

Central Park Hotel

Traffic Impact Study



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CENTRAL PARK HOTEL PROJECT

TRAFFIC IMPACT STUDY

1.0 INTRODUCTION

The Fox Tuttle Transportation Group has prepared this traffic impact study for the proposed Central Park Hotel Project in Steamboat Springs, Colorado. The currently vacant ±4.2 acre site is located between Pine Grove Road, Central Park Drive, and Snapdragon Way. The project proposes to construct a 180 room limited-service hotel and 3,500 square foot restaurant space.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this project. The traffic study addresses existing, short-term (Year 2027), and long-term (Year 2043) peak hour intersection and roadway conditions in the study area with and without the project generated traffic. The information contained in this study is anticipated to be used by the City of Steamboat Springs in identifying any intersection or roadway deficiencies and potential improvements for the future conditions. This study focuses on the weekday AM and PM peak hours which represent the periods of highest trip generation for the proposed uses and adjacent roadway traffic. It also includes an evaluation of roadway capacity needs, auxiliary lane requirements, and intersection traffic controls.

The study was developed consistent with City of Steamboat Springs criteria for the preparation of Traffic Impact Study and includes the Traffic Impact Study Scope Approval form in the Appendix.

2.0 PROJECT DESCRIPTION

The Central Park Hotel Project proposes to construct a 180 room, four-story limited-service hotel and 3,500 square foot restaurant space at the southeast corner of the site. A surface parking lot will be on the northwest side of the lot with a planned 184 parking stalls.

Vehicle access to the site is proposed via a right-in right-out access to Central Park Drive. Pedestrian connectivity to the parking structure would be provided to Pine Grove Road, Snapdragon Way and Central Park Drive. New detached sidewalks are planned along the north side of Snapdragon Way and west side of Pine Grove Road along the property frontage.

A vicinity map is shown on **Figure 1**. The concept site and access plan is provided on **Figure 2** (note that the site plan is subject to change as the project is still in design/development).

3.0 STUDY CONSIDERATIONS

3.1 Data Collection

Intersection turning movement and daily roadway volumes were collected for this project in late-March 2023. The existing traffic volumes, lane configuration and traffic control are illustrated on **Figure 3**. Count data sheets are provided in the **Appendix**.

3.2 Evaluation Methodology

The traffic operations analysis addressed the signalized and unsignalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual*¹ (HCM). Existing peak hour factors were applied to the intersections for the existing and future scenarios. Study intersections were evaluated using Synchro (v11) software.

3.3 Level of Service Definitions

A level of service analysis was conducted to determine the existing and future performance of the study area intersections and to determine the most appropriate traffic controls and need for any other roadway or intersection improvements.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level of Service” (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersection’s traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. A more detailed discussion of LOS methodology is contained in the **Appendix** for reference.

Typically, the desired standard for overall intersection performance is LOS D or better. Individual movements may be allowed to fall to LOS E/F depending on the circumstances, such as a low-volume side street approach to a major arterial or a protected-only left-turn on a major arterial.

¹ [Highway Capacity Manual](#), Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

4.0 EXISTING CONDITIONS

4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The existing study area street network consists of collector and local roadways. The primary public roadways that serve the project site are discussed in the following text and illustrated on **Figure 1**.

Pine Grove Road is a two-lane, collector roadway east of the site. Pine Grove Road generally runs northwest/southeast and services existing commercial and residential land uses. Turning movements to various access points are provided via a center turn lane. The posted speed limit is 30 miles per hour (mph) within the study area. On-street bicycle lanes are provided along the section of Pine Grove Road adjacent to the project site. There are no existing sidewalks along this section of Pine Grove Road. The intersection of Pine Grove Road and Snapdragon way is side-street stop controlled while the intersection of Pine Grove Road and Central Park Drive is signalized.

Central Park Drive is a two-lane, collector roadway west of the site. Central Park Drive also runs northwest/southeast along the project site and provides access to existing commercial and residential land uses. Central Park Drive provide access control through a raised, landscaped median, with left turn movements provided as needed. Just north of the site, a roundabout provides intersection control and access to two significant commercial destinations. The posted speed limit is 25 miles per hour (mph) within the study area. On-street bicycle lanes are provided along the section of Central Park Drive adjacent to the project site. An existing six-foot wide sidewalk on the west side of the road provides pedestrian connectivity between Mt. Werner Road and Pine Grove Road, while a 10 foot wide sidewalk provides pedestrian connectivity on the east side of the road. Both the Mount Werner Road and Pine Grove Road intersections are signalized.

Snapdragon Way is an east-west, two-lane local roadway that provides access to commercial land uses. Snapdragon Way has a 26-foot wide paved section that provides two through lanes, one per direction; that are not striped. The speed limit is unposted and has been modeled at 25 mph; a speed limit typical of low volume, local roadways. There are no on-street bike lanes. Pedestrian connectivity is provided via an existing concrete sidewalk for approximately 260' east of the Central Park Drive intersection along the south side of the road. There is no sidewalk on the north side of the road. Curb and gutter exists only along Snapdragon Way adjacent to the commercial development near Central Park Drive. Both the Pine Grove Road and Central Park Drive intersections are stop controlled on Snapdragon Way.

Mt. Werner Road is a collector roadway south of the site. Mt. Werner Road generally runs east/west and services primarily existing commercial land uses. Mt. Werner Road will provide access to State Highway 40 for the site. The lane configuration between State Highway 40 and Central Park Drive provides two westbound lanes, and a single eastbound lane. Although unposted within the section south of the site, the posted speed limit is 35 miles per hour (mph) east of the Central Park Drive intersection. There are no on-street bike lanes. Pedestrian connectivity is provided along the south side of the road via an 8' detached sidewalk. Curb and gutter is apparent for roughly 185' along the north side of the road east of the raised median delineating the right turn lane ramp onto State Highway 40. The intersection of Mt. Werner Road with Central Park Drive is signalized.

4.2 Intersections

The study area includes seven (7) existing intersections that are listed below with the current traffic control and were analyzed for existing and future background year traffic operations:

1. Pine Grove Road and Central Park Drive (signalized)
2. Pine Grove Road and Snapdragon Way (unsignalized, side-street stop controlled)
3. Central Park Drive and Mt. Werner Road (signalized)
4. Central Park Drive and Snapdragon Way (unsignalized, side street stop controlled)
5. Pine Grove Road and Mt. Werner Road (signalized)
6. Central Park Drive and Shopping Center Access (roundabout)
7. Pine Grove Road and Rollingstone Drive (unsignalized, side street stop controlled)

The existing lane configuration at each of the study locations is illustrated on **Figure 3**.

4.3 Pedestrian and Bicycle

On-street bike lanes exist on Pine Grove Road and Central Park Drive within the study area. Bicyclist merge with traffic at the Central Park Drive/Commercial access roundabout. There are no dedicated bicycle facilities along Snapdragon Road nor along Mt. Werner Road.

Pedestrian connectivity within the study area is somewhat sporadic. Sidewalks exist primarily along developed areas and consists of both attached and detached walks of variable widths. The project proposes to construct sidewalks along its Snapdragon Way and Pine Grove Road frontages, connecting in to existing facilities along both roads as well as along Central Park Drive. Once constructed sidewalk will exist within the study minus a roughly 100' segment along the south side of Snapdragon Way just west of Pine Grove Road.

4.4 Transit

Steamboat Springs Transit (SST) serves this area both in the summer and winter seasons. During the summer months, the SST Red Line provides transit services along Central Park Drive. During the winter months, SST provides transit services via the Purple, Red, Blue, and Orange Line routes. The nearest transit stops are located at the Central Park Drive roundabout.

4.5 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated on **Figure 3**. The results of the LOS calculations for the intersections are summarized on **Table 1**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

All project intersections are shown to be operating at LOS C or better overall in the AM and PM peak hours, which meets City of Steamboat Springs requirements for overall intersection operations. There are no existing operational issues identified in the study area.

4.6 Existing Intersection Queue Analysis

Intersection queue length analysis for 2023 existing volumes is shown in **Table 2**. For most movements, 95th percentile queue lengths are within the available storage space. Two movements have queues that exceed the existing storage space:

- Eastbound left at Pine Grove Road and Central Park Drive

The eastbound left queue exceeds available storage during the PM peak period by 48 feet (approximately two vehicles). Beyond the available storage space is a left turn lane to access the adjacent shopping center. Queues exceeding storage may block the upstream left turn lane, but access to the shopping center is also available through the Central Park Drive roundabout immediately upstream if a blockage occurred.

- Eastbound left at Central Park Drive and Mt. Werner Road

The eastbound left queue exceeds the available turn lane storage in the PM peak. The painted median on Mt. Werner Road provides enough additional storage to absorb the existing queue without impeding operations of other movements.

5.0 FUTURE CONDITIONS

5.1 Annual Growth Factor and Future Volume Methodology

In order to forecast the future peak hour traffic volumes, background traffic growth assumptions were estimated based on buildout projections of remaining development potential and Colorado Department of Transportation (CDOT) growth factors for 20-year traffic growth along Lincoln Avenue (US 40) near the site. The data supports that base area traffic will grow by an average of approximately 1.0% annually. This growth was applied to the short-term, assumed build-out year of 2027 to develop background traffic projections.

Using these assumptions, the Year 2027 background traffic is summarized on **Figure 4**.

5.2 Year 2027 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the 2027 background scenario and to identify any capacity constraints associated with background traffic. The background volumes, lane configuration, and traffic control are illustrated on **Figure 4**.

The level of service criteria discussed previously were applied to the study area intersections to determine the impacts with the short-term background volumes. The results of the LOS calculations for the intersections are summarized on **Table 1**. The intersection level of service worksheets and queue reports are attached in the **Appendix**. The Year 2027 background analysis assumed the existing lane configuration and intersection control would remain the same at the study intersections.

All project intersections are shown to continue to operate acceptably at LOS C or better in the AM and PM peak hours. Only one movement falls below LOS D:

- Southbound Left+Through at Pine Grove Road and Rollingstone Drive

The southbound left delay increases to LOS E in the PM peak period. Delay increases due to growth in left turn traffic and opposing through movements. High delay can be expected for side street stop-controlled movements during peak periods. The southbound left turn queue is within the available storage.

5.3 Year 2043 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the 2043 background scenario and to identify any capacity constraints associated with background traffic. The background volumes, lane configuration, and traffic control are illustrated on **Figure 5**.

The level of service criteria discussed previously were applied to the study area intersections to determine the impacts with the long-term background volumes. The results of the LOS calculations for the intersections are summarized on **Table 1**. The intersection level of service

worksheets and queue reports are attached in the **Appendix**. The Year 2043 background analysis assumed the existing lane configuration and intersection control would remain the same at the study intersections.

All project intersections are shown to continue to operate acceptably at LOS C or better in the AM and PM peak hours. Only one movement falls below LOS D:

- Southbound Left+Through at Pine Grove Road and Rollingstone Drive

The southbound left delay increases to LOS F in the PM peak period. Despite the high delay for that movement, the 95th percentile queue remains within the available storage.

5.4 Intersection Queuing Analysis

Under 2027 and 2043 Background conditions, there are no new movements that exceed available storage length as compared to 2023 Existing. The two movements with storage deficiencies are:

- Eastbound left at Pine Grove Road and Central Park Drive

The future background queue is predicted to extend beyond the available storage and may impact either the eastbound through lane or the upstream left turn lane.

- Eastbound left at Central Park Drive and Mt. Werner Road

The eastbound left turn storage at Central Park Drive and Mt. Werner Road is expected to exceed available storage. Storage could be extended by removing the existing striped median up to a length of about 225 feet using the existing pavement width, enough to accommodate the 2043 Background queue. It is recommended that if this restriping improvement is put in place it could be done as part of an annual repaving project.

6.0 FUTURE CONDITIONS WITH PROJECT DEVELOPMENT

6.1 Trip Generation

The Central Park Hotel Project proposes to develop the ±4.2 acres site with a 180 room hotel and 3,500 square foot restaurant. In order to estimate the volume of new vehicular trips that will be generated by the project, trip rates contained in the *Institute of Transportation Engineers (ITE) Trip Generation Manual*² were applied to estimate the traffic for proposed land uses.

Given the proposed land uses, ITE trip generation rates for “Hotel” (#310), and “High-Turnover (Sit-Down) Restaurant” (#932) were applied to the proposed uses on site. The trip generation estimates using these rates are summarized on **Table 3**. The project is anticipated

² Trip Generation 11th Edition, Institute of Transportation Engineers, 2021.

to generate 2,576 new daily, 145 new AM peak hour, and 163 new PM peak hour vehicle trips at full buildout.

6.2 Trip Distribution and Assignment

The estimated trip volumes were distributed onto the study area street network based on existing traffic characteristics, land uses, and traffic patterns in the area. **Figure 6** summarizes the trip distribution assumptions.

Using these distribution assumptions, the projected site traffic was assigned to the study area roadway network for the weekday AM and PM peak hours. The site-generated volumes are also shown on **Figure 7**. The site-generated volumes were then added to the background traffic to develop the future total traffic volumes, as summarized on **Figure 8** for the 2027 short-term future and **Figure 9** for the 2043 long-term future.

6.3 2027 Background + Project Intersection Capacity and Queue Analysis

Under 2027 Background + Project conditions, all study area intersections operate at overall LOS C or better in the AM and PM peak periods. With the project-added traffic, no additional movements drop below LOS D.

No new movements have 95th percentile queues extending beyond the existing storage length compared to 2027 Background. The project-added trips do result in slightly increased queue lengths, but do not result in any new operational problems as compared to 2027 Background. The same queue mitigation suggestions to address Background queues would also mitigate the 2027 Background + Project queues.

6.4 2043 Background + Project Intersection Capacity and Queue Analysis

In 2043 with the added project trips, all study area intersections operate at overall LOS C or better. With the project-added traffic, the following movement drops below LOS D:

- Eastbound left at Central Park Drive and Pine Grove Road

The project adds trips to the eastbound left turn movement at Central Park Drive and Pine Grove Road resulting in LOS E in the PM peak. Despite increased delay, the volume to capacity ratio for eastbound left indicates that there is enough green time in the cycle to serve all queued vehicles each cycle.

Only one movement has 95th percentile queues extending beyond the existing storage length compared to 2043 Background:

- Southbound left at Pine Grove Road and Rollingstone Drive

Additional demand for southbound left turns and increased conflicting traffic result in maximum queue slightly exceeding available storage. The 95th percentile queue is less than one vehicle greater than available storage, indicating that the queue for the southbound left turn is likely to have minimal impact on southbound right turn operations.

6.5 Site Access

One vehicle access point is proposed to the site: a right-in right-out access is proposed on Central Park Drive. Movements to go west/south will be accommodated by u-turns at the Central Park roundabout and/or right-turns onto Pine Grove Road to go south to Mt. Werner Road.

Under 2027 Background + Project and 2043 Background + Project conditions, the site access operates acceptably overall and for all movements. 95th percentile queue is less than one vehicle for both peak periods.

7.0 PERCENT CONTRIBUTION

The percent contribution of project-added trips to two intersections is presented in **Table 4** for year 2027. At US 40 west ramp and Mt. Werner Road, the project is calculated to contribute approximately 6.3% of total trips in the AM peak period and 5.7% of total trips in the PM peak period. At Pine Grove Road and Mt. Werner Road, the project is calculated to contribute approximately 2.1% of total trips in both the AM and PM peak periods.

8.0 CONCLUSIONS

The Central Park Hotel Project proposes to develop a ±4.2 acre site and is located between Central Park Drive, Snapdragon Way, and Pine Grove Road. The project proposes to construct 180 hotel rooms, a 3,500 square foot restaurant space and a 184-stall surface parking lot on the site. This traffic study addresses existing, site-build out (short-term), and long-term peak hour intersection and roadway conditions in the study area with and without the project generated traffic.

The project is anticipated to generate 2,576 new daily, 145 new AM peak hour, and 163 new PM peak hour trips at full buildout. Site access is provided via a right-in right-out access to Central Park Drive.

Based on this analysis, the following improvements are recommended to address queueing issues in the Background (without project) conditions:

-
- Extend the eastbound left turn lane at Central Park Drive and Mt. Werner Road by restriping the existing pavement and removing the existing painted median. As the need for a longer striped turn lane was identified as a long-term future need regardless of this development project, it is recommended that the City modifies their striping of the eastbound left turn lane at Central Park Drive and Mt. Werner Road as part of their annual pavement marking program in the future as area volumes grow out to the Year 2043 projections.

