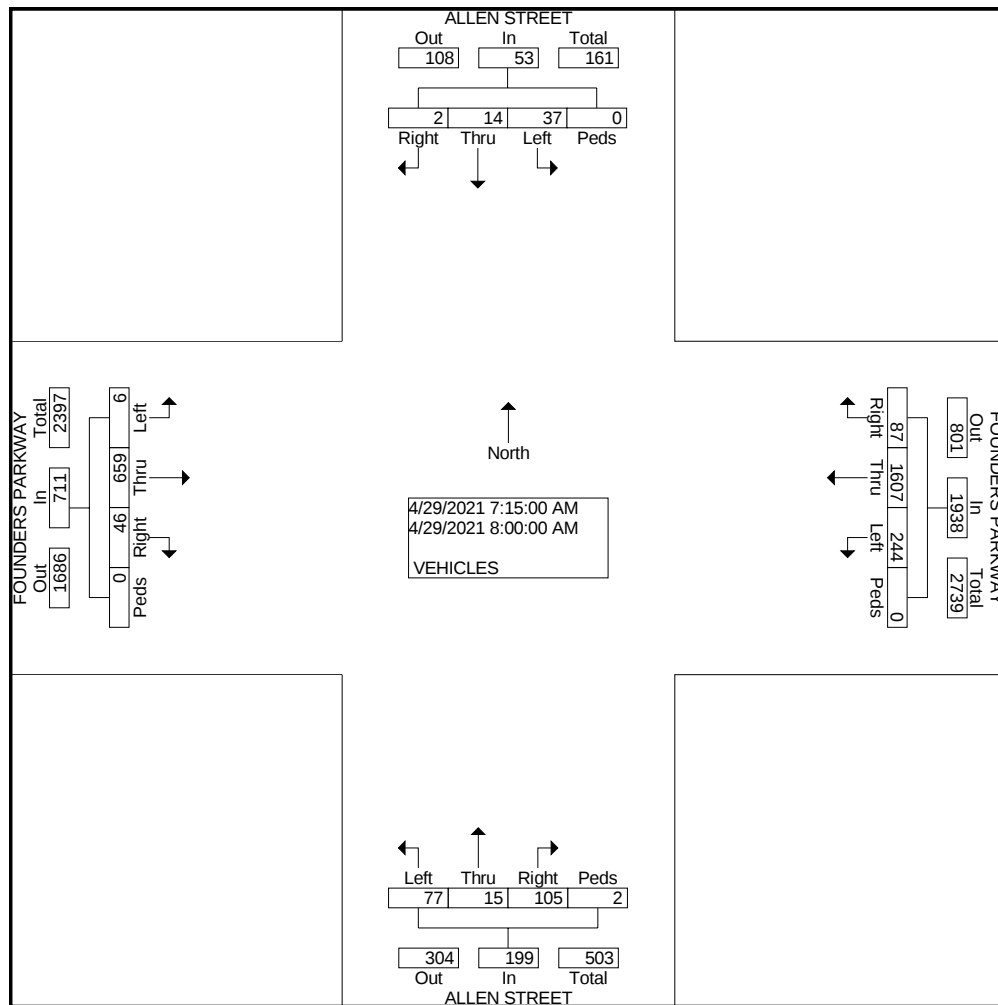
COUNTER MEASURES INC.

1889 YORK STREET
DENVER, COLORADO
303-333-7409

N/S STREET: ALLEN STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : ALLENSTFOUND
Site Code : 00000016
Start Date : 4/29/2021
Page No : 2

	ALLEN STREET Southbound					FOUNDERS PARKWAY Westbound					ALLEN STREET Northbound					FOUNDERS PARKWAY Eastbound					Int. Total
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1	07:15 AM					07:15 AM					07:30 AM					08:00 AM					2901 767 0.946
Volume	37	14	2	0	53	244	160	87	0	1938	77	15	105	2	199	6	659	46	0	711	
Percent	69.8	26.4	3.8	0.0		12.6	82.9	4.5	0.0		38.7	7.5	52.8	1.0		0.8	92.7	6.5	0.0		
07:45 Volume	7	4	0	0	11	64	432	27	0	523	14	5	19	0	38	3	176	16	0	195	
Peak Factor																					
High Int. Volume	15	5	0	0	20	91	442	25	0	558	23	5	38	0	66	1	184	22	0	207	
Peak Factor					0.663					0.868					0.754					0.859	



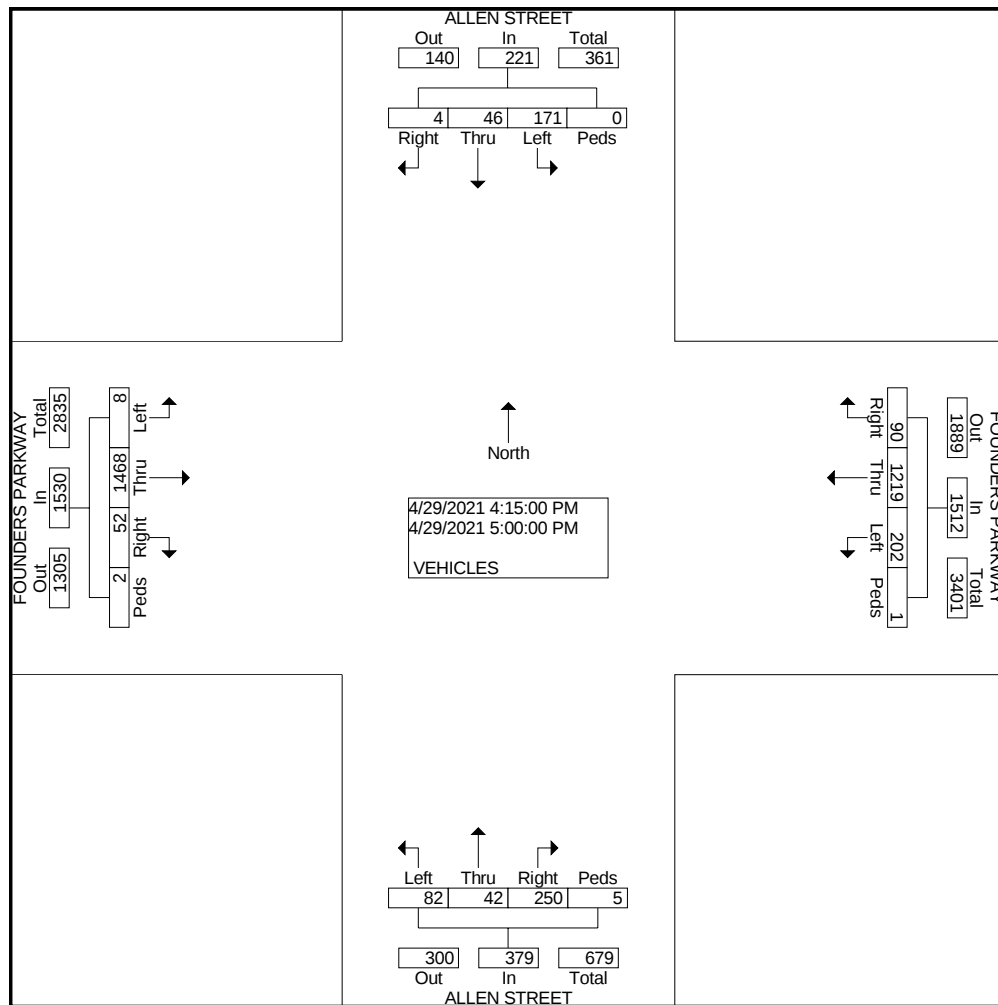
COUNTER MEASURES INC.

1889 YORK STREET
DENVER, COLORADO
303-333-7409

N/S STREET: ALLEN STREET
E/W STREET: FOUNDERS PARKWAY
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : ALLENSTFOUND
Site Code : 00000016
Start Date : 4/29/2021
Page No : 2

	ALLEN STREET Southbound					FOUNDERS PARKWAY Westbound					ALLEN STREET Northbound					FOUNDERS PARKWAY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:15 PM to 05:00 PM - Peak 1 of 1	04:15 PM																				
Intersection	04:15 PM																				
Volume	171	46	4	0	221	202	121	90	1	1512	82	42	250	5	379	8	146	52	2	1530	3642
Percent	77.4	20.8	1.8	0.0		13.4	80.6	6.0	0.1		21.6	11.1	66.0	1.3		0.5	95.9	3.4	0.1		
04:30 Volume	43	12	0	0	55	43	319	21	0	383	24	12	90	0	126	3	362	11	0	376	940
Peak Factor																					0.969
High Int. Volume	05:00 PM					04:15 PM					04:30 PM					04:45 PM					
Peak Factor	55	17	2	0	74	57	330	23	0	410	24	12	90	0	126	4	363	26	0	393	
	0.74					0.92					0.75					0.97					
	7					2					2					3					



COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET:FOUNDERS PARKWAY
E/W STREET: 5TH ST/STATE ROAD 86
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FOUNDRS86
Site Code : 00000017
Start Date : 4/27/2021
Page No : 1

Groups Printed- VEHICLES

	FOUNDERS PARKWAY Southbound				STATE ROAD 86 Westbound				RIDGE ROAD Northbound				5TH STREET Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	41	19	14	0	12	75	107	0	37	59	8	0	10	24	22	0	428
06:45 AM	59	17	18	0	11	70	103	0	46	68	7	0	14	51	10	0	474
Total	100	36	32	0	23	145	210	0	83	127	15	0	24	75	32	0	902
07:00 AM	75	19	31	0	13	86	100	0	81	95	4	0	12	37	21	0	574
07:15 AM	52	37	39	0	22	118	147	0	132	95	9	0	15	52	35	0	753
07:30 AM	60	30	41	0	13	109	167	0	87	103	10	0	19	49	51	0	739
07:45 AM	49	30	22	0	24	93	124	0	79	81	13	0	17	53	38	0	623
Total	236	116	133	0	72	406	538	0	379	374	36	0	63	191	145	0	2689
08:00 AM	48	46	20	0	22	59	130	0	38	81	15	0	15	54	33	0	561
08:15 AM	49	29	24	0	19	77	129	0	58	84	12	0	19	42	28	0	570
Total	97	75	44	0	41	136	259	0	96	165	27	0	34	96	61	0	1131
04:00 PM	123	98	30	0	18	62	98	0	39	68	4	0	32	89	76	0	737
04:15 PM	122	108	17	0	32	63	87	0	53	85	15	0	35	88	66	0	771
04:30 PM	116	92	22	0	30	56	88	0	44	74	13	0	28	91	86	0	740
04:45 PM	148	121	22	0	22	56	84	0	40	69	14	0	36	93	116	0	821
Total	509	419	91	0	102	237	357	0	176	296	46	0	131	361	344	0	3069
05:00 PM	119	87	18	0	17	52	78	0	53	66	14	0	31	90	79	1	705
05:15 PM	114	105	15	4	34	62	60	0	49	80	10	0	33	89	97	0	752
05:30 PM	138	93	11	0	19	57	76	0	33	69	16	0	25	89	82	0	708
05:45 PM	96	76	23	0	31	57	56	0	38	56	6	0	37	79	62	0	617
Total	467	361	67	4	101	228	270	0	173	271	46	0	126	347	320	1	2782
Grand Total	1409	1007	367	4	339	1152	1634	0	907	1233	170	0	378	1070	902	1	10573
Apprch %	50.6	36.1	13.2	0.1	10.8	36.9	52.3	0.0	39.3	53.4	7.4	0.0	16.1	45.5	38.4	0.0	
Total %	13.3	9.5	3.5	0.0	3.2	10.9	15.5	0.0	8.6	11.7	1.6	0.0	3.6	10.1	8.5	0.0	

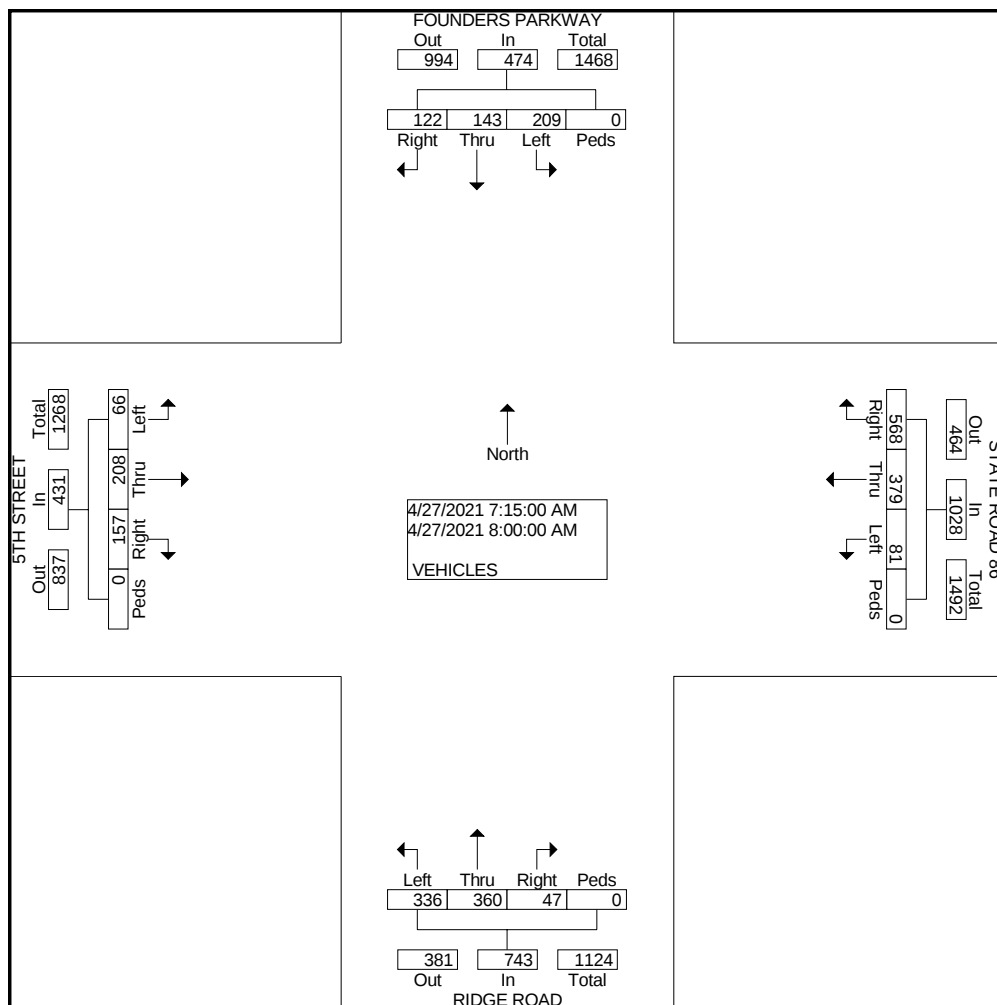
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET:FOUNDERS PARKWAY
E/W STREET: 5TH ST/STATE ROAD 86
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FOUNDSR86
Site Code : 00000017
Start Date : 4/27/2021
Page No : 2

	FOUNDERS PARKWAY Southbound					STATE ROAD 86 Westbound					RIDGE ROAD Northbound					5TH STREET Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	209	143	122	0	474	81	379	568	0	1028	336	360	47	0	743	66	208	157	0	431	2676
Percent	44.1	30.2	25.7	0.0		7.9	36.9	55.3	0.0		45.2	48.5	6.3	0.0		15.3	48.3	36.4	0.0		
07:15 Volume	52	37	39	0	128	22	118	147	0	287	132	95	9	0	236	15	52	35	0	102	753
Peak Factor																					0.888
High Int. Volume	07:30 AM					07:30 AM					07:15 AM					07:30 AM					
Peak Factor	60	30	41	0	131	13	109	167	0	289	132	95	9	0	236	19	49	51	0	119	
	0.90					0.88					0.78					0.90					5



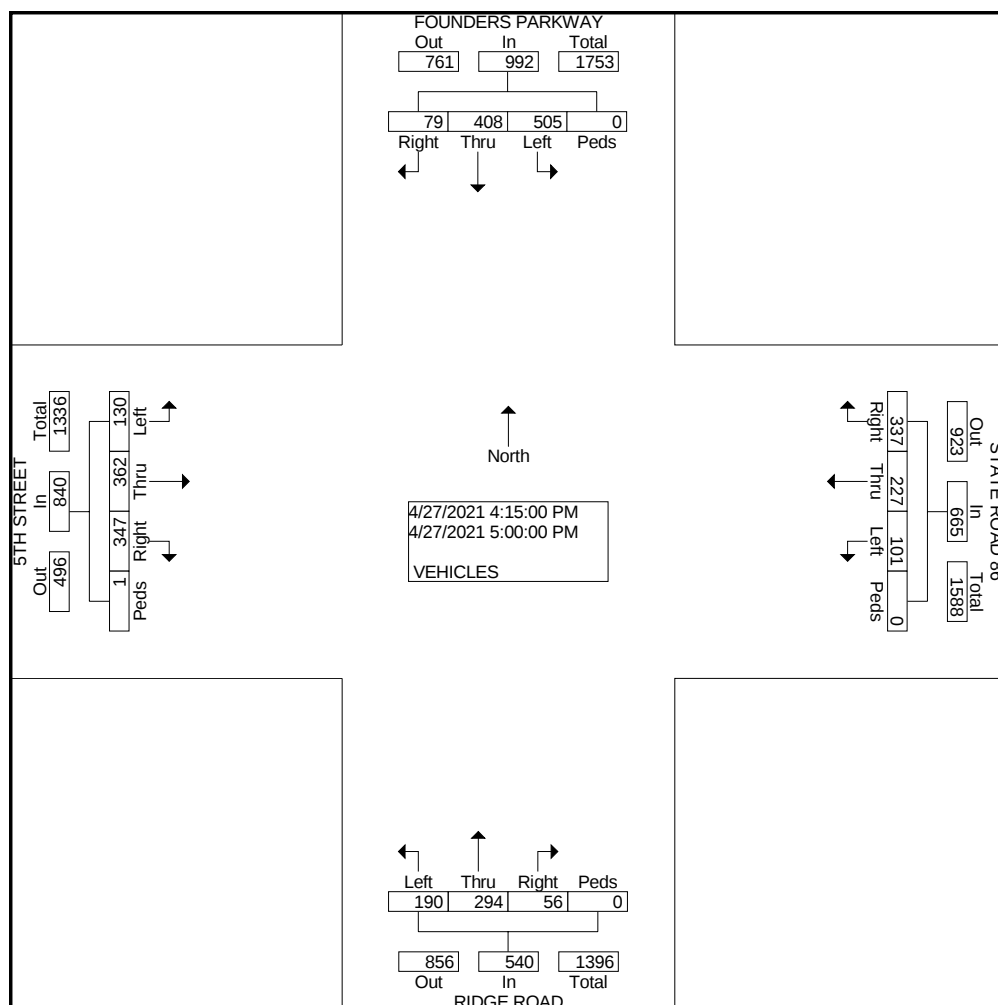
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET:FOUNDERS PARKWAY
E/W STREET: 5TH ST/STATE ROAD 86
CITY: CASTLE ROCK
COUNTY: DOUGLAS

File Name : FOUNDSR86
Site Code : 00000017
Start Date : 4/27/2021
Page No : 2

	FOUNDERS PARKWAY Southbound					STATE ROAD 86 Westbound					RIDGE ROAD Northbound					5TH STREET Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	505	408	79	0	992	101	227	337	0	665	190	294	56	0	540	130	362	347	1	840	3037
Percent	50.9	41.1	8.0	0.0		15.2	34.1	50.7	0.0		35.2	54.4	10.4	0.0		15.5	43.1	41.3	0.1		
04:45 Volume	148	121	22	0	291	22	56	84	0	162	40	69	14	0	123	36	93	116	0	245	821
Peak Factor																					0.925
High Int. Volume	04:45 PM					04:15 PM					04:15 PM					04:45 PM					
Peak Factor	148	121	22	0	291	32	63	87	0	182	53	85	15	0	153	36	93	116	0	245	
	0.85					0.91					0.88					0.85					7
	2					3					2					7					



Location: CASTLE OAKS DR S-O ROCKY VIEW RD
City: CASTLE ROCK
County: DOUGLAS
Direction: NORTH/SOUTH

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Site Code: 210314
Station ID: 210314

Start Time	04-May-21 Tue	NORTHBOU	SOUTHBOU							Total
12:00 AM		5	3							8
01:00		1	1							2
02:00		0	0							0
03:00		1	3							4
04:00		1	14							15
05:00		3	47							50
06:00		22	136							158
07:00		70	202							272
08:00		89	160							249
09:00		91	117							208
10:00		78	106							184
11:00		105	137							242
12:00 PM		121	120							241
01:00		104	109							213
02:00		121	116							237
03:00		167	127							294
04:00		203	132							335
05:00		218	147							365
06:00		177	105							282
07:00		118	69							187
08:00		97	44							141
09:00		53	18							71
10:00		23	9							32
11:00		9	8							17
Total		1877	1930							3807
Percent		49.3%	50.7%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	105	202	-	-	-	-	-	-	272
PM Peak	-	17:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	218	147	-	-	-	-	-	-	365

Location: CASTLE OAKS DR S-O ROCKY VIEW RD
City: CASTLE ROCK
County: DOUGLAS
Direction: NORTH/SOUTH

COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409

Site Code: 210314
Station ID: 210314

Start Time	05-May-21 Wed	NORTHBOU	SOUTHBOU							Total
12:00 AM		6	5							11
01:00		1	2							3
02:00		1	1							2
03:00		2	3							5
04:00		2	9							11
05:00		4	58							62
06:00		29	136							165
07:00		72	217							289
08:00		99	183							282
09:00		23	25							48
10:00		0	0							0
11:00		0	0							0
12:00 PM		0	0							0
01:00		0	0							0
02:00		0	0							0
03:00		0	0							0
04:00		0	0							0
05:00		0	0							0
06:00		0	0							0
07:00		0	0							0
08:00		0	0							0
09:00		0	0							0
10:00		0	0							0
11:00		0	0							0
Total		239	639							878
Percent		27.2%	72.8%							
AM Peak	-	08:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	99	217	-	-	-	-	-	-	289
PM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
Grand Total		2116	2569							4685
Percent		45.2%	54.8%							
ADT		ADT 2,342	AADT 2,342							

Location: FOUNDERS PKWY E-O CROWFOOT VALLEY RD
City: CASTLE ROCK
County: DOUGLAS
Direction: EAST/WEST

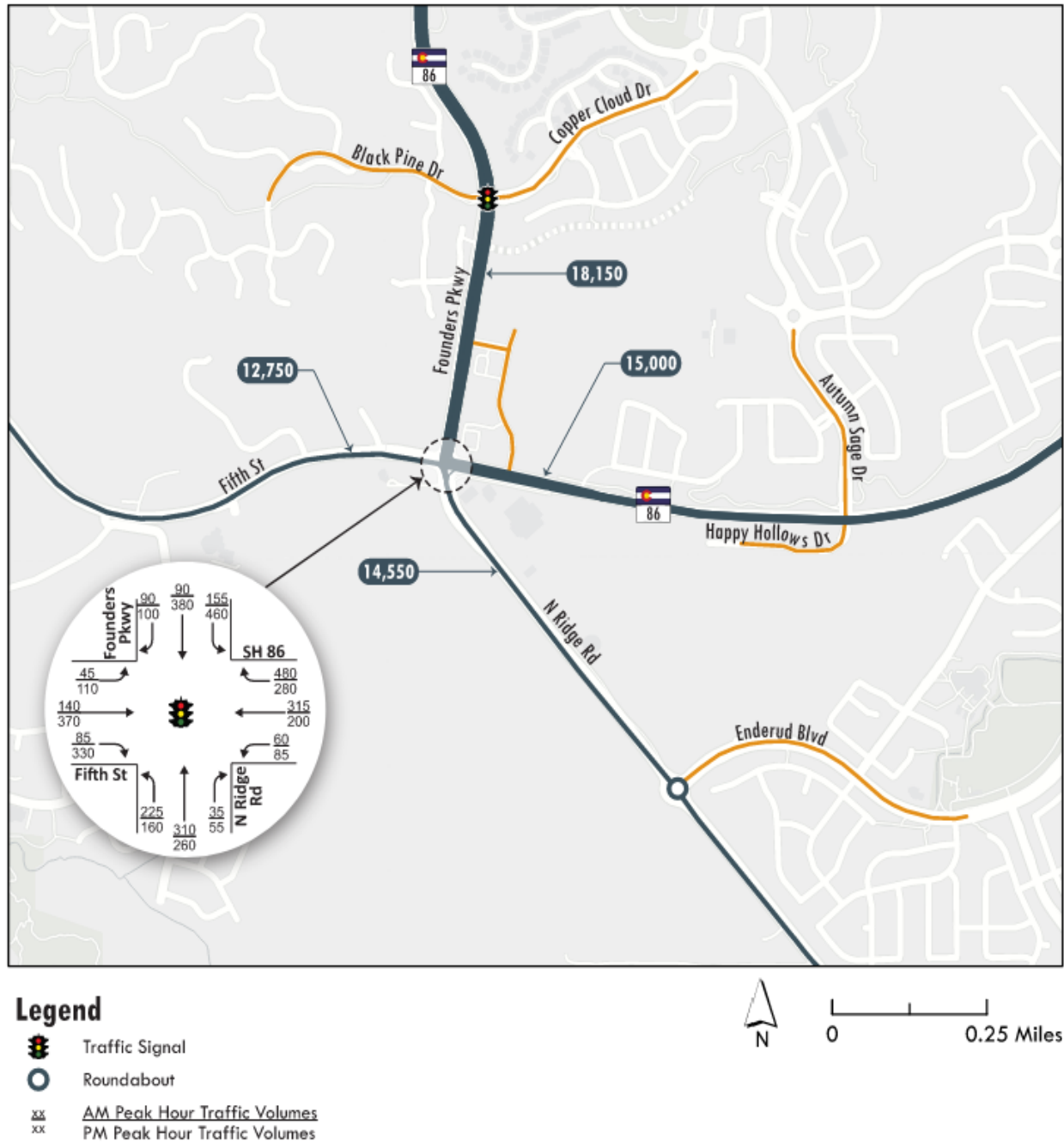
COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Site Code: 210310
Station ID: 210310

Start Time	04-May-21 Tue	EASTBOUN	WESTBOUN							Total
12:00 AM		50	23							73
01:00		15	12							27
02:00		3	18							21
03:00		12	48							60
04:00		27	130							157
05:00		46	394							440
06:00		252	885							1137
07:00		467	1360							1827
08:00		632	1126							1758
09:00		461	908							1369
10:00		564	824							1388
11:00		682	856							1538
12:00 PM		756	783							1539
01:00		780	802							1582
02:00		833	796							1629
03:00		1141	826							1967
04:00		1232	1056							2288
05:00		1386	854							2240
06:00		1002	634							1636
07:00		700	377							1077
08:00		534	279							813
09:00		360	150							510
10:00		176	61							237
11:00		79	40							119
Total		12190	13242							25432
Percent		47.9%	52.1%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	682	1360	-	-	-	-	-	-	1827
PM Peak	-	17:00	16:00	-	-	-	-	-	-	16:00
Vol.	-	1386	1056	-	-	-	-	-	-	2288
Grand Total		12190	13242							25432
Percent		47.9%	52.1%							
ADT		ADT 25,432	AADT 25,432							

Traffic Data for Canyons Far South Proposal

Figure 1: Existing 2019 counts from the Town's Founders/SH-86/Ridge Rd/5th St. intersection improvement project





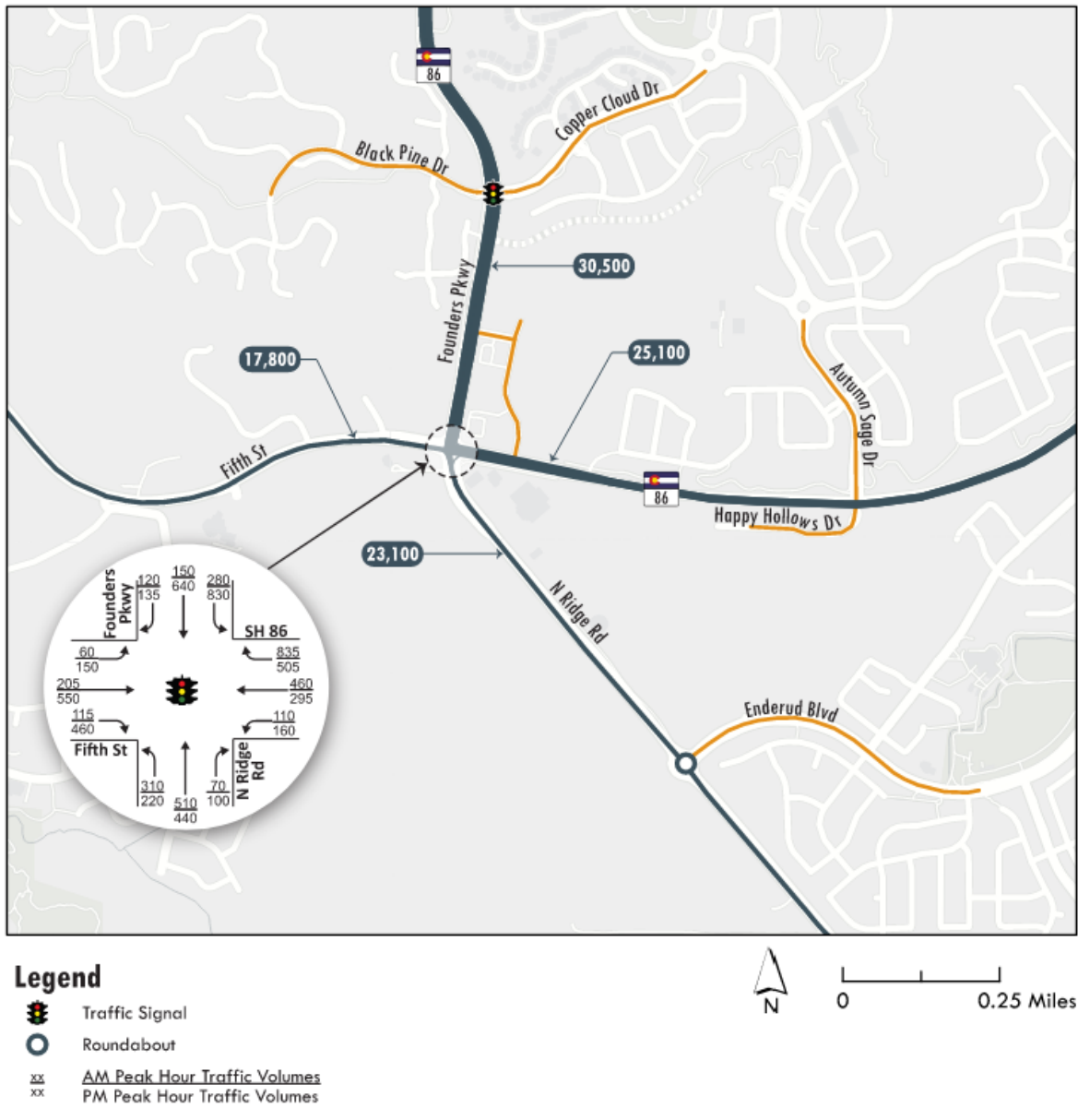
Tuesday, August 14, 2018 AM 7:15-8:15 PM 4:15-5:15 1 127(193) → 303(350) → 353(372) → 367(434) ← 557(961) ← 112(145) ← 202(201) → 845(772) → 204(177) → MEADOWS PKWY / HWY 85	Tuesday, August 14, 2018 AM 7:15-8:15 PM 4:00-5:00 2 299(364) → 12(31) → 58(110) → 105(125) ← 1833(1358) ← 35(34) ← 192(303) → 790(1912) → 113(184) → FOUNDERS PKWY / ALLEN WAY	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:15-5:15 3 82(59) → 38(83) → 3(39) → 11(18) ← 1652(1239) ← 60(102) ← 54(163) → 657(1586) → 137(344) → FOUNDERS PKWY / FRONT ST	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 4 2(7) → 10(31) → 35(141) → 82(77) ← 1598(905) ← 317(147) ← 1(2) → 470(1415) → 64(114) → FOUNDERS PKWY / WOODLANDS BLVD
Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 5 754(465) → 70(115) → 110(104) → 1237(668) ← 296(665) → 332(1159) → FOUNDERS PKWY / CROWFOOT VALLEY RD	Tuesday, August 14, 2018 AM 7:15-8:15 PM 4:14-5:15 6 172(192) → 380(510) → 130(144) → 12(18) → 26(14) → 321(448) → LIGGETT RD / HWY 85	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 7 39(103) → 191(525) → 10(49) → 41(38) ← 170(151) ← 249(232) ← 40(95) → 110(221) → 179(405) → BLACK FEATHER TRAIL / FRONT ST	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 8 257(186) → 13(19) → 5(26) → 21(21) ← 77(49) ← 143(243) → 23(47) → 25(45) → BLACK FEATHER TRAIL / WOODLANDS BLVD
Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 9 375(1092) → 46(150) → 196(89) → 9(10) ← 1135(676) ← 8(17) ← FOUNDERS PKWY / CRIMSON SKY DR	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 10 493(786) → 128(391) → 296(169) → 128(37) ← 527(607) ← 90(41) ← E SCOTT BLVD / FRONT ST	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 11 168(366) → 415(144) → E SCOTT BLVD / WOODLANDS BLVD	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 12 334(993) → 44(127) → 127(88) → 61(47) ← 1009(614) ← 30(61) ← RISING SUN DR / FOUNDERS PKWY
Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 13 7(5) → 356(785) → 94(27) → 89(63) ← 14(6) ← 55(33) ← 16(4) → 24(6) → 96(208) → LIGGETT RD / FRONT ST	Thursday, April 26, 2018 AM 7:30-8:30 PM 4:45-5:45 14 93(131) → 123(250) → 15(58) → 16(9) ← 578(384) ← 50(71) ← 47(114) → 234(567) → 44(49) → FIFTH ST / PERRY ST	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:30-5:30 15 50(41) → 159(289) → 37(56) → 212(648) → FIFTH ST / WOODLANDS BLVD	Tuesday, August 14, 2018 AM 7:00-8:00 PM 4:45-5:45 16 136(103) → 115(454) → 191(506) → 541(292) ← 411(196) ← 65(86) ← 63(121) → 190(372) → 146(423) → FIFTH ST / FOUNDERS PKWY

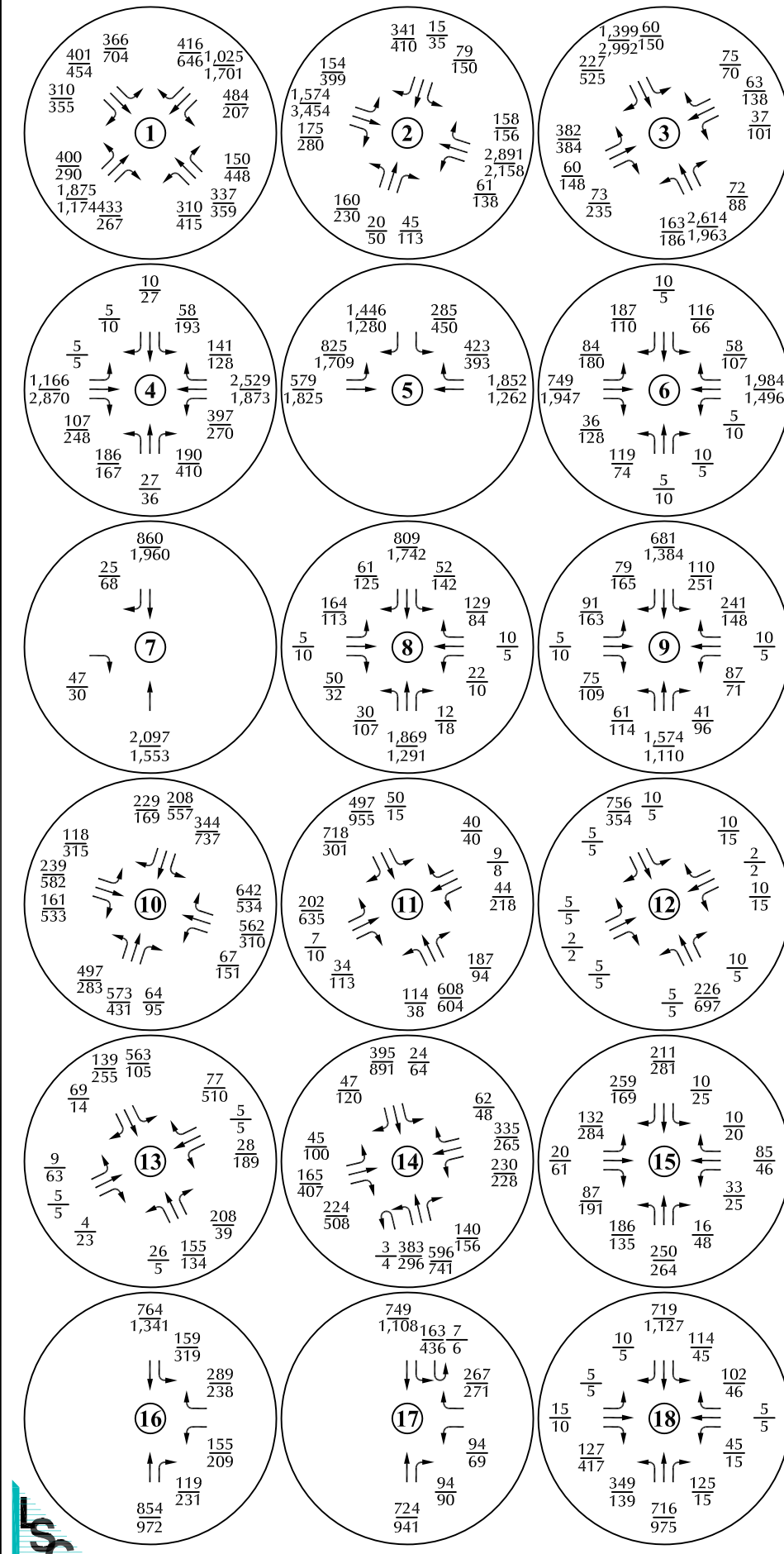
LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

PINE CANYON
DOUGLAS COUNTY, CO
EXISTING TRAFFIC VOLUMES

FIGURE 3

Figure 2: 2040 counts from the Town’s Founders/SH-86/Ridge Rd/5th St. intersection improvement project





LEGEND:
 (#) = Intersection Location
 $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
 2,500 = Average Daily Traffic

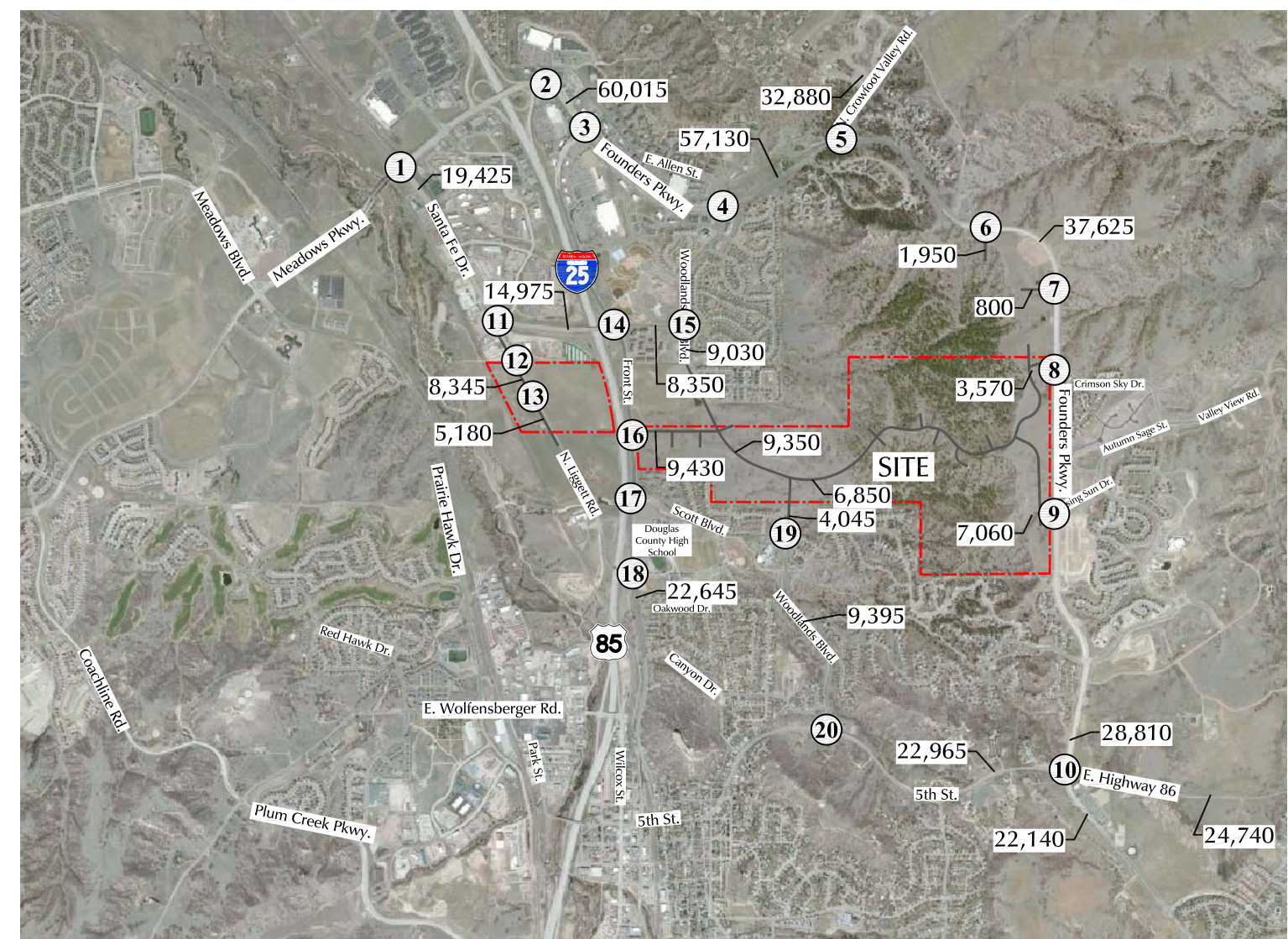
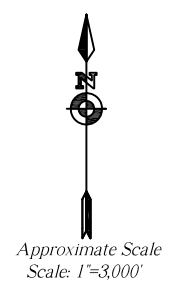


Figure 7a
Year 2035
Total Traffic Volumes
 Pine Canyon Update (LSC #160590)



Founders Pkwy

Ridge Rd



PINE CANYON
DOUGLAS COUNTY, CO
2040 TOTAL TRAFFIC VOLUMES

1 158(240) 485(516) 482(567) 251(250) 1121(1130) 408(326) MEADOWS PKWY / HWY 85	2 387(458) 15(39) 76(144) 244(391) 1419(3229) 141(229) FOUNDERS PKWY / ALLEN WAY	3 102(73) 63(119) 4(49) 67(203) 1151(2636) 278(612) FOUNDERS PKWY / FRONT ST	4 2(9) 12(39) 44(176) 1(2) 716(2096) 247(504) FOUNDERS PKWY / WOODLANDS BLVD
5 1038(650) 114(191) 185(161) 1805(1077) 435(934) 544(1778) FOUNDERS PKWY / CROWFOOT VALLEY RD	6 633(401) 601(918) 324(548) 41(94) LIGGETT RD / HWY 85	7 49(128) 384(807) 24(82) 63(154) 189(380) 242(538) BLACK FEATHER TRAIL / FRONT ST	8 397(257) 205(432) 6(32) 204(374) 29(59) 81(145) BLACK FEATHER TRAIL / WOODLANDS BLVD
9 57(120) 502(1406) 57(187) 106(80) 98(82) FOUNDERS PKWY / CRIMSON SKY DR	10 690(1076) 119(397) 258(120) 159(46) E SCOTT BLVD / FRONT ST	11 10(5) 251(316) 5(10) E SCOTT BLVD / WOODLANDS BLVD	12 15(27) 539(1343) 55(158) 28(18) 21(14) RISING SUN DR / FOUNDERS PKWY
13 9(6) 519(1075) 117(34) 20(5) 30(7) 145(331) LIGGETT RD / FRONT ST	14 204(308) 168(338) 19(72) 194(242) 383(916) 55(61) FIFTH ST / PERRY ST	15 196(162) 275(476) 592(233) 807(481) FIFTH ST / WOODLANDS BLVD	16 225(177) 191(603) 279(664) 105(217) 278(523) 217(583) FIFTH ST / FOUNDERS PKWY
17 38(12) 246(256) 380(150) 13(36) 5(14) SITE ACCESS / LIGGETT RD	18 161(52) 750(1400) 120(252) 42(115) 45(106) 18(50) SITE ACCESS / FRONT ST		

LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

FIGURE 12

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

<u>LOS</u>	<u>Average Vehicle Delay</u> sec/vehicle	<u>Operational Characteristics</u>
A	<10 seconds	Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	10 to 20 seconds	Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20 to 35 seconds	Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	35 to 55 seconds	Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55 to 80 seconds	Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
F	>80 seconds	Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

LOS	Average Vehicle Control Delay	Operational Characteristics
A	<10 seconds	Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.
B	10 to 15 seconds	Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. <u>The delay could be up to 15 seconds.</u> Left-turning vehicles on the uncontrolled street may have to wait to make their turn.
C	15 to 25 seconds	Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. <u>Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.</u>
D	25 to 35 seconds	<u>This is the point at which a traffic signal may be warranted for this intersection.</u> The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.
E	35 to 50 seconds	The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. <u>There is a high probability that this intersection will meet traffic signal warrants.</u> The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach.
F	>50 seconds	The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. <u>The only remedy for these long delays is installing a traffic signal or restricting the accesses.</u> The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

Existing
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	990	150	35	2015	120	105	20	45	60	13	300
Future Volume (vph)	265	990	150	35	2015	120	105	20	45	60	13	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	330		200	0		0	125		0
Storage Lanes	2		0	1		1	1		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.980				0.850		0.896				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4984	0	1770	5085	1583	1770	1669	0	1770	1863	2787
Flt Permitted	0.950			0.209			0.569			0.711		
Satd. Flow (perm)	3433	4984	0	389	5085	1583	1060	1669	0	1324	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47				118		49				192
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	288	1076	163	38	2190	130	114	22	49	65	14	326
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	1239	0	38	2190	130	114	71	0	65	14	326
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			12			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6	8			4		4

Synchro 10 Report

Lanes, Volumes, Timings

1: Allen Way & Founder Pkwy

Existing
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	15.0	83.0		11.0	79.0	79.0	14.0	13.0		13.0	12.0	12.0
Total Split (%)	12.5%	69.2%		9.2%	65.8%	65.8%	11.7%	10.8%		10.8%	10.0%	10.0%
Maximum Green (s)	10.0	77.0		6.0	73.0	73.0	9.0	7.0		8.0	6.0	6.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
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)	-2.0	0.0		0.0	0.0	-1.0	0.0	0.0		0.0	-2.0	-1.0
Total Lost Time (s)	3.0	6.0		5.0	6.0	5.0	5.0	6.0		5.0	4.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	12.0	81.4		79.9	73.0	74.0	17.8	9.6		14.8	8.3	7.3
Actuated g/C Ratio	0.10	0.68		0.67	0.61	0.62	0.15	0.08		0.12	0.07	0.06
v/c Ratio	0.84	0.36		0.12	0.71	0.13	0.55	0.40		0.34	0.11	0.93
Control Delay	74.6	8.7		8.6	24.3	7.1	54.6	29.7		47.9	54.8	57.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	74.6	8.7		8.6	24.3	7.1	54.6	29.7		47.9	54.8	57.6
LOS	E	A		A	C	A	D	C		D	D	E
Approach Delay		21.1			23.1			45.1			56.0	
Approach LOS		C			C			D			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 26.3

Intersection LOS: C

Intersection Capacity Utilization 71.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

Existing
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	64	775	255	60	1670	12	415	50	40	5	40	85
Future Volume (vph)	64	775	255	60	1670	12	415	50	40	5	40	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	210		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.963			0.999				0.850		0.898	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4897	0	1770	5080	0	3433	1863	1583	1770	3178	0
Flt Permitted	0.077			0.214			0.443			0.722		
Satd. Flow (perm)	143	4897	0	399	5080	0	1601	1863	1583	1345	3178	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		129			2				73		81	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			12.6			9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	842	277	65	1815	13	451	54	43	5	43	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	1119	0	65	1828	0	451	54	43	5	135	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

Existing
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	9.0	10.0	21.0	
Total Split (s)	10.0	80.0		10.0	80.0		18.0	19.0	10.0	11.0	12.0	
Total Split (%)	8.3%	66.7%		8.3%	66.7%		15.0%	15.8%	8.3%	9.2%	10.0%	
Maximum Green (s)	5.0	74.0		5.0	74.0		13.0	13.0	5.0	6.0	6.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	3.0	3.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	6.0	5.0	5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	81.1	76.1		81.1	76.1		24.9	21.7	32.8	12.6	5.9	
Actuated g/C Ratio	0.68	0.63		0.68	0.63		0.21	0.18	0.27	0.10	0.05	
v/c Ratio	0.42	0.36		0.20	0.57		0.85	0.16	0.09	0.03	0.58	
Control Delay	12.8	13.0		6.8	13.8		59.8	45.0	3.2	38.8	34.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	12.8	13.0		6.8	13.8		59.8	45.0	3.2	38.8	34.9	
LOS	B	B		A	B		E	D	A	D	C	
Approach Delay		13.0			13.5			53.9			35.0	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 42 (35%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 20.0

Intersection LOS: C

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy



Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

Existing
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	650	70	325	1650	87	115	25	140	37	14	2
Future Volume (vph)	6	650	70	325	1650	87	115	25	140	37	14	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		400	220		0	120		140
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	3476	0
Flt Permitted	0.075			0.328			0.541					
Satd. Flow (perm)	140	3539	1583	611	3539	1583	1008	1863	1583	1863	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			152		2	
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			9.5			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	707	76	353	1793	95	125	27	152	40	15	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	707	76	353	1793	95	125	27	152	40	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
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		

Synchro 10 Report

Lanes, Volumes, Timings 3: Woodlands Blvd & Founders Pkwy

Existing
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	20.0	20.0	9.0	20.0	20.0	9.0	20.0	20.0	9.0	20.0	
Total Split (s)	10.0	80.0	80.0	10.0	80.0	80.0	18.0	19.0	19.0	11.0	12.0	
Total Split (%)	8.3%	66.7%	66.7%	8.3%	66.7%	66.7%	15.0%	15.8%	15.8%	9.2%	10.0%	
Maximum Green (s)	5.0	74.0	74.0	5.0	74.0	74.0	13.0	13.0	13.0	6.0	6.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
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	-1.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	5.0	5.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	83.1	76.8	76.8	89.9	87.9	87.9	19.1	9.3	10.3	8.7	5.8	
Actuated g/C Ratio	0.69	0.64	0.64	0.75	0.73	0.73	0.16	0.08	0.09	0.07	0.05	
v/c Ratio	0.04	0.31	0.07	0.66	0.69	0.08	0.50	0.19	0.55	0.31	0.10	
Control Delay	5.5	10.7	0.1	15.0	12.3	0.1	50.9	53.3	15.7	50.5	51.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.5	10.7	0.1	15.0	12.3	0.1	50.9	53.3	15.7	50.5	51.3	
LOS	A	B	A	B	B	A	D	D	B	D	D	
Approach Delay	9.6			12.2			33.5			50.8		
Approach LOS	A			B			C			D		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 42 (35%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.2

Intersection LOS: B

Intersection Capacity Utilization 76.1%

ICU Level of Service D

Analysis Period (min) 15

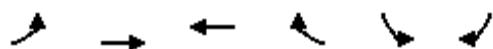
Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

Existing
AM Peak

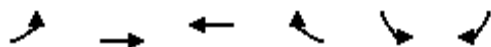


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	315	510	1260	116	75	800
Future Volume (vph)	315	510	1260	116	75	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	125	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.874	0.850
Flt Protected	0.950				0.992	
Satd. Flow (prot)	3433	3539	3539	1583	3133	1441
Flt Permitted	0.950				0.992	
Satd. Flow (perm)	3433	3539	3539	1583	3133	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				126	279	341
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	342	554	1370	126	82	870
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	342	554	1370	126	517	435
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

Existing
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	10.0	10.0	9.0	
Total Split (s)	25.0	107.0	82.0	82.0	13.0	
Total Split (%)	20.8%	89.2%	68.3%	68.3%	10.8%	
Maximum Green (s)	20.0	101.0	76.0	76.0	8.0	
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	18.8	103.0	81.2	81.2	10.0	120.0
Actuated g/C Ratio	0.16	0.86	0.68	0.68	0.08	1.00
v/c Ratio	0.64	0.18	0.57	0.11	1.12dr	0.30
Control Delay	52.8	1.6	11.7	1.5	65.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	1.6	11.7	1.5	65.6	0.5
LOS	D	A	B	A	E	A
Approach Delay		21.1	10.9		35.9	
Approach LOS		C	B		D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 20.7

Intersection LOS: C

Intersection Capacity Utilization 64.4%

ICU Level of Service C

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

Existing
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	208	157	81	379	568	336	360	47	209	143	122
Future Volume (vph)	66	208	157	81	379	568	336	360	47	209	143	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		425	500		0	230		0	600		600
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.375			0.535			0.492			0.231		
Satd. Flow (perm)	699	1863	1583	997	1863	1583	916	1863	1583	430	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173			510			173			173
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	226	171	88	399	617	365	391	51	227	155	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	226	171	88	399	617	365	391	51	227	155	133
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

Existing
AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	44.0		12.0	44.0		24.0	44.0		20.0	40.0	
Total Split (%)	10.0%	36.7%		10.0%	36.7%		20.0%	36.7%		16.7%	33.3%	
Maximum Green (s)	7.0	38.0		7.0	38.0		19.0	38.0		15.0	34.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	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		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		4.0	5.0		4.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	54.0	45.6	120.0	55.8	48.1	120.0	51.6	31.3	120.0	43.1	26.8	120.0
Actuated g/C Ratio	0.45	0.38	1.00	0.46	0.40	1.00	0.43	0.26	1.00	0.36	0.22	1.00
v/c Ratio	0.19	0.32	0.11	0.17	0.53	0.39	0.68	0.81	0.03	0.70	0.37	0.08
Control Delay	19.6	29.9	0.1	19.2	33.6	0.7	30.8	54.3	0.0	34.0	40.6	0.1
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	19.6	29.9	0.1	19.2	33.6	0.7	30.8	54.3	0.0	34.0	40.6	0.1
LOS	B	C	A	B	C	A	C	D	A	C	D	A
Approach Delay		17.5			14.1			40.2			27.2	
Approach LOS		B			B			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 24.3

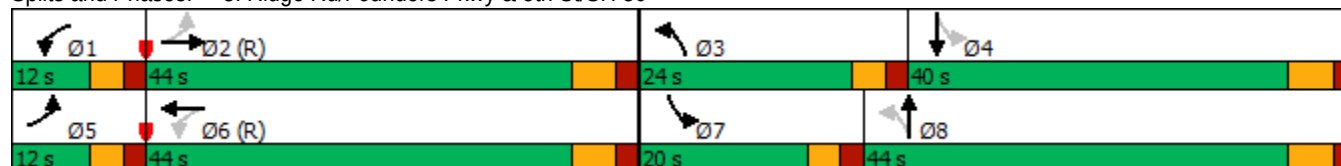
Intersection LOS: C

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							 
Traffic Volume (vph)	435	2385	230	40	1905	135	150	35	90	115	35	450
Future Volume (vph)	435	2385	230	40	1905	135	150	35	90	115	35	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	330		200	0		0	125		0
Storage Lanes	2		0	1		1	1		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.986				0.850		0.892				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5014	0	1770	5085	1583	1770	1662	0	1770	1863	2787
Flt Permitted	0.950			0.059			0.732			0.444		
Satd. Flow (perm)	3433	5014	0	110	5085	1583	1364	1662	0	827	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				164		82				279
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.96	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	453	2511	250	43	1944	147	163	38	98	125	38	489
Shared Lane Traffic (%)												
Lane Group Flow (vph)	453	2761	0	43	1944	147	163	136	0	125	38	489
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			12			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6	8			4		4