The project-generated trips can be successfully accommodated in the short term and long term horizons by balancing traffic signal timing.

Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Lanes Groups	2023 Existing				2027 Background				2027 Bkgrd + Project				2043 Background				2043 Bkgrd + Project			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
STOP SIGN CONTROL																				
2. Pine Grove Road at Snapdragon Way	0	A	1	A	1	A	1	A	1	A	1	A	0	A	1	A	1	A	1	A
Eastbound Left+Right	11	B	13	B	11	B	13	B	12	B	14	B	12	B	15	B	12	B	16	C
Northbound Left	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A
Northbound Through	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
4. Central Park Drive at Snapdragon Way	1	A	1	A	0	A	1	A	1	A	2	A	0	A	1	A	1	A	2	A
Westbound Left+Right	9	A	13	B	9	A	13	B	10	A	13	B	9	A	15	C	10	A	15	C
Northbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Left	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A
Southbound Through	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
7. Central Park Drive at Project Access									2	A	2	A					2	A	2	A
Westbound Right									10	A	11	B					10	A	12	B
Northbound Through+Right									0	A	0	A					0	A	0	A
8. Pine Grove Road at Rollingstone Drive	3	A	3	A	3	A	3	A	3	A	3	A	3	A	5	A	4	A	6	A
Eastbound Left	8	A	9	A	8	A	9	A	8	A	9	A	8	A	10	A	8	A	10	A
Eastbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Westbound Left	8	A	8	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Westbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Northbound Left+Through+Right	15	B	15	B	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Left+Through	20	C	33	D	20	C	35	E	23	C	42	E	28	D	66	F	32	D	86	F
Southbound Right	10	A	13	B	10	A	13	B	10	B	14	B	10	B	14	B	11	B	15	B
SIGNAL CONTROL																				
1. Pine Grove Road at Central Park Drive	15	B	21	C	15	B	22	C	16	B	24	C	16	B	25	C	17	B	29	C
Eastbound Left	12	B	29	C	12	B	31	C	12	B	43	D	13	B	40	D	13	B	63	E
Eastbound Through+Right	10	A	17	B	10	A	17	B	10	A	17	B	10	B	17	B	10	B	17	B
Westbound Left+Through	15	B	26	C	16	B	26	C	16	B	26	C	16	B	25	C	17	B	25	C
Westbound Right	19	B	35	C	20	B	35	C	20	B	35	C	22	C	36	D	22	C	36	D
Northbound Left	13	B	12	B	13	B	12	B	14	B	12	B	13	B	13	B	14	B	13	B
Northbound Through+Right	20	B	19	B	20	B	19	B	20	C	20	B	20	B	24	C	20	C	24	C
Southbound Left	13	B	12	B	13	B	13	B	13	B	13	B	15	B	15	B	15	B	15	B
Southbound Through	15	B	15	B	15	B	15	B	16	B	15	B	16	B	17	B	17	B	17	B
Southbound Right	13	B	18	B	13	B	19	B	14	B	19	B	14	B	22	C	14	B	22	C
3. Central Park Drive at Mt. Werner Road	10	A	18	B	10	A	18	B	10	B	19	B	11	B	21	C	11	B	24	C
Eastbound Left	8	A	14	B	8	A	15	B	9	A	18	B	9	A	21	C	9	A	30	C
Eastbound Through	8	A	11	B	9	A	11	B	9	A	12	B	10	A	13	B	9	A	14	B
Eastbound Right	7	A	10	B	7	A	11	B	7	A	11	B	7	A	13	B	7	A	13	B
Westbound Left	11	B	17	B	11	B	17	B	12	B	18	B	12	B	19	B	12	B	19	B
Westbound Through	11	B	18	B	12	B	19	B	12	B	19	B	12	B	21	C	12	B	21	C
Westbound Right	11	B	17	B	11	B	18	B	12	B	18	B	12	B	20	B	12	B	20	B
Northbound Left	13	B	13	B	13	B	13	B	14	B	12	B	13	B	12	B	14	B	12	B
Northbound Through+Right	12	B	11	B	12	B	10	B	12	B	10	B	12	B	10	A	12	B	10	A
Southbound Left+Through	17	B	17	B	17	B	17	B	17	B	17	B	17	B	17	B	17	B	16	B
Southbound Right	17	B	26	C	17	B	27	C	17	B	29	C	17	B	33	C	18	B	35	C
5. Pine Grove Road at Mt. Werner Drive	18	B	17	B	18	B	17	B	19	B	17	B	20	C	18	B	21	C	18	B
Eastbound Left	-	-	16	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Eastbound Through	22	C	20	B	22	C	20	B	22	C	20	C	24	C	21	C	24	C	20	C
Eastbound Right	17	B	17	B	17	B	17	B	17	B	17	B	18	B	17	B	18	B	17	B
Westbound Left	14	B	14	B	14	B	14	B	14	B	14	B	15	B	14	B	16	B	14	B
Westbound Through	10	B	12	B	10	A	12	B	10	B	12	B	10	B	12	B	11	B	12	B
Westbound Right	11	B	15	B	11	B	16	B	11	B	16	B	12	B	17	B	12	B	17	B
Northbound Left+Through	19	B	19	B	20	B	20	B	20	B	20	B	23	C	21	C	23	C	23	C
Northbound Right	22	C	18	B	22	C	18	B	22	C	18	B	27	C	19	B	28	C	20	C
Southbound Left+Through+Right	24	C	20	C	25	C	21	C	25	C	21	C	28	C	23	C	28	C	24	C
ROUNDABOUT CONTROL																				
6. Central Park Drive at Alpine Plaza Access	4	A	6	A	4	A	7	A	4	A	7	A	4	A	8	A	4	A	8	A
Eastbound Left+Through+Right	4	A	5	A	4	A	6	A	4	A	7	A	4	A	6	A	4	A	8	A
Westbound Left+Through+Right	4	A	6	A	4	A	6	A	4	A	7	A	4	A	7	A	4	A	8	A
Northbound Left+Through+Right	3	A	5	A	3	A	5	A	4	A	5	A	3	A	9	A	4	A	6	A
Southbound Left+Through+Right	4	A	7	A	4	A	7	A	4	A	8	A	4	A	5	A	4	A	9	A

Table 2 - Peak Hour 95th Percentile Queue Summary

Intersection and Lanes Groups	Existing Storage Length (Feet)	2023 Existing		2027 Background		2027 Bkgrd + Project		2043 Background		2043 Bkgrd + Project	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Pine Grove Road at Central Park Drive											
Eastbound Left	95'	41'	143'	43'	150'	64'	213'	53'	190'	74'	259'
Eastbound Through+Right	95'	29'	48'	29'	50'	34'	53'	35'	55'	39'	59'
Westbound Left+Through	-	28'	84'	28'	89'	30'	91'	33'	98'	36'	100'
Westbound Right	75'	21'	49'	22'	50'	23'	49'	34'	52'	34'	52'
Northbound Left	105'	15'	62'	15'	64'	15'	65'	18'	82'	18'	82'
Northbound Through+Right	-	94'	222'	96'	127'	96'	236'	115'	323'	115'	306'
Southbound Left	120'	75'	48'	79'	21'	79'	51'	98'	62'	97'	63'
Southbound Through	-	111'	83'	115'	39'	127'	100'	141'	106'	153'	121'
Southbound Right	120'	15'	46'	17'	0'	17'	47'	24'	52'	24'	52'
2. Pine Grove Road at Snapdragon Way											
Eastbound Left+Right	130'	3'	5'	3'	5'	3'	8'	3'	10'	3'	10'
Northbound Left	-	0'	0'	0'	0'	3'	3'	0'	3'	3'	3'
Northbound Through	-	-	-	-	-	-	-	-	-	-	-
Southbound Through+Right	-	-	-	-	-	-	-	-	-	-	-
3. Central Park Drive at Mt. Werner Road											
Eastbound Left	90'	43'	96'	43'	100'	58'	129'	50'	133'	65'	199'
Eastbound Through	-	148'	64'	156'	69'	156'	69'	192'	83'	193'	86'
Eastbound Right	90'	18'	14'	19'	14'	19'	14'	22'	22'	22'	22'
Westbound Left	130'	11'	20'	12'	22'	12'	22'	12'	23'	12'	23'
Westbound Through	-	27'	79'	28'	84'	28'	84'	32'	103'	32'	105'
Westbound Right	130'	0'	1'	0'	1'	0'	1'	0'	6'	0'	5'
Northbound Left	120'	20'	44'	20'	45'	20'	45'	24'	54'	26'	54'
Northbound Through+Right	120'	18'	24'	19'	25'	19'	25'	19'	28'	21'	28'
Southbound Left+Through	110'	41'	78'	43'	82'	43'	82'	46'	96'	49'	96'
Southbound Right	110'	0'	54'	0'	55'	6'	56'	1'	65'	7'	76'
4. Central Park Drive at Snapdragon Way											
Westbound Left+Right	40'	0'	10'	0'	10'	5'	18'	0'	15'	5'	25'
Northbound Through+Right	-	-	-	-	-	-	-	-	-	-	-
Southbound Left	50'	0'	0'	0'	0'	0'	0'	0'	3'	0'	3'
Southbound Through	-	-	-	-	-	-	-	-	-	-	-
5. Pine Grove Road at Mt. Werner Drive											
Eastbound Left	75'	-	4'	-	-	-	-	-	-	-	-
Eastbound Through	-	238'	159'	249'	172'	248'	173'	306'	201'	293'	201'
Eastbound Right	75'	28'	0'	29'	0'	29'	0'	39'	0'	37'	0'
Westbound Left	100'	30'	45'	72'	49'	76'	50'	83'	56'	87'	56'
Westbound Through	-	14'	86'	33'	93'	34'	94'	37'	111'	40'	111'
Westbound Right	60'	0'	53'	31'	55'	35'	57'	34'	58'	36'	59'
Northbound Left+Through	-	18'	143'	60'	151'	61'	153'	65'	183'	69'	185'
Northbound Right	70'	0'	21'	52'	23'	52'	23'	57'	34'	57'	34'
Southbound Left+Through+Right	-	83'	150'	191'	158'	192'	169'	231'	199'	239'	211'
6. Central Park Drive at Alpine Plaza											
Eastbound Left+Through+Right	140'	0'	25'	0'	25'	0'	25'	0'	25'	25'	50'
Westbound Left+Through+Right	130'	0'	25'	0'	25'	0'	25'	0'	50'	0'	50'
Northbound Left+Through+Right	30'	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Southbound Left+Through+Right	65'	0'	50'	0'	50'	0'	50'	0'	75'	0'	75'
7. Central Park Drive at Project Access											
Westbound Right	50'	-	-	-	-	8'	10'	-	-	8'	13'
Northbound Through+Right	-	-	-	-	-	-	-	-	-	-	-
8. Pine Grove Road at Rollingstone Drive											
Eastbound Left	160'	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Eastbound Through+Right	-	-	-	-	-	-	-	-	-	-	-
Westbound Left	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Westbound Through+Right	-	-	-	-	-	-	-	-	-	-	-
Northbound Through+Right	40'	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Southbound Left+Through	100'	30'	43'	33'	45'	38'	55'	53'	93'	60'	110'
Southbound Right	100'	0'	3'	0'	3'	0'	3'	0'	5'	3'	5'

Note: Queues shown in blue exceed existing storage length

Table 3. Trip Generation Estimate

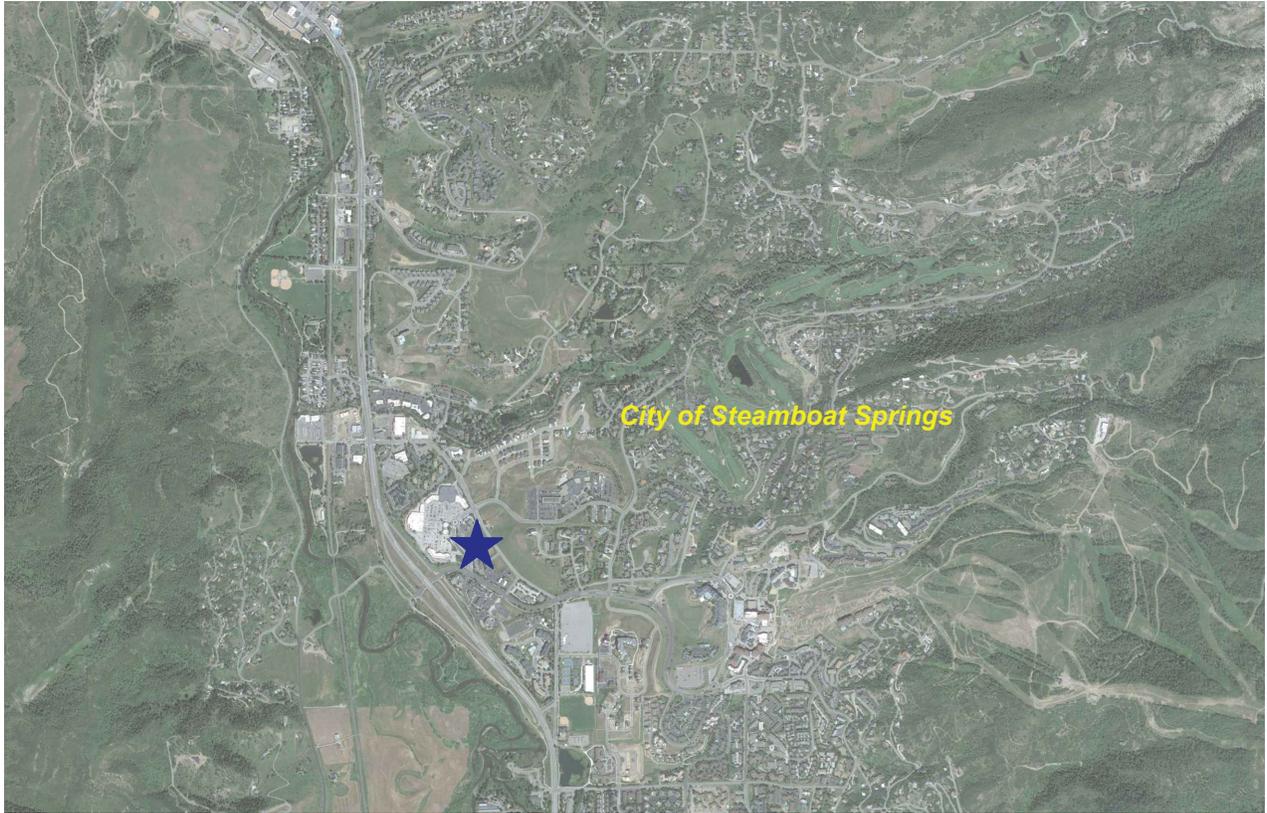
Land Use	Size	Unit	Average Weekday Trips		Weekday AM Peak Hour Trips				Weekday PM Peak Hour Trips			
			Rate	Total	Rate	Total	In	Out	Rate	Total	In	Out
#310 Hotel	180	D.U.	12.23	2201	0.62	112	63	49	0.73	131	64	67
#932 High-Turnover (Sit-Down) Restaurant	3.5	1000 Sq. Ft. GFA	107.20	375	9.57	33	18	15	9.05	32	20	12
Total				2576		145	81	64		163	84	79

Source: ITE Trip Generation Handbook, 11th Edition (2021).

Table 4 - Percent Contribution

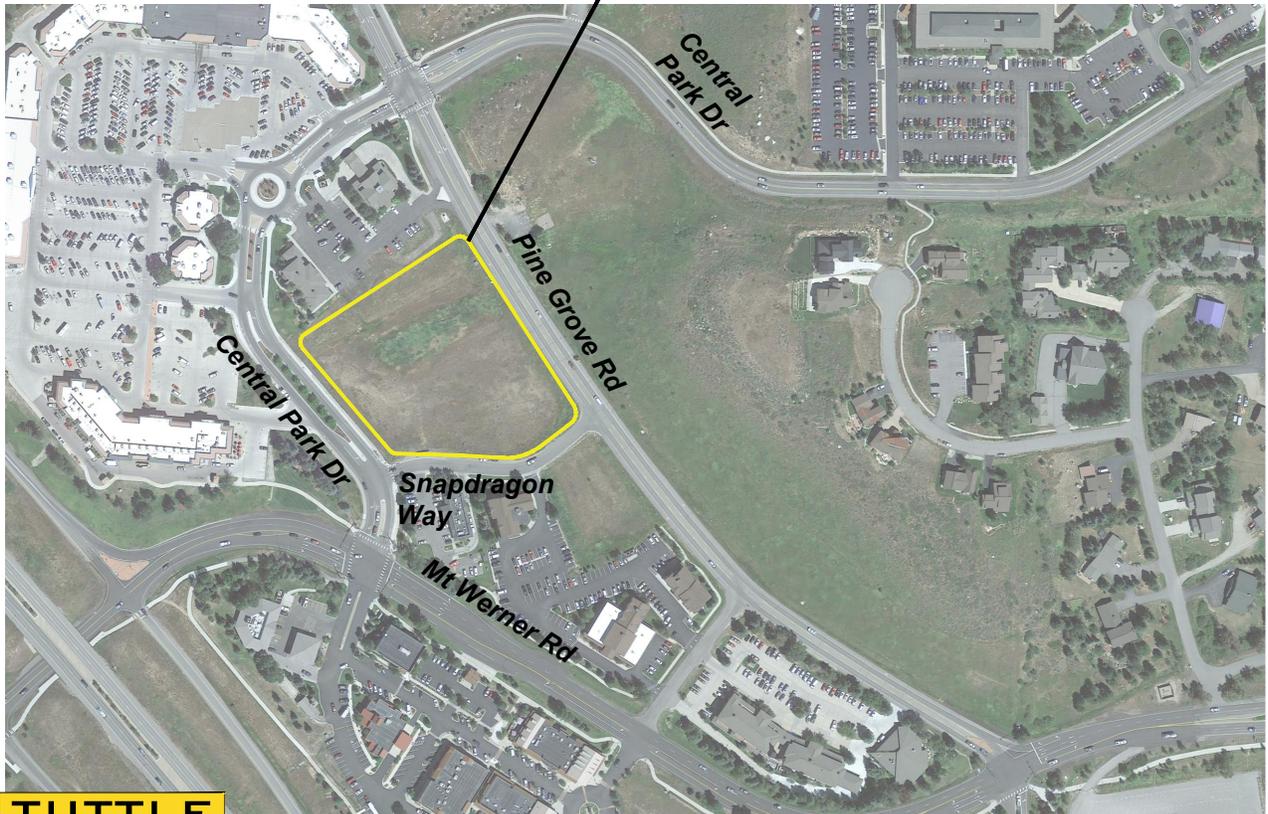
Lane/Movement	Background 2027		Project-Added	
	AM	PM	AM	PM
US 40 west ramp & Mt. Werner Road				
EB Through	70	60		
EB Right	10	15		
WB Left	55	270	13	16
WB Through	35	140		
SB Left	445	250	27	28
SB Through	0	5		
SB Right	25	35		
<i>Total Entering Volume</i>	<i>640</i>	<i>775</i>	<i>40</i>	<i>44</i>
<i>Percent Increase</i>			6.25%	5.68%
Pine Grove Road & Mt. Werner Road				
EB Left	0	0		
EB Through	315	210		
EB Right	90	30		
WB Left	125	60		
WB Through	115	300		
WB Right	170	350	12	13
NB Left	10	65		
NB Through	35	115	2	2
NB Right	125	85		
SB Left	170	145	10	12
SB Through	35	35	1	2
SB Right	5	10		
<i>Total Entering Volume</i>	<i>1195</i>	<i>1405</i>	<i>25.0</i>	<i>29.0</i>
<i>Percent Increase</i>			2.09%	2.06%

Area Map



Location within Steamboat Springs

PROJECT SITE



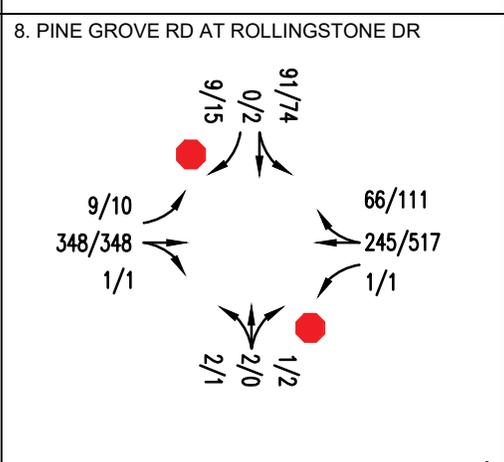
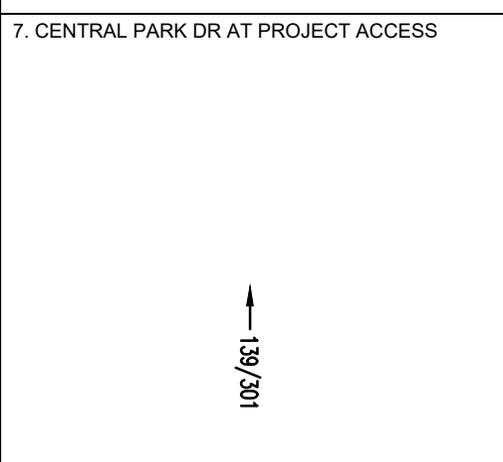
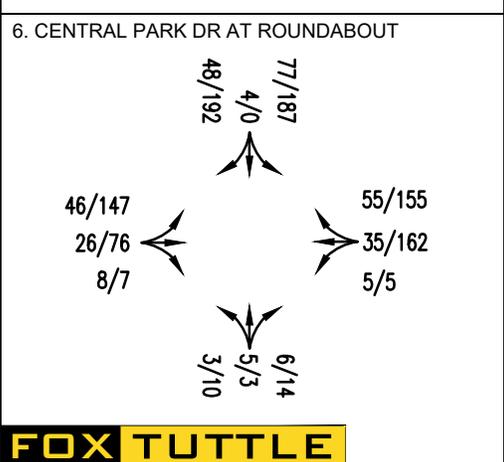
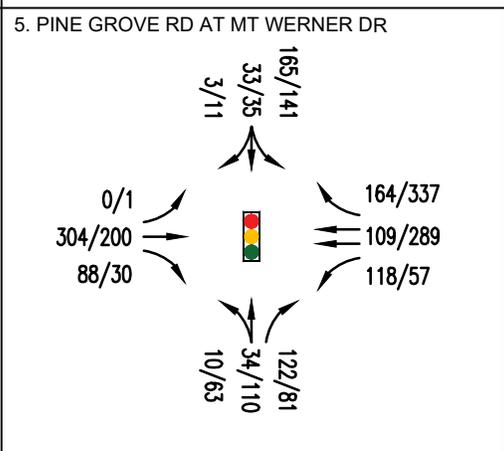
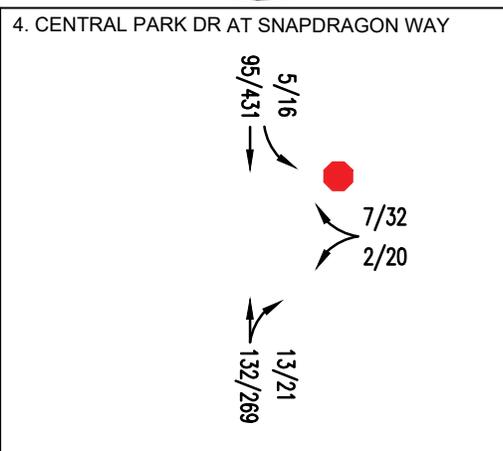
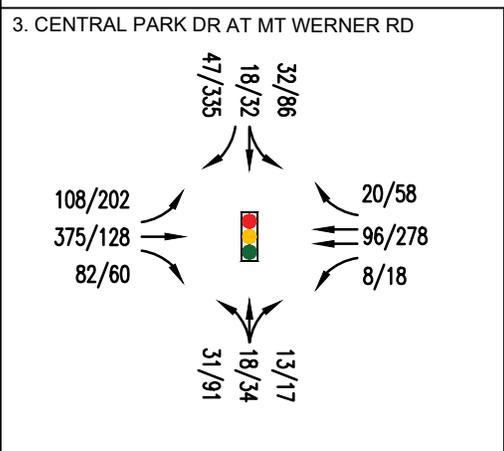
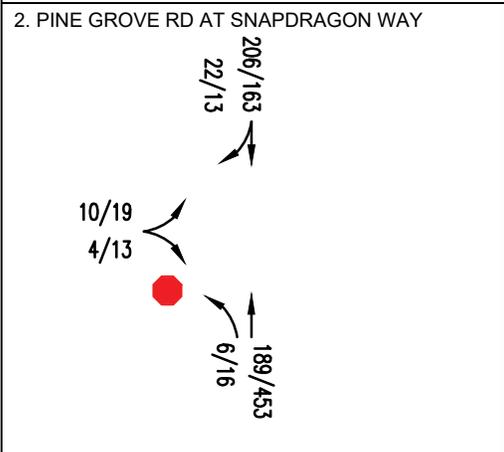
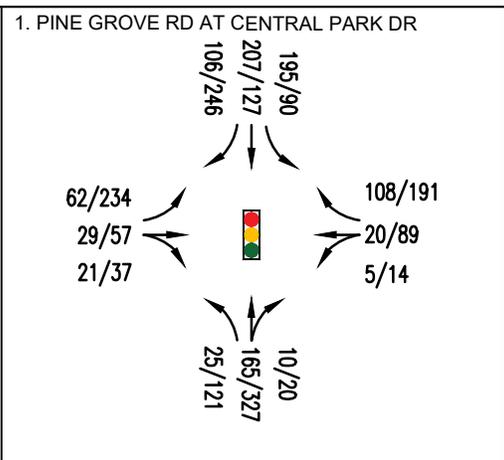
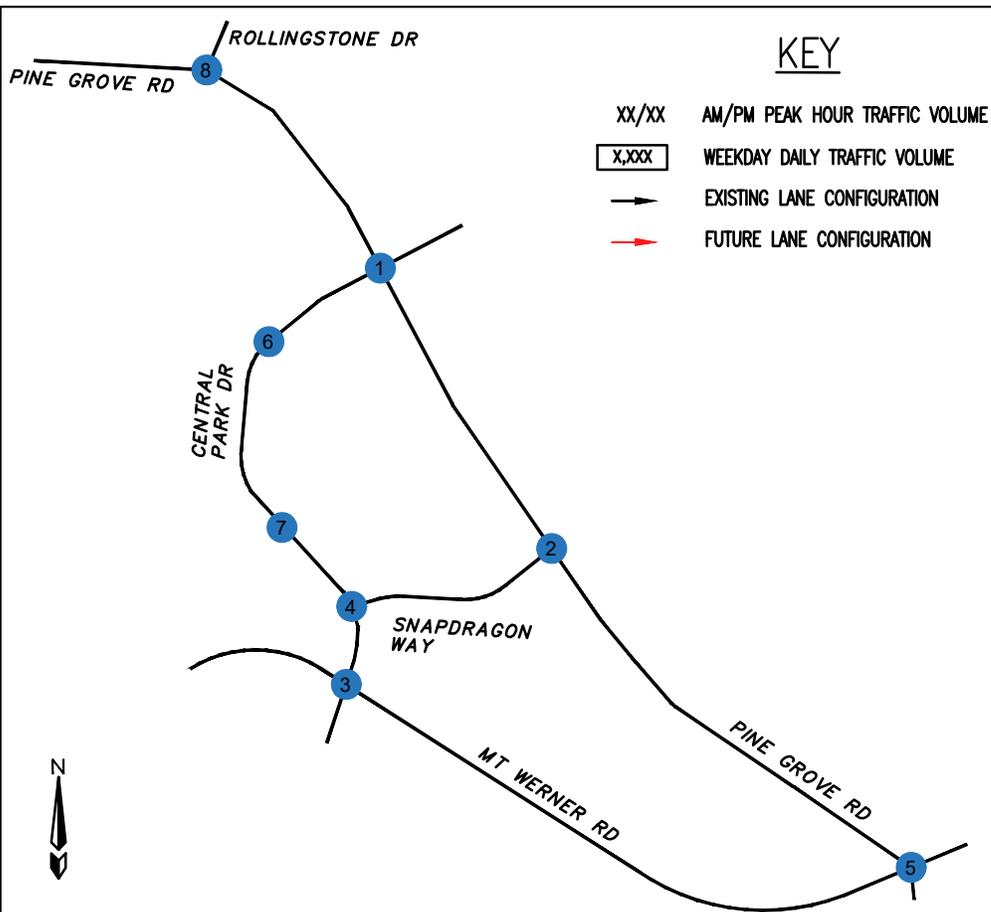
**CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
VICINITY MAP**