Synchro 10 Report

Lanes, Volumes, Timings

1: Allen Way & Founder Pkwy

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	13.0		9.0	13.0	13.0
Total Split (s)	20.0	83.0		11.0	74.0	74.0	13.0	13.0		13.0	13.0	13.0
Total Split (%)	16.7%	69.2%		9.2%	61.7%	61.7%	10.8%	10.8%		10.8%	10.8%	10.8%
Maximum Green (s)	15.0	77.0		6.0	68.0	68.0	8.0	7.0		8.0	7.0	7.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
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)	-2.0	0.0		0.0	0.0	-1.0	-2.0	0.0		-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	6.0		5.0	6.0	5.0	3.0	6.0		3.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	17.0	79.2		74.9	68.0	69.0	20.0	7.0		20.0	9.0	9.0
Actuated g/C Ratio	0.14	0.66		0.62	0.57	0.58	0.17	0.06		0.17	0.08	0.08
v/c Ratio	0.93	0.83		0.29	0.67	0.15	0.62	0.78		0.58	0.27	1.05
Control Delay	78.2	18.7		9.3	19.5	3.2	55.3	53.4		54.0	57.8	77.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	78.2	18.7		9.3	19.5	3.2	55.3	53.4		54.0	57.8	77.6
LOS	E	B		A	B	A	E	D		D	E	E
Approach Delay		27.1			18.2			54.4			72.0	
Approach LOS		C			B			D			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 30.0

Intersection LOS: C

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

Existing
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	165	1740	685	130	1400	20	620	110	200	40	85	60
Future Volume (vph)	165	1740	685	130	1400	20	620	110	200	40	85	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	210		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.957			0.998				0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4867	0	1770	5075	0	3433	1863	1583	1770	3320	0
Flt Permitted	0.133			0.055			0.546			0.519		
Satd. Flow (perm)	248	4867	0	102	5075	0	1973	1863	1583	967	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		170			3				164		65	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			12.6			9.0	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	1832	745	141	1429	22	674	120	217	43	92	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	2577	0	141	1451	0	674	120	217	43	157	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

Existing
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	20.0	83.0		11.0	74.0		13.0	13.0	13.0	13.0	13.0	
Total Split (%)	16.7%	69.2%		9.2%	61.7%		10.8%	10.8%	10.8%	10.8%	10.8%	
Maximum Green (s)	15.0	77.0		6.0	68.0		8.0	7.0	7.0	8.0	7.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	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		-2.0	-2.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0		3.0	4.0	6.0	5.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	86.9	77.0		81.1	73.8		20.6	11.6	9.6	15.0	6.7	
Actuated g/C Ratio	0.72	0.64		0.68	0.62		0.17	0.10	0.08	0.12	0.06	
v/c Ratio	0.60	0.81		0.90	0.46		1.47	0.67	0.79	0.26	0.64	
Control Delay	19.1	12.2		78.1	13.3		256.4	72.6	36.3	46.1	44.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	19.1	12.2		78.1	13.3		256.4	72.6	36.3	46.1	44.4	
LOS	B	B		E	B		F	E	D	D	D	
Approach Delay		12.6			19.0			187.4			44.8	
Approach LOS		B			B			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.47

Intersection Signal Delay: 47.4

Intersection LOS: D

Intersection Capacity Utilization 95.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy

 Ø1	 Ø2 (R)	 Ø3	 Ø4
11 s	83 s	13 s	13 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
20 s	74 s	13 s	13 s

Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1450	120	205	1320	90	90	45	315	171	46	7
Future Volume (vph)	8	1450	120	205	1320	90	90	45	315	171	46	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		400	220		0	120		140
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	3465	0
Flt Permitted	0.170			0.106			0.717			0.725		
Satd. Flow (perm)	317	3539	1583	197	3539	1583	1336	1863	1583	1350	3465	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			164			218		8	
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			9.5			11.3	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1526	130	223	1347	98	98	49	342	186	50	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1526	130	223	1347	98	98	49	342	186	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		

Synchro 10 Report

Lanes, Volumes, Timings 3: Woodlands Blvd & Founders Pkwy

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0	20.0	9.0	20.0	20.0	9.0	13.0		9.0	13.0	
Total Split (s)	20.0	83.0	83.0	11.0	74.0	74.0	13.0	13.0		13.0	13.0	
Total Split (%)	16.7%	69.2%	69.2%	9.2%	61.7%	61.7%	10.8%	10.8%		10.8%	10.8%	
Maximum Green (s)	15.0	77.0	77.0	6.0	68.0	68.0	8.0	7.0		8.0	7.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0		3.0	4.0	
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	-2.0	0.0	0.0	-2.0	-1.0		-2.0	-2.0	
Total Lost Time (s)	5.0	6.0	6.0	3.0	6.0	6.0	3.0	5.0		3.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	85.7	79.0	79.0	93.0	88.4	88.4	18.0	7.7	120.0	18.0	8.7	
Actuated g/C Ratio	0.71	0.66	0.66	0.78	0.74	0.74	0.15	0.06	1.00	0.15	0.07	
v/c Ratio	0.03	0.65	0.12	0.84	0.52	0.08	0.42	0.41	0.22	0.78	0.22	
Control Delay	4.4	14.5	1.6	41.6	8.6	0.2	48.1	64.5	0.3	68.9	47.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	4.4	14.5	1.6	41.6	8.6	0.2	48.1	64.5	0.3	68.9	47.8	
LOS	A	B	A	D	A	A	D	E	A	E	D	
Approach Delay		13.4			12.5			16.3			63.9	
Approach LOS		B			B			B			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 16.4

Intersection LOS: B

Intersection Capacity Utilization 79.2%

ICU Level of Service D

Analysis Period (min) 15

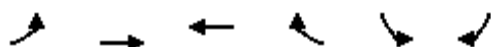
Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

Existing
PM Peak

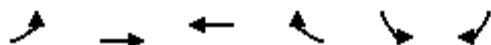


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←←	→→	←←	→	←←	→
Traffic Volume (vph)	700	1240	990	110	120	515
Future Volume (vph)	700	1240	990	110	120	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	125	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.898	0.850
Flt Protected	0.950				0.984	
Satd. Flow (prot)	3433	3539	3539	1583	3193	1441
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	3433	3539	3539	1583	3193	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				120	280	280
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	761	1348	1076	120	130	560
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	761	1348	1076	120	410	280
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

Existing
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.0	10.0	10.0	9.0	
Total Split (s)	37.0	92.0	55.0	55.0	28.0	
Total Split (%)	30.8%	76.7%	45.8%	45.8%	23.3%	
Maximum Green (s)	32.0	86.0	49.0	49.0	23.0	
Yellow Time (s)	3.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	33.8	100.2	63.3	63.3	12.8	120.0
Actuated g/C Ratio	0.28	0.84	0.53	0.53	0.11	1.00
v/c Ratio	0.79	0.46	0.58	0.13	0.69	0.19
Control Delay	45.8	3.5	22.4	3.8	22.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	3.5	22.4	3.8	22.4	0.3
LOS	D	A	C	A	C	A
Approach Delay		18.8	20.5		13.4	
Approach LOS		B	C		B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 101 (84%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 18.4

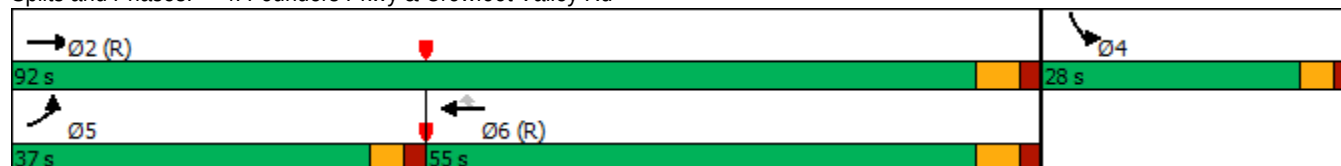
Intersection LOS: B

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	400	357	101	227	337	190	294	59	505	411	108
Future Volume (vph)	130	400	357	101	227	337	190	294	59	505	411	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		425	500		0	230		0	600		600
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.467			0.223			0.397			0.210		
Satd. Flow (perm)	870	1863	1583	415	1863	1583	740	1863	1583	391	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			388			366			218			218
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92
Adj. Flow (vph)	141	435	388	110	247	366	207	320	64	532	447	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	435	388	110	247	366	207	320	64	532	447	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

Existing
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	10.0	39.0		10.0	39.0		22.0	37.0		34.0	49.0	
Total Split (%)	8.3%	32.5%		8.3%	32.5%		18.3%	30.8%		28.3%	40.8%	
Maximum Green (s)	5.0	33.0		5.0	33.0		17.0	31.0		29.0	43.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-2.0		-2.0	-1.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		4.0	4.0		3.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	47.4	37.5	120.0	46.6	37.1	120.0	41.6	27.2	120.0	62.0	41.6	120.0
Actuated g/C Ratio	0.40	0.31	1.00	0.39	0.31	1.00	0.35	0.23	1.00	0.52	0.35	1.00
v/c Ratio	0.34	0.75	0.25	0.43	0.43	0.23	0.54	0.76	0.04	0.96	0.69	0.07
Control Delay	26.4	47.4	0.4	29.3	37.0	0.3	23.4	54.8	0.1	57.1	39.8	0.1
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	26.4	47.4	0.4	29.3	37.0	0.3	23.4	54.8	0.1	57.1	39.8	0.1
LOS	C	D	A	C	D	A	C	D	A	E	D	A
Approach Delay		25.4			17.3			37.9			43.9	
Approach LOS		C			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 31.9

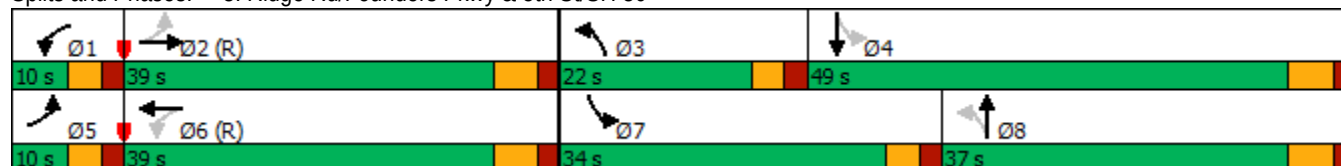
Intersection LOS: C

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	1115	150	38	2265	125	115	22	48	65	14	325
Future Volume (vph)	265	1115	150	38	2265	125	115	22	48	65	14	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	330		200	0		0	125		0
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.982				0.850		0.897				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4994	0	1770	5085	1583	3433	1671	0	1770	1863	2787
Flt Permitted	0.950			0.180			0.670			0.690		
Satd. Flow (perm)	3433	4994	0	335	5085	1583	2421	1671	0	1285	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31				109		52				277
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	288	1212	163	41	2384	136	125	24	52	71	15	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	1375	0	41	2384	136	125	76	0	71	15	342
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6	8			4		4

Synchro 10 Report

Lanes, Volumes, Timings

1: Allen Way & Founder Pkwy

2025 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	15.0	68.0		12.0	65.0	65.0	12.0	28.0		12.0	28.0	28.0
Total Split (%)	12.5%	56.7%		10.0%	54.2%	54.2%	10.0%	23.3%		10.0%	23.3%	23.3%
Maximum Green (s)	10.0	61.5		7.0	58.5	58.5	7.0	23.0		7.0	23.0	23.0
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)	-2.0	-3.0		-2.0	-3.0	-2.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.5		3.0	3.5	4.5	3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	17.4	81.3		78.7	70.0	69.0	20.7	13.5		20.0	11.1	11.1
Actuated g/C Ratio	0.14	0.68		0.66	0.58	0.58	0.17	0.11		0.17	0.09	0.09
v/c Ratio	0.58	0.41		0.13	0.80	0.14	0.25	0.32		0.29	0.09	0.67
Control Delay	52.4	9.7		5.3	21.4	2.0	40.9	23.6		42.5	48.3	18.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	52.4	9.7		5.3	21.4	2.0	40.9	23.6		42.5	48.3	18.1
LOS	D	A		A	C	A	D	C		D	D	B
Approach Delay		17.1			20.1			34.4			23.2	
Approach LOS		B			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.9

Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Background
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	64	875	255	66	1880	12	415	50	35	5	40	85
Future Volume (vph)	64	875	255	66	1880	12	415	50	35	5	40	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	210		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.966			0.999				0.850		0.898	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4912	0	1770	5080	0	3433	1863	1583	1770	3178	0
Flt Permitted	0.058			0.181			0.487			0.722		
Satd. Flow (perm)	108	4912	0	337	5080	0	1760	1863	1583	1345	3178	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		87			1				77		92	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			12.6			9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	951	277	72	2043	13	451	54	38	5	43	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	1228	0	72	2056	0	451	54	38	5	135	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Background
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	9.0	10.0	21.0	
Total Split (s)	12.0	65.0		12.0	65.0		18.0	31.0	12.0	12.0	25.0	
Total Split (%)	10.0%	54.2%		10.0%	54.2%		15.0%	25.8%	10.0%	10.0%	20.8%	
Maximum Green (s)	7.0	58.5		7.0	58.5		13.0	26.0	7.0	7.0	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)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	82.5	74.3		82.3	74.2		26.4	24.1	36.1	15.2	8.4	
Actuated g/C Ratio	0.69	0.62		0.69	0.62		0.22	0.20	0.30	0.13	0.07	
v/c Ratio	0.38	0.40		0.22	0.65		0.78	0.14	0.07	0.03	0.44	
Control Delay	25.1	10.2		7.2	16.9		52.0	41.9	0.9	36.2	24.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	25.1	10.2		7.2	16.9		52.0	41.9	0.9	36.2	24.1	
LOS	C	B		A	B		D	D	A	D	C	
Approach Delay		11.0			16.5			47.5			24.5	
Approach LOS		B			B			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 19.1

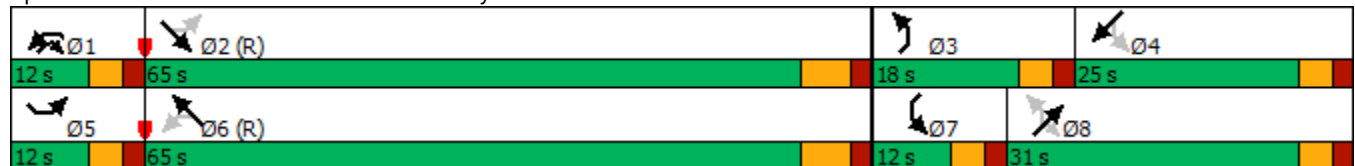
Intersection LOS: B

Intersection Capacity Utilization 70.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy



Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

2025 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	725	80	365	1850	95	130	27	160	40	14	2
Future Volume (vph)	6	725	80	365	1850	95	130	27	160	40	14	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		400	220		0	120		140
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	3476	0
Flt Permitted	0.061			0.278			0.513					
Satd. Flow (perm)	114	3539	1583	518	3539	1583	956	1863	1583	1863	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109			174		2	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	788	87	397	2011	103	141	29	174	43	15	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	788	87	397	2011	103	141	29	174	43	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		

Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

2025 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0	20.0	9.0	20.0	20.0	9.0	20.0		9.0	20.0	
Total Split (s)	12.0	68.0	68.0	12.0	68.0	68.0	17.0	25.0		15.0	23.0	
Total Split (%)	10.0%	56.7%	56.7%	10.0%	56.7%	56.7%	14.2%	20.8%		12.5%	19.2%	
Maximum Green (s)	7.0	61.5	61.5	7.0	61.5	61.5	12.0	20.0		10.0	18.0	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	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)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	5.5	5.5	4.0	5.5	6.5	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	76.5	68.3	68.3	93.0	89.3	88.3	18.4	9.4	120.0	13.2	7.2	
Actuated g/C Ratio	0.64	0.57	0.57	0.78	0.74	0.74	0.15	0.08	1.00	0.11	0.06	
v/c Ratio	0.04	0.39	0.09	0.66	0.76	0.09	0.58	0.20	0.11	0.22	0.08	
Control Delay	6.3	15.9	1.8	10.8	13.9	1.6	54.6	54.9	0.1	45.5	49.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.3	15.9	1.8	10.8	13.9	1.6	54.6	54.9	0.1	45.5	49.2	
LOS	A	B	A	B	B	A	D	D	A	D	D	
Approach Delay		14.5			12.9			27.1			46.5	
Approach LOS		B			B			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 15.1

Intersection LOS: B

Intersection Capacity Utilization 79.6%

ICU Level of Service D

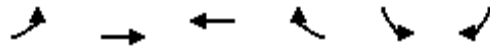
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

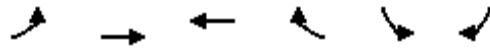
2025 Background
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↑↑	↑↑	↱	↰↰	↱
Traffic Volume (vph)	355	575	1430	130	85	900
Future Volume (vph)	355	575	1430	130	85	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.874	0.850
Flt Protected	0.950				0.992	
Satd. Flow (prot)	3433	3539	3539	1583	3133	1441
Flt Permitted	0.950				0.992	
Satd. Flow (perm)	3433	3539	3539	1583	3133	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				109	303	489
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	386	625	1554	141	92	978
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	386	625	1554	141	581	489
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2025 Background
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.5	10.5	10.5	9.0	
Total Split (s)	26.0	90.0	64.0	64.0	30.0	
Total Split (%)	21.7%	75.0%	53.3%	53.3%	25.0%	
Maximum Green (s)	21.0	83.5	57.5	57.5	25.0	
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5	4.5	6.5	5.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	19.2	91.3	70.1	68.1	17.2	120.0
Actuated g/C Ratio	0.16	0.76	0.58	0.57	0.14	1.00
v/c Ratio	0.70	0.23	0.75	0.15	1.01dr	0.34
Control Delay	54.8	4.9	23.1	5.1	33.2	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	4.9	23.1	5.1	33.2	0.6
LOS	D	A	C	A	C	A
Approach Delay		23.9	21.6		18.3	
Approach LOS		C	C		B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 21.3

Intersection LOS: C

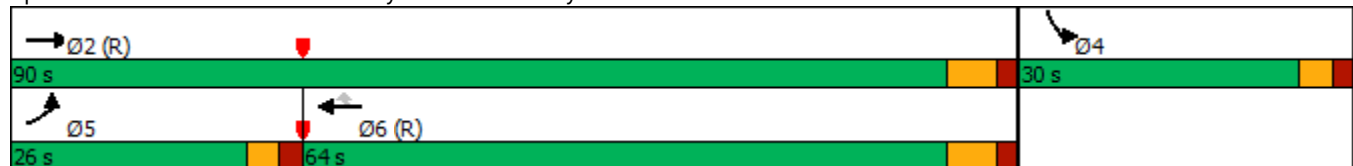
Intersection Capacity Utilization 72.9%

ICU Level of Service C

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



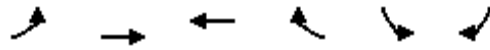
HCM 6th Roundabout
5: Connector Collector Roadway & Internal Collector Roadway

2025 Background
AM Peak

Intersection			
Intersection Delay, s/veh	3.2		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	65	98	55
Demand Flow Rate, veh/h	66	100	56
Vehicles Circulating, veh/h	50	34	16
Vehicles Exiting, veh/h	84	38	100
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.4	3.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	66	100	56
Cap Entry Lane, veh/h	1311	1333	1358
Entry HV Adj Factor	0.980	0.980	0.982
Flow Entry, veh/h	65	98	55
Cap Entry, veh/h	1285	1306	1333
V/C Ratio	0.050	0.075	0.041
Control Delay, s/veh	3.2	3.4	3.0
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Lanes, Volumes, Timings
6: Founder Pkwy & Connector Collector Roadway

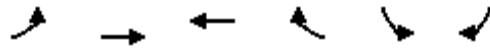
2025 Background
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	30	625	1500	20	25	65	
Future Volume (vph)	30	625	1500	20	25	65	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583	
Flt Permitted	0.128				0.950		
Satd. Flow (perm)	238	3539	3539	1583	1770	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				22		71	
Link Speed (mph)		50	50		35		
Link Distance (ft)		483	546		1305		
Travel Time (s)		6.6	7.4		25.4		
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.92	
Adj. Flow (vph)	33	679	1579	22	27	71	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	33	679	1579	22	27	71	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	pm+pt	NA	NA	Perm	pm+pt	Free	
Protected Phases	5	2	6		4		7
Permitted Phases	2			6	7	Free	
Detector Phase	5	2	6	6	4		
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0

Lanes, Volumes, Timings
6: Founder Pkwy & Connector Collector Roadway

2025 Background
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Minimum Split (s)	9.0	20.0	20.0	20.0	20.0		20.0
Total Split (s)	12.0	90.0	78.0	78.0	30.0		30.0
Total Split (%)	10.0%	75.0%	65.0%	65.0%	25.0%		25%
Maximum Green (s)	7.0	83.5	71.5	71.5	25.0		25.0
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0		3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.0	6.5	6.5	6.5	5.0		
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Max	C-Max	C-Max	None		None
Act Effect Green (s)	107.0	108.1	101.5	101.5	7.3	120.0	
Actuated g/C Ratio	0.89	0.90	0.85	0.85	0.06	1.00	
v/c Ratio	0.12	0.21	0.53	0.02	0.25	0.04	
Control Delay	2.2	1.6	5.7	1.6	58.8	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	2.2	1.6	5.7	1.6	58.8	0.0	
LOS	A	A	A	A	E	A	
Approach Delay	1.6		5.7		16.2		
Approach LOS	A		A		B		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 4.9

Intersection LOS: A

Intersection Capacity Utilization 54.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Founder Pkwy & Connector Collector Roadway



Intersection			
Intersection Delay, s/veh	4.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	38	92	278
Demand Flow Rate, veh/h	39	94	284
Vehicles Circulating, veh/h	200	34	16
Vehicles Exiting, veh/h	100	205	112
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.3	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	39	94	284
Cap Entry Lane, veh/h	1125	1333	1358
Entry HV Adj Factor	0.974	0.984	0.979
Flow Entry, veh/h	38	92	278
Cap Entry, veh/h	1096	1311	1329
V/C Ratio	0.035	0.071	0.209
Control Delay, s/veh	3.6	3.3	4.5
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	235	180	90	425	640	375	405	55	235	160	135
Future Volume (vph)	75	235	180	90	425	640	375	405	55	235	160	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		425	500		0	230		0	600		600
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.299			0.478			0.459			0.171		
Satd. Flow (perm)	557	1863	1583	890	1863	1583	855	1863	1583	319	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			196			514			155			155
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	255	196	98	447	696	408	440	60	255	174	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	255	196	98	447	696	408	440	60	255	174	147
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Background
AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	44.0		12.0	44.0		24.0	44.0		20.0	40.0	
Total Split (%)	10.0%	36.7%		10.0%	36.7%		20.0%	36.7%		16.7%	33.3%	
Maximum Green (s)	7.0	39.0		7.0	39.0		19.0	39.0		15.0	35.0	
Yellow Time (s)	3.0	3.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	54.3	45.8	120.0	55.6	48.2	120.0	53.4	33.8	120.0	45.0	29.4	120.0
Actuated g/C Ratio	0.45	0.38	1.00	0.46	0.40	1.00	0.44	0.28	1.00	0.38	0.24	1.00
v/c Ratio	0.24	0.36	0.12	0.21	0.60	0.44	0.77	0.84	0.04	0.83	0.38	0.09
Control Delay	20.3	30.1	0.2	19.6	35.0	0.9	33.9	54.9	0.0	48.2	38.9	0.1
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	30.1	0.2	19.6	35.0	0.9	33.9	54.9	0.0	48.2	38.9	0.1
LOS	C	C	A	B	C	A	C	D	A	D	D	A
Approach Delay		17.6			14.6			41.8			33.1	
Approach LOS		B			B			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 26.0

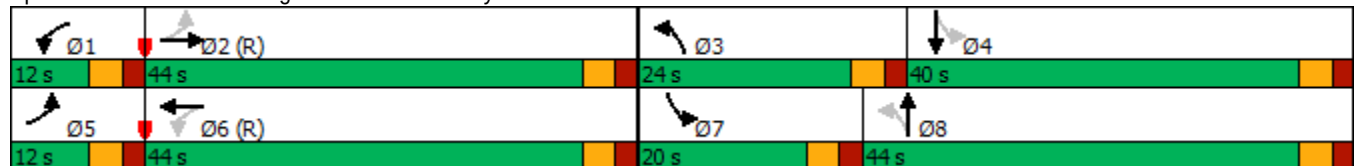
Intersection LOS: C

Intersection Capacity Utilization 74.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	2685	230	42	2145	145	165	38	90	125	37	460
Future Volume (vph)	435	2685	230	42	2145	145	165	38	90	125	37	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	330		200	0		0	125		0
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.988				0.850		0.894				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5024	0	1770	5085	1583	3433	1665	0	1770	1863	2787
Flt Permitted	0.950			0.067			0.731			0.462		
Satd. Flow (perm)	3433	5024	0	125	5085	1583	2642	1665	0	861	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				155		86				305
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	473	2826	250	46	2258	158	179	41	98	136	40	500
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	3076	0	46	2258	158	179	139	0	136	40	500
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6	8			4		4

Synchro 10 Report

Lanes, Volumes, Timings

1: Allen Way & Founder Pkwy

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	20.0	74.0		11.0	65.0	65.0	11.0	24.0		11.0	24.0	24.0
Total Split (%)	16.7%	61.7%		9.2%	54.2%	54.2%	9.2%	20.0%		9.2%	20.0%	20.0%
Maximum Green (s)	15.0	67.5		6.0	58.5	58.5	6.0	19.0		6.0	19.0	19.0
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)	-1.0	-2.0		-1.0	-2.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.5		4.0	4.5	5.5	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	20.0	76.1		68.6	61.1	60.1	22.4	15.4		22.4	15.4	15.4
Actuated g/C Ratio	0.17	0.63		0.57	0.51	0.50	0.19	0.13		0.19	0.13	0.13
v/c Ratio	0.83	0.96		0.28	0.87	0.18	0.33	0.48		0.64	0.17	0.80
Control Delay	62.4	31.7		12.1	28.1	3.0	39.3	25.0		53.7	45.9	29.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	62.4	31.7		12.1	28.1	3.0	39.3	25.0		53.7	45.9	29.4
LOS	E	C		B	C	A	D	C		D	D	C
Approach Delay		35.8			26.2			33.1			35.3	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 32.2

Intersection LOS: C

Intersection Capacity Utilization 88.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Background
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	165	1950	685	130	1575	20	620	110	190	40	85	60
Future Volume (vph)	165	1950	685	130	1575	20	620	110	190	40	85	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	210		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.959			0.998				0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4877	0	1770	5075	0	3433	1863	1583	1770	3320	0
Flt Permitted	0.075			0.066			0.950			0.680		
Satd. Flow (perm)	140	4877	0	123	5075	0	3433	1863	1583	1267	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		121			2				91		65	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			12.6			9.0	
Peak Hour Factor	0.92	0.98	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	1990	745	141	1658	22	674	120	207	43	92	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	2735	0	141	1680	0	674	120	207	43	157	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6					8	4		