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	1
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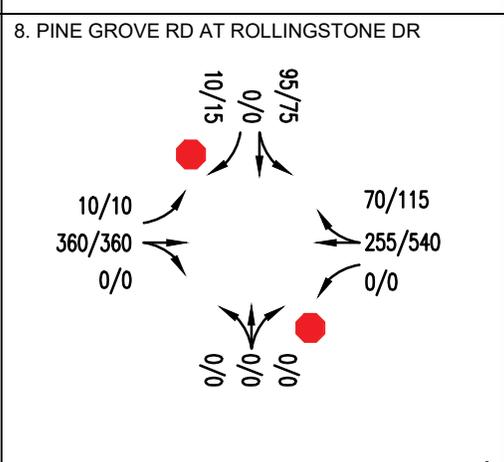
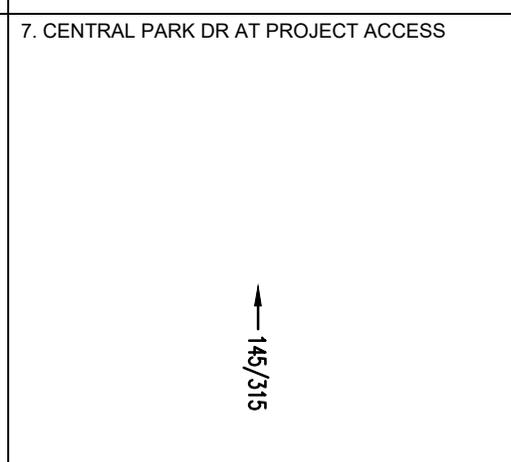
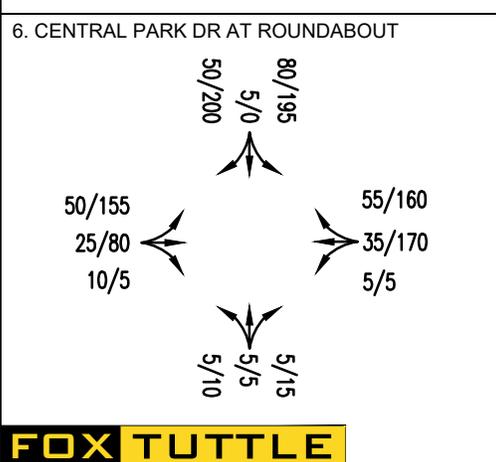
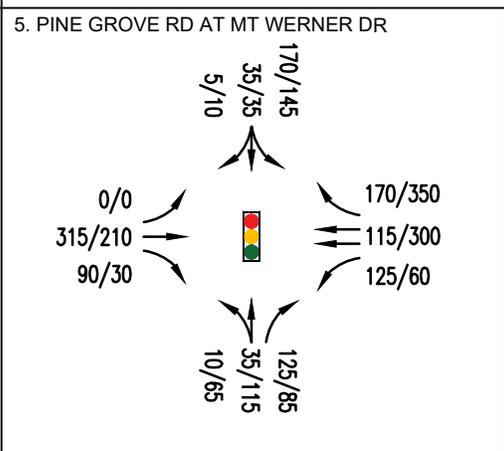
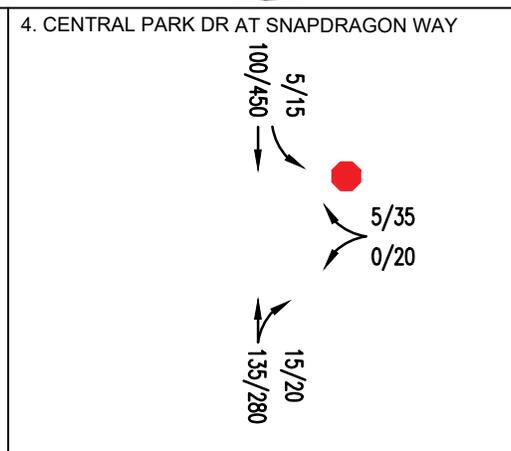
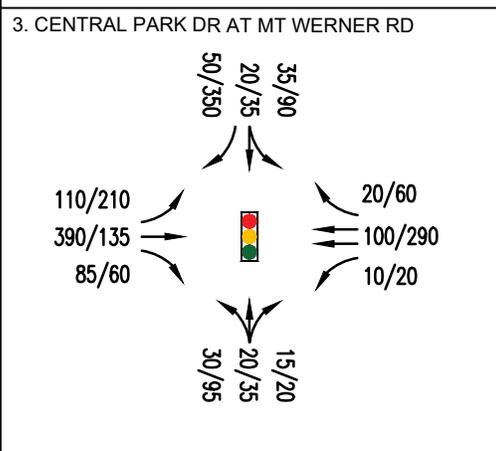
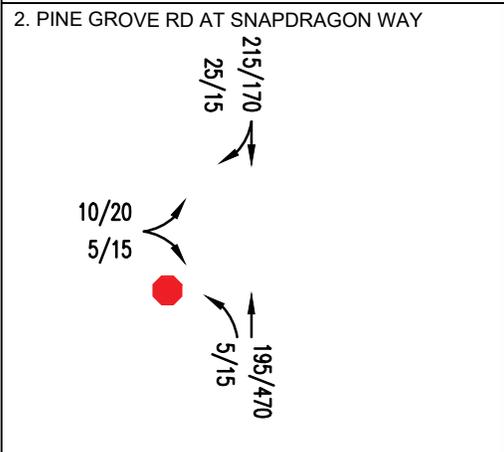
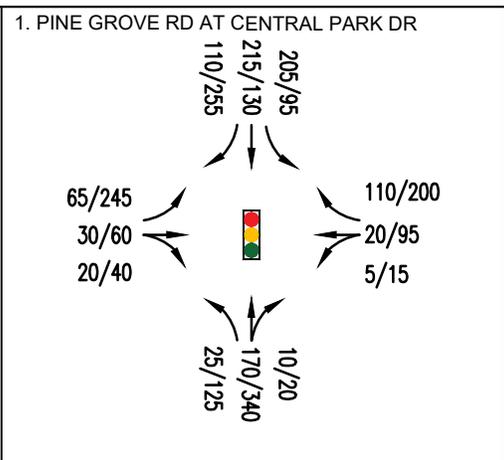
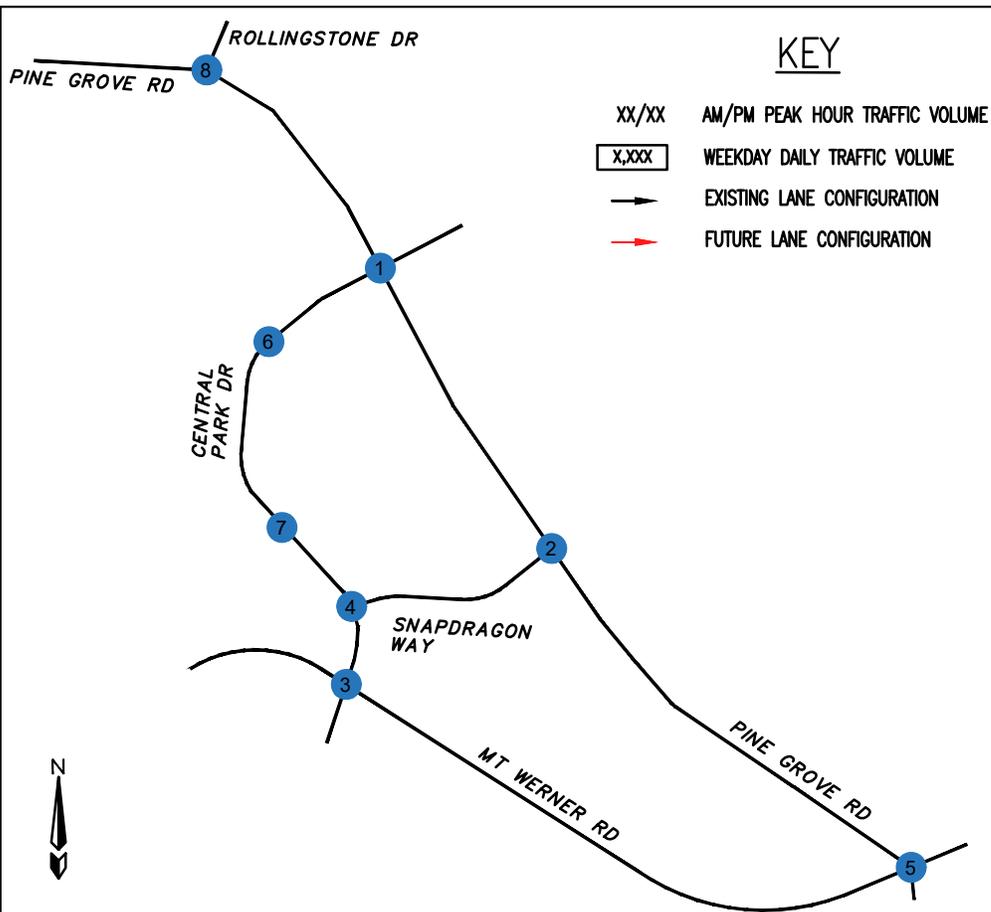
**Proposed Access
Right-In / Right-Out
Stop-Controlled**





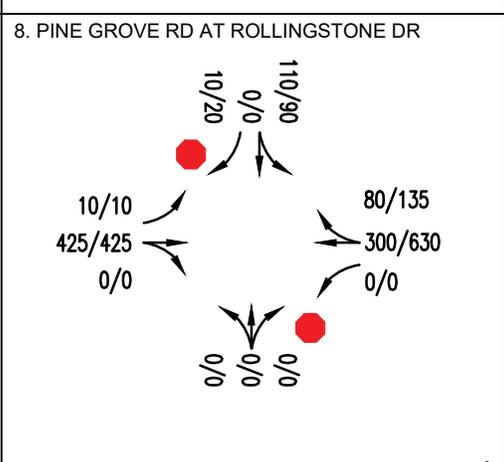
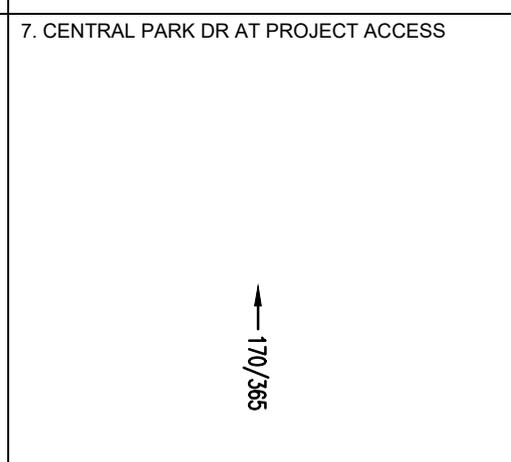
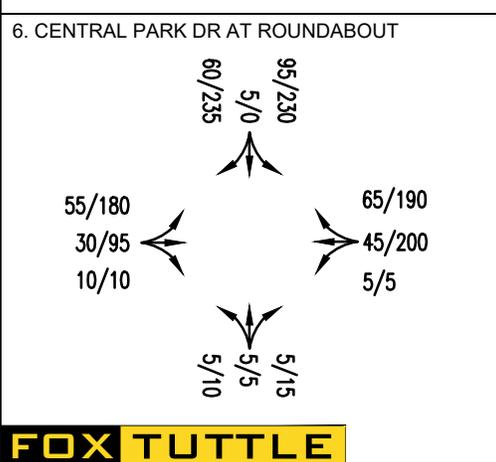
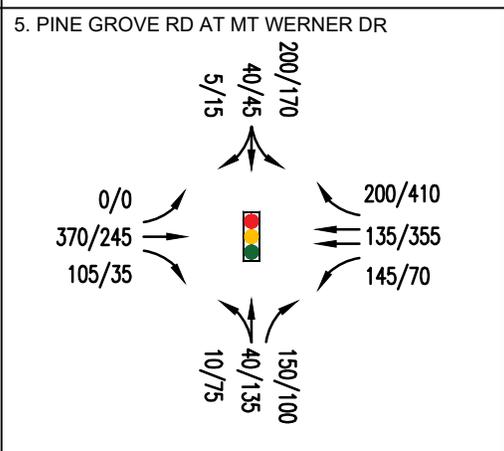
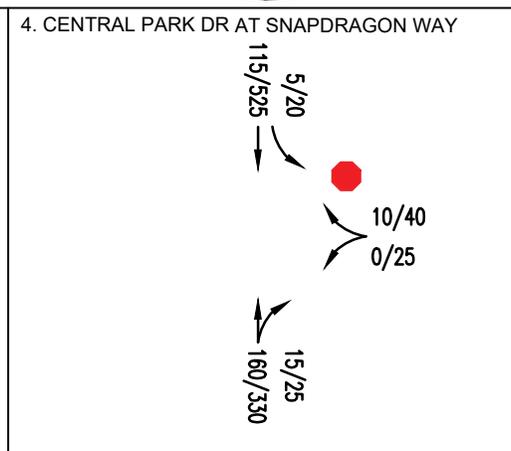
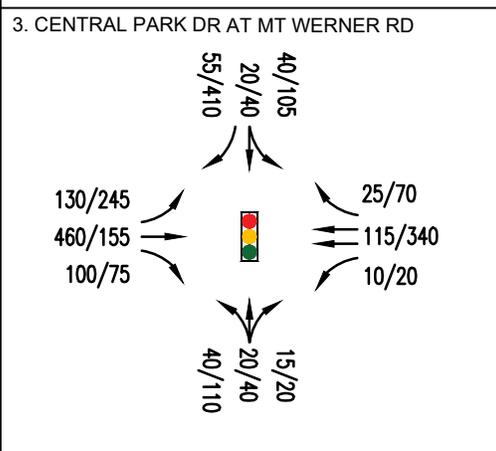
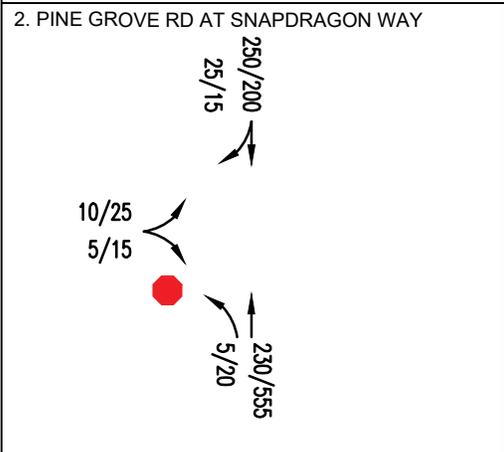
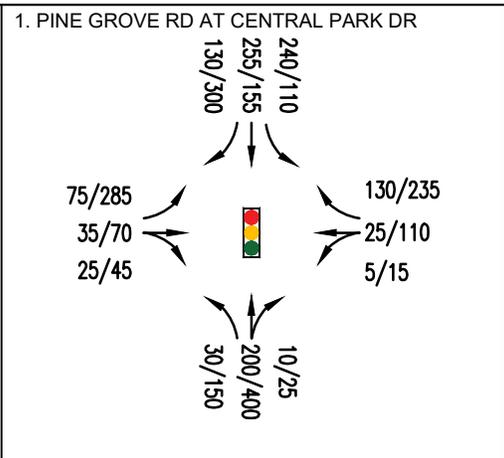
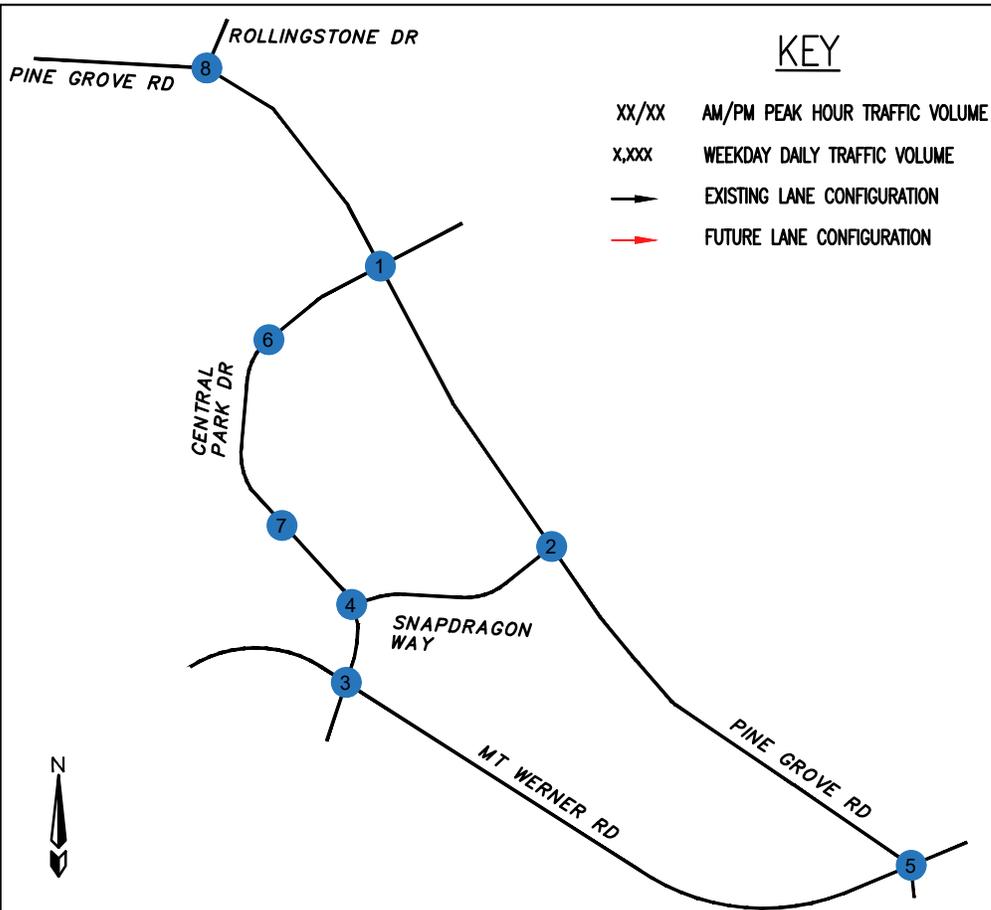
CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
EXISTING TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	3
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CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
YEAR 2027 BACKGROUND TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	4
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CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
YEAR 2043 BACKGROUND TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	5
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55%

To North Pine Grove Road

25%

From North Pine Grove Road

2%

To/From North Rollingstone Drive

3%

To/From East Central Park Drive

33%

From North US 40

3%

To North US 40

20%

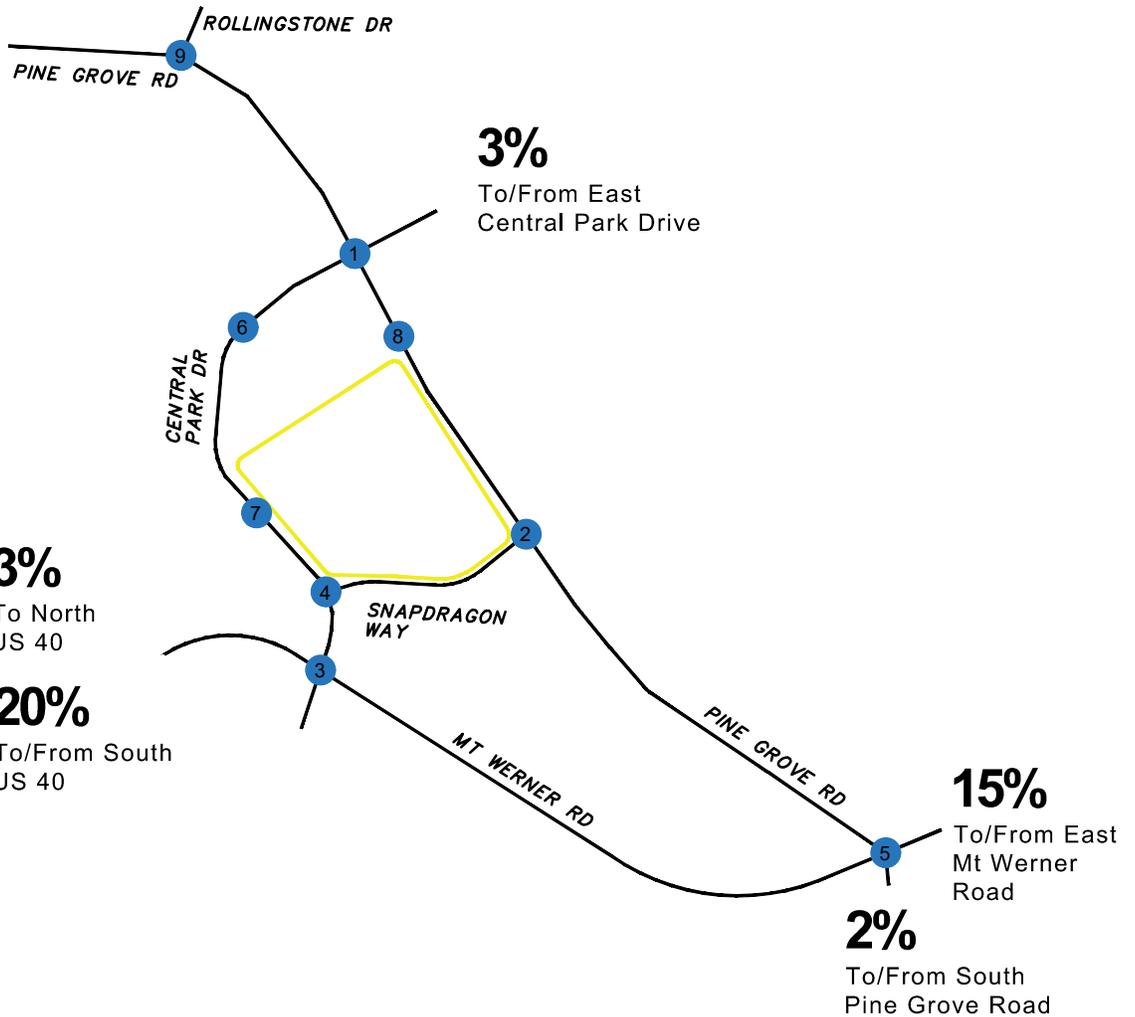
To/From South US 40

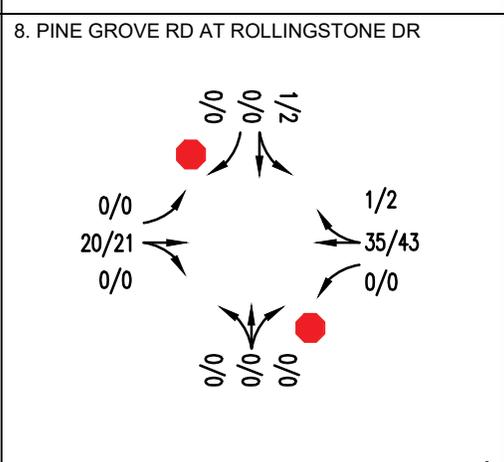
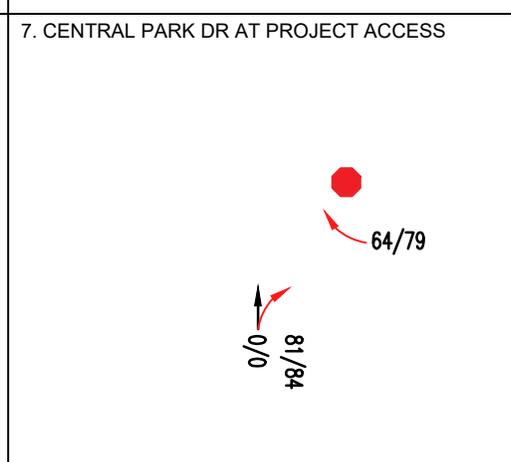
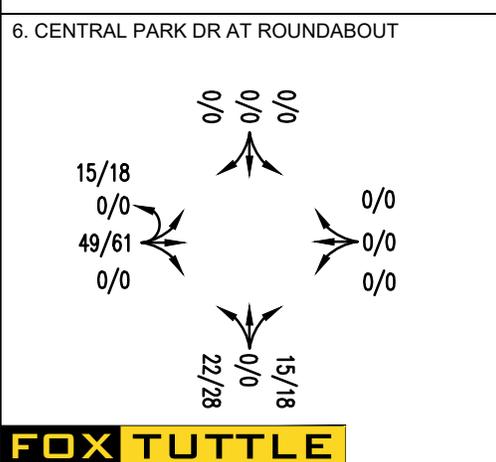
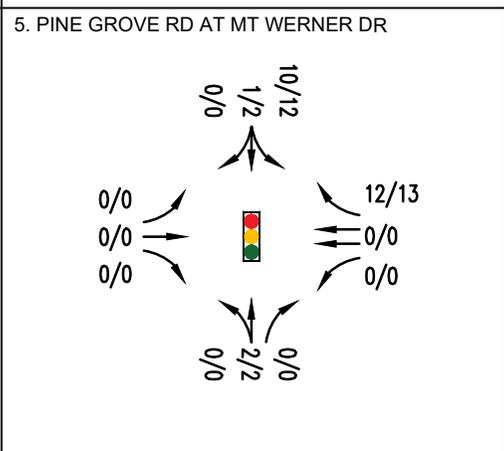
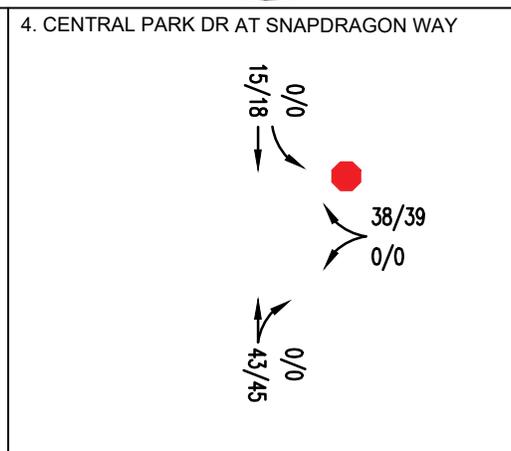
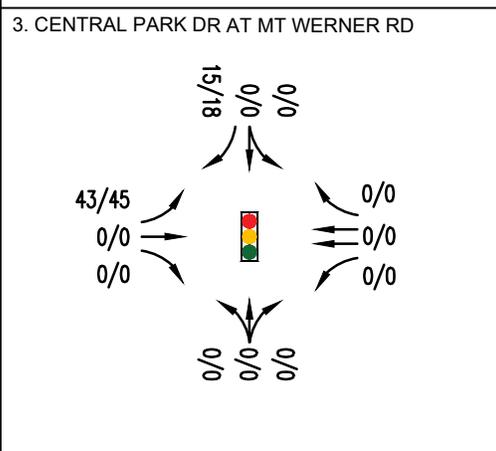
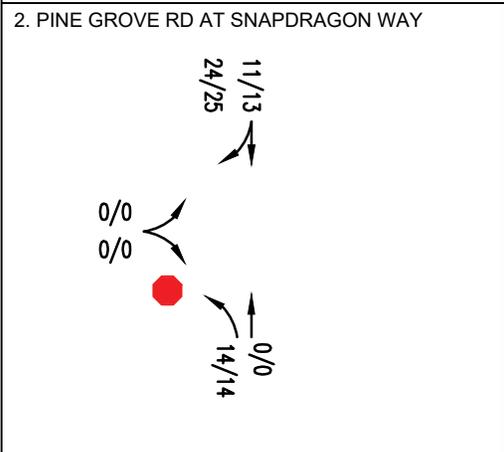
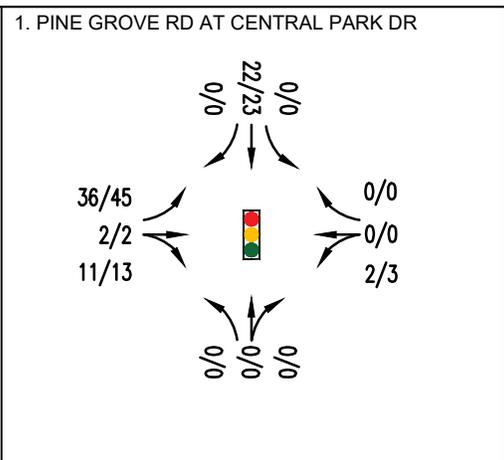
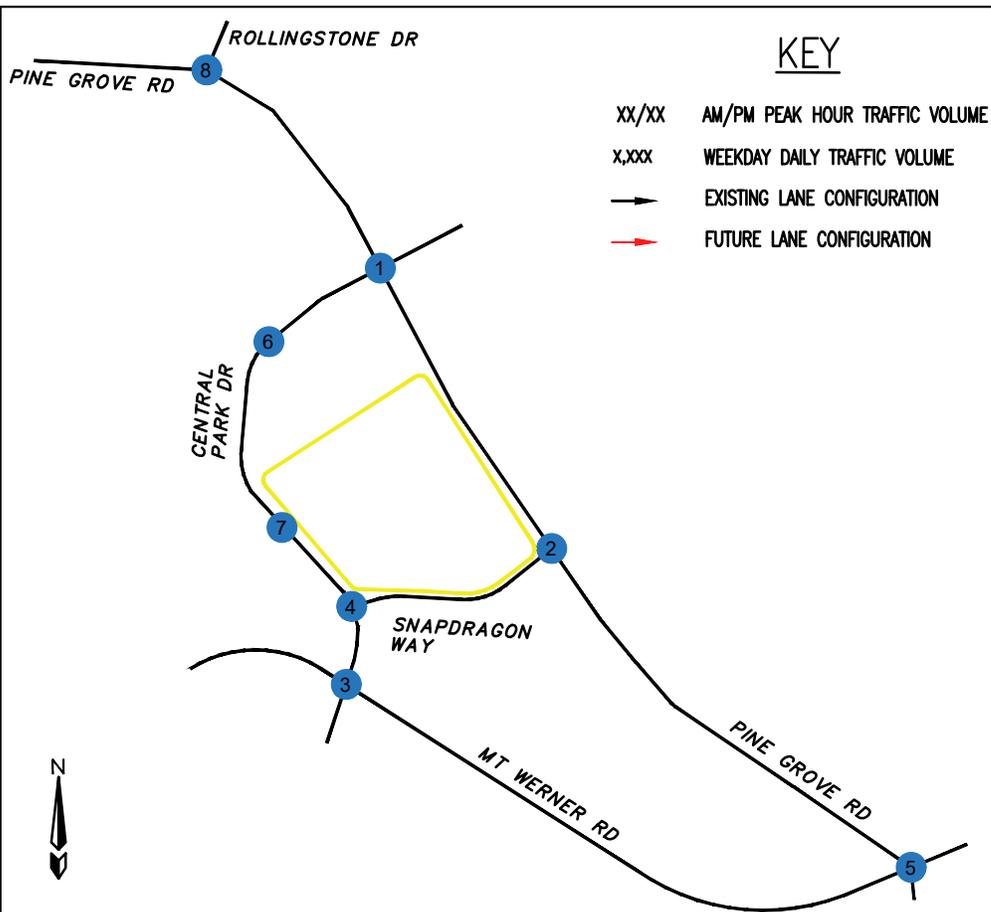
15%

To/From East Mt Werner Road

2%

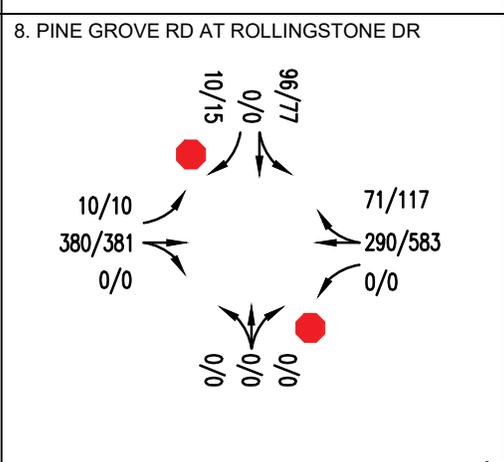
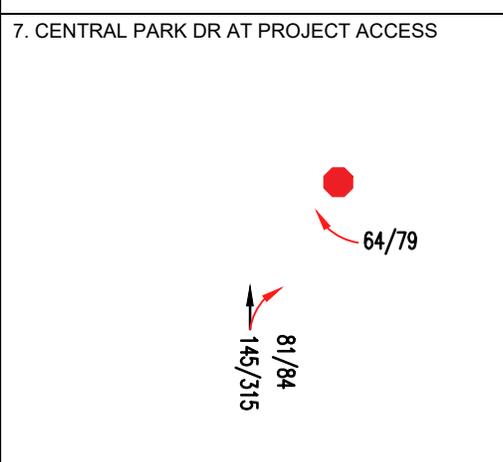
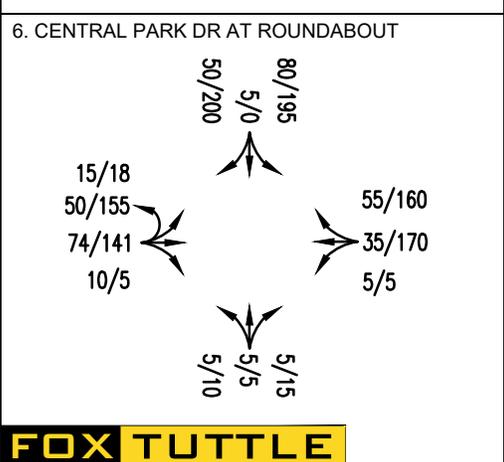
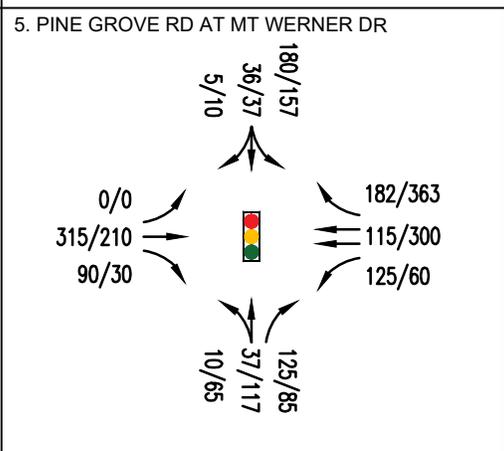
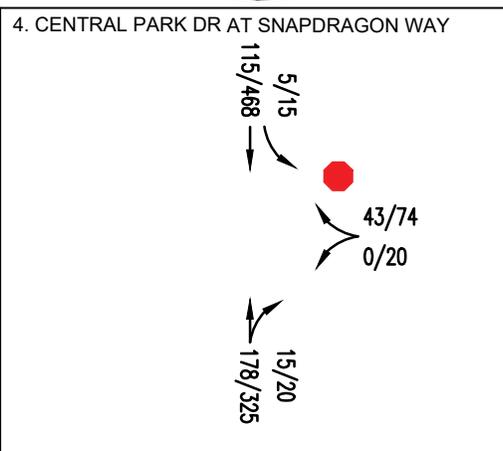
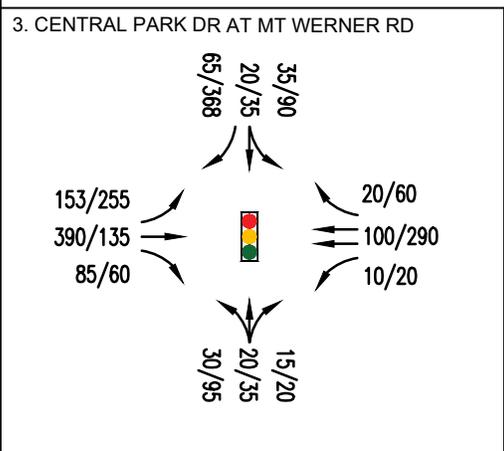
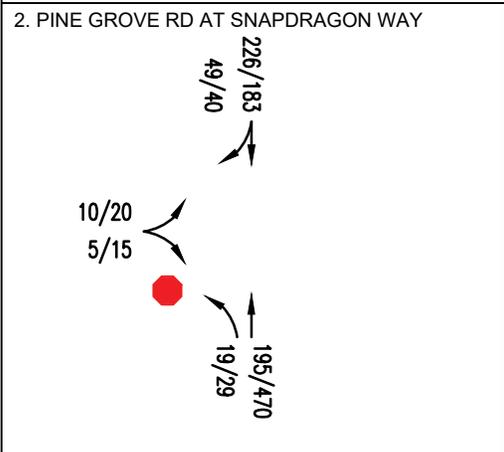
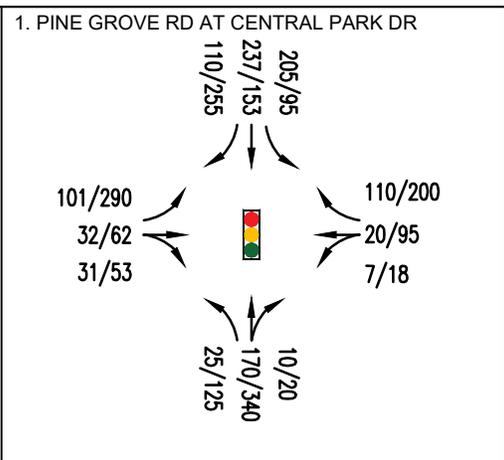
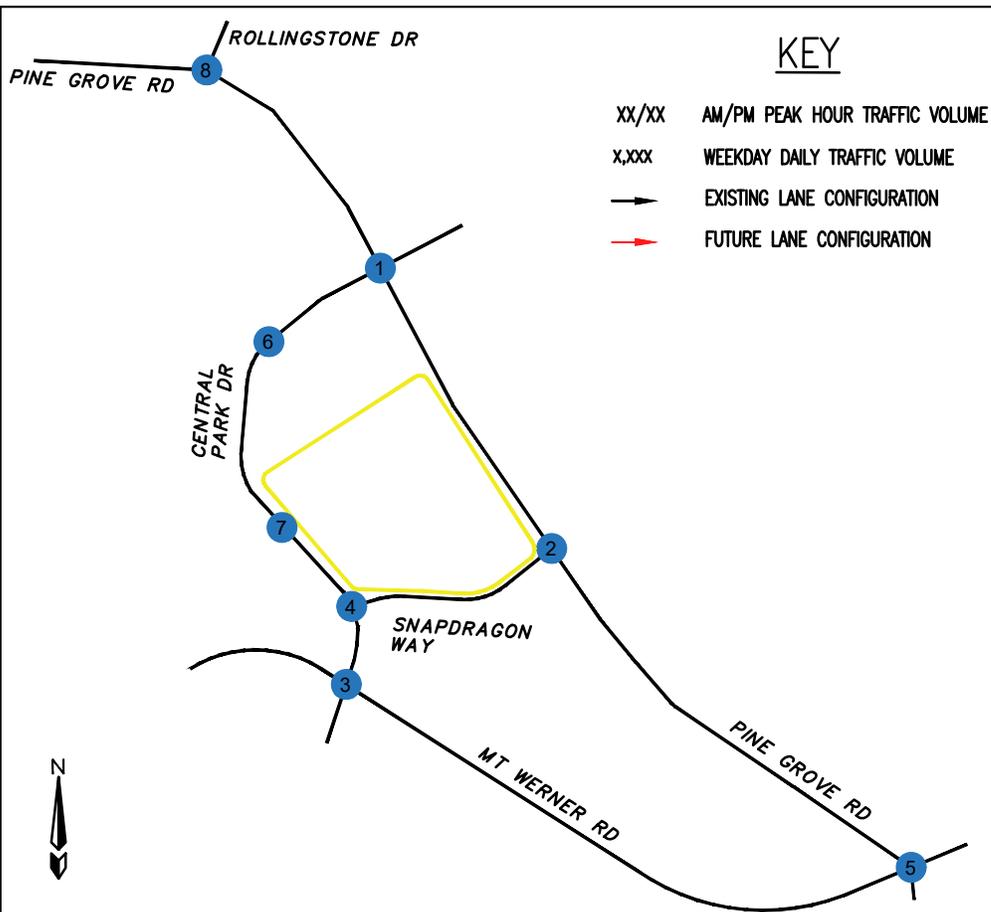
To/From South Pine Grove Road