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Background
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	9.0	10.0	14.0	
Total Split (s)	11.0	68.0		10.0	67.0		27.0	29.0	10.0	13.0	15.0	
Total Split (%)	9.2%	56.7%		8.3%	55.8%		22.5%	24.2%	8.3%	10.8%	12.5%	
Maximum Green (s)	6.0	62.0		5.0	61.0		22.0	24.0	5.0	8.0	10.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-1.0	-2.5		-1.0	-2.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	3.5		4.0	4.0		3.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	72.6	64.5		70.6	63.0		24.0	26.4	38.0	17.5	9.4	
Actuated g/C Ratio	0.60	0.54		0.59	0.52		0.20	0.22	0.32	0.15	0.08	
v/c Ratio	0.89	1.02		0.80	0.63		0.98	0.29	0.37	0.20	0.49	
Control Delay	51.6	44.6		54.2	21.5		78.4	42.3	20.5	32.9	35.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	51.6	44.6		54.2	21.5		78.4	42.3	20.5	32.9	35.9	
LOS	D	D		D	C		E	D	C	C	D	
Approach Delay		45.1			24.1			62.1			35.2	
Approach LOS		D			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 41.2

Intersection LOS: D

Intersection Capacity Utilization 95.5%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy

 Ø1	 Ø2 (R)	 Ø3	 Ø4
10 s	68 s	27 s	15 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
11 s	67 s	13 s	29 s

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1630	135	225	1450	95	105	45	355	173	48	8
Future Volume (vph)	8	1630	135	225	1450	95	105	45	355	173	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		400	220		0	120		140
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95
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	1770	3539	1583	1770	1863	1583	1770	3461	0
Flt Permitted	0.135			0.060			0.615			0.725		
Satd. Flow (perm)	251	3539	1583	112	3539	1583	1146	1863	1583	1350	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114			109			198		9	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1716	147	245	1576	103	114	49	386	188	52	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1716	147	245	1576	103	114	49	386	188	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		Free	4		

Synchro 10 Report

Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0	20.0	9.0	20.0	20.0	9.0	20.0		9.0	20.0	
Total Split (s)	11.0	69.0	69.0	11.0	69.0	69.0	17.0	25.0		15.0	23.0	
Total Split (%)	9.2%	57.5%	57.5%	9.2%	57.5%	57.5%	14.2%	20.8%		12.5%	19.2%	
Maximum Green (s)	6.0	62.5	62.5	6.0	62.5	62.5	12.0	20.0		10.0	18.0	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	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)	-1.0	-2.0	-1.0	-1.0	-2.0	-1.0	-1.0	-2.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.5	5.5	4.0	4.5	5.5	4.0	3.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	71.7	64.5	63.5	89.4	86.7	85.7	20.7	10.7	120.0	18.2	8.5	
Actuated g/C Ratio	0.60	0.54	0.53	0.74	0.72	0.71	0.17	0.09	1.00	0.15	0.07	
v/c Ratio	0.04	0.90	0.16	0.67	0.62	0.09	0.44	0.30	0.24	0.77	0.24	
Control Delay	6.2	32.9	4.6	39.3	11.2	1.7	46.1	54.9	0.4	65.6	47.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.2	32.9	4.6	39.3	11.2	1.7	46.1	54.9	0.4	65.6	47.2	
LOS	A	C	A	D	B	A	D	D	A	E	D	
Approach Delay		30.6			14.3			14.7			61.1	
Approach LOS		C			B			B			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 23.5

Intersection LOS: C

Intersection Capacity Utilization 84.2%

ICU Level of Service E

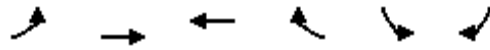
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

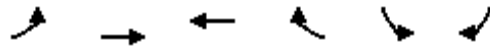
2025 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	785	1415	1085	125	135	580
Future Volume (vph)	785	1415	1085	125	135	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.898	0.850
Flt Protected	0.950				0.984	
Satd. Flow (prot)	3433	3539	3539	1583	3193	1441
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	3433	3539	3539	1583	3193	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				136	315	315
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	853	1538	1179	136	147	630
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	853	1538	1179	136	462	315
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2025 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	10.5	10.5	10.5	9.0	
Total Split (s)	26.0	90.0	64.0	64.0	30.0	
Total Split (%)	21.7%	75.0%	53.3%	53.3%	25.0%	
Maximum Green (s)	21.0	83.5	57.5	57.5	25.0	
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	0.0	-2.0	0.0	0.0	
Total Lost Time (s)	4.0	6.5	4.5	6.5	5.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	35.5	97.0	59.5	57.5	11.5	120.0
Actuated g/C Ratio	0.30	0.81	0.50	0.48	0.10	1.00
v/c Ratio	0.84	0.54	0.67	0.16	0.78	0.22
Control Delay	49.1	5.2	25.3	3.3	26.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	5.2	25.3	3.3	26.0	0.3
LOS	D	A	C	A	C	A
Approach Delay		20.8	23.0		15.6	
Approach LOS		C	C		B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 20.6
Intersection LOS: C
Intersection Capacity Utilization 73.6%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



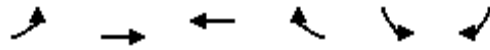
HCM 6th Roundabout
5: Connector Collector Roadway & Internal Collector Roadway

2025 Background
PM Peak

Intersection			
Intersection Delay, s/veh	3.3		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	87	60	108
Demand Flow Rate, veh/h	89	62	110
Vehicles Circulating, veh/h	34	55	50
Vehicles Exiting, veh/h	83	105	73
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.2	3.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	89	62	110
Cap Entry Lane, veh/h	1333	1305	1311
Entry HV Adj Factor	0.978	0.975	0.982
Flow Entry, veh/h	87	60	108
Cap Entry, veh/h	1303	1272	1287
V/C Ratio	0.067	0.048	0.084
Control Delay, s/veh	3.3	3.2	3.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Lanes, Volumes, Timings
6: Founder Pkwy & Connector Collector Roadway

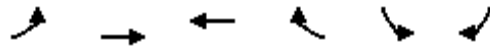
2025 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	65	1475	1175	35	20	45	
Future Volume (vph)	65	1475	1175	35	20	45	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583	
Flt Permitted	0.186				0.950		
Satd. Flow (perm)	346	3539	3539	1583	1770	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				38		49	
Link Speed (mph)		50	50		35		
Link Distance (ft)		483	546		1305		
Travel Time (s)		6.6	7.4		25.4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	71	1603	1277	38	22	49	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	71	1603	1277	38	22	49	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	pm+pt	NA	NA	Perm	pm+pt	Free	
Protected Phases	5	2	6		4		7
Permitted Phases	2			6	7	Free	
Detector Phase	5	2	6	6	4		
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0

Lanes, Volumes, Timings
6: Founder Pkwy & Connector Collector Roadway

2025 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Minimum Split (s)	9.0	20.0	20.0	20.0	20.0		20.0
Total Split (s)	12.0	90.0	78.0	78.0	30.0		30.0
Total Split (%)	10.0%	75.0%	65.0%	65.0%	25.0%		25%
Maximum Green (s)	7.0	83.5	71.5	71.5	25.0		25.0
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0		3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.0	6.5	6.5	6.5	5.0		
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Max	C-Max	C-Max	None		None
Act Effect Green (s)	107.3	108.4	98.0	98.0	7.0	120.0	
Actuated g/C Ratio	0.89	0.90	0.82	0.82	0.06	1.00	
v/c Ratio	0.19	0.50	0.44	0.03	0.21	0.03	
Control Delay	2.3	2.6	5.2	1.4	58.1	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	2.3	2.6	5.2	1.4	58.1	0.0	
LOS	A	A	A	A	E	A	
Approach Delay	2.6		5.1		18.0		
Approach LOS	A		A		B		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 4.0

Intersection LOS: A

Intersection Capacity Utilization 53.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 6: Founder Pkwy & Connector Collector Roadway



Intersection			
Intersection Delay, s/veh	4.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	103	222	195
Demand Flow Rate, veh/h	105	226	199
Vehicles Circulating, veh/h	144	89	5
Vehicles Exiting, veh/h	60	160	310
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.8	4.4	3.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	105	226	199
Cap Entry Lane, veh/h	1191	1260	1373
Entry HV Adj Factor	0.981	0.981	0.981
Flow Entry, veh/h	103	222	195
Cap Entry, veh/h	1169	1236	1346
V/C Ratio	0.088	0.179	0.145
Control Delay, s/veh	3.8	4.4	3.9
LOS	A	A	A
95th %tile Queue, veh	0	1	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	450	400	115	255	380	215	330	65	570	460	120
Future Volume (vph)	145	450	400	115	255	380	215	330	65	570	460	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		425	500		0	230		0	600		600
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.398			0.114			0.468			0.137		
Satd. Flow (perm)	741	1863	1583	212	1863	1583	872	1863	1583	255	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			435			413			200			200
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	158	489	435	125	277	413	234	359	71	620	500	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	489	435	125	277	413	234	359	71	620	500	130
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	10.0	39.0		10.0	39.0		20.0	30.0		41.0	51.0	
Total Split (%)	8.3%	32.5%		8.3%	32.5%		16.7%	25.0%		34.2%	42.5%	
Maximum Green (s)	5.0	34.0		5.0	34.0		15.0	25.0		36.0	46.0	
Yellow Time (s)	3.0	3.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-2.0		-2.0	-1.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	3.0		3.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	41.7	35.0	120.0	41.8	35.1	120.0	39.3	26.2	120.0	67.2	48.2	120.0
Actuated g/C Ratio	0.35	0.29	1.00	0.35	0.29	1.00	0.33	0.22	1.00	0.56	0.40	1.00
v/c Ratio	0.50	0.90	0.27	0.78	0.51	0.26	0.60	0.88	0.04	1.00	0.67	0.08
Control Delay	33.5	62.1	0.4	59.3	39.3	0.4	24.7	68.8	0.0	67.9	34.9	0.1
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	33.5	62.1	0.4	59.3	39.3	0.4	24.7	68.8	0.0	67.9	34.9	0.1
LOS	C	E	A	E	D	A	C	E	A	E	C	A
Approach Delay		33.1			22.7			45.9			47.7	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 37.9

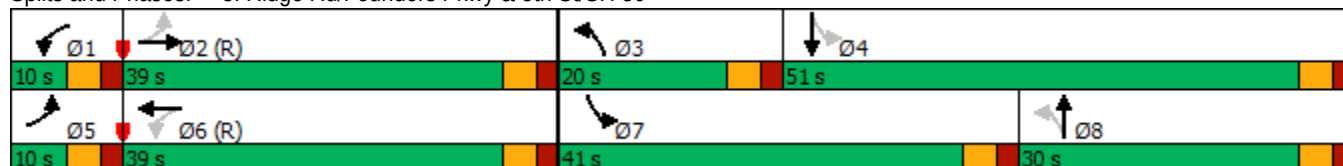
Intersection LOS: D

Intersection Capacity Utilization 92.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	1169	150	38	2412	125	115	22	48	65	14	325
Future Volume (vph)	265	1169	150	38	2412	125	115	22	48	65	14	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.983				0.850		0.897				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4999	0	1770	5085	1583	3433	1671	0	1770	1863	2787
Flt Permitted	0.950			0.158			0.950			0.708		
Satd. Flow (perm)	3433	4999	0	294	5085	1583	3433	1671	0	1319	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				120		52				224
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	288	1271	163	41	2461	136	125	24	52	71	15	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	1434	0	41	2461	136	125	76	0	71	15	342
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	14.0	74.0		15.0	75.0	75.0	12.0	20.0		11.0	19.0	19.0
Total Split (%)	11.7%	61.7%		12.5%	62.5%	62.5%	10.0%	16.7%		9.2%	15.8%	15.8%
Maximum Green (s)	9.0	68.0		10.0	69.0	69.0	7.0	15.0		6.0	14.0	14.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-2.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	5.0		4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	13.7	78.4		79.2	71.9	70.9	8.0	14.6		18.4	11.4	11.4
Actuated g/C Ratio	0.11	0.65		0.66	0.60	0.59	0.07	0.12		0.15	0.10	0.10
v/c Ratio	0.74	0.44		0.14	0.81	0.14	0.55	0.31		0.31	0.09	0.73
Control Delay	64.0	11.2		4.4	17.2	1.2	63.8	22.9		43.3	48.5	27.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.0	11.2		4.4	17.2	1.2	63.8	22.9		43.3	48.5	27.6
LOS	E	B		A	B	A	E	C		D	D	C
Approach Delay		20.0			16.2			48.3			31.0	
Approach LOS		C			B			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 74.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Total
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	64	929	255	73	2027	12	415	50	40	5	40	85
Future Volume (vph)	64	929	255	73	2027	12	415	50	40	5	40	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.968			0.999				0.850		0.898	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4923	0	1770	5080	0	3433	1863	1583	1770	3178	0
Flt Permitted	0.059			0.162			0.527			0.722		
Satd. Flow (perm)	110	4923	0	302	5080	0	1904	1863	1583	1345	3178	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			1				118		92	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	1010	277	79	2134	13	451	54	43	5	43	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	1287	0	79	2147	0	451	54	43	5	135	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Total
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	12.0	63.0		12.0	63.0		20.0	33.0	33.0	12.0	25.0	
Total Split (%)	10.0%	52.5%		10.0%	52.5%		16.7%	27.5%	27.5%	10.0%	20.8%	
Maximum Green (s)	7.0	57.0		7.0	57.0		15.0	28.0	28.0	7.0	20.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		3.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	80.4	72.7		80.6	72.7		29.3	26.0	26.0	15.2	8.4	
Actuated g/C Ratio	0.67	0.61		0.67	0.61		0.24	0.22	0.22	0.13	0.07	
v/c Ratio	0.38	0.43		0.26	0.70		0.66	0.13	0.10	0.03	0.44	
Control Delay	24.6	14.0		8.3	18.7		44.5	40.1	0.5	34.8	24.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	24.6	14.0		8.3	18.7		44.5	40.1	0.5	34.8	24.1	
LOS	C	B		A	B		D	D	A	C	C	
Approach Delay		14.6			18.3			40.6			24.5	
Approach LOS		B			B			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 20.2

Intersection LOS: C

Intersection Capacity Utilization 72.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy



Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	784	80	370	2010	95	130	27	164	40	14	2
Future Volume (vph)	6	784	80	370	2010	95	130	27	164	40	14	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	1863	1583	1770	3476	0
Flt Permitted	0.062			0.258			0.500					
Satd. Flow (perm)	115	3539	1583	481	3539	1583	1807	1863	1583	1863	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			118			178		2	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	825	87	402	2116	103	141	29	178	43	15	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	825	87	402	2116	103	141	29	178	43	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2		2	6		6	8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	9.0	20.0	10.0	9.0	20.0	
Total Split (s)	15.0	57.0	57.0	21.0	63.0	63.0	19.0	25.0	21.0	17.0	23.0	
Total Split (%)	12.5%	47.5%	47.5%	17.5%	52.5%	52.5%	15.8%	20.8%	17.5%	14.2%	19.2%	
Maximum Green (s)	9.0	51.0	51.0	15.0	57.0	57.0	14.0	20.0	15.0	12.0	18.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	4.0	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)	-1.0	-1.0	-1.0	-2.0	-1.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0	5.0	3.0	3.0	5.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	73.9	67.2	67.2	94.1	90.7	90.7	18.3	9.8	31.4	12.8	7.4	
Actuated g/C Ratio	0.62	0.56	0.56	0.78	0.76	0.76	0.15	0.08	0.26	0.11	0.06	
v/c Ratio	0.04	0.42	0.09	0.66	0.79	0.08	0.30	0.19	0.33	0.23	0.08	
Control Delay	8.2	18.2	1.7	11.2	14.5	1.3	44.1	54.1	5.7	46.0	48.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.2	18.2	1.7	11.2	14.5	1.3	44.1	54.1	5.7	46.0	48.9	
LOS	A	B	A	B	B	A	D	D	A	D	D	
Approach Delay	16.6			13.4			25.3			46.8		
Approach LOS	B			B			C			D		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 80.9%

ICU Level of Service D

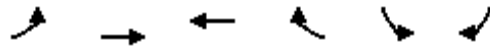
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2025 Total
AM Peak

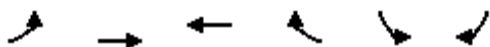


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱↱	↰↰	↱	↰↰↰	↱
Traffic Volume (vph)	355	638	1595	138	89	900
Future Volume (vph)	355	638	1595	138	89	900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.875	0.850
Flt Protected	0.950				0.992	
Satd. Flow (prot)	3433	3539	3539	1583	3137	1441
Flt Permitted	0.950				0.992	
Satd. Flow (perm)	3433	3539	3539	1583	3137	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				120	246	443
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.95
Adj. Flow (vph)	386	693	1679	150	97	947
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	386	693	1679	150	571	473
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2025 Total
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	23.0	91.0	68.0	68.0	29.0	
Total Split (%)	19.2%	75.8%	56.7%	56.7%	24.2%	
Maximum Green (s)	17.0	85.0	62.0	62.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	19.1	92.6	69.5	69.5	20.4	120.0
Actuated g/C Ratio	0.16	0.77	0.58	0.58	0.17	1.00
v/c Ratio	0.71	0.25	0.82	0.16	1.00dr	0.33
Control Delay	55.3	4.5	25.7	4.2	34.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	4.5	25.7	4.2	34.0	0.6
LOS	E	A	C	A	C	A
Approach Delay		22.7	23.9		18.8	
Approach LOS		C	C		B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.3
Intersection LOS: C
Intersection Capacity Utilization 76.3%
ICU Level of Service D
Analysis Period (min) 15
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



HCM 6th Roundabout
5: Internal Collector Roadway & Connector Collector Roadway

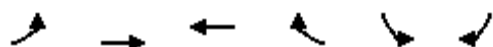
2025 Total
AM Peak

Intersection			
Intersection Delay, s/veh	4.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	108	308	85
Demand Flow Rate, veh/h	110	314	87
Vehicles Circulating, veh/h	35	35	214
Vehicles Exiting, veh/h	266	110	135
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	4.8	4.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	110	314	87
Cap Entry Lane, veh/h	1331	1331	1109
Entry HV Adj Factor	0.982	0.981	0.981
Flow Entry, veh/h	108	308	85
Cap Entry, veh/h	1307	1306	1088
V/C Ratio	0.083	0.236	0.078
Control Delay, s/veh	3.4	4.8	4.0
LOS	A	A	A
95th %tile Queue, veh	0	1	0

Lanes, Volumes, Timings

6: Founder Pkwy & Connector Collector Roadway

2025 Total
AM Peak

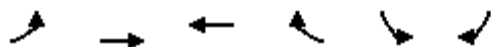


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	97	625	1499	49	68	239	
Future Volume (vph)	97	625	1499	49	68	239	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	400			400	200	0	
Storage Lanes	1			1	0	1	
Taper Length (ft)	100				100		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583	
Flt Permitted	0.097				0.950		
Satd. Flow (perm)	181	3539	3539	1583	1770	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				53		114	
Link Speed (mph)		50	50		35		
Link Distance (ft)		483	546		622		
Travel Time (s)		6.6	7.4		12.1		
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.92	
Adj. Flow (vph)	105	679	1578	53	74	260	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	105	679	1578	53	74	260	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	pm+pt	NA	NA	Perm	pm+pt	Perm	
Protected Phases	5	2	6		7		4
Permitted Phases	2			6	4	7	

Lanes, Volumes, Timings

6: Founder Pkwy & Connector Collector Roadway

2025 Total
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø4
Detector Phase	5	2	6	6	7	7	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	9.0	9.0	20.0
Total Split (s)	12.0	90.0	78.0	78.0	30.0	30.0	30.0
Total Split (%)	10.0%	75.0%	65.0%	65.0%	25.0%	25.0%	25%
Maximum Green (s)	6.0	84.0	72.0	72.0	25.0	25.0	25.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effect Green (s)	93.1	93.1	80.4	80.4	17.9	17.9	
Actuated g/C Ratio	0.78	0.78	0.67	0.67	0.15	0.15	
v/c Ratio	0.43	0.25	0.67	0.05	0.28	0.78	
Control Delay	9.7	4.5	14.6	2.6	45.7	42.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.7	4.5	14.6	2.6	45.7	42.8	
LOS	A	A	B	A	D	D	
Approach Delay		5.2	14.2		43.4		
Approach LOS		A	B		D		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 15.2

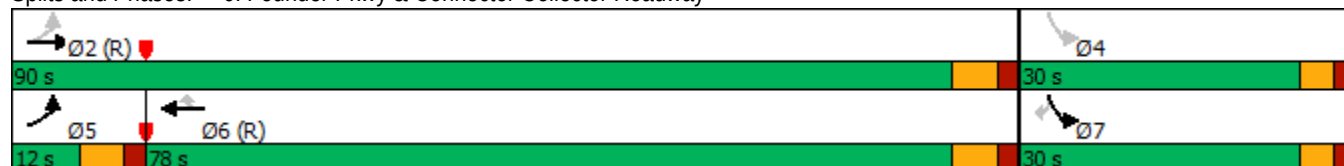
Intersection LOS: B

Intersection Capacity Utilization 63.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Founder Pkwy & Connector Collector Roadway



HCM 6th Roundabout
7: Castle Oaks Drive & Internal Community Collector

2025 Total
AM Peak

Intersection			
Intersection Delay, s/veh	4.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	49	94	283
Demand Flow Rate, veh/h	50	96	289
Vehicles Circulating, veh/h	200	43	18
Vehicles Exiting, veh/h	107	207	121
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.4	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	50	96	289
Cap Entry Lane, veh/h	1125	1321	1355
Entry HV Adj Factor	0.980	0.984	0.980
Flow Entry, veh/h	49	94	283
Cap Entry, veh/h	1103	1300	1327
V/C Ratio	0.044	0.073	0.213
Control Delay, s/veh	3.6	3.4	4.5
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	235	180	90	425	646	375	413	55	248	174	149
Future Volume (vph)	82	235	180	90	425	646	375	413	55	248	174	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.274			0.493			0.442			0.166		
Satd. Flow (perm)	510	1863	1583	918	1863	1583	823	1863	1583	309	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			196			518			155			162
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	255	196	98	447	702	408	449	60	270	189	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	255	196	98	447	702	408	449	60	270	189	162
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	44.0		12.0	44.0		24.0	44.0		20.0	40.0	
Total Split (%)	10.0%	36.7%		10.0%	36.7%		20.0%	36.7%		16.7%	33.3%	
Maximum Green (s)	7.0	39.0		7.5	39.0		19.0	39.0		15.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		1.5	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	54.0	45.6	120.0	54.7	45.4	120.0	54.1	34.4	120.0	45.9	30.1	120.0
Actuated g/C Ratio	0.45	0.38	1.00	0.46	0.38	1.00	0.45	0.29	1.00	0.38	0.25	1.00
v/c Ratio	0.28	0.36	0.12	0.20	0.63	0.44	0.77	0.84	0.04	0.87	0.40	0.10
Control Delay	21.1	30.2	0.2	19.6	37.0	0.9	33.9	54.7	0.0	54.5	39.0	0.1
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	30.2	0.2	19.6	37.0	0.9	33.9	54.7	0.0	54.5	39.0	0.1
LOS	C	C	A	B	D	A	C	D	A	D	D	A
Approach Delay		17.8			15.3			41.9			35.6	
Approach LOS		B			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 26.8

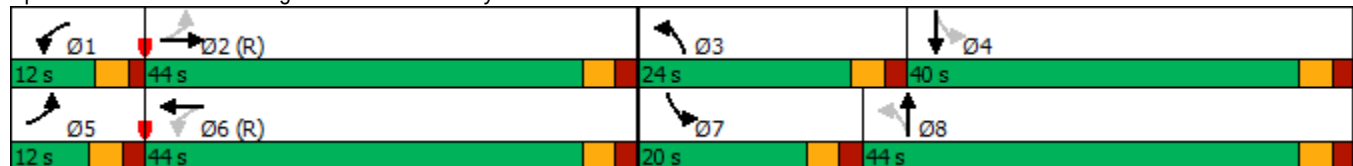
Intersection LOS: C

Intersection Capacity Utilization 75.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



HCM 6th TWSC
9: Connector Collector Roadway & Commercial Access

2025 Total
AM Peak

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	2	97	49	3	237
Future Vol, veh/h	70	2	97	49	3	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	190	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	2	105	53	3	258
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	369	105	0	0	158	0
Stage 1	105	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	631	949	-	-	1422	-
Stage 1	919	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	949	-	-	1422	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.4	0	0.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 630 949	1422	-		
HCM Lane V/C Ratio	-	- 0.121 0.002	0.002	-		
HCM Control Delay (s)	-	- 11.5 8.8	7.5	-		
HCM Lane LOS	-	- B A	A	-		
HCM 95th %tile Q(veh)	-	- 0.4 0	0	-		

HCM 6th TWSC
10: Internal Collector Roadway & Site Access #10

2025 Total
AM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	270	0	5	94
Future Vol, veh/h	0	13	270	0	5	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	293	0	5	102
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	405	293	0	0	293	0
Stage 1	293	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	602	746	-	-	1269	-
Stage 1	757	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	600	746	-	-	1269	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.9	0		0.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	746	1269	-	
HCM Lane V/C Ratio	-	-	0.019	0.004	-	
HCM Control Delay (s)	-	-	9.9	7.8	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile O(veh)	-	-	0.1	0	-	

HCM 6th TWSC
11: Internal Collector Roadway & Site Access #11

2025 Total
AM Peak

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	1	2	23	1	7	15	60	254	0	5	87	2
Future Vol, veh/h	1	2	23	1	7	15	60	254	0	5	87	2
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	2	25	1	8	16	65	276	0	5	95	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	524	512	96	526	513	276	97	0	0	276	0	0
Stage 1	106	106	-	406	406	-	-	-	-	-	-	-
Stage 2	418	406	-	120	107	-	-	-	-	-	-	-
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	464	465	960	462	465	763	1496	-	-	1287	-	-
Stage 1	900	807	-	622	598	-	-	-	-	-	-	-
Stage 2	612	598	-	884	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	432	443	960	432	443	763	1496	-	-	1287	-	-
Mov Cap-2 Maneuver	432	443	-	432	443	-	-	-	-	-	-	-
Stage 1	861	804	-	595	572	-	-	-	-	-	-	-
Stage 2	565	572	-	855	804	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.4		11.2		1.4		0.4					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1496	-	-	844	609	1287	-	-				
HCM Lane V/C Ratio	0.044	-	-	0.033	0.041	0.004	-	-				
HCM Control Delay (s)	7.5	-	-	9.4	11.2	7.8	-	-				
HCM Lane LOS	A	-	-	A	B	A	-	-				
HCM 95th %tile O(veh)	0.1	-	-	0.1	0.1	0	-	-				

HCM 6th TWSC
12: Internal Collector Roadway & Site Access #12

2025 Total
AM Peak

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	48	266	0	16	95
Future Vol, veh/h	1	48	266	0	16	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	52	289	0	17	103
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	426	289	0	0	289	0
Stage 1	289	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	585	750	-	-	1273	-
Stage 1	760	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	577	750	-	-	1273	-
Mov Cap-2 Maneuver	577	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.2	0		1.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	745	1273	-	
HCM Lane V/C Ratio	-	-	0.071	0.014	-	
HCM Control Delay (s)	-	-	10.2	7.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile O(veh)	-	-	0.2	0	-	

HCM 6th TWSC
13: Internal Collector Roadway & Site Access #13

2025 Total
AM Peak

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	75	201	1	2	65
Future Vol, veh/h	21	75	201	1	2	65
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	82	218	1	2	71
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	219	0	-	0	347	219
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	128	-
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	1350	-	-	-	650	821
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	898	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1350	-	-	-	639	821
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	898	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		9.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1350	-	-	-	814	
HCM Lane V/C Ratio	0.017	-	-	-	0.089	
HCM Control Delay (s)	7.7	-	-	-	9.9	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

HCM 6th TWSC
14: Site Access #14 & Internal Collector Roadway

2025 Total
AM Peak

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	57	20	1	143	59	1
Future Vol, veh/h	57	20	1	143	59	1
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	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	22	1	155	64	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	84	0	219	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	157	-
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	-	-	1513	-	769	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1513	-	768	1003
Mov Cap-2 Maneuver	-	-	-	-	768	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	870	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	771	-	-	1513	-	
HCM Lane V/C Ratio	0.085	-	-	0.001	-	
HCM Control Delay (s)	10.1	-	-	7.4	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