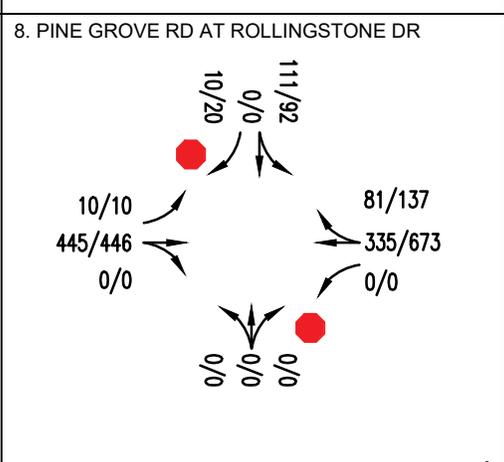
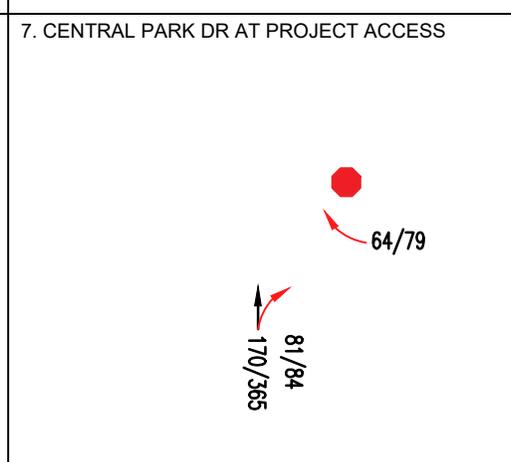
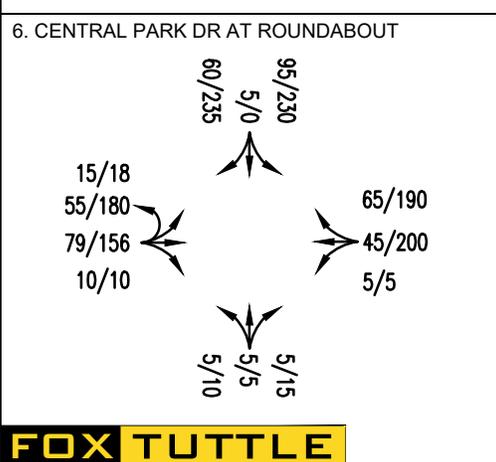
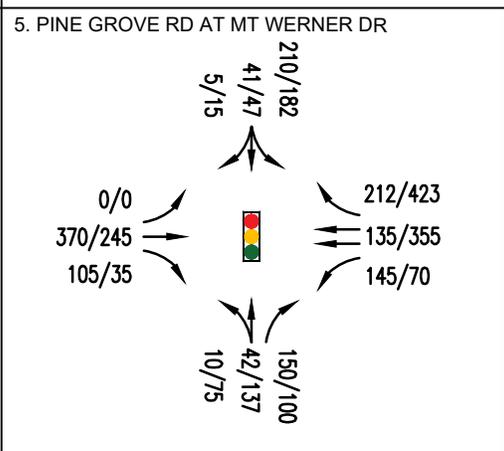
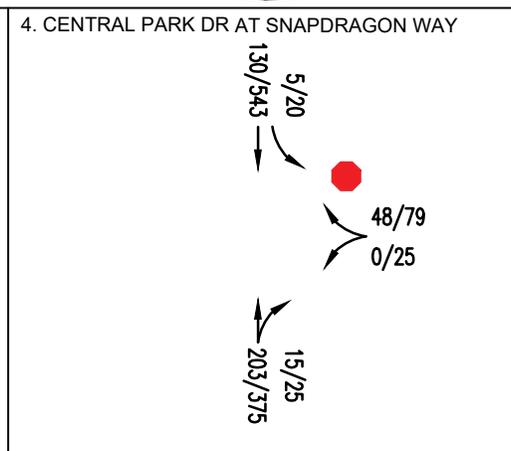
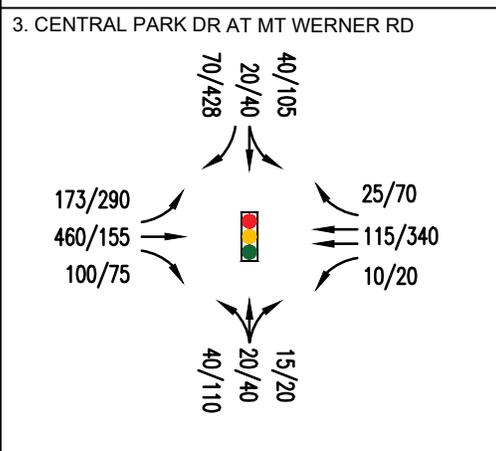
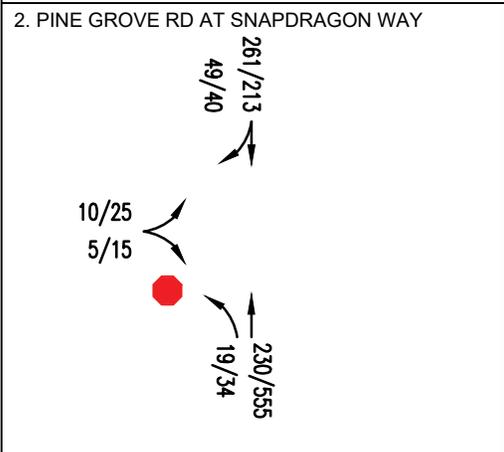
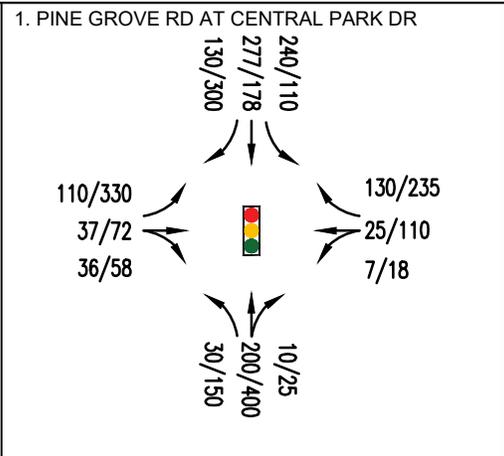
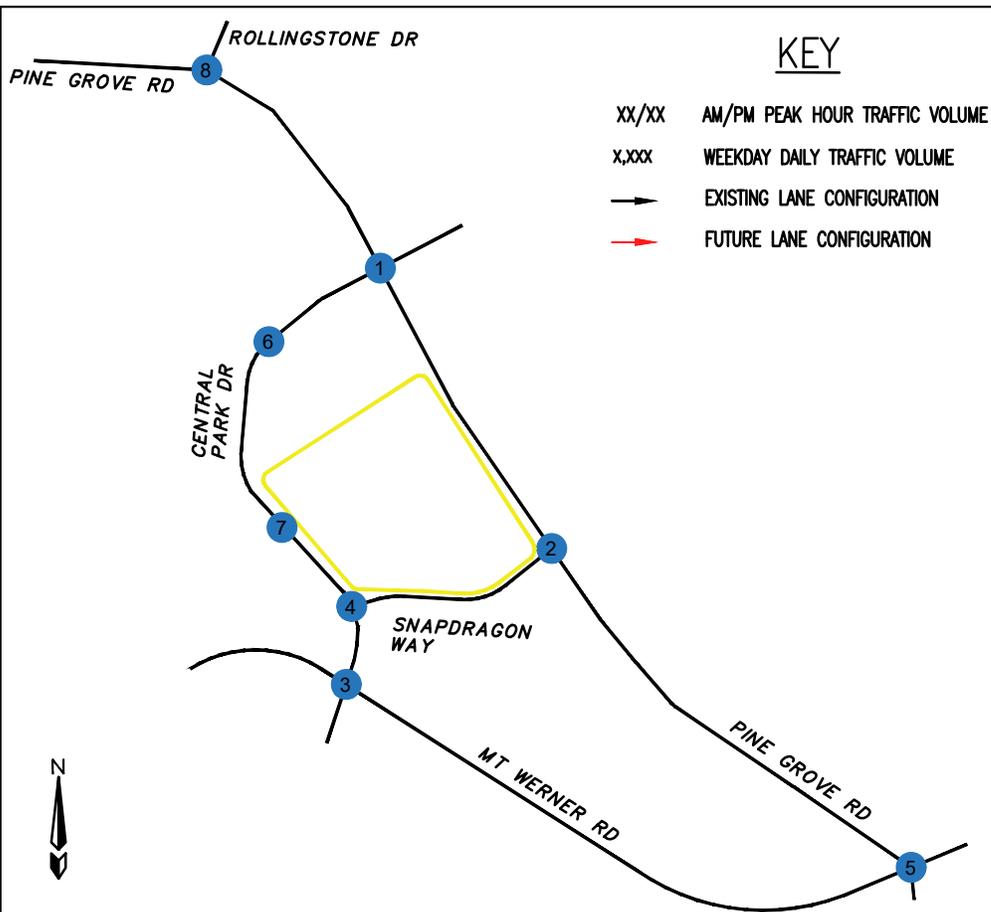
CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
SITE-GENERATED TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	7
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CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
YEAR 2027 BACKGROUND + PROJECT TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	8
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CENTRAL PARK HOTEL TRAFFIC IMPACT STUDY
YEAR 2043 BACKGROUND + PROJECT TRAFFIC VOLUMES

Project #	23013	Original Scale	NTS	Date	06/14/2023	Drawn by	SKK	Figure #	9
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Appendix:

Traffic Impact Study Scope Approval Form

Level of Service Definitions

Traffic Count Data Sheets

Intersection Capacity Worksheets





Traffic Impact Study Scope Approval Form



**Attachment A
TRAFFIC IMPACT STUDY – SCOPE APPROVAL FORM**

Prior to starting a traffic impact study, a Scope Approval Form must be submitted for review and signed by the City Public Works Director. It shall be included in every traffic study submittal as Attachment A. This Scope Approval Form is for City requirements only. Consultants must contact CDOT to determine requirements related to access permits and work in CDOT right-of-way.

Project Information

Project Name:	Central Park Workforce Housing & Hotel
Project Location:	Snapdragon Way & Pine Grove Rd./Central Park Dr.
Developer Name/ Contact:	Ridley Goodpasture / rgoodpasture@seraccapital.com
Traffic Engineer Name/ Contact:	Steve Tuttle, PE, PTOE / steve.tuttle@foxtuttle.com, 303-652-3571

Study Parameters

Type of Study Required: Trip Generation Letter Long-term Traffic Study
 Short-term Traffic Study Trip Evaluation Letter

Traffic Counts

Winter Zone Summer Zone

Counts w/in last 2 years are available By: _____ Date conducted: _____

New counts will be collected on Weekday peak season, February 2023

Existing counts will be estimated based on: _____
 % growth rate: _____
 Seasonal Adjustment Factor applied (ratio): _____

Future counts will be estimated based on a 1 % growth rate.

Peak Hours Analyzed

AM Peak Hour PM peak hour Other _____

Trip Generation Rates

From ITE Other (cite) _____

No passby or mode split (typical)

Passby or mode split (describe) Any reductions to ITE suburban residential rates for Workforce Housing will be made consistent with data from the "Work Force Housing Traffic Study in Steamboat Springs" report (Fox Tuttle, June 2021), to be agreed upon by City staff.

Trip Distribution – Attach sketch A-1

Study Parameters

List of Study Area Intersections

1.	Pine Grove Road & Central Park Drive	
2.	Pine Grove Road & Snapdragon Way	
3.	Central Park Drive & Mt. Werner Road	
4.	Central Park Drive & Snapdragon Way	
5.	RI/RO Garage access on Pine Grove Rd	
6.	Accesses on Snapdragon Way (3)	
7.	Pine Grove Rd. & Mt. Werner Rd.	

Key Analysis items

- Existing + site traffic at study intersections
- Peak Hour LOS at study intersections
- CDOT Access Permit Required (consult with CDOT prior to approval of scope)
- % Site contribution to intersection/road segment at Pine Grove Rd. & Mt. Werner Rd.
- Auxiliary lane evaluation at RI/RO Garage access on Pine Grove Rd.
- Traffic signal warrants at _____
- Four-way stop sign warrants at _____
- Queuing Analysis at all intersections
- Other _____

Approvals

Prepared By: _____ Date: _____

Please note that the approval of this scope approval form shall not be construed as an approval of the proposed use, but rather a methodology for evaluation of the proposed use. During the city development review process, the proposed use will be reviewed by city staff for compliance with code, standards, and community planning documents.

Level of Service Definitions



LEVEL OF SERVICE (LOS) DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle*		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers can maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome, and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however, the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.

* Delay ranges based on 2010 Highway Capacity Manual Criteria

Traffic Count Data Sheets



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Central Park Dr				Central Park Dr				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	2	0	0	0	0	0	1	1	0	0	1	1	2	8	0
7:15 AM	0	3	0	0	0	0	0	0	0	0	2	0	0	1	2	0	8	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	1	0	2	0	1	8	0
7:45 AM	0	0	1	0	0	0	0	1	0	0	3	0	0	0	4	1	10	34
8:00 AM	0	0	0	0	0	0	0	1	0	0	5	0	0	2	7	1	16	42
8:15 AM	0	0	0	0	0	0	2	2	0	1	4	0	0	2	1	3	15	49
8:30 AM	0	2	0	0	0	0	1	1	0	0	2	0	0	0	4	0	10	51
8:45 AM	0	1	0	0	0	0	1	0	0	1	3	0	0	0	1	2	9	50
Count Total	0	6	1	2	0	0	4	5	0	3	24	1	0	8	20	10	84	0
Peak Hour	0	3	0	0	0	0	4	4	0	2	14	0	0	4	13	6	50	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Central Park Dr			Central Park Dr			Pine Grove Rd			Pine Grove Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

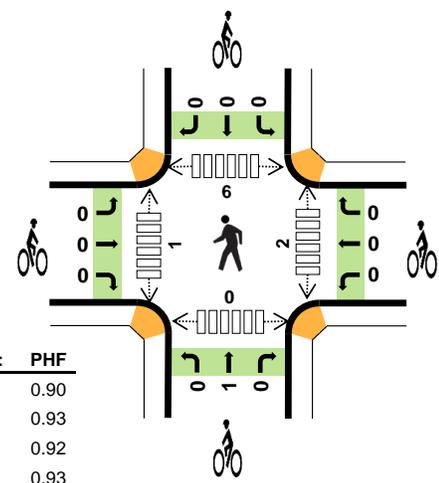
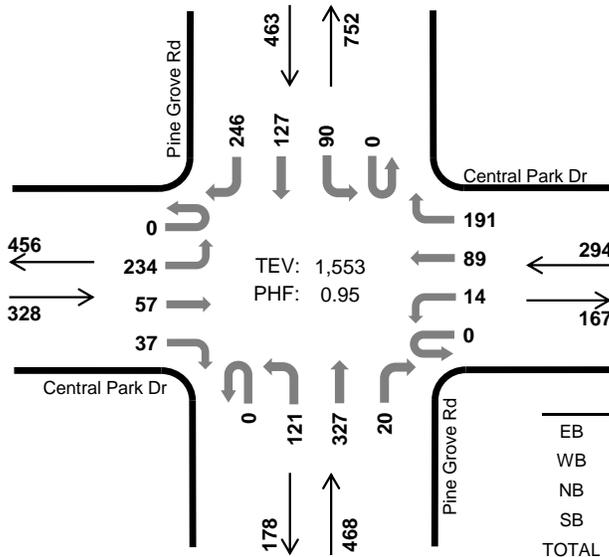
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Pine Grove Rd Central Park Dr



Peak Hour

Date: 03/21/2023
Count Period: 3:30 PM to 5:30 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	1.5%	0.90
WB	1.4%	0.93
NB	4.5%	0.92
SB	4.1%	0.93
TOTAL	3.2%	0.95

Two-Hour Count Summaries

Interval Start	Central Park Dr Eastbound				Central Park Dr Westbound				Pine Grove Rd Northbound				Pine Grove Rd Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:30 PM	0	56	23	8	0	1	23	39	0	30	77	4	0	37	38	43	379	0	
3:45 PM	0	49	16	9	0	1	23	49	0	40	76	1	0	26	41	62	393	0	
4:00 PM	0	70	13	8	0	5	24	50	0	27	78	8	0	26	29	69	407	0	
4:15 PM	0	57	19	11	0	4	15	47	0	26	76	5	0	18	34	55	367	1,546	
4:30 PM	0	52	11	6	0	2	25	49	0	35	82	4	0	16	35	58	375	1,542	
4:45 PM	0	55	14	12	0	3	25	45	0	33	91	3	0	30	29	64	404	1,553	
5:00 PM	0	61	14	9	0	1	23	46	0	30	70	2	0	25	30	57	368	1,514	
5:15 PM	0	56	12	7	0	3	16	51	0	29	66	2	0	23	36	55	356	1,503	
Count Total	0	456	122	70	0	20	174	376	0	250	616	29	0	201	272	463	3,049	0	
Peak Hour	All	0	234	57	37	0	14	89	191	0	121	327	20	0	90	127	246	1,553	0
	HV	0	4	0	1	0	0	3	1	0	1	19	1	0	3	10	6	49	0
	HV%	-	2%	0%	3%	-	0%	3%	1%	-	1%	6%	5%	-	3%	8%	2%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	1	1	2	7	11	0	0	0	0	0	0	0	1	0	1
3:45 PM	1	2	6	3	12	0	0	0	0	0	2	0	6	0	8
4:00 PM	2	1	4	5	12	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	4	4	9	0	0	0	0	0	0	0	2	0	2
4:30 PM	1	2	5	6	14	0	0	1	0	1	0	1	2	0	3
4:45 PM	1	1	8	4	14	0	0	0	0	0	2	0	2	0	4
5:00 PM	2	2	4	8	16	0	0	0	0	0	1	0	3	1	5
5:15 PM	1	1	5	3	10	0	0	0	0	0	0	0	0	0	0
Count Total	10	10	38	40	98	0	0	1	0	1	5	1	16	1	23
Peak Hour	5	4	21	19	49	0	0	1	0	1	2	1	6	0	9

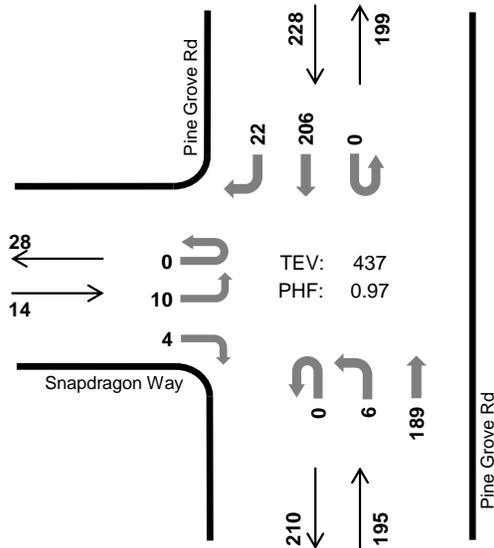
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Central Park Dr				Central Park Dr				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM	0	1	0	0	0	0	1	0	0	0	2	0	0	1	4	2	11	0
3:45 PM	0	1	0	0	0	0	1	1	0	0	6	0	0	1	2	0	12	0
4:00 PM	0	1	0	1	0	0	1	0	0	0	3	1	0	0	2	3	12	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	1	2	1	9	44
4:30 PM	0	1	0	0	0	0	1	1	0	1	4	0	0	0	4	2	14	47
4:45 PM	0	1	0	0	0	0	1	0	0	0	8	0	0	2	2	0	14	49
5:00 PM	0	1	0	1	0	0	2	0	0	0	4	0	0	1	5	2	16	53
5:15 PM	0	1	0	0	0	0	1	0	0	1	4	0	0	0	2	1	10	54
Count Total	0	8	0	2	0	0	8	2	0	2	35	1	0	6	23	11	98	0
Peak Hour	0	4	0	1	0	0	3	1	0	1	19	1	0	3	10	6	49	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Central Park Dr			Central Park Dr			Pine Grove Rd			Pine Grove Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Pine Grove Rd Snapdragon Way

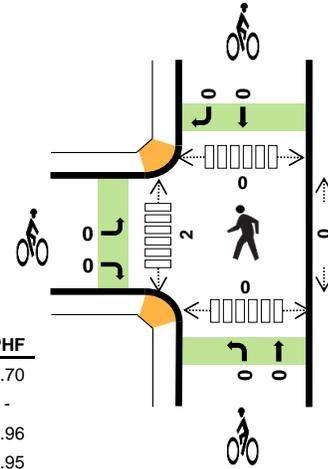


Peak Hour

Date: 03/21/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



TEV: 437
PHF: 0.97



	HV %:	PHF
EB	0.0%	0.70
WB	-	-
NB	9.2%	0.96
SB	6.1%	0.95
TOTAL	7.3%	0.97

Two-Hour Count Summaries

Interval Start	Snapdragon Way				N/A				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		TH		RT						
7:00 AM	0	2	0	0	0	0	0	0	0	0	16	0	0	0	32	2	52	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	23	1	44	0	
7:30 AM	0	1	0	2	0	0	0	0	0	2	25	0	0	0	33	2	65	0	
7:45 AM	0	3	0	0	0	0	0	0	0	1	53	0	0	0	39	2	98	259	
8:00 AM	0	2	0	1	0	0	0	0	0	1	49	0	0	0	56	4	113	320	
8:15 AM	0	1	0	0	0	0	0	0	0	3	41	0	0	0	46	9	100	376	
8:30 AM	0	4	0	1	0	0	0	0	0	2	49	0	0	0	51	5	112	423	
8:45 AM	0	3	0	2	0	0	0	0	0	0	50	0	0	0	53	4	112	437	
Count Total	0	16	0	6	0	0	0	0	0	9	303	0	0	0	333	29	696	0	
Peak Hour	All	0	10	0	4	0	0	0	0	0	6	189	0	0	0	206	22	437	0
	HV	0	0	0	0	0	0	0	0	0	2	16	0	0	0	14	0	32	0
	HV%	-	0%	-	0%	-	-	-	-	-	33%	8%	-	-	-	7%	0%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
7:15 AM	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	3	1	5	0	0	0	1	1	1	0	0	0	1
7:45 AM	1	0	5	4	10	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	3	8	11	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	6	1	7	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	6	1	7	0	0	0	0	0	0	2	0	0	2
Count Total	2	0	29	21	52	0	0	1	1	2	1	2	0	0	3
Peak Hr	0	0	18	14	32	0	0	0	0	0	0	2	0	0	2

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	Snapdragon Way				N/A				Pine Grove Rd				Pine Grove Rd					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
7:30 AM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	1	0	5	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	3	1	10	20
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	8	0	11	30
8:15 AM	0	0	0	0	0	0	0	0	0	1	5	0	0	0	1	0	7	33
8:30 AM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	4	0	7	35
8:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	7	32
Count Total	0	1	0	1	0	0	0	0	0	2	27	0	0	0	20	1	52	0
Peak Hour	0	0	0	0	0	0	0	0	0	2	16	0	0	0	14	0	32	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour
Interval Start	Snapdragon Way			N/A			Pine Grove Rd			Pine Grove Rd					
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	1	0	0	1	0	2	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Snapdragon Way				N/A				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	6	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	2	0	8	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	6	25
4:30 PM	0	0	0	0	0	0	0	0	0	1	5	0	0	0	4	0	10	29
4:45 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	10	31
5:00 PM	0	0	0	0	0	0	0	0	0	2	4	0	0	0	4	0	10	36
5:15 PM	0	0	0	0	0	0	0	0	0	1	6	0	0	0	4	0	11	41
Count Total	0	0	0	0	0	0	0	0	0	4	38	0	0	0	24	0	66	0
Peak Hour	0	0	0	0	0	0	0	0	0	1	20	0	0	0	10	0	31	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Snapdragon Way			N/A			Pine Grove Rd			Pine Grove Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0

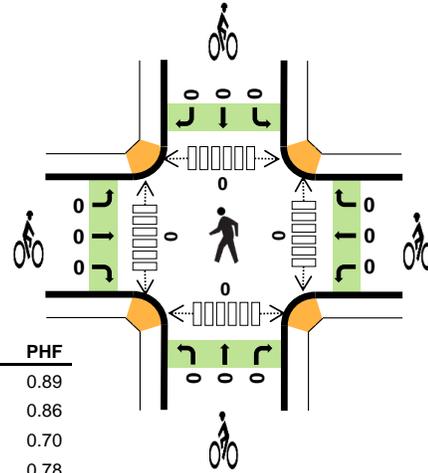
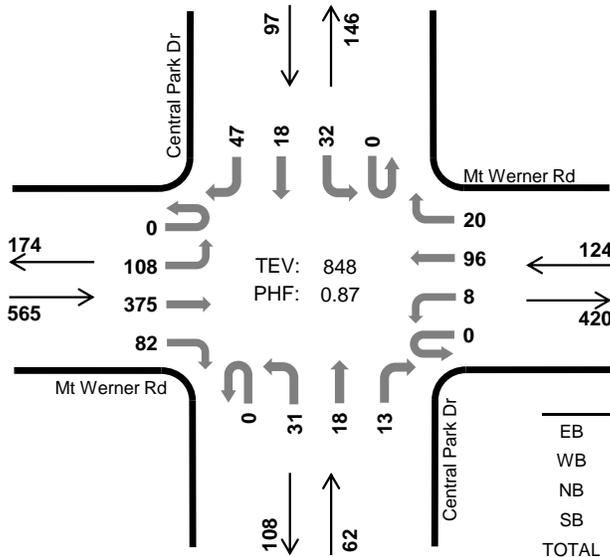
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Central Park Dr Mt Werner Rd



Peak Hour

Date: 03/21/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	2.5%	0.89
WB	12.1%	0.86
NB	8.1%	0.70
SB	12.4%	0.78
TOTAL	5.4%	0.87

Two-Hour Count Summaries

Interval Start	Mt Werner Rd Eastbound				Mt Werner Rd Westbound				Central Park Dr Northbound				Central Park Dr Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	9	51	10	0	3	12	1	0	1	3	1	0	4	1	6	102	0	
7:15 AM	0	8	62	10	0	4	7	5	0	7	1	4	0	4	3	11	126	0	
7:30 AM	0	12	47	14	0	2	8	0	0	6	4	3	0	5	5	6	112	0	
7:45 AM	0	17	68	17	0	4	24	3	0	4	5	3	0	4	2	10	161	501	
8:00 AM	0	28	109	21	0	3	20	6	0	3	3	1	0	5	2	7	208	607	
8:15 AM	0	28	85	16	0	1	28	1	0	5	2	4	0	8	7	14	199	680	
8:30 AM	0	26	103	27	0	3	26	7	0	13	6	3	0	13	5	13	245	813	
8:45 AM	0	26	78	18	0	1	22	6	0	10	7	5	0	6	4	13	196	848	
Count Total	0	154	603	133	0	21	147	29	0	49	31	24	0	49	29	80	1,349	0	
Peak Hour	All	0	108	375	82	0	8	96	20	0	31	18	13	0	32	18	47	848	0
	HV	0	0	11	3	0	1	11	3	0	3	0	2	0	9	1	2	46	0
	HV%	-	0%	3%	4%	-	13%	11%	15%	-	10%	0%	15%	-	28%	6%	4%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	1	2	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	3	3	3	11	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	2	0	1	4	0	0	0	0	0	0	1	0	0	1
7:45 AM	2	3	0	3	8	0	0	0	0	0	0	0	1	0	1
8:00 AM	4	2	1	2	9	0	0	0	0	0	0	0	0	0	0
8:15 AM	2	4	0	5	11	0	0	0	0	0	0	0	0	0	0
8:30 AM	3	7	0	4	14	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	2	4	1	12	0	0	0	0	0	0	0	0	0	0
Count Total	20	24	9	21	74	0	0	0	0	0	0	1	1	0	2
Peak Hour	14	15	5	12	46	0	0	0	0	0	0	0	0	0	0