HCM 6th TWSC
15: Site Access #15 & Internal Collector Roadway

2025 Total
AM Peak

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	5	42	11	1	96	0	32	0	2	1	0	16
Future Vol, veh/h	5	42	11	1	96	0	32	0	2	1	0	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	46	12	1	104	0	35	0	2	1	0	17
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	134	83	9	111	90	1	17	0	0	2	0	0
Stage 1	11	11	-	71	71	-	-	-	-	-	-	-
Stage 2	123	72	-	40	19	-	-	-	-	-	-	-
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	838	807	1073	867	800	1084	1600	-	-	1620	-	-
Stage 1	1010	886	-	939	836	-	-	-	-	-	-	-
Stage 2	881	835	-	975	880	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	739	788	1073	805	782	1084	1600	-	-	1620	-	-
Mov Cap-2 Maneuver	739	788	-	805	782	-	-	-	-	-	-	-
Stage 1	988	885	-	918	818	-	-	-	-	-	-	-
Stage 2	752	817	-	913	879	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.7		10.3			6.9			0.4			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1600	-	-	825	782	1620	-	-				
HCM Lane V/C Ratio	0.022	-	-	0.076	0.135	0.001	-	-				
HCM Control Delay (s)	7.3	0	-	9.7	10.3	7.2	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile O(veh)	0.1	-	-	0.2	0.5	0	-	-				

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	2861	230	42	2258	145	165	38	90	125	37	460
Future Volume (vph)	435	2861	230	42	2258	145	165	38	90	125	37	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.989				0.850		0.894				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5029	0	1770	5085	1583	3433	1665	0	1770	1863	2787
Flt Permitted	0.950			0.061			0.950			0.423		
Satd. Flow (perm)	3433	5029	0	114	5085	1583	3433	1665	0	788	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				155		82				294
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	473	3110	250	46	2304	158	179	41	98	136	40	484
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	3360	0	46	2304	158	179	139	0	136	40	484
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2025 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	22.0	81.0		10.0	69.0	69.0	12.0	18.0		11.0	17.0	17.0
Total Split (%)	18.3%	67.5%		8.3%	57.5%	57.5%	10.0%	15.0%		9.2%	14.2%	14.2%
Maximum Green (s)	17.0	75.0		5.0	63.0	63.0	7.0	13.0		6.0	12.0	12.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-2.0	-1.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	4.0	5.0	3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	19.0	80.8		73.9	65.8	64.8	9.0	14.2		21.2	13.2	13.2
Actuated g/C Ratio	0.16	0.67		0.62	0.55	0.54	0.08	0.12		0.18	0.11	0.11
v/c Ratio	0.87	0.99		0.28	0.83	0.17	0.70	0.52		0.67	0.20	0.85
Control Delay	66.7	33.5		12.8	24.4	2.3	69.1	29.0		58.1	50.5	35.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	66.7	33.5		12.8	24.4	2.3	69.1	29.0		58.1	50.5	35.6
LOS	E	C		B	C	A	E	C		E	D	D
Approach Delay		37.6			22.8			51.5			41.1	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 33.4

Intersection LOS: C

Intersection Capacity Utilization 91.5%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Total
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	165	2126	685	140	1688	20	620	110	207	40	85	60
Future Volume (vph)	165	2126	685	140	1688	20	620	110	207	40	85	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.963			0.998				0.850		0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4897	0	1770	5075	0	3433	1863	1583	1770	3320	0
Flt Permitted	0.070			0.057			0.359			0.680		
Satd. Flow (perm)	130	4897	0	106	5075	0	1297	1863	1583	1267	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113			2				160		65	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	2311	745	152	1835	22	633	120	225	43	92	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	3056	0	152	1857	0	633	120	225	43	157	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2025 Total
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	12.0	72.0		15.0	75.0		22.0	21.0	21.0	12.0	11.0	
Total Split (%)	10.0%	60.0%		12.5%	62.5%		18.3%	17.5%	17.5%	10.0%	9.2%	
Maximum Green (s)	7.0	66.0		10.0	69.0		17.0	16.0	16.0	7.0	6.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-1.0	-2.6		-2.0	-2.0		-2.0	-1.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	3.4		3.0	4.0		3.0	4.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	77.0	69.5		83.2	71.0		29.9	19.4	20.4	16.6	7.9	
Actuated g/C Ratio	0.64	0.58		0.69	0.59		0.25	0.16	0.17	0.14	0.07	
v/c Ratio	0.93	1.06		0.67	0.62		0.96	0.40	0.56	0.20	0.56	
Control Delay	48.9	54.9		37.5	16.9		68.3	51.1	21.0	38.0	39.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.9	54.9		37.5	16.9		68.3	51.1	21.0	38.0	39.8	
LOS	D	D		D	B		E	D	C	D	D	
Approach Delay		54.5			18.4			55.3			39.4	
Approach LOS		D			B			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 42.9

Intersection LOS: D

Intersection Capacity Utilization 99.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy

 Ø1	 Ø2 (R)	 Ø3	 Ø4
15 s	72 s	22 s	11 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	75 s	12 s	21 s

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2025 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1823	135	234	1573	95	105	45	364	173	48	8
Future Volume (vph)	8	1823	135	234	1573	95	105	45	364	173	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	0.95
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	1770	3539	1583	3433	1863	1583	1770	3461	0
Flt Permitted	0.109			0.059			0.715			0.573		
Satd. Flow (perm)	203	3539	1583	110	3539	1583	2584	1863	1583	1067	3461	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173			118			73		9	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1919	147	254	1656	103	114	49	396	188	52	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1919	147	254	1656	103	114	49	396	188	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2		2	6		6	8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2025 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	9.0	20.0	10.0	9.0	20.0	
Total Split (s)	10.0	66.0	66.0	18.0	74.0	74.0	13.0	20.0	18.0	16.0	23.0	
Total Split (%)	8.3%	55.0%	55.0%	15.0%	61.7%	61.7%	10.8%	16.7%	15.0%	13.3%	19.2%	
Maximum Green (s)	4.0	60.0	60.0	12.0	68.0	68.0	8.0	15.0	12.0	11.0	18.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	4.0	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)	-2.0	-3.0	-1.0	-3.0	-3.0	-1.0	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	3.0	5.0	3.0	3.0	5.0	3.0	3.0	4.0	3.0	3.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	72.2	65.5	63.5	89.6	87.1	85.1	19.6	10.5	31.5	24.4	13.0	
Actuated g/C Ratio	0.60	0.55	0.53	0.75	0.73	0.71	0.16	0.09	0.26	0.20	0.11	
v/c Ratio	0.04	0.99	0.16	0.68	0.64	0.09	0.23	0.30	0.85	0.64	0.16	
Control Delay	6.6	46.9	1.8	39.3	11.6	1.5	39.0	55.2	50.9	52.1	41.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.6	46.9	1.8	39.3	11.6	1.5	39.0	55.2	50.9	52.1	41.4	
LOS	A	D	A	D	B	A	D	E	D	D	D	
Approach Delay		43.5			14.6			48.9			49.4	
Approach LOS		D			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 32.6

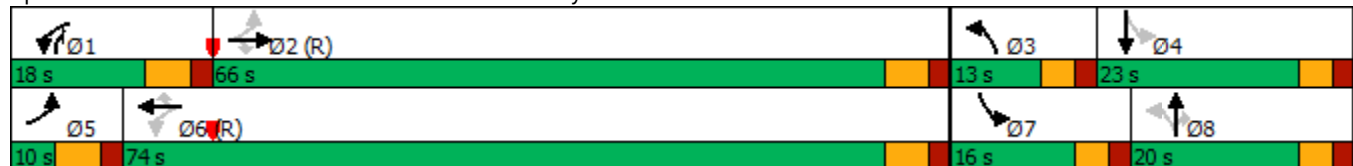
Intersection LOS: C

Intersection Capacity Utilization 92.5%

ICU Level of Service F

Analysis Period (min) 15

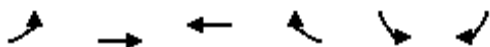
Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2025 Total
PM Peak

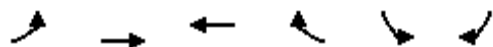


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	785	1617	1217	135	148	580
Future Volume (vph)	785	1617	1217	135	148	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.902	0.850
Flt Protected	0.950				0.983	
Satd. Flow (prot)	3433	3539	3539	1583	3204	1441
Flt Permitted	0.950				0.983	
Satd. Flow (perm)	3433	3539	3539	1583	3204	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				123	306	305
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.95
Adj. Flow (vph)	853	1758	1281	147	161	611
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	853	1758	1281	147	467	305
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2025 Total
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	39.0	93.0	54.0	54.0	27.0	
Total Split (%)	32.5%	77.5%	45.0%	45.0%	22.5%	
Maximum Green (s)	33.0	87.0	48.0	48.0	22.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	36.3	99.0	58.7	58.7	14.0	120.0
Actuated g/C Ratio	0.30	0.82	0.49	0.49	0.12	1.00
v/c Ratio	0.82	0.60	0.74	0.18	0.73	0.21
Control Delay	46.1	5.2	29.3	5.8	23.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	5.2	29.3	5.8	23.6	0.3
LOS	D	A	C	A	C	A
Approach Delay		18.5	26.9		14.4	
Approach LOS		B	C		B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 20.4
Intersection LOS: C
Intersection Capacity Utilization 76.4%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



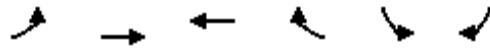
HCM 6th Roundabout
5: Internal Collector Roadway & Connector Collector Roadway

2025 Total
PM Peak

Intersection			
Intersection Delay, s/veh	4.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	299	204	148
Demand Flow Rate, veh/h	305	208	151
Vehicles Circulating, veh/h	107	63	144
Vehicles Exiting, veh/h	188	349	127
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.2	4.2	4.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	305	208	151
Cap Entry Lane, veh/h	1237	1294	1191
Entry HV Adj Factor	0.980	0.980	0.979
Flow Entry, veh/h	299	204	148
Cap Entry, veh/h	1213	1268	1167
V/C Ratio	0.247	0.161	0.127
Control Delay, s/veh	5.2	4.2	4.2
LOS	A	A	A
95th %tile Queue, veh	1	1	0

Lanes, Volumes, Timings
6: Founder Pkwy & Connector Collector Roadway

2025 Total
PM Peak

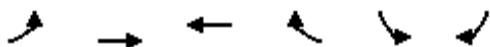


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	295	1460	1170	113	100	192
Future Volume (vph)	295	1460	1170	113	100	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400			400	200	0
Storage Lanes	1			1	0	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.159				0.950	
Satd. Flow (perm)	296	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				123		205
Link Speed (mph)		50	50		35	
Link Distance (ft)		483	546		622	
Travel Time (s)		6.6	7.4		12.1	
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	321	1587	1232	123	109	209
Shared Lane Traffic (%)						
Lane Group Flow (vph)	321	1587	1232	123	109	209
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Perm	Perm
Protected Phases	5	2	6			
Permitted Phases	2			6	4	7

Lanes, Volumes, Timings

6: Founder Pkwy & Connector Collector Roadway

2025 Total
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	7
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	9.0
Total Split (s)	17.0	90.0	73.0	73.0	30.0	30.0
Total Split (%)	14.2%	75.0%	60.8%	60.8%	25.0%	25.0%
Maximum Green (s)	11.0	84.0	67.0	67.0	25.0	25.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-1.0	-1.0	-1.0	-2.0	-1.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	3.0	4.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	98.3	97.3	75.3	75.3	14.7	13.7
Actuated g/C Ratio	0.82	0.81	0.63	0.63	0.12	0.11
v/c Ratio	0.69	0.55	0.56	0.12	0.50	0.58
Control Delay	18.1	5.1	15.0	2.3	56.6	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	5.1	15.0	2.3	56.6	13.5
LOS	B	A	B	A	E	B
Approach Delay	7.3		13.9		28.3	
Approach LOS	A		B		C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 11.6

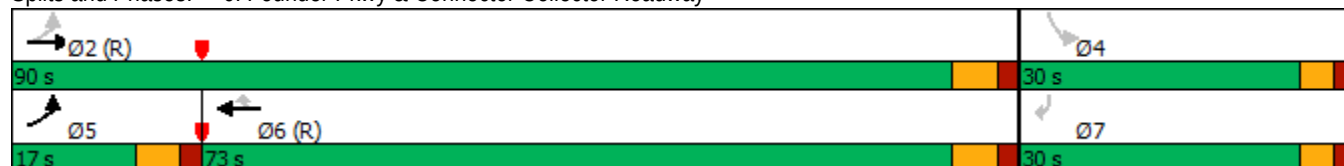
Intersection LOS: B

Intersection Capacity Utilization 65.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Founder Pkwy & Connector Collector Roadway



HCM 6th Roundabout
7: Castle Oaks Drive & Internal Community Collector

2025 Total
PM Peak

Intersection			
Intersection Delay, s/veh	4.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	120	227	209
Demand Flow Rate, veh/h	122	231	213
Vehicles Circulating, veh/h	144	100	10
Vehicles Exiting, veh/h	79	166	321
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.9	4.5	4.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	122	231	213
Cap Entry Lane, veh/h	1191	1246	1366
Entry HV Adj Factor	0.984	0.981	0.982
Flow Entry, veh/h	120	227	209
Cap Entry, veh/h	1172	1223	1341
V/C Ratio	0.102	0.185	0.156
Control Delay, s/veh	3.9	4.5	4.0
LOS	A	A	A
95th %tile Queue, veh	0	1	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	450	400	115	255	399	215	352	65	582	479	139
Future Volume (vph)	166	450	400	115	255	399	215	352	65	582	479	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	3539	1583
Flt Permitted	0.397			0.119			0.459			0.132		
Satd. Flow (perm)	740	1863	1583	222	1863	1583	855	1863	1583	246	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			435			434			214			214
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.92
Adj. Flow (vph)	180	489	435	125	268	434	234	383	71	613	521	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	489	435	125	268	434	234	383	71	613	521	151
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free	8		Free	4		Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2025 Total
PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	11.0	40.0		10.0	39.0		45.0	31.0		39.0	25.0	
Total Split (%)	9.2%	33.3%		8.3%	32.5%		37.5%	25.8%		32.5%	20.8%	
Maximum Green (s)	6.0	33.5		5.0	32.5		40.0	26.0		34.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		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	
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0		-2.0	-1.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.0	3.0		3.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	43.6	35.5	120.0	41.6	34.5	120.0	44.3	27.4	120.0	66.4	43.4	120.0
Actuated g/C Ratio	0.36	0.30	1.00	0.35	0.29	1.00	0.37	0.23	1.00	0.55	0.36	1.00
v/c Ratio	0.54	0.89	0.27	0.77	0.50	0.27	0.52	0.90	0.04	1.03	0.41	0.10
Control Delay	33.4	59.9	0.4	58.2	39.5	0.4	20.9	70.4	0.0	79.0	30.7	0.1
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	33.4	59.9	0.4	58.2	39.5	0.4	20.9	70.4	0.0	79.0	30.7	0.1
LOS	C	E	A	E	D	A	C	E	A	E	C	A
Approach Delay		32.1			21.8			46.3			50.2	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 38.4

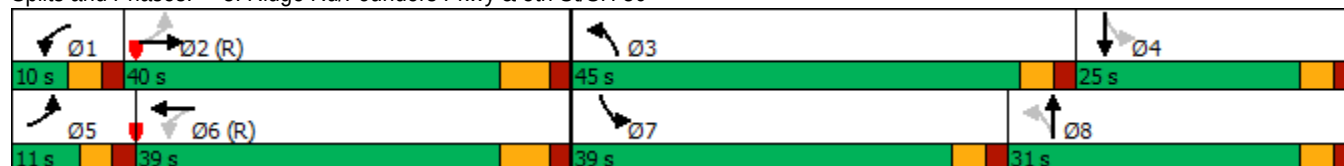
Intersection LOS: D

Intersection Capacity Utilization 94.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



HCM 6th TWSC
9: Connector Collector Roadway & Commercial Access

2025 Total
PM Peak

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	11	264	144	7	163
Future Vol, veh/h	129	11	264	144	7	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	190	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	12	287	157	8	177
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	480	287	0	0	444	0
Stage 1	287	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	545	752	-	-	1116	-
Stage 1	762	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	541	752	-	-	1116	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.7	0	0.3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 541 752	1116	-		
HCM Lane V/C Ratio	-	- 0.259 0.016	0.007	-		
HCM Control Delay (s)	-	- 14 9.9	8.2	-		
HCM Lane LOS	-	- B A	A	-		
HCM 95th %tile Q(veh)	-	- 1 0	0	-		

HCM 6th TWSC
10: Internal Collector Roadway & Site Access #10

2025 Total
PM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	179	0	15	300
Future Vol, veh/h	0	9	179	0	15	300
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	195	0	16	326
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	553	195	0	0	195	0
Stage 1	195	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	494	846	-	-	1378	-
Stage 1	838	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	487	846	-	-	1378	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.3	0		0.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	846	1378	-	
HCM Lane V/C Ratio	-	-	0.012	0.012	-	
HCM Control Delay (s)	-	-	9.3	7.6	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC
11: Internal Collector Roadway & Site Access #11

2025 Total
PM Peak

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	7	9	98	0	4	10	47	162	1	15	275	10
Future Vol, veh/h	7	9	98	0	4	10	47	162	1	15	275	10
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	10	107	0	4	11	51	176	1	16	299	11
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	623	616	305	674	621	177	310	0	0	177	0	0
Stage 1	337	337	-	279	279	-	-	-	-	-	-	-
Stage 2	286	279	-	395	342	-	-	-	-	-	-	-
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	398	406	735	368	403	866	1250	-	-	1399	-	-
Stage 1	677	641	-	728	680	-	-	-	-	-	-	-
Stage 2	721	680	-	630	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	374	385	735	296	382	866	1250	-	-	1399	-	-
Mov Cap-2 Maneuver	374	385	-	296	382	-	-	-	-	-	-	-
Stage 1	649	634	-	698	652	-	-	-	-	-	-	-
Stage 2	678	652	-	524	631	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.8		10.8			1.8			0.4			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1250	-	-	650	636	1399	-	-				
HCM Lane V/C Ratio	0.041	-	-	0.191	0.024	0.012	-	-				
HCM Control Delay (s)	8	-	-	11.8	10.8	7.6	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile O(veh)	0.1	-	-	0.7	0.1	0	-	-				

HCM 6th TWSC
12: Internal Collector Roadway & Site Access #12

2025 Total
PM Peak

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	32	178	1	54	299
Future Vol, veh/h	1	32	178	1	54	299
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	35	193	1	59	325
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	637	194	0	0	194	0
Stage 1	194	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	441	847	-	-	1379	-
Stage 1	839	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	422	847	-	-	1379	-
Mov Cap-2 Maneuver	422	-	-	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.6	0		1.2		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	822		1379	-	
HCM Lane V/C Ratio	-	0.044		0.043	-	
HCM Control Delay (s)	-	9.6		7.7	-	
HCM Lane LOS	-	A		A	-	
HCM 95th %tile Q(veh)	-	0.1		0.1	-	

HCM 6th TWSC
13: Internal Collector Roadway & Site Access #13

2025 Total
PM Peak

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	73	227	136	2	2	43
Future Vol, veh/h	73	227	136	2	2	43
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	247	148	2	2	47
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	150	0	-	0	554	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	405	-
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	1431	-	-	-	493	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1431	-	-	-	466	898
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	673	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.9	0		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1431	-	-	-	862	
HCM Lane V/C Ratio	0.055	-	-	-	0.057	
HCM Control Delay (s)	7.7	-	-	-	9.4	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile O(veh)	0.2	-	-	-	0.2	

HCM 6th TWSC
14: Site Access #14 & Internal Collector Roadway

2025 Total
PM Peak

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	162	67	1	99	39	1
Future Vol, veh/h	162	67	1	99	39	1
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	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	176	73	1	108	42	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	249	0	286	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	110	-
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	-	-	1317	-	704	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1317	-	703	867
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	914	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		10.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	706	-	-	1317	-	
HCM Lane V/C Ratio	0.062	-	-	0.001	-	
HCM Control Delay (s)	10.4	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile O(veh)	0.2	-	-	0	-	

HCM 6th TWSC
15: Site Access #15 & Internal Collector Roadway

2025 Total
PM Peak

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	109	36	3	68	1	21	0	1	0	0	11
Future Vol, veh/h	18	109	36	3	68	1	21	0	1	0	0	11
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	118	39	3	74	1	23	0	1	0	0	12
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	90	53	6	132	59	1	12	0	0	1	0	0
Stage 1	6	6	-	47	47	-	-	-	-	-	-	-
Stage 2	84	47	-	85	12	-	-	-	-	-	-	-
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	895	838	1077	840	832	1084	1607	-	-	1622	-	-
Stage 1	1016	891	-	967	856	-	-	-	-	-	-	-
Stage 2	924	856	-	923	886	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	823	826	1077	713	820	1084	1607	-	-	1622	-	-
Mov Cap-2 Maneuver	823	826	-	713	820	-	-	-	-	-	-	-
Stage 1	1002	891	-	953	844	-	-	-	-	-	-	-
Stage 2	830	844	-	771	886	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.2		9.9			6.9			0			
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1607	-	-	870	818	1622	-	-				
HCM Lane V/C Ratio	0.014	-	-	0.204	0.096	-	-	-				
HCM Control Delay (s)	7.3	0	-	10.2	9.9	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.8	0.3	0	-	-				

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	1366	150	45	3013	140	130	25	55	75	15	385
Future Volume (vph)	265	1366	150	45	3013	140	130	25	55	75	15	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.985				0.850		0.897				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5009	0	1770	5085	1583	3433	1671	0	1770	1863	2787
Flt Permitted	0.950			0.119			0.950			0.701		
Satd. Flow (perm)	3433	5009	0	222	5085	1583	3433	1671	0	1306	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27				109		60				217
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	288	1438	163	49	3074	152	141	27	60	82	16	418
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	1601	0	49	3074	152	141	87	0	82	16	418
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	14.0	74.0		15.0	75.0	75.0	12.0	20.0		11.0	19.0	19.0
Total Split (%)	11.7%	61.7%		12.5%	62.5%	62.5%	10.0%	16.7%		9.2%	15.8%	15.8%
Maximum Green (s)	9.0	68.0		10.0	69.0	69.0	7.0	15.0		6.0	14.0	14.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-2.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	5.0		4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	12.1	76.1		78.8	71.4	70.4	8.0	16.7		20.5	13.5	13.5
Actuated g/C Ratio	0.10	0.63		0.66	0.60	0.59	0.07	0.14		0.17	0.11	0.11
v/c Ratio	0.83	0.50		0.20	1.02	0.16	0.62	0.31		0.33	0.08	0.83
Control Delay	73.9	12.9		4.8	36.5	1.2	66.8	21.5		42.6	47.5	39.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	73.9	12.9		4.8	36.5	1.2	66.8	21.5		42.6	47.5	39.1
LOS	E	B		A	D	A	E	C		D	D	D
Approach Delay		22.2			34.4			49.6			39.9	
Approach LOS		C			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 31.5

Intersection LOS: C

Intersection Capacity Utilization 86.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Background
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	70	1146	280	62	2563	15	530	75	45	5	65	105
Future Volume (vph)	70	1146	280	62	2563	15	530	75	45	5	65	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.970			0.999				0.850		0.908	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4933	0	1770	5080	0	3433	1863	1583	1770	3214	0
Flt Permitted	0.060			0.116			0.449			0.704		
Satd. Flow (perm)	112	4933	0	216	5080	0	1623	1863	1583	1311	3214	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			1				118		109	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	1206	304	67	2615	16	576	82	49	5	71	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	1510	0	67	2631	0	576	82	49	5	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Background
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	12.0	63.0		12.0	63.0		20.0	33.0	33.0	12.0	25.0	
Total Split (%)	10.0%	52.5%		10.0%	52.5%		16.7%	27.5%	27.5%	10.0%	20.8%	
Maximum Green (s)	7.0	57.0		7.0	57.0		15.0	28.0	28.0	7.0	20.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		3.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	79.8	71.7		79.0	71.4		30.4	27.1	27.1	16.3	9.4	
Actuated g/C Ratio	0.66	0.60		0.66	0.60		0.25	0.23	0.23	0.14	0.08	
v/c Ratio	0.40	0.51		0.27	0.87		0.86	0.19	0.11	0.02	0.53	
Control Delay	26.1	18.1		9.5	25.9		54.5	39.7	0.5	33.6	27.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	26.1	18.1		9.5	25.9		54.5	39.7	0.5	33.6	27.8	
LOS	C	B		A	C		D	D	A	C	C	
Approach Delay		18.5			25.5			49.0			27.9	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 26.6

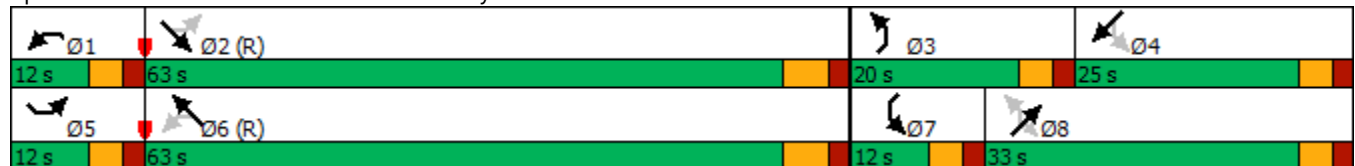
Intersection LOS: C

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy



Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	6	826	250	490	2170	105	465	30	226	45	15	3
Future Volume (vph)	6	826	250	490	2170	105	465	30	226	45	15	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.964			0.993			0.868			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4902	0	1770	5050	0	3433	1617	0	1770	3454	0
Flt Permitted	0.082			0.147			0.512			0.714		
Satd. Flow (perm)	153	4902	0	274	5050	0	1850	1617	0	1330	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			9			246			3	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	869	272	533	2214	114	505	33	246	49	16	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1141	0	533	2328	0	505	279	0	49	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	15.0	57.0		21.0	63.0		19.0	25.0		17.0	23.0	
Total Split (%)	12.5%	47.5%		17.5%	52.5%		15.8%	20.8%		14.2%	19.2%	
Maximum Green (s)	9.0	51.0		15.0	57.0		14.0	20.0		12.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-2.0	-1.0		-2.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		4.0	5.0		3.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	58.7	52.0		88.1	84.6		24.9	12.7		14.3	9.0	
Actuated g/C Ratio	0.49	0.43		0.73	0.70		0.21	0.11		0.12	0.08	
v/c Ratio	0.04	0.53		0.91	0.65		0.81	0.71		0.26	0.07	
Control Delay	9.5	24.0		46.4	12.9		54.0	19.9		43.1	44.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.5	24.0		46.4	12.9		54.0	19.9		43.1	44.2	
LOS	A	C		D	B		D	B		D	D	
Approach Delay		23.9			19.2			41.8			43.4	
Approach LOS		C			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 24.3

Intersection LOS: C

Intersection Capacity Utilization 81.7%

ICU Level of Service D

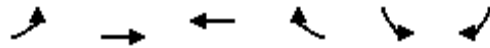
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2041 Background
AM Peak

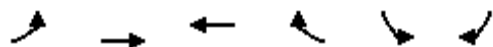


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↑↑	↑↑	↱	↰↰	↱
Traffic Volume (vph)	450	647	1695	182	116	1070
Future Volume (vph)	450	647	1695	182	116	1070
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.877	0.850
Flt Protected	0.950				0.991	
Satd. Flow (prot)	3433	3539	3539	1583	3141	1441
Flt Permitted	0.950				0.991	
Satd. Flow (perm)	3433	3539	3539	1583	3141	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				144	242	440
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	703	1842	198	126	1163
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	489	703	1842	198	708	581
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2041 Background
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	23.0	91.0	68.0	68.0	29.0	
Total Split (%)	19.2%	75.8%	56.7%	56.7%	24.2%	
Maximum Green (s)	17.0	85.0	62.0	62.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	19.7	88.9	65.2	65.2	24.1	120.0
Actuated g/C Ratio	0.16	0.74	0.54	0.54	0.20	1.00
v/c Ratio	0.87	0.27	0.96	0.21	1.14dr	0.40
Control Delay	65.7	5.5	39.8	5.0	41.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	5.5	39.8	5.0	41.4	0.8
LOS	E	A	D	A	D	A
Approach Delay		30.2	36.4		23.1	
Approach LOS		C	D		C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 31.0

Intersection LOS: C

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



HCM 6th Roundabout
5: Connector Collector Roadway & Internal Collector Roadway

2041 Background
AM Peak

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	109	130	87
Demand Flow Rate, veh/h	112	132	89
Vehicles Circulating, veh/h	66	55	28
Vehicles Exiting, veh/h	121	62	150
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.6	3.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	112	132	89
Cap Entry Lane, veh/h	1290	1305	1341
Entry HV Adj Factor	0.977	0.983	0.978
Flow Entry, veh/h	109	130	87
Cap Entry, veh/h	1261	1282	1311
V/C Ratio	0.087	0.101	0.066
Control Delay, s/veh	3.6	3.6	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	676	40	5	1702	30	120	0	10	40	0	95
Future Volume (vph)	50	676	40	5	1702	30	120	0	10	40	0	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		400	400		400	200		0	200		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1583	0	1770	1583	0
Flt Permitted	0.051			0.361			0.520			0.750		
Satd. Flow (perm)	95	3539	1583	672	3539	1583	969	1583	0	1397	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			118		310			141	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		483			546			392			1305	
Travel Time (s)		6.6			7.4			7.6			25.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	735	43	5	1792	33	130	0	11	43	0	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	735	43	5	1792	33	130	11	0	43	103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0		9.0	20.0	
Total Split (s)	13.0	68.0	68.0	12.0	67.0	67.0	15.0	28.0		12.0	25.0	
Total Split (%)	10.8%	56.7%	56.7%	10.0%	55.8%	55.8%	12.5%	23.3%		10.0%	20.8%	
Maximum Green (s)	7.0	62.0	62.0	6.0	61.0	61.0	10.0	23.0		7.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	88.7	87.0	87.0	84.5	79.2	79.2	17.2	13.2		17.4	6.9	
Actuated g/C Ratio	0.74	0.72	0.72	0.70	0.66	0.66	0.14	0.11		0.14	0.06	
v/c Ratio	0.31	0.29	0.04	0.01	0.77	0.03	0.62	0.02		0.18	0.46	
Control Delay	12.0	6.6	0.1	4.4	17.9	0.1	61.2	0.1		42.9	10.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	12.0	6.6	0.1	4.4	17.9	0.1	61.2	0.1		42.9	10.0	
LOS	B	A	A	A	B	A	E	A		D	B	
Approach Delay		6.6			17.6			56.5			19.7	
Approach LOS		A			B			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.5

Intersection LOS: B

Intersection Capacity Utilization 67.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy



Intersection			
Intersection Delay, s/veh	5.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	60	136	434
Demand Flow Rate, veh/h	61	138	443
Vehicles Circulating, veh/h	310	50	22
Vehicles Exiting, veh/h	155	321	166
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.2	3.6	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	61	138	443
Cap Entry Lane, veh/h	1006	1311	1349
Entry HV Adj Factor	0.984	0.984	0.980
Flow Entry, veh/h	60	136	434
Cap Entry, veh/h	989	1290	1322
V/C Ratio	0.061	0.105	0.328
Control Delay, s/veh	4.2	3.6	5.7
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	210	120	115	475	859	320	527	75	287	156	121
Future Volume (vph)	63	210	120	115	475	859	320	527	75	287	156	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.448			0.588			0.950			0.950		
Satd. Flow (perm)	835	3539	1583	1095	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			719			141			141
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	228	130	125	500	934	348	573	82	312	170	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	228	130	125	500	934	348	573	82	312	170	132
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free			Free			Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Background
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	57.0		12.0	57.0		21.0	31.0		20.0	30.0	
Total Split (%)	10.0%	47.5%		10.0%	47.5%		17.5%	25.8%		16.7%	25.0%	
Maximum Green (s)	8.0	50.5		8.0	50.5		17.0	27.0		16.0	26.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	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		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	64.2	54.5	120.0	66.5	57.3	120.0	15.9	24.1	120.0	14.9	23.1	120.0
Actuated g/C Ratio	0.54	0.45	1.00	0.55	0.48	1.00	0.13	0.20	1.00	0.12	0.19	1.00
v/c Ratio	0.14	0.14	0.08	0.19	0.30	0.59	0.77	0.81	0.05	0.74	0.25	0.08
Control Delay	13.3	20.5	0.1	13.5	21.2	1.6	62.0	55.0	0.1	61.5	41.3	0.1
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	13.3	20.5	0.1	13.5	21.2	1.6	62.0	55.0	0.1	61.5	41.3	0.1
LOS	B	C	A	B	C	A	E	D	A	E	D	A
Approach Delay		13.1			8.9			52.9			42.7	
Approach LOS		B			A			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 27.4

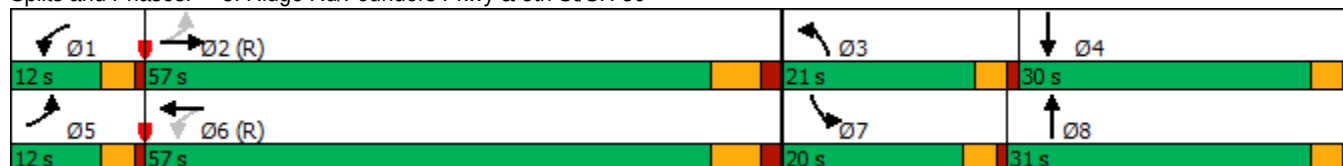
Intersection LOS: C

Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	3209	230	45	2372	160	185	45	90	145	40	460
Future Volume (vph)	435	3209	230	45	2372	160	185	45	90	145	40	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.990				0.850		0.900				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5034	0	1770	5085	1583	3433	1676	0	1770	1863	2787
Flt Permitted	0.950			0.061			0.950			0.397		
Satd. Flow (perm)	3433	5034	0	114	5085	1583	3433	1676	0	740	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				155		69				291
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	473	3378	250	49	2420	174	201	49	98	158	43	500
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	3628	0	49	2420	174	201	147	0	158	43	500
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	22.0	81.0		10.0	69.0	69.0	12.0	18.0		11.0	17.0	17.0
Total Split (%)	18.3%	67.5%		8.3%	57.5%	57.5%	10.0%	15.0%		9.2%	14.2%	14.2%
Maximum Green (s)	17.0	75.0		5.0	63.0	63.0	7.0	13.0		6.0	12.0	12.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-2.0	-1.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	4.0	5.0	3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	19.0	80.6		73.7	65.6	64.6	9.0	14.4		21.4	13.4	13.4
Actuated g/C Ratio	0.16	0.67		0.61	0.55	0.54	0.08	0.12		0.18	0.11	0.11
v/c Ratio	0.87	1.07		0.29	0.87	0.19	0.78	0.56		0.79	0.21	0.88
Control Delay	66.7	59.6		11.6	23.8	2.1	75.6	35.4		69.8	50.8	39.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	66.7	59.6		11.6	23.8	2.1	75.6	35.4		69.8	50.8	39.4
LOS	E	E		B	C	A	E	D		E	D	D
Approach Delay		60.4			22.2			58.6			46.9	
Approach LOS		E			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 46.2

Intersection LOS: D

Intersection Capacity Utilization 99.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Background
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	205	2624	615	135	1962	25	540	145	193	40	120	75
Future Volume (vph)	205	2624	615	135	1962	25	540	145	193	40	120	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.971			0.998				0.850		0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4938	0	1770	5075	0	3433	1863	1583	1770	3334	0
Flt Permitted	0.055			0.056			0.333			0.657		
Satd. Flow (perm)	102	4938	0	104	5075	0	1203	1863	1583	1224	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91			3				122		82	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	2762	668	147	2002	27	587	158	210	43	130	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	3430	0	147	2029	0	587	158	210	43	212	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Background
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	13.0	78.0		11.0	76.0		20.0	21.0	21.0	10.0	11.0	
Total Split (%)	10.8%	65.0%		9.2%	63.3%		16.7%	17.5%	17.5%	8.3%	9.2%	
Maximum Green (s)	8.0	72.0		6.0	70.0		15.0	16.0	16.0	5.0	6.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	85.0	75.0		81.0	72.0		28.0	20.0	20.0	15.0	8.0	
Actuated g/C Ratio	0.71	0.62		0.68	0.60		0.23	0.17	0.17	0.12	0.07	
v/c Ratio	1.06	1.10		0.81	0.67		0.98	0.51	0.58	0.23	0.71	
Control Delay	67.9	66.9		57.4	17.3		77.0	53.2	27.2	40.3	47.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.9	66.9		57.4	17.3		77.0	53.2	27.2	40.3	47.3	
LOS	E	E		E	B		E	D	C	D	D	
Approach Delay		66.9			20.0			62.1			46.1	
Approach LOS		E			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 51.0

Intersection LOS: D

Intersection Capacity Utilization 106.4%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy

													
Ø1	Ø2 (R)	Ø3	Ø4	Ø5	Ø6 (R)	Ø7	Ø8						
11 s	78 s	20 s	11 s	13 s	76 s	10 s	21 s						

Lanes, Volumes, Timings

3: Woodlands Blvd & Founders Pkwy

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1937	505	246	1517	100	355	45	476	175	50	10
Future Volume (vph)	8	1937	505	246	1517	100	355	45	476	175	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.968			0.990			0.863			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4923	0	1770	5034	0	3433	1608	0	1770	3451	0
Flt Permitted	0.118			0.060			0.649			0.244		
Satd. Flow (perm)	220	4923	0	112	5034	0	2345	1608	0	455	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			17			107			11	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	2039	549	267	1548	109	386	49	517	190	54	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	2588	0	267	1657	0	386	566	0	190	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	10.0	68.0		18.0	76.0		11.0	20.0		14.0	23.0	
Total Split (%)	8.3%	56.7%		15.0%	63.3%		9.2%	16.7%		11.7%	19.2%	
Maximum Green (s)	4.0	62.0		12.0	70.0		6.0	15.0		9.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		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	
Lost Time Adjust (s)	-2.0	-3.0		-3.0	-3.0		-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	70.0	65.0		83.0	81.0		26.2	17.0		27.0	17.5	
Actuated g/C Ratio	0.58	0.54		0.69	0.68		0.22	0.14		0.22	0.15	
v/c Ratio	0.04	0.96		0.94	0.49		0.62	1.77		0.85	0.13	
Control Delay	7.1	35.4		74.0	10.3		44.3	386.5		72.2	36.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.1	35.4		74.0	10.3		44.3	386.5		72.2	36.3	
LOS	A	D		E	B		D	F		E	D	
Approach Delay		35.3			19.1			247.8			63.1	
Approach LOS		D			B			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.77

Intersection Signal Delay: 66.4

Intersection LOS: E

Intersection Capacity Utilization 117.1%

ICU Level of Service H

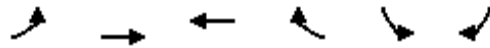
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

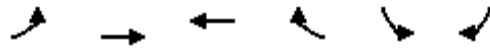
2041 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	960	1628	1193	165	187	670
Future Volume (vph)	960	1628	1193	165	187	670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.904	0.850
Flt Protected	0.950				0.982	
Satd. Flow (prot)	3433	3539	3539	1583	3208	1441
Flt Permitted	0.950				0.982	
Satd. Flow (perm)	3433	3539	3539	1583	3208	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				148	341	364
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1043	1770	1297	179	203	728
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	1043	1770	1297	179	567	364
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2041 Background
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	39.0	93.0	54.0	54.0	27.0	
Total Split (%)	32.5%	77.5%	45.0%	45.0%	22.5%	
Maximum Green (s)	33.0	87.0	48.0	48.0	22.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	42.2	96.2	50.0	50.0	16.8	120.0
Actuated g/C Ratio	0.35	0.80	0.42	0.42	0.14	1.00
v/c Ratio	0.86	0.62	0.88	0.24	0.76	0.25
Control Delay	45.8	6.5	40.5	6.3	26.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	6.5	40.5	6.3	26.1	0.4
LOS	D	A	D	A	C	A
Approach Delay		21.1	36.4		16.0	
Approach LOS		C	D		B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 24.5

Intersection LOS: C

Intersection Capacity Utilization 82.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



HCM 6th Roundabout
5: Connector Collector Roadway & Internal Collector Roadway

2041 Background
PM Peak

Intersection			
Intersection Delay, s/veh	3.8		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	136	98	169
Demand Flow Rate, veh/h	139	100	173
Vehicles Circulating, veh/h	50	84	78
Vehicles Exiting, veh/h	134	167	111
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.5	4.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	139	100	173
Cap Entry Lane, veh/h	1311	1267	1274
Entry HV Adj Factor	0.982	0.980	0.977
Flow Entry, veh/h	136	98	169
Cap Entry, veh/h	1287	1241	1245
V/C Ratio	0.106	0.079	0.136
Control Delay, s/veh	3.7	3.5	4.0
LOS	A	A	A
95th %tile Queue, veh	0	0	0

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1585	130	10	1210	55	75	0	5	30	0	70
Future Volume (vph)	100	1585	130	10	1210	55	75	0	5	30	0	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		400	400		400	200		0	200		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1583	0	1770	1583	0
Flt Permitted	0.146			0.095			0.714			0.503		
Satd. Flow (perm)	272	3539	1583	177	3539	1583	1330	1583	0	937	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			173		185			219	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		483			546			392			1305	
Travel Time (s)		6.6			7.4			7.6			25.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	1723	141	11	1315	60	82	0	5	33	0	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	1723	141	11	1315	60	82	5	0	33	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0		9.0	20.0	
Total Split (s)	21.0	71.0	71.0	12.0	62.0	62.0	12.0	25.0		12.0	25.0	
Total Split (%)	17.5%	59.2%	59.2%	10.0%	51.7%	51.7%	10.0%	20.8%		10.0%	20.8%	
Maximum Green (s)	15.0	65.0	65.0	6.0	56.0	56.0	7.0	20.0		7.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	98.0	95.6	95.6	90.0	83.3	83.3	11.3	8.9		14.4	6.5	
Actuated g/C Ratio	0.82	0.80	0.80	0.75	0.69	0.69	0.09	0.07		0.12	0.05	
v/c Ratio	0.32	0.61	0.11	0.05	0.54	0.05	0.53	0.02		0.17	0.26	
Control Delay	5.4	8.2	1.1	4.0	11.3	0.1	63.3	0.2		46.2	2.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.4	8.2	1.1	4.0	11.3	0.1	63.3	0.2		46.2	2.2	
LOS	A	A	A	A	B	A	E	A		D	A	
Approach Delay		7.6			10.8			59.7			15.5	
Approach LOS		A			B			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 10.3

Intersection LOS: B

Intersection Capacity Utilization 69.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy



Intersection			
Intersection Delay, s/veh	5.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	163	337	304
Demand Flow Rate, veh/h	166	344	310
Vehicles Circulating, veh/h	221	144	11
Vehicles Exiting, veh/h	100	243	477
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.8	4.6
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	166	344	310
Cap Entry Lane, veh/h	1101	1191	1364
Entry HV Adj Factor	0.982	0.981	0.980
Flow Entry, veh/h	163	337	304
Cap Entry, veh/h	1081	1169	1337
V/C Ratio	0.151	0.289	0.227
Control Delay, s/veh	4.7	5.8	4.6
LOS	A	A	A
95th %tile Queue, veh	1	1	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	565	475	165	305	521	225	453	105	853	656	141
Future Volume (vph)	154	565	475	165	305	521	225	453	105	853	656	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.505			0.234			0.950			0.950		
Satd. Flow (perm)	941	3539	1583	436	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			516			566			168			168
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	167	614	516	179	332	566	245	492	114	927	713	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	614	516	179	332	566	245	492	114	927	713	153
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free			Free			Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Background
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	38.0		14.0	40.0		43.0	26.0		42.0	25.0	
Total Split (%)	10.0%	31.7%		11.7%	33.3%		35.8%	21.7%		35.0%	20.8%	
Maximum Green (s)	7.0	31.5		9.0	33.5		38.0	21.0		37.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		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	
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0		-2.0	-1.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.0	3.0		3.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	44.4	35.0	120.0	47.5	36.5	120.0	14.9	22.7	120.0	37.3	43.1	120.0
Actuated g/C Ratio	0.37	0.29	1.00	0.40	0.30	1.00	0.12	0.19	1.00	0.31	0.36	1.00
v/c Ratio	0.41	0.60	0.33	0.62	0.31	0.36	0.57	0.74	0.07	0.87	0.56	0.10
Control Delay	27.6	39.7	0.5	34.2	33.4	0.6	54.6	53.2	0.1	48.7	33.0	0.1
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	27.6	39.7	0.5	34.2	33.4	0.6	54.6	53.2	0.1	48.7	33.0	0.1
LOS	C	D	A	C	C	A	D	D	A	D	C	A
Approach Delay		22.6			16.3			46.5			38.3	
Approach LOS		C			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 30.9

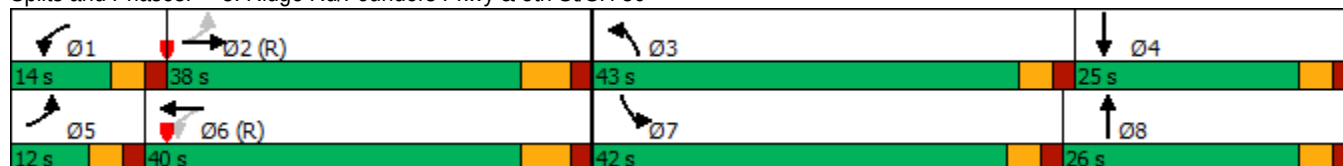
Intersection LOS: C

Intersection Capacity Utilization 75.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background - mitigated

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 				 	
Traffic Volume (vph)	6	826	250	490	2170	105	465	30	226	45	15	3
Future Volume (vph)	6	826	250	490	2170	105	465	30	226	45	15	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		75	150		0
Storage Lanes	1		0	1		0	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.964			0.993				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4902	0	1770	5050	0	3433	1863	1583	1770	3454	0
Flt Permitted	0.082			0.147			0.519					
Satd. Flow (perm)	153	4902	0	274	5050	0	1876	1863	1583	1863	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			9				227		3	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	869	272	533	2214	114	505	33	246	49	16	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1141	0	533	2328	0	505	33	246	49	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background - mitigated

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0	10.0	9.0	20.0	
Total Split (s)	15.0	57.0		21.0	63.0		19.0	25.0	21.0	17.0	23.0	
Total Split (%)	12.5%	47.5%		17.5%	52.5%		15.8%	20.8%	17.5%	14.2%	19.2%	
Maximum Green (s)	9.0	51.0		15.0	57.0		14.0	20.0	15.0	12.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	4.0	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	
Lost Time Adjust (s)	-1.0	-1.0		-2.0	-1.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		4.0	5.0		3.0	4.0	5.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	58.7	52.0		90.9	87.5		22.1	10.9	45.4	13.7	7.1	
Actuated g/C Ratio	0.49	0.43		0.76	0.73		0.18	0.09	0.38	0.11	0.06	
v/c Ratio	0.04	0.53		0.85	0.63		0.88	0.20	0.33	0.24	0.09	
Control Delay	9.0	24.0		37.8	10.6		64.3	53.9	5.8	44.8	48.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	9.0	24.0		37.8	10.6		64.3	53.9	5.8	44.8	48.1	
LOS	A	C		D	B		E	D	A	D	D	
Approach Delay		23.9			15.6			45.5			45.7	
Approach LOS		C			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 22.8

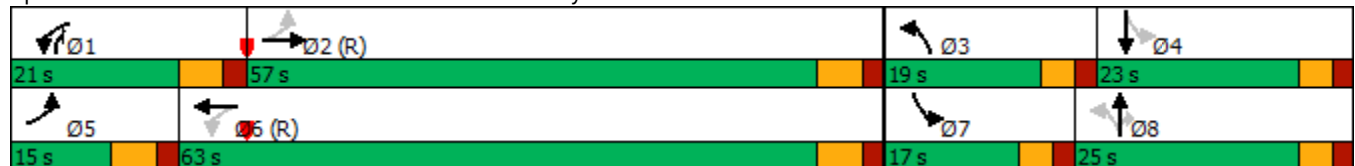
Intersection LOS: C

Intersection Capacity Utilization 79.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background - mitigated

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1937	505	246	1517	100	355	45	476	175	50	10
Future Volume (vph)	8	1937	505	246	1517	100	355	45	476	175	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		0	1		0	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.968			0.990				0.850		0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4923	0	1770	5034	0	3433	1863	1583	1770	3451	0
Flt Permitted	0.137			0.060			0.712			0.572		
Satd. Flow (perm)	255	4923	0	112	5034	0	2573	1863	1583	1065	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			17				73		11	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.98	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	9	2039	549	267	1548	109	386	49	501	190	54	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	2588	0	267	1657	0	386	49	501	190	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Background - mitigated

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0	10.0	9.0	20.0	
Total Split (s)	10.0	68.0		18.0	76.0		11.0	20.0	18.0	14.0	23.0	
Total Split (%)	8.3%	56.7%		15.0%	63.3%		9.2%	16.7%	15.0%	11.7%	19.2%	
Maximum Green (s)	4.0	62.0		12.0	70.0		6.0	15.0	12.0	9.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	4.0	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	
Lost Time Adjust (s)	-2.0	-3.0		-3.0	-3.0		-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0	4.0	3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	71.7	65.0		91.6	89.2		17.6	10.5	34.0	22.4	12.9	
Actuated g/C Ratio	0.60	0.54		0.76	0.74		0.15	0.09	0.28	0.19	0.11	
v/c Ratio	0.04	0.96		0.65	0.44		0.88	0.30	1.00	0.72	0.17	
Control Delay	6.0	35.4		37.5	7.4		67.7	55.2	78.0	59.5	40.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	6.0	35.4		37.5	7.4		67.7	55.2	78.0	59.5	40.5	
LOS	A	D		D	A		E	E	E	E	D	
Approach Delay		35.3			11.6			72.5			54.7	
Approach LOS		D			B			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 34.2

Intersection LOS: C

Intersection Capacity Utilization 97.9%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	1420	150	45	3160	140	130	25	55	75	15	385
Future Volume (vph)	265	1420	150	45	3160	140	130	25	55	75	15	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.986				0.850		0.897				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5014	0	1770	5085	1583	3433	1671	0	1770	1863	2787
Flt Permitted	0.950			0.103			0.950			0.701		
Satd. Flow (perm)	3433	5014	0	192	5085	1583	3433	1671	0	1306	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				109		60				217
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	288	1543	163	49	3224	152	141	27	60	82	16	405
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	1706	0	49	3224	152	141	87	0	82	16	405
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	14.0	74.0		15.0	75.0	75.0	12.0	20.0		11.0	19.0	19.0
Total Split (%)	11.7%	61.7%		12.5%	62.5%	62.5%	10.0%	16.7%		9.2%	15.8%	15.8%
Maximum Green (s)	9.0	68.0		10.0	69.0	69.0	7.0	15.0		6.0	14.0	14.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-1.0		-1.0	-2.0	-1.0	-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	5.0		4.0	4.0	5.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	12.3	76.4		79.0	71.5	70.5	8.0	16.4		20.2	13.2	13.2
Actuated g/C Ratio	0.10	0.64		0.66	0.60	0.59	0.07	0.14		0.17	0.11	0.11
v/c Ratio	0.82	0.53		0.22	1.06	0.16	0.62	0.31		0.33	0.08	0.81
Control Delay	72.7	13.3		4.6	52.4	0.9	66.8	21.6		42.8	47.6	37.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	72.7	13.3		4.6	52.4	0.9	66.8	21.6		42.8	47.6	37.1
LOS	E	B		A	D	A	E	C		D	D	D
Approach Delay		21.9			49.4			49.6			38.3	
Approach LOS		C			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 39.6

Intersection LOS: D

Intersection Capacity Utilization 89.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Total
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	70	1200	280	75	2710	15	530	75	50	5	65	105
Future Volume (vph)	70	1200	280	75	2710	15	530	75	50	5	65	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.972			0.999				0.850		0.908	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4943	0	1770	5080	0	3433	1863	1583	1770	3214	0
Flt Permitted	0.061			0.098			0.450			0.704		
Satd. Flow (perm)	114	4943	0	183	5080	0	1626	1863	1583	1311	3214	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			1				118		109	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	1304	304	82	2853	16	576	82	54	5	71	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	1608	0	82	2869	0	576	82	54	5	185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Total
AM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	12.0	63.0		12.0	63.0		20.0	33.0	33.0	12.0	25.0	
Total Split (%)	10.0%	52.5%		10.0%	52.5%		16.7%	27.5%	27.5%	10.0%	20.8%	
Maximum Green (s)	7.0	57.0		7.0	57.0		15.0	28.0	28.0	7.0	20.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0		3.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	79.2	71.2		79.5	71.3		30.5	27.2	27.2	16.3	9.5	
Actuated g/C Ratio	0.66	0.59		0.66	0.59		0.25	0.23	0.23	0.14	0.08	
v/c Ratio	0.40	0.54		0.35	0.95		0.86	0.19	0.12	0.02	0.52	
Control Delay	25.4	20.1		10.9	32.5		54.3	39.7	0.5	33.6	27.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	25.4	20.1		10.9	32.5		54.3	39.7	0.5	33.6	27.7	
LOS	C	C		B	C		D	D	A	C	C	
Approach Delay		20.3			31.9			48.5			27.9	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 30.4

Intersection LOS: C

Intersection Capacity Utilization 91.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy



Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	885	250	495	2330	105	465	30	230	45	15	3
Future Volume (vph)	6	885	250	495	2330	105	465	30	230	45	15	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		0	1		0	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.966			0.993				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4912	0	1770	5050	0	3433	1863	1583	1770	3454	0
Flt Permitted	0.082			0.131			0.519					
Satd. Flow (perm)	153	4912	0	244	5050	0	1876	1863	1583	1863	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		77			8				216		3	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	932	272	538	2453	114	505	33	250	49	16	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1204	0	538	2567	0	505	33	250	49	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0	10.0	9.0	20.0	
Total Split (s)	15.0	57.0		21.0	63.0		19.0	25.0	21.0	17.0	23.0	
Total Split (%)	12.5%	47.5%		17.5%	52.5%		15.8%	20.8%	17.5%	14.2%	19.2%	
Maximum Green (s)	9.0	51.0		15.0	57.0		14.0	20.0	15.0	12.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	4.0	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	
Lost Time Adjust (s)	-1.0	-1.0		-2.0	-1.0		-2.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		4.0	5.0		3.0	4.0	5.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	58.7	52.0		90.9	87.5		22.1	10.9	45.4	13.7	7.1	
Actuated g/C Ratio	0.49	0.43		0.76	0.73		0.18	0.09	0.38	0.11	0.06	
v/c Ratio	0.04	0.55		0.87	0.70		0.88	0.20	0.34	0.24	0.09	
Control Delay	9.0	24.7		42.9	11.9		64.3	53.9	6.8	44.8	48.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	9.0	24.7		42.9	11.9		64.3	53.9	6.8	44.8	48.1	
LOS	A	C		D	B		E	D	A	D	D	
Approach Delay		24.6			17.3			45.6			45.7	
Approach LOS		C			B			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 23.7

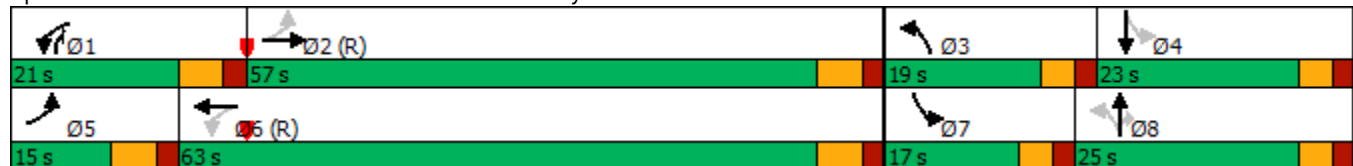
Intersection LOS: C

Intersection Capacity Utilization 82.3%

ICU Level of Service E

Analysis Period (min) 15

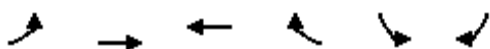
Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2041 Total
AM Peak