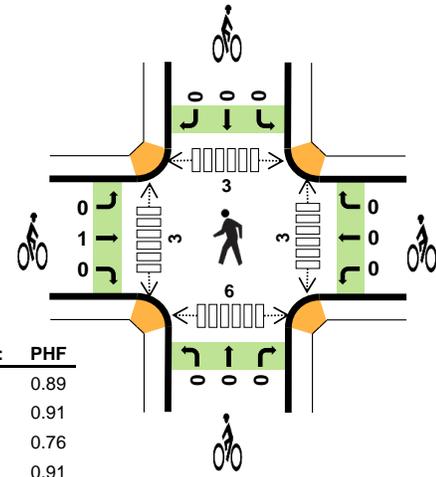
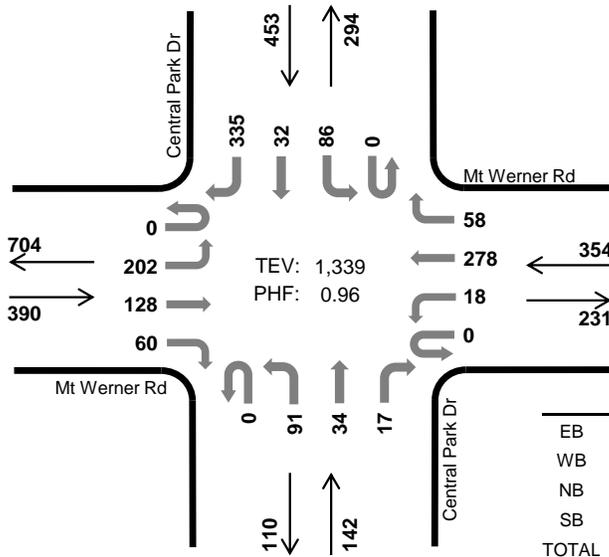
Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Mt Werner Rd				Mt Werner Rd				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	1	5	0
7:15 AM	0	0	2	0	0	0	0	3	0	1	0	2	0	2	1	0	0	11	0
7:30 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	4	0
7:45 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	2	0	1	8	28
8:00 AM	0	0	3	1	0	0	2	0	0	1	0	0	0	1	0	1	0	9	32
8:15 AM	0	0	2	0	0	0	4	0	0	0	0	0	0	4	0	1	0	11	32
8:30 AM	0	0	3	0	0	1	4	2	0	0	0	0	0	4	0	0	0	14	42
8:45 AM	0	0	3	2	0	0	1	1	0	2	0	2	0	0	1	0	0	12	46
Count Total	0	0	17	3	0	2	15	7	0	4	1	4	0	14	3	4	0	74	0
Peak Hour	0	0	11	3	0	1	11	3	0	3	0	2	0	9	1	2	0	46	0
Two-Hour Count Summaries - Bikes																			
Interval Start	Mt Werner Rd			Mt Werner Rd			Central Park Dr			Central Park Dr			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																			

Central Park Dr Mt Werner Rd



Peak Hour

Date: 03/21/2023
Count Period: 3:30 PM to 5:30 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	3.6%	0.89
WB	6.8%	0.91
NB	1.4%	0.76
SB	3.3%	0.91
TOTAL	4.1%	0.96

Two-Hour Count Summaries

Interval Start	Mt Werner Rd Eastbound				Mt Werner Rd Westbound				Central Park Dr Northbound				Central Park Dr Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:30 PM	0	53	35	25	0	5	43	14	0	23	7	3	0	15	9	75	307	0	
3:45 PM	0	49	41	21	0	3	63	14	0	20	12	8	0	22	9	67	329	0	
4:00 PM	0	51	24	18	0	7	92	9	0	16	11	3	0	18	14	67	330	0	
4:15 PM	0	41	31	19	0	5	66	15	0	17	14	5	0	15	9	81	318	1,284	
4:30 PM	0	43	22	16	0	7	78	12	0	24	10	2	0	19	2	81	316	1,293	
4:45 PM	0	52	31	19	0	2	72	16	0	17	5	5	0	13	12	87	331	1,295	
5:00 PM	0	47	43	8	0	3	61	12	0	29	11	7	0	28	9	87	345	1,310	
5:15 PM	0	60	32	17	0	6	67	18	0	21	8	3	0	26	9	80	347	1,339	
Count Total	0	396	259	143	0	38	542	110	0	167	78	36	0	156	73	625	2,623	0	
Peak Hour	All	0	202	128	60	0	18	278	58	0	91	34	17	0	86	32	335	1,339	0
	HV	0	2	11	1	0	0	18	6	0	2	0	0	0	12	0	3	55	0
	HV%	-	1%	9%	2%	-	0%	6%	10%	-	2%	0%	0%	-	14%	0%	1%	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	2	3	1	4	10	0	0	1	0	1	1	0	1	0	2
3:45 PM	3	6	0	3	12	0	0	0	0	0	0	1	0	0	1
4:00 PM	3	4	1	8	16	0	0	0	0	0	1	3	0	4	8
4:15 PM	4	6	0	3	13	0	0	0	0	0	0	9	0	6	15
4:30 PM	1	7	0	3	11	0	0	0	0	0	2	2	2	3	9
4:45 PM	6	4	1	2	13	0	0	0	0	0	0	1	0	1	2
5:00 PM	4	7	1	5	17	1	0	0	0	1	0	0	1	0	1
5:15 PM	3	6	0	5	14	0	0	0	0	0	1	0	0	2	3
Count Total	26	43	4	33	106	1	0	1	0	2	5	16	4	16	41
Peak Hour	14	24	2	15	55	1	0	0	0	1	3	3	3	6	15

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Mt Werner Rd				Mt Werner Rd				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM	0	0	2	0	0	0	2	1	0	0	1	0	0	4	0	0	10	0
3:45 PM	0	3	0	0	0	0	5	1	0	0	0	0	0	3	0	0	12	0
4:00 PM	0	0	3	0	0	0	3	1	0	1	0	0	0	4	1	3	16	0
4:15 PM	0	0	4	0	0	0	4	2	0	0	0	0	0	2	0	1	13	51
4:30 PM	0	0	1	0	0	0	6	1	0	0	0	0	0	3	0	0	11	52
4:45 PM	0	2	3	1	0	0	3	1	0	1	0	0	0	2	0	0	13	53
5:00 PM	0	0	4	0	0	0	5	2	0	1	0	0	0	4	0	1	17	54
5:15 PM	0	0	3	0	0	0	4	2	0	0	0	0	0	3	0	2	14	55
Count Total	0	5	20	1	0	0	32	11	0	3	1	0	0	25	1	7	106	0
Peak Hour	0	2	11	1	0	0	18	6	0	2	0	0	0	12	0	3	55	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Mt Werner Rd			Mt Werner Rd			Central Park Dr			Central Park Dr			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

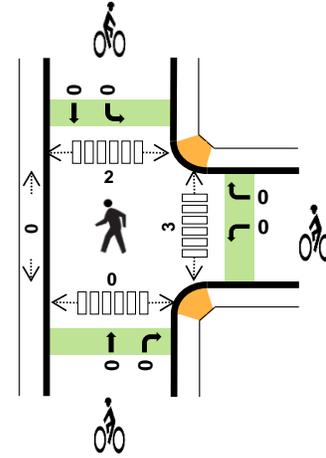
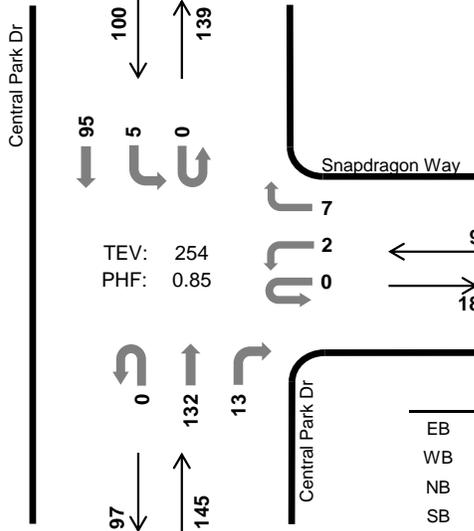
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Central Park Dr Snapdragon Way



Peak Hour

Date: 03/21/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	-	-
WB	22.2%	0.56
NB	2.1%	0.93
SB	12.0%	0.76
TOTAL	6.7%	0.85

Two-Hour Count Summaries

Interval Start	N/A				Snapdragon Way				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	0	0	0	12	2	0	1	12	0	27	0	
7:15 AM	0	0	0	0	0	1	0	0	0	0	13	1	0	0	17	0	32	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	16	0	0	2	16	0	34	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	19	6	0	0	16	0	41	134	
8:00 AM	0	0	0	0	0	1	0	0	0	0	31	6	0	1	13	0	52	159	
8:15 AM	0	0	0	0	0	0	0	3	0	0	29	2	0	0	30	0	64	191	
8:30 AM	0	0	0	0	0	0	0	4	0	0	36	2	0	3	30	0	75	232	
8:45 AM	0	0	0	0	0	1	0	0	0	0	36	3	0	1	22	0	63	254	
Count Total	0	0	0	0	0	3	0	7	0	0	192	22	0	8	156	0	388	0	
Peak Hour	All	0	0	0	0	0	2	0	7	0	0	132	13	0	5	95	0	254	0
	HV	0	0	0	0	0	0	0	2	0	0	3	0	0	0	12	0	17	0
	HV%	-	-	-	-	-	0%	-	29%	-	-	2%	0%	-	0%	13%	-	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	3	2	6	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	5	6	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	2	4	7	0	0	0	0	0	2	0	1	0	3
8:45 AM	0	0	1	1	2	0	0	0	0	0	1	0	1	0	2
Count Total	0	3	8	20	31	0	0	0	0	0	3	0	2	0	5
Peak Hr	0	2	3	12	17	0	0	0	0	0	3	0	2	0	5

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	N/A				Snapdragon Way				Central Park Dr				Central Park Dr					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	2	0	6	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	14
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	14
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	0	6	14
8:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	4	0	7	19
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	17
Count Total	0	0	0	0	0	1	0	2	0	0	8	0	0	0	20	0	31	0
Peak Hour	0	0	0	0	0	0	0	2	0	0	3	0	0	0	12	0	17	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour		
Interval Start	N/A			Snapdragon Way			Central Park Dr			Central Park Dr							
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	N/A				Snapdragon Way				Central Park Dr				Central Park Dr					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	7	0
4:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	7	0	9	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	6	27
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	26
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	24
5:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	6	0	9	24
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	4	0	7	25
Count Total	0	0	0	0	0	1	0	2	0	0	17	0	0	0	32	0	52	0
Peak Hour	0	0	0	0	0	0	0	2	0	0	8	0	0	0	15	0	25	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour
Interval Start	N/A			Snapdragon Way			Central Park Dr			Central Park Dr					
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

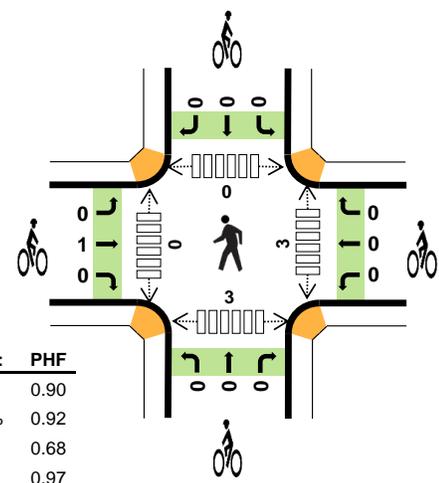
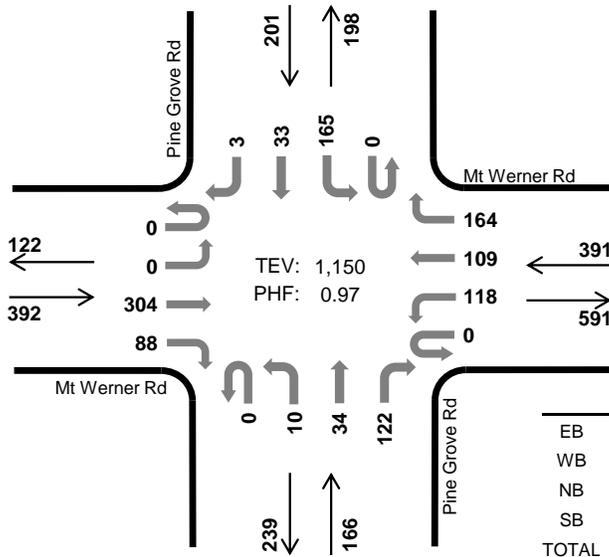
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Pine Grove Rd Mt Werner Rd



Peak Hour

Date: 03/21/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	6.9%	0.90
WB	13.8%	0.92
NB	4.2%	0.68
SB	6.5%	0.97
TOTAL	8.8%	0.97

Two-Hour Count Summaries

Interval Start	Mt Werner Rd Eastbound				Mt Werner Rd Westbound				Pine Grove Rd Northbound				Pine Grove Rd Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	51	1	0	2	13	12	0	0	5	17	0	24	5	1	132	0	
7:15 AM	0	0	59	10	0	7	13	14	0	1	6	13	0	23	1	2	149	0	
7:30 AM	0	0	50	11	0	10	10	23	0	2	7	14	0	25	10	0	163	0	
7:45 AM	0	1	55	13	0	6	31	40	0	3	13	25	0	33	4	1	225	669	
8:00 AM	0	0	85	17	0	18	22	43	0	3	9	49	0	44	7	0	297	834	
8:15 AM	0	0	71	24	0	29	34	38	0	3	11	27	0	38	12	1	288	973	
8:30 AM	0	0	84	25	0	27	28	46	0	2	9	24	0	42	5	0	292	1,102	
8:45 AM	0	0	64	22	0	44	25	37	0	2	5	22	0	41	9	2	273	1,150	
Count Total	0	3	519	123	0	143	176	253	0	16	65	191	0	270	53	7	1,819	0	
Peak Hour	All	0	0	304	88	0	118	109	164	0	10	34	122	0	165	33	3	1,150	0
	HV	0	0	26	1	0	23	16	15	0	1	1	5	0	13	0	0	101	0
	HV%	-	-	9%	1%	-	19%	15%	9%	-	10%	3%	4%	-	8%	0%	0%	9%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	4	0	0	7	0	0	0	0	0	0	0	0	0	0
7:15 AM	6	7	3	2	18	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	6	2	2	12	0	0	0	0	0	2	0	0	0	2
7:45 AM	2	11	3	4	20	0	0	0	0	0	0	0	0	0	0
8:00 AM	5	8	1	7	21	0	0	0	0	0	1	0	0	0	1
8:15 AM	7	16	3	2	28	0	0	0	0	0	0	0	0	0	0
8:30 AM	8	17	2	3	30	0	0	0	0	0	0	0	0	0	0
8:45 AM	7	13	1	1	22	1	0	0	0	1	2	0	0	3	5
Count Total	40	82	15	21	158	1	0	0	0	1	5	0	0	3	8
Peak Hour	27	54	7	13	101	1	0	0	0	1	3	0	0	3	6

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Mt Werner Rd				Mt Werner Rd				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	1	2	1	0	0	0	0	0	0	0	0	7	0
7:15 AM	0	0	5	1	0	2	4	1	0	0	1	2	0	1	0	1	18	0
7:30 AM	0	0	2	0	0	3	1	2	0	0	1	1	0	2	0	0	12	0
7:45 AM	0	0	2	0	0	4	4	3	0	0	1	2	0	3	1	0	20	57
8:00 AM	0	0	5	0	0	5	1	2	0	1	0	0	0	7	0	0	21	71
8:15 AM	0	0	7	0	0	5	5	6	0	0	1	2	0	2	0	0	28	81
8:30 AM	0	0	8	0	0	6	8	3	0	0	0	2	0	3	0	0	30	99
8:45 AM	0	0	6	1	0	7	2	4	0	0	0	1	0	1	0	0	22	101
Count Total	0	0	38	2	0	33	27	22	0	1	4	10	0	19	1	1	158	0
Peak Hour	0	0	26	1	0	23	16	15	0	1	1	5	0	13	0	0	101	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Mt Werner Rd			Mt Werner Rd			Pine Grove Rd			Pine Grove Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

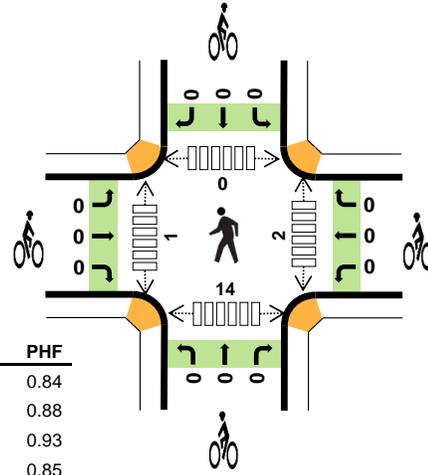