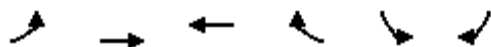


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱↱	↰↰	↱	↰↰↰	↱
Traffic Volume (vph)	450	710	1860	190	120	1070
Future Volume (vph)	450	710	1860	190	120	1070
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.878	0.850
Flt Protected	0.950				0.991	
Satd. Flow (prot)	3433	3539	3539	1583	3144	1441
Flt Permitted	0.950				0.991	
Satd. Flow (perm)	3433	3539	3539	1583	3144	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				142	240	438
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.95
Adj. Flow (vph)	489	772	1958	207	130	1126
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	489	772	1958	207	693	563
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2041 Total
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	23.0	91.0	68.0	68.0	29.0	
Total Split (%)	19.2%	75.8%	56.7%	56.7%	24.2%	
Maximum Green (s)	17.0	85.0	62.0	62.0	24.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	19.9	89.2	65.3	65.3	23.8	120.0
Actuated g/C Ratio	0.17	0.74	0.54	0.54	0.20	1.00
v/c Ratio	0.86	0.29	1.02	0.22	1.11dr	0.39
Control Delay	64.7	5.6	52.8	5.5	40.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	5.6	52.8	5.5	40.6	0.8
LOS	E	A	D	A	D	A
Approach Delay		28.5	48.3		22.8	
Approach LOS		C	D		C	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 36.1
Intersection LOS: D
Intersection Capacity Utilization 89.0%
ICU Level of Service E
Analysis Period (min) 15
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



HCM 6th Roundabout
5: Internal Collector Roadway & Connector Collector Roadway

2041 Total
AM Peak

Intersection			
Intersection Delay, s/veh	4.8		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	129	362	140
Demand Flow Rate, veh/h	132	370	143
Vehicles Circulating, veh/h	56	46	231
Vehicles Exiting, veh/h	318	142	185
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	5.3	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	132	370	143
Cap Entry Lane, veh/h	1303	1317	1090
Entry HV Adj Factor	0.977	0.979	0.978
Flow Entry, veh/h	129	362	140
Cap Entry, veh/h	1274	1289	1067
V/C Ratio	0.101	0.281	0.131
Control Delay, s/veh	3.7	5.3	4.5
LOS	A	A	A
95th %tile Queue, veh	0	1	0

Lanes, Volumes, Timings

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	675	40	5	1700	55	120	3	10	83	1	270
Future Volume (vph)	118	675	40	5	1700	55	120	3	10	83	1	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		400	400		400	200		0	200		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.882			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1643	0	1770	1585	0
Flt Permitted	0.060			0.354			0.267			0.591		
Satd. Flow (perm)	112	3539	1583	659	3539	1583	497	1643	0	1101	1585	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			118		11			129	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		483			546			392			622	
Travel Time (s)		6.6			7.4			7.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	128	734	43	5	1789	60	130	3	11	90	1	293
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	734	43	5	1789	60	130	14	0	90	294	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		

Synchro 10 Report

Lanes, Volumes, Timings

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0		9.0	20.0	
Total Split (s)	13.0	68.0	68.0	12.0	67.0	67.0	15.0	28.0		12.0	25.0	
Total Split (%)	10.8%	56.7%	56.7%	10.0%	55.8%	55.8%	12.5%	23.3%		10.0%	20.8%	
Maximum Green (s)	7.0	62.0	62.0	6.0	61.0	61.0	10.0	23.0		7.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	77.2	75.6	75.6	71.4	64.7	64.7	23.4	17.3		29.0	18.2	
Actuated g/C Ratio	0.64	0.63	0.63	0.60	0.54	0.54	0.20	0.14		0.24	0.15	
v/c Ratio	0.69	0.33	0.04	0.01	0.94	0.07	0.62	0.06		0.24	0.84	
Control Delay	40.2	11.9	0.1	8.6	37.2	0.1	53.2	22.8		34.0	48.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.2	11.9	0.1	8.6	37.2	0.1	53.2	22.8		34.0	48.3	
LOS	D	B	A	A	D	A	D	C		C	D	
Approach Delay		15.4			36.0			50.3			44.9	
Approach LOS		B			D			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 32.0

Intersection LOS: C

Intersection Capacity Utilization 91.9%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy



HCM 6th Roundabout
7: Castle Oaks Drive & Internal Community Collector

2041 Total
AM Peak

Intersection			
Intersection Delay, s/veh	5.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	71	138	440
Demand Flow Rate, veh/h	72	140	449
Vehicles Circulating, veh/h	310	60	24
Vehicles Exiting, veh/h	163	322	176
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	3.7	5.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	72	140	449
Cap Entry Lane, veh/h	1006	1298	1346
Entry HV Adj Factor	0.986	0.984	0.980
Flow Entry, veh/h	71	138	440
Cap Entry, veh/h	992	1277	1319
V/C Ratio	0.072	0.108	0.333
Control Delay, s/veh	4.3	3.7	5.8
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	210	120	115	475	865	320	535	75	300	170	135
Future Volume (vph)	70	210	120	115	475	865	320	535	75	300	170	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.445			0.590			0.950			0.950		
Satd. Flow (perm)	829	3539	1583	1099	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			708			141			147
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	228	130	125	500	940	348	582	82	326	185	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	228	130	125	500	940	348	582	82	326	185	147
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free			Free			Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Total
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	57.0		12.0	57.0		21.0	31.0		20.0	30.0	
Total Split (%)	10.0%	47.5%		10.0%	47.5%		17.5%	25.8%		16.7%	25.0%	
Maximum Green (s)	8.0	50.5		8.0	50.5		17.0	27.0		16.0	26.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	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		4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	63.8	54.0	120.0	65.9	56.7	120.0	15.9	24.4	120.0	15.0	23.6	120.0
Actuated g/C Ratio	0.53	0.45	1.00	0.55	0.47	1.00	0.13	0.20	1.00	0.12	0.20	1.00
v/c Ratio	0.15	0.14	0.08	0.19	0.30	0.59	0.77	0.81	0.05	0.76	0.27	0.09
Control Delay	13.5	20.6	0.1	13.7	21.5	1.6	62.0	54.8	0.1	62.8	41.3	0.1
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	13.5	20.6	0.1	13.7	21.5	1.6	62.0	54.8	0.1	62.8	41.3	0.1
LOS	B	C	A	B	C	A	E	D	A	E	D	A
Approach Delay		13.2			9.0			52.9			42.8	
Approach LOS		B			A			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 27.6

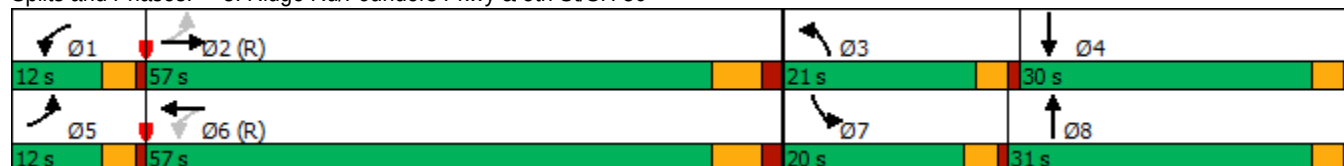
Intersection LOS: C

Intersection Capacity Utilization 55.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



HCM 6th TWSC
9: Connector Collector Roadway & Commercial Access

2041 Total
AM Peak

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	2	127	49	3	282
Future Vol, veh/h	70	2	127	49	3	282
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	190	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	2	138	53	3	307
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	451	138	0	0	191	0
Stage 1	138	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	566	910	-	-	1383	-
Stage 1	889	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	565	910	-	-	1383	-
Mov Cap-2 Maneuver	565	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.3	0	0.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 565 910 1383	-	-		
HCM Lane V/C Ratio	-	- 0.135 0.002 0.002	-	-		
HCM Control Delay (s)	-	- 12.4 9 7.6	-	-		
HCM Lane LOS	-	- B A A	-	-		
HCM 95th %tile Q(veh)	-	- 0.5 0 0	-	-		

HCM 6th TWSC
10: Internal Collector Roadway & Site Access #10

2041 Total
AM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	320	0	5	114
Future Vol, veh/h	0	13	320	0	5	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	348	0	5	124
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	482	348	0	0	348	0
Stage 1	348	-	-	-	-	-
Stage 2	134	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	543	695	-	-	1211	-
Stage 1	715	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	541	695	-	-	1211	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.3	0		0.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	695	1211	-	
HCM Lane V/C Ratio	-	-	0.02	0.004	-	
HCM Control Delay (s)	-	-	10.3	8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile O(veh)	-	-	0.1	0	-	

HCM 6th TWSC
11: Internal Collector Roadway & Site Access #11

2041 Total
AM Peak

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	1	2	23	1	7	15	60	304	0	5	107	2
Future Vol, veh/h	1	2	23	1	7	15	60	304	0	5	107	2
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	2	25	1	8	16	65	330	0	5	116	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	599	587	117	601	588	330	118	0	0	330	0	0
Stage 1	127	127	-	460	460	-	-	-	-	-	-	-
Stage 2	472	460	-	141	128	-	-	-	-	-	-	-
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	413	422	935	412	421	712	1470	-	-	1229	-	-
Stage 1	877	791	-	581	566	-	-	-	-	-	-	-
Stage 2	573	566	-	862	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	383	402	935	385	401	712	1470	-	-	1229	-	-
Mov Cap-2 Maneuver	383	402	-	385	401	-	-	-	-	-	-	-
Stage 1	838	788	-	555	541	-	-	-	-	-	-	-
Stage 2	528	541	-	833	787	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.6		11.7			1.2			0.3			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1470	-	-	808	559	1229	-	-				
HCM Lane V/C Ratio	0.044	-	-	0.035	0.045	0.004	-	-				
HCM Control Delay (s)	7.6	-	-	9.6	11.7	7.9	-	-				
HCM Lane LOS	A	-	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-				

HCM 6th TWSC
12: Internal Collector Roadway & Site Access #12

2041 Total
AM Peak

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	48	316	0	16	115
Future Vol, veh/h	1	48	316	0	16	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	52	343	0	17	125
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	502	343	0	0	343	0
Stage 1	343	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	529	700	-	-	1216	-
Stage 1	719	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	522	700	-	-	1216	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	858	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.6	0		1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		695	1216	
HCM Lane V/C Ratio	-	-		0.077	0.014	
HCM Control Delay (s)	-	-		10.6	8	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0.2	0	

HCM 6th TWSC
13: Internal Collector Roadway & Site Access #13

2041 Total
AM Peak

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	95	251	1	2	65
Future Vol, veh/h	21	95	251	1	2	65
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	103	273	1	2	71
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	274	0	-	0	423	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	149	-
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	1289	-	-	-	588	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1289	-	-	-	577	765
Mov Cap-2 Maneuver	-	-	-	-	577	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	879	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		10.3		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1289	-	-	-	758	
HCM Lane V/C Ratio	0.018	-	-	-	0.096	
HCM Control Delay (s)	7.8	-	-	-	10.3	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile O(veh)	0.1	-	-	-	0.3	

HCM 6th TWSC
14: Site Access #14 & Internal Collector Roadway

2041 Total
AM Peak

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	77	20	1	193	59	1
Future Vol, veh/h	77	20	1	193	59	1
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	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	22	1	210	64	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	106	0	296	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	212	-
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	-	-	1485	-	695	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	694	975
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	822	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		10.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	697	-	-	1485	-	
HCM Lane V/C Ratio	0.094	-	-	0.001	-	
HCM Control Delay (s)	10.7	-	-	7.4	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile O(veh)	0.3	-	-	0	-	

HCM 6th TWSC
15: Site Access #15 & Internal Collector Roadway

2041 Total
AM Peak

Intersection												
Int Delay, s/veh	9.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	62	11	1	146	0	32	0	2	1	0	16
Future Vol, veh/h	5	62	11	1	146	0	32	0	2	1	0	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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	67	12	1	159	0	35	0	2	1	0	17
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	162	83	9	121	90	1	17	0	0	2	0	0
Stage 1	11	11	-	71	71	-	-	-	-	-	-	-
Stage 2	151	72	-	50	19	-	-	-	-	-	-	-
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	803	807	1073	854	800	1084	1600	-	-	1620	-	-
Stage 1	1010	886	-	939	836	-	-	-	-	-	-	-
Stage 2	851	835	-	963	880	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	666	788	1073	775	782	1084	1600	-	-	1620	-	-
Mov Cap-2 Maneuver	666	788	-	775	782	-	-	-	-	-	-	-
Stage 1	988	885	-	918	818	-	-	-	-	-	-	-
Stage 2	671	817	-	879	879	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10		10.8			6.9			0.4			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1600	-	-	809	782	1620	-	-				
HCM Lane V/C Ratio	0.022	-	-	0.105	0.204	0.001	-	-				
HCM Control Delay (s)	7.3	0	-	10	10.8	7.2	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile O(veh)	0.1	-	-	0.3	0.8	0	-	-				

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	3385	230	45	2485	160	185	45	90	145	40	460
Future Volume (vph)	435	3385	230	45	2485	160	185	45	90	145	40	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	290		0	325		0	75		0	130		110
Storage Lanes	2		0	1		1	2		0	1		2
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	0.97	0.91	0.91	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	0.88
Frt		0.990				0.850		0.900				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5034	0	1770	5085	1583	3433	1676	0	1770	1863	2787
Flt Permitted	0.950			0.061			0.950			0.392		
Satd. Flow (perm)	3433	5034	0	114	5085	1583	3433	1676	0	730	1863	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				155		69				290
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		533			1095			278			392	
Travel Time (s)		10.4			21.3			6.3			8.9	
Peak Hour Factor	0.92	0.98	0.92	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	473	3454	250	49	2536	174	201	49	98	158	43	484
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	3704	0	49	2536	174	201	147	0	158	43	484
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		20			20			24			20	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases				6		6				4		4

Synchro 10 Report

Lanes, Volumes, Timings
1: Allen Way & Founder Pkwy

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	11.0	21.0		9.5	21.0	21.0	9.0	21.0		9.0	21.0	21.0
Total Split (s)	22.0	81.0		10.0	69.0	69.0	12.0	18.0		11.0	17.0	17.0
Total Split (%)	18.3%	67.5%		8.3%	57.5%	57.5%	10.0%	15.0%		9.2%	14.2%	14.2%
Maximum Green (s)	17.0	75.0		5.0	63.0	63.0	7.0	13.0		6.0	12.0	12.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	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
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-2.0	-1.0	-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0		3.0	4.0	5.0	3.0	3.0		3.0	3.0	3.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effect Green (s)	19.0	80.8		73.9	65.8	64.8	9.0	14.2		21.2	13.2	13.2
Actuated g/C Ratio	0.16	0.67		0.62	0.55	0.54	0.08	0.12		0.18	0.11	0.11
v/c Ratio	0.87	1.09		0.29	0.91	0.19	0.78	0.57		0.80	0.21	0.86
Control Delay	66.7	67.9		10.8	23.8	1.6	75.6	35.6		70.9	50.8	36.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	66.7	67.9		10.8	23.8	1.6	75.6	35.6		70.9	50.8	36.4
LOS	E	E		B	C	A	E	D		E	D	D
Approach Delay		67.8			22.2			58.7			45.3	
Approach LOS		E			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 119 (99%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 49.7

Intersection LOS: D

Intersection Capacity Utilization 103.1%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 1: Allen Way & Founder Pkwy



Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Total
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	205	2800	615	145	2075	25	540	145	210	40	120	75
Future Volume (vph)	205	2800	615	145	2075	25	540	145	210	40	120	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	460		0	200		0	285		0	230		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.972			0.998				0.850		0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4943	0	1770	5075	0	3433	1863	1583	1770	3334	0
Flt Permitted	0.054			0.056			0.364			0.657		
Satd. Flow (perm)	101	4943	0	104	5075	0	1315	1863	1583	1224	3334	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			3				118		82	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1095			488			556			397	
Travel Time (s)		21.3			9.5			10.8			7.7	
Peak Hour Factor	0.92	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	2857	668	158	2255	27	587	158	228	43	130	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	3525	0	158	2282	0	587	158	228	43	212	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			40			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		

Synchro 10 Report

Lanes, Volumes, Timings
2: Front St & Founder Pkwy

2041 Total
PM Peak

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	5	2		1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		9.0	21.0	21.0	10.0	21.0	
Total Split (s)	13.0	29.0		11.0	27.0		20.0	21.0	21.0	9.0	10.0	
Total Split (%)	10.8%	65.8%		9.2%	64.2%		16.7%	17.5%	17.5%	7.5%	8.3%	
Maximum Green (s)	8.0	73.0		6.0	71.0		15.0	16.0	16.0	4.0	5.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		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	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	86.0	76.0		82.0	73.0		27.0	19.8	19.8	13.0	7.0	
Actuated g/C Ratio	0.72	0.63		0.68	0.61		0.22	0.16	0.16	0.11	0.06	
v/c Ratio	1.06	1.11		0.87	0.74		0.99	0.51	0.64	0.27	0.78	
Control Delay	67.7	73.2		66.8	18.6		78.2	53.4	31.7	42.4	54.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.7	73.2		66.8	18.6		78.2	53.4	31.7	42.4	54.2	
LOS	E	E		E	B		E	D	C	D	D	
Approach Delay		72.9			21.7			63.3			52.2	
Approach LOS		E			C			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:SETL and 6:NWTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 54.1

Intersection LOS: D

Intersection Capacity Utilization 110.3%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 2: Front St & Founder Pkwy

															
11 s	79 s							20 s				10 s			
															
13 s	77 s							9 s				21 s			

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	2130	505	255	1640	100	355	45	485	175	50	10
Future Volume (vph)	8	2130	505	255	1640	100	355	45	485	175	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		0	500		0	300		0	150		0
Storage Lanes	1		0	1		0	2		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	0.95	0.95
Frt		0.970			0.991				0.850		0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4933	0	1770	5040	0	3433	1863	1583	1770	3451	0
Flt Permitted	0.113			0.060			0.712			0.572		
Satd. Flow (perm)	210	4933	0	112	5040	0	2573	1863	1583	1065	3451	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			15				73		11	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		721			782			419			497	
Travel Time (s)		9.8			10.7			8.2			9.7	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	9	2242	549	277	1726	109	386	49	511	190	54	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	2791	0	277	1835	0	386	49	511	190	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			30			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases	2			6			8		8	4		

Lanes, Volumes, Timings
3: Woodlands Blvd & Founders Pkwy

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	20.0		10.0	20.0		9.0	20.0	10.0	9.0	20.0	
Total Split (s)	10.0	68.0		18.0	76.0		11.0	20.0	18.0	14.0	23.0	
Total Split (%)	8.3%	56.7%		15.0%	63.3%		9.2%	16.7%	15.0%	11.7%	19.2%	
Maximum Green (s)	4.0	62.0		12.0	70.0		6.0	15.0	12.0	9.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	4.0	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	
Lost Time Adjust (s)	-2.0	-3.0		-3.0	-3.0		-2.0	-2.0	-3.0	-2.0	-2.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Act Effect Green (s)	71.7	65.0		91.6	89.2		17.6	10.5	35.0	22.4	12.9	
Actuated g/C Ratio	0.60	0.54		0.76	0.74		0.15	0.09	0.29	0.19	0.11	
v/c Ratio	0.04	1.03		0.68	0.49		0.88	0.30	1.00	0.72	0.17	
Control Delay	6.1	53.0		39.1	7.9		67.7	55.2	75.7	59.5	40.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	6.1	53.0		39.1	7.9		67.7	55.2	75.7	59.5	40.5	
LOS	A	D		D	A		E	E	E	E	D	
Approach Delay		52.9			12.0			71.4			54.7	
Approach LOS		D			B			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 37 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 41.7

Intersection LOS: D

Intersection Capacity Utilization 102.1%

ICU Level of Service G

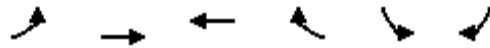
Analysis Period (min) 15

Splits and Phases: 3: Woodlands Blvd & Founders Pkwy



Lanes, Volumes, Timings
4: Founders Pkwy & Crowfoot Valley Rd

2041 Total
PM Peak

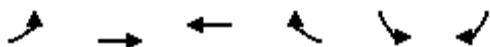


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	960	1830	1325	175	200	670
Future Volume (vph)	960	1830	1325	175	200	670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	485			0	150	0
Storage Lanes	2			1	2	1
Taper Length (ft)	100				100	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.91
Frt				0.850	0.907	0.850
Flt Protected	0.950				0.981	
Satd. Flow (prot)	3433	3539	3539	1583	3215	1441
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	3433	3539	3539	1583	3215	1441
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				146	308	352
Link Speed (mph)		50	50		35	
Link Distance (ft)		641	617		595	
Travel Time (s)		8.7	8.4		11.6	
Peak Hour Factor	0.92	0.92	0.95	0.92	0.92	0.95
Adj. Flow (vph)	1043	1989	1395	190	217	705
Shared Lane Traffic (%)						50%
Lane Group Flow (vph)	1043	1989	1395	190	570	352
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	5	2	6		4	
Permitted Phases				6		Free

Lanes, Volumes, Timings

4: Founders Pkwy & Crowfoot Valley Rd

2041 Total
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	5	2	6	6	4	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.5	10.0	10.0	10.0	
Total Split (s)	39.0	93.0	54.0	54.0	27.0	
Total Split (%)	32.5%	77.5%	45.0%	45.0%	22.5%	
Maximum Green (s)	33.0	87.0	48.0	48.0	22.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	41.1	95.1	50.0	50.0	17.9	120.0
Actuated g/C Ratio	0.34	0.79	0.42	0.42	0.15	1.00
v/c Ratio	0.89	0.71	0.95	0.26	0.77	0.24
Control Delay	48.4	8.4	47.9	7.2	29.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	8.4	47.9	7.2	29.1	0.4
LOS	D	A	D	A	C	A
Approach Delay		22.1	43.0		18.1	
Approach LOS		C	D		B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 27.4
Intersection LOS: C
Intersection Capacity Utilization 86.8%
ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Founders Pkwy & Crowfoot Valley Rd



HCM 6th Roundabout
5: Internal Collector Roadway & Connector Collector Roadway

2041 Total
PM Peak

Intersection			
Intersection Delay, s/veh	5.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	359	243	198
Demand Flow Rate, veh/h	366	248	202
Vehicles Circulating, veh/h	136	91	161
Vehicles Exiting, veh/h	227	411	178
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.9	4.6	4.6
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	366	248	202
Cap Entry Lane, veh/h	1201	1258	1171
Entry HV Adj Factor	0.981	0.981	0.982
Flow Entry, veh/h	359	243	198
Cap Entry, veh/h	1178	1234	1150
V/C Ratio	0.305	0.197	0.173
Control Delay, s/veh	5.9	4.6	4.6
LOS	A	A	A
95th %tile Queue, veh	1	1	1

Lanes, Volumes, Timings

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	1570	130	10	1205	126	75	7	5	100	10	217
Future Volume (vph)	330	1570	130	10	1205	126	75	7	5	100	10	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		400	400		400	200		0	200		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.942			0.857	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1755	0	1770	1596	0
Flt Permitted	0.091			0.109			0.548			0.484		
Satd. Flow (perm)	170	3539	1583	203	3539	1583	1021	1755	0	902	1596	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			173		5			216	
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		483			546			392			622	
Travel Time (s)		6.6			7.4			7.6			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	1707	141	11	1268	137	82	8	5	109	11	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	359	1707	141	11	1268	137	82	13	0	109	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		

Synchro 10 Report

Lanes, Volumes, Timings

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2	2	1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	20.0	20.0	10.0	20.0	20.0	20.0	20.0		9.0	20.0	
Total Split (s)	21.0	71.0	71.0	12.0	62.0	62.0	12.0	25.0		12.0	25.0	
Total Split (%)	17.5%	59.2%	59.2%	10.0%	51.7%	51.7%	10.0%	20.8%		10.0%	20.8%	
Maximum Green (s)	15.0	65.0	65.0	6.0	56.0	56.0	7.0	20.0		7.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	90.8	87.3	87.3	66.7	60.0	60.0	14.6	10.7		19.6	11.6	
Actuated g/C Ratio	0.76	0.73	0.73	0.56	0.50	0.50	0.12	0.09		0.16	0.10	
v/c Ratio	0.76	0.66	0.12	0.06	0.72	0.16	0.47	0.08		0.45	0.71	
Control Delay	38.3	12.8	1.9	8.1	27.0	1.5	52.6	36.0		47.3	21.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.3	12.8	1.9	8.1	27.0	1.5	52.6	36.0		47.3	21.1	
LOS	D	B	A	A	C	A	D	D		D	C	
Approach Delay		16.2			24.4			50.4			29.1	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 21.0

Intersection LOS: C

Intersection Capacity Utilization 83.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy



HCM 6th Roundabout
7: Castle Oaks Drive & Internal Community Collector

2041 Total
PM Peak

Intersection			
Intersection Delay, s/veh	5.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	179	341	318
Demand Flow Rate, veh/h	183	348	324
Vehicles Circulating, veh/h	221	155	15
Vehicles Exiting, veh/h	118	249	488
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.9	4.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	183	348	324
Cap Entry Lane, veh/h	1101	1178	1359
Entry HV Adj Factor	0.978	0.981	0.980
Flow Entry, veh/h	179	341	318
Cap Entry, veh/h	1077	1156	1332
V/C Ratio	0.166	0.295	0.238
Control Delay, s/veh	4.8	5.9	4.7
LOS	A	A	A
95th %tile Queue, veh	1	1	1

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	565	475	165	305	540	225	475	105	865	675	160
Future Volume (vph)	175	565	475	165	305	540	225	475	105	865	675	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		425	250		0	250		0	600		500
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.513			0.226			0.950			0.950		
Satd. Flow (perm)	956	3539	1583	421	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			516			587			168			174
Link Speed (mph)		35			50			35			50	
Link Distance (ft)		450			848			659			865	
Travel Time (s)		8.8			11.6			12.8			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	614	516	179	321	587	245	516	114	940	734	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	190	614	516	179	321	587	245	516	114	940	734	174
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		18			18			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)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free	6		Free			Free			Free

Synchro 10 Report

Lanes, Volumes, Timings
8: Ridge Rd/Founders Pkwy & 5th St/SH 86

2041 Total
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	20.0		9.0	20.0		9.0	20.0		9.0	20.0	
Total Split (s)	12.0	38.0		14.0	40.0		43.0	26.0		42.0	25.0	
Total Split (%)	10.0%	31.7%		11.7%	33.3%		35.8%	21.7%		35.0%	20.8%	
Maximum Green (s)	7.0	31.5		9.0	33.5		38.0	21.0		37.0	20.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		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	
Lost Time Adjust (s)	-1.0	-2.0		-1.0	-2.0		-1.0	-2.0		-2.0	-1.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5		4.0	3.0		3.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effect Green (s)	43.4	34.1	120.0	46.5	35.7	120.0	14.9	23.5	120.0	37.6	44.1	120.0
Actuated g/C Ratio	0.36	0.28	1.00	0.39	0.30	1.00	0.12	0.20	1.00	0.31	0.37	1.00
v/c Ratio	0.47	0.61	0.33	0.64	0.31	0.37	0.57	0.75	0.07	0.88	0.56	0.11
Control Delay	29.6	40.5	0.5	35.8	33.6	0.7	54.6	53.2	0.1	49.1	32.7	0.1
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	29.6	40.5	0.5	35.8	33.6	0.7	54.6	53.2	0.1	49.1	32.7	0.1
LOS	C	D	A	D	C	A	D	D	A	D	C	A
Approach Delay	23.3			16.2			46.7			38.0		
Approach LOS	C			B			D			D		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 31.1

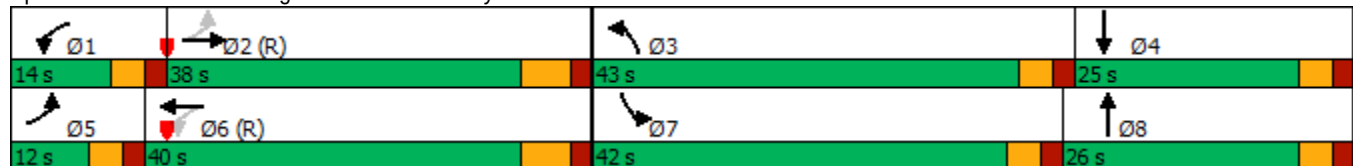
Intersection LOS: C

Intersection Capacity Utilization 76.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Ridge Rd/Founders Pkwy & 5th St/SH 86



HCM 6th TWSC
9: Connector Collector Roadway & Commercial Access

2041 Total
PM Peak

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	11	319	144	7	198
Future Vol, veh/h	129	11	319	144	7	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	190	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	12	347	157	8	215
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	578	347	0	0	504	0
Stage 1	347	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	478	696	-	-	1061	-
Stage 1	716	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	474	696	-	-	1061	-
Mov Cap-2 Maneuver	474	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.4	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	474	696	1061	-
HCM Lane V/C Ratio	-	-	0.296	0.017	0.007	-
HCM Control Delay (s)	-	-	15.8	10.3	8.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile O(veh)	-	-	1.2	0.1	0	-

HCM 6th TWSC
10: Internal Collector Roadway & Site Access #10

2041 Total
PM Peak

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	214	0	15	355
Future Vol, veh/h	0	9	214	0	15	355
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	233	0	16	386
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	651	233	0	0	233	0
Stage 1	233	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	433	806	-	-	1335	-
Stage 1	806	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	427	806	-	-	1335	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.5	0		0.3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	806		1335	-	
HCM Lane V/C Ratio	-	0.012		0.012	-	
HCM Control Delay (s)	-	9.5		7.7	0	
HCM Lane LOS	-	A		A	A	
HCM 95th %tile Q(veh)	-	0		0	-	

HCM 6th TWSC
11: Internal Collector Roadway & Site Access #11

2041 Total
PM Peak

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	9	78	0	4	10	47	197	1	15	330	10
Future Vol, veh/h	7	9	78	0	4	10	47	197	1	15	330	10
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	10	85	0	4	11	51	214	1	16	359	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	721	714	365	761	719	215	370	0	0	215	0	0
Stage 1	397	397	-	317	317	-	-	-	-	-	-	-
Stage 2	324	317	-	444	402	-	-	-	-	-	-	-
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	343	357	680	322	354	825	1189	-	-	1355	-	-
Stage 1	629	603	-	694	654	-	-	-	-	-	-	-
Stage 2	688	654	-	593	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	321	338	680	264	335	825	1189	-	-	1355	-	-
Mov Cap-2 Maneuver	321	338	-	264	335	-	-	-	-	-	-	-
Stage 1	602	596	-	664	626	-	-	-	-	-	-	-
Stage 2	645	626	-	505	593	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.6		11.4		1.6		0.3					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1189	-	-	576	582	1355	-	-				
HCM Lane V/C Ratio	0.043	-	-	0.177	0.026	0.012	-	-				
HCM Control Delay (s)	8.2	-	-	12.6	11.4	7.7	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0	-	-				

HCM 6th TWSC
12: Internal Collector Roadway & Site Access #12

2041 Total
PM Peak

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	32	213	1	54	354
Future Vol, veh/h	1	32	213	1	54	354
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	35	232	1	59	385
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	736	233	0	0	233	0
Stage 1	233	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	386	806	-	-	1335	-
Stage 1	806	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	369	806	-	-	1335	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.9	0		1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	778	1335	-	
HCM Lane V/C Ratio	-	-	0.046	0.044	-	
HCM Control Delay (s)	-	-	9.9	7.8	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

HCM 6th TWSC
13: Internal Collector Roadway & Site Access #13

2041 Total
PM Peak

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	73	282	171	2	2	43
Future Vol, veh/h	73	282	171	2	2	43
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	307	186	2	2	47
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	188	0	-	0	652	187
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	465	-
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	1386	-	-	-	433	855
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1386	-	-	-	408	855
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	632	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		9.7		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1386	-	-	-	815	
HCM Lane V/C Ratio	0.057	-	-	-	0.06	
HCM Control Delay (s)	7.8	-	-	-	9.7	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	

HCM 6th TWSC
14: Site Access #14 & Internal Collector Roadway

2041 Total
PM Peak

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	217	67	1	134	39	1
Future Vol, veh/h	217	67	1	134	39	1
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	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	236	73	1	146	42	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	384	236
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	148	-
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	-	-	1252	-	619	803
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	618	803
Mov Cap-2 Maneuver	-	-	-	-	618	-
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	879	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		11.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	622	-	-	1252	-	
HCM Lane V/C Ratio	0.07	-	-	0.001	-	
HCM Control Delay (s)	11.2	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

HCM 6th TWSC
15: Site Access #15 & Internal Collector Roadway

2041 Total
PM Peak

Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	164	36	3	103	1	11	0	1	0	0	11
Future Vol, veh/h	18	164	36	3	103	1	11	0	1	0	0	11
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	178	39	3	112	1	12	0	1	0	0	12
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	87	31	6	140	37	1	12	0	0	1	0	0
Stage 1	6	6	-	25	25	-	-	-	-	-	-	-
Stage 2	81	25	-	115	12	-	-	-	-	-	-	-
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	899	862	1077	830	855	1084	1607	-	-	1622	-	-
Stage 1	1016	891	-	993	874	-	-	-	-	-	-	-
Stage 2	927	874	-	890	886	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	803	856	1077	668	849	1084	1607	-	-	1622	-	-
Mov Cap-2 Maneuver	803	856	-	668	849	-	-	-	-	-	-	-
Stage 1	1009	891	-	986	868	-	-	-	-	-	-	-
Stage 2	801	868	-	686	886	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	10.6			9.9			6.7			0		
HCM LOS	B			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1607	-	-	881	844	1622	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.269	0.138	-	-	-				
HCM Control Delay (s)	7.3	0	-	10.6	9.9	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	1.1	0.5	0	-	-				

Queues

2025 Total

1: Allen Way & Founder Pkwy

AM Peak



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	288	1434	41	2622	136	125	76	71	15	353
v/c Ratio	0.60	0.44	0.14	0.92	0.15	0.27	0.33	0.30	0.09	0.71
Control Delay	53.8	11.2	5.5	26.4	1.7	41.4	24.0	43.3	48.6	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	11.2	5.5	26.4	1.7	41.4	24.0	43.3	48.6	21.3
Queue Length 50th (ft)	108	183	6	710	4	42	18	47	11	34
Queue Length 95th (ft)	154	263	m9	#910	m6	65	63	84	31	83
Internal Link Dist (ft)		453		1015			198		312	
Turn Bay Length (ft)	300		330		200			125		
Base Capacity (vph)	481	3285	298	2839	931	459	375	235	372	775
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	0.60	0.44	0.14	0.92	0.15	0.27	0.20	0.30	0.04	0.46

Intersection Summary

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2025 Total

2: Front St & Founder Pkwy

AM Peak

									
Lane Group	SEL	SET	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	70	1287	79	2216	451	54	43	5	135
v/c Ratio	0.38	0.42	0.25	0.71	0.78	0.14	0.08	0.03	0.44
Control Delay	25.7	10.5	7.6	18.1	52.0	41.9	2.1	36.2	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	10.5	7.6	18.1	52.0	41.9	2.1	36.2	24.1
Queue Length 50th (ft)	21	127	16	415	163	34	0	3	16
Queue Length 95th (ft)	76	150	34	530	210	77	9	14	48
Internal Link Dist (ft)		1015		408		476			317
Turn Bay Length (ft)	460		200		285			210	
Base Capacity (vph)	191	3073	315	3141	581	420	536	211	632
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	0.37	0.42	0.25	0.71	0.78	0.13	0.08	0.02	0.21
Intersection Summary									

Queues

2025 Total

3: Woodlands Blvd & Founders Pkwy

AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	852	87	402	2185	103	141	29	178	43	17
v/c Ratio	0.04	0.44	0.10	0.67	0.83	0.09	0.58	0.20	0.11	0.22	0.08
Control Delay	6.3	17.9	1.8	13.0	16.2	1.6	54.6	54.9	0.1	45.5	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	17.9	1.8	13.0	16.2	1.6	54.6	54.9	0.1	45.5	49.2
Queue Length 50th (ft)	1	211	0	85	525	0	98	22	0	32	5
Queue Length 95th (ft)	6	264	17	192	#1066	20	157	52	0	59	18
Internal Link Dist (ft)		641			702			339			417
Turn Bay Length (ft)	450			500		400	220			120	
Base Capacity (vph)	185	1917	907	598	2634	1193	250	326	1583	218	552
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.44	0.10	0.67	0.83	0.09	0.56	0.09	0.11	0.20	0.03

Intersection Summary

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

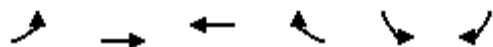
Queue shown is maximum after two cycles.

Queues

2025 Total

4: Founders Pkwy & Crowfoot Valley Rd

AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	386	693	1734	150	586	489
v/c Ratio	0.70	0.26	0.84	0.16	1.01dr	0.34
Control Delay	54.9	5.1	27.0	5.9	33.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	5.1	27.0	5.9	33.9	0.6
Queue Length 50th (ft)	146	72	554	15	114	0
Queue Length 95th (ft)	195	122	#865	56	168	0
Internal Link Dist (ft)		561	537		515	
Turn Bay Length (ft)	485				150	
Base Capacity (vph)	629	2683	2059	939	889	1441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.26	0.84	0.16	0.66	0.34

Intersection Summary

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

Queue shown is maximum after two cycles.

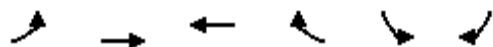
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues

2025 Total

6: Founder Pkwy & Connector Collector Roadway

AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	107	326	1628	49	74	261
v/c Ratio	0.40	0.11	0.63	0.04	0.49	0.16
Control Delay	6.6	2.3	10.6	2.2	62.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	2.3	10.6	2.2	62.5	0.2
Queue Length 50th (ft)	11	21	304	0	56	0
Queue Length 95th (ft)	25	36	476	14	103	0
Internal Link Dist (ft)		403	466		1225	
Turn Bay Length (ft)						
Base Capacity (vph)	271	3002	2594	1173	368	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.11	0.63	0.04	0.20	0.16
Intersection Summary						

Queues

2025 Total

8: Ridge Rd/Founders Pkwy & 5th St/SH 86

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	255	196	98	462	702	408	449	60	270	189	162
v/c Ratio	0.29	0.36	0.12	0.21	0.66	0.44	0.77	0.84	0.04	0.87	0.40	0.10
Control Delay	21.3	30.4	0.2	20.0	37.7	0.9	33.9	54.7	0.0	54.5	39.0	0.1
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	21.3	30.4	0.2	20.0	37.7	0.9	33.9	54.7	0.0	54.5	39.0	0.1
Queue Length 50th (ft)	37	147	0	41	303	0	217	324	0	137	121	0
Queue Length 95th (ft)	74	229	0	80	444	0	285	429	0	#265	180	0
Internal Link Dist (ft)		370			768			579			785	
Turn Bay Length (ft)	375		425	500			230			600		600
Base Capacity (vph)	309	702	1583	473	705	1583	529	621	1583	313	558	1583
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	0.29	0.36	0.12	0.21	0.66	0.44	0.77	0.72	0.04	0.86	0.34	0.10

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2025 Total

1: Allen Way & Founder Pkwy

PM Peak



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	473	3262	46	2377	158	179	139	136	40	500
v/c Ratio	0.83	1.02	0.28	0.92	0.18	0.33	0.48	0.64	0.17	0.80
Control Delay	62.4	44.7	11.9	29.3	2.5	39.3	25.0	53.7	45.9	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	44.7	11.9	29.3	2.5	39.3	25.0	53.7	45.9	29.5
Queue Length 50th (ft)	185	~1026	10	655	8	58	37	88	28	82
Queue Length 95th (ft)	#309	#1146	m15	m712	m18	87	98	143	60	147
Internal Link Dist (ft)		453		1015			198		312	
Turn Bay Length (ft)	300		330		200			125		
Base Capacity (vph)	571	3196	169	2588	870	539	349	213	310	717
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	0.83	1.02	0.27	0.92	0.18	0.33	0.40	0.64	0.13	0.70

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2025 Total

2: Front St & Founder Pkwy

PM Peak



Lane Group	SEL	SET	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	179	2868	152	1799	646	120	225	43	157
v/c Ratio	0.94	1.05	0.86	0.67	0.98	0.30	0.41	0.20	0.49
Control Delay	55.1	54.8	64.7	22.1	79.8	42.7	24.4	33.8	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	54.8	64.7	22.1	79.8	42.7	24.4	33.8	35.9
Queue Length 50th (ft)	115	~544	65	357	259	80	90	24	36
Queue Length 95th (ft)	m#132	m#544	#207	411	#381	136	166	52	71
Internal Link Dist (ft)		1015		408		476			317
Turn Bay Length (ft)	460		200		285			210	
Base Capacity (vph)	191	2721	176	2686	657	412	547	217	363
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	0.94	1.05	0.86	0.67	0.98	0.29	0.41	0.20	0.43

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2025 Total

3: Woodlands Blvd & Founders Pkwy

PM Peak

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	1919	147	254	1710	103	114	49	396	188	61
v/c Ratio	0.04	1.01	0.17	0.70	0.67	0.09	0.44	0.30	0.25	0.77	0.24
Control Delay	6.4	50.9	5.0	41.1	12.3	1.7	46.1	54.9	0.4	65.6	47.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	50.9	5.0	41.1	12.3	1.7	46.1	54.9	0.4	65.6	47.2
Queue Length 50th (ft)	2	~773	14	136	335	0	75	36	0	130	20
Queue Length 95th (ft)	7	#960	46	#290	600	20	127	74	0	201	42
Internal Link Dist (ft)		641			702			339			417
Turn Bay Length (ft)	450			500		400	220			120	
Base Capacity (vph)	209	1902	888	364	2555	1161	272	341	1583	243	555
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	1.01	0.17	0.70	0.67	0.09	0.42	0.14	0.25	0.77	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

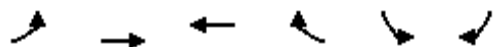
Queue shown is maximum after two cycles.

Queues

2025 Total

4: Founders Pkwy & Crowfoot Valley Rd

PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	853	1758	1323	147	476	315
v/c Ratio	0.86	0.62	0.75	0.18	0.79	0.22
Control Delay	50.6	6.3	27.8	4.2	27.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	6.3	27.8	4.2	27.2	0.3
Queue Length 50th (ft)	321	224	421	5	62	0
Queue Length 95th (ft)	#494	367	510	40	115	0
Internal Link Dist (ft)		561	537		515	
Turn Bay Length (ft)	485				150	
Base Capacity (vph)	997	2842	1754	828	914	1441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.62	0.75	0.18	0.52	0.22

Intersection Summary

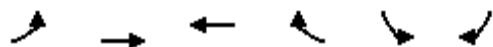
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2025 Total

6: Founder Pkwy & Connector Collector Roadway

PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	326	1582	1266	121	103	214
v/c Ratio	0.70	0.56	0.60	0.12	0.58	0.14
Control Delay	22.6	5.4	16.8	2.1	63.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	5.4	16.8	2.1	63.5	0.2
Queue Length 50th (ft)	86	185	306	0	77	0
Queue Length 95th (ft)	#247	281	372	24	131	0
Internal Link Dist (ft)		403	466		1225	
Turn Bay Length (ft)						
Base Capacity (vph)	464	2840	2108	992	368	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.56	0.60	0.12	0.28	0.14

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2025 Total

8: Ridge Rd/Founders Pkwy & 5th St/SH 86

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	180	489	435	125	277	434	234	383	71	613	521	151
v/c Ratio	0.59	0.90	0.27	0.81	0.51	0.27	0.62	0.92	0.04	0.99	0.69	0.10
Control Delay	37.1	62.1	0.4	65.5	39.3	0.4	25.4	74.7	0.0	65.1	35.5	0.1
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	37.1	62.1	0.4	65.5	39.3	0.4	25.4	74.7	0.0	65.1	35.5	0.1
Queue Length 50th (ft)	96	364	0	64	179	0	88	291	0	415	329	0
Queue Length 95th (ft)	153	#560	0	#154	265	0	135	#473	0	#661	469	0
Internal Link Dist (ft)		370			768			579			785	
Turn Bay Length (ft)	375		425	500			230			600		600
Base Capacity (vph)	307	543	1583	154	543	1583	408	419	1583	622	756	1583
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	0.59	0.90	0.27	0.81	0.51	0.27	0.57	0.91	0.04	0.99	0.69	0.10

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2041 Total

1: Allen Way & Founder Pkwy

AM Peak



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	288	1706	49	3224	152	141	87	82	16	405
v/c Ratio	0.82	0.53	0.22	1.06	0.16	0.62	0.31	0.33	0.08	0.81
Control Delay	72.7	13.3	4.6	52.4	0.9	66.8	21.6	42.8	47.6	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	13.3	4.6	52.4	0.9	66.8	21.6	42.8	47.6	37.1
Queue Length 50th (ft)	115	267	5	~1018	5	55	19	52	11	80
Queue Length 95th (ft)	#198	317	m6	#1107	m1	90	68	98	33	143
Internal Link Dist (ft)		453		1015			198		312	
Turn Bay Length (ft)	290		325			75		130		110
Base Capacity (vph)	350	3201	276	3029	974	228	287	247	232	538
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	0.82	0.53	0.18	1.06	0.16	0.62	0.30	0.33	0.07	0.75

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2041 Total

2: Front St & Founder Pkwy

AM Peak



Lane Group	SEL	SET	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	76	1608	82	2869	576	82	54	5	185
v/c Ratio	0.40	0.54	0.35	0.95	0.86	0.19	0.12	0.02	0.52
Control Delay	25.4	20.1	10.9	32.5	54.3	39.7	0.5	33.6	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	20.1	10.9	32.5	54.3	39.7	0.5	33.6	27.7
Queue Length 50th (ft)	34	275	19	744	207	50	0	3	30
Queue Length 95th (ft)	82	357	39	#993	258	103	0	13	65
Internal Link Dist (ft)		1015		408		476			317
Turn Bay Length (ft)	460		200		285			230	
Base Capacity (vph)	195	2956	238	3018	668	456	477	221	652
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	0.39	0.54	0.34	0.95	0.86	0.18	0.11	0.02	0.28

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2041 Total

3: Woodlands Blvd & Founders Pkwy

AM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	1204	538	2567	505	33	250	49	19
v/c Ratio	0.04	0.55	0.87	0.70	0.88	0.20	0.34	0.24	0.09
Control Delay	9.0	24.7	42.9	11.9	64.3	53.9	6.8	44.8	48.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	24.7	42.9	11.9	64.3	53.9	6.8	44.8	48.1
Queue Length 50th (ft)	1	234	297	334	192	25	17	36	6
Queue Length 95th (ft)	6	279	#564	629	240	57	77	65	19
Internal Link Dist (ft)		641		702		339			417
Turn Bay Length (ft)	450		500		300			150	
Base Capacity (vph)	213	2172	615	3683	571	326	733	245	549
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	0.03	0.55	0.87	0.70	0.88	0.10	0.34	0.20	0.03

Intersection Summary

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

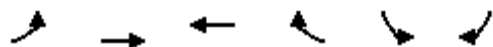
Queue shown is maximum after two cycles.

Queues

2041 Total

4: Founders Pkwy & Crowfoot Valley Rd

AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	489	772	1958	207	693	563
v/c Ratio	0.86	0.29	1.02	0.22	1.11dr	0.39
Control Delay	64.7	5.6	52.8	5.5	40.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	5.6	52.8	5.5	40.6	0.8
Queue Length 50th (ft)	193	96	~860	24	176	0
Queue Length 95th (ft)	#288	122	#998	62	249	0
Internal Link Dist (ft)		561	537		515	
Turn Bay Length (ft)	485				150	
Base Capacity (vph)	569	2630	1925	926	869	1441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.29	1.02	0.22	0.80	0.39

Intersection Summary

~ 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.

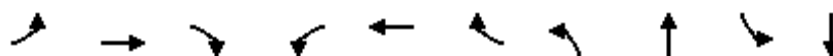
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	128	734	43	5	1789	60	130	14	90	294
v/c Ratio	0.68	0.33	0.04	0.01	0.93	0.07	0.62	0.06	0.25	0.85
Control Delay	39.3	11.8	0.1	8.6	36.5	0.1	53.3	22.8	34.3	50.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	11.8	0.1	8.6	36.5	0.1	53.3	22.8	34.3	50.1
Queue Length 50th (ft)	45	129	0	1	688	0	100	2	52	125
Queue Length 95th (ft)	#143	218	0	6	#881	0	129	20	94	#252
Internal Link Dist (ft)		403			466			312		1225
Turn Bay Length (ft)	400		400	400		400	200		200	
Base Capacity (vph)	188	2242	1046	461	1918	911	213	338	363	383
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	0.68	0.33	0.04	0.01	0.93	0.07	0.61	0.04	0.25	0.77

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2041 Total

8: Ridge Rd/Founders Pkwy & 5th St/SH 86

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	228	130	125	500	940	348	582	82	326	185	147
v/c Ratio	0.15	0.14	0.08	0.19	0.30	0.59	0.77	0.81	0.05	0.76	0.27	0.09
Control Delay	13.5	20.6	0.1	13.7	21.5	1.6	62.0	54.8	0.1	62.8	41.3	0.1
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	13.5	20.6	0.1	13.7	21.5	1.6	62.0	54.8	0.1	62.8	41.3	0.1
Queue Length 50th (ft)	26	56	0	45	132	0	134	224	0	126	63	0
Queue Length 95th (ft)	52	83	0	78	178	0	186	287	0	176	96	0
Internal Link Dist (ft)	370				768				579			
Turn Bay Length (ft)	300			425	250			250			600	500
Base Capacity (vph)	508	1593	1583	650	1672	1583	486	796	1583	457	766	1583
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	0.14	0.08	0.19	0.30	0.59	0.72	0.73	0.05	0.71	0.24	0.09
Intersection Summary												

Queues

2041 Total

1: Allen Way & Founder Pkwy

PM Peak



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	458	3704	49	2616	174	201	147	158	43	484
v/c Ratio	0.85	1.09	0.29	0.94	0.19	0.78	0.57	0.80	0.21	0.86
Control Delay	64.7	67.9	11.1	26.5	1.6	75.6	35.6	70.9	50.8	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	67.9	11.1	26.5	1.6	75.6	35.6	70.9	50.8	36.4
Queue Length 50th (ft)	179	~1221	8	718	4	80	56	106	31	84
Queue Length 95th (ft)	#260	#1295	m11	m780	m9	#139	125	#210	67	#175
Internal Link Dist (ft)		453		1015			198		312	
Turn Bay Length (ft)	290		325			75		130		110
Base Capacity (vph)	543	3395	167	2792	927	257	269	198	217	581
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	0.84	1.09	0.29	0.94	0.19	0.78	0.55	0.80	0.20	0.83

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2041 Total

2: Front St & Founder Pkwy

PM Peak



Lane Group	SEL	SET	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	223	3525	158	2211	563	158	228	43	212
v/c Ratio	1.06	1.11	0.87	0.72	0.99	0.51	0.64	0.25	0.71
Control Delay	67.7	73.2	66.8	18.0	79.9	53.4	31.7	41.7	47.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	73.2	66.8	18.0	79.9	53.4	31.7	41.7	47.3
Queue Length 50th (ft)	~155	~1127	69	408	209	115	80	27	52
Queue Length 95th (ft)	m135	m#522	#195	464	#297	187	171	59	#102
Internal Link Dist (ft)		1015		408		476			317
Turn Bay Length (ft)	460		200		285			230	
Base Capacity (vph)	211	3162	182	3088	568	307	359	170	298
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	1.06	1.11	0.87	0.72	0.99	0.51	0.64	0.25	0.71

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2041 Total

3: Woodlands Blvd & Founders Pkwy

PM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	2722	274	1835	386	49	505	190	65
v/c Ratio	0.04	1.01	0.67	0.49	0.88	0.30	1.01	0.72	0.17
Control Delay	6.1	45.5	38.6	7.9	67.7	55.2	79.8	59.5	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	45.5	38.6	7.9	67.7	55.2	79.8	59.5	40.5
Queue Length 50th (ft)	2	~742	146	178	139	36	~353	132	20
Queue Length 95th (ft)	6	#887	#293	331	184	74	#582	202	41
Internal Link Dist (ft)		641		702		339			417
Turn Bay Length (ft)	450		500		300			150	
Base Capacity (vph)	225	2708	410	3748	439	263	500	263	584
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	0.04	1.01	0.67	0.49	0.88	0.19	1.01	0.72	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

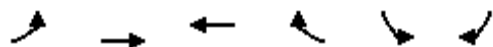
Queue shown is maximum after two cycles.

Queues

2041 Total

4: Founders Pkwy & Crowfoot Valley Rd

PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1011	1926	1440	190	657	352
v/c Ratio	0.96	0.72	0.98	0.26	0.84	0.24
Control Delay	61.4	10.1	53.3	7.5	41.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	10.1	53.3	7.5	41.6	0.4
Queue Length 50th (ft)	~411	386	568	22	170	0
Queue Length 95th (ft)	#553	466	#735	69	240	0
Internal Link Dist (ft)		561	537		515	
Turn Bay Length (ft)	485				150	
Base Capacity (vph)	1052	2677	1474	742	825	1441
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.72	0.98	0.26	0.80	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

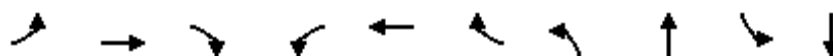
Queue shown is maximum after two cycles.

Queues

2041 Total

6: Pioneer Ranch Access/Connector Collector Roadway & Founder Pkwy

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	364	1701	141	11	1304	142	82	13	114	252
v/c Ratio	0.76	0.66	0.12	0.05	0.76	0.17	0.47	0.08	0.47	0.72
Control Delay	41.6	12.8	1.9	8.1	28.9	1.8	52.5	35.8	47.9	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	12.8	1.9	8.1	28.9	1.8	52.5	35.8	47.9	22.9
Queue Length 50th (ft)	198	303	0	2	430	0	63	6	78	29
Queue Length 95th (ft)	#443	676	28	9	521	21	92	24	121	109
Internal Link Dist (ft)		403			466			312		1225
Turn Bay Length (ft)	400		400	400		400	200		200	
Base Capacity (vph)	476	2571	1189	206	1724	859	175	311	242	455
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	0.76	0.66	0.12	0.05	0.76	0.17	0.47	0.04	0.47	0.55

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2041 Total

8: Ridge Rd/Founders Pkwy & 5th St/SH 86

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	614	516	179	332	587	245	516	114	911	734	174
v/c Ratio	0.47	0.61	0.33	0.63	0.32	0.37	0.57	0.77	0.07	0.86	0.57	0.11
Control Delay	29.7	40.4	0.5	35.1	33.8	0.7	54.6	54.9	0.1	48.0	32.8	0.1
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	29.7	40.4	0.5	35.1	33.8	0.7	54.6	54.9	0.1	48.0	32.8	0.1
Queue Length 50th (ft)	98	218	0	91	105	0	93	203	0	332	233	0
Queue Length 95th (ft)	155	281	0	146	146	0	131	266	0	414	311	0
Internal Link Dist (ft)		370			768			579			785	
Turn Bay Length (ft)	300		425	250			250			600		500
Base Capacity (vph)	402	1007	1583	283	1051	1583	1115	675	1583	1115	1294	1583
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	0.47	0.61	0.33	0.63	0.32	0.37	0.22	0.76	0.07	0.82	0.57	0.11
Intersection Summary												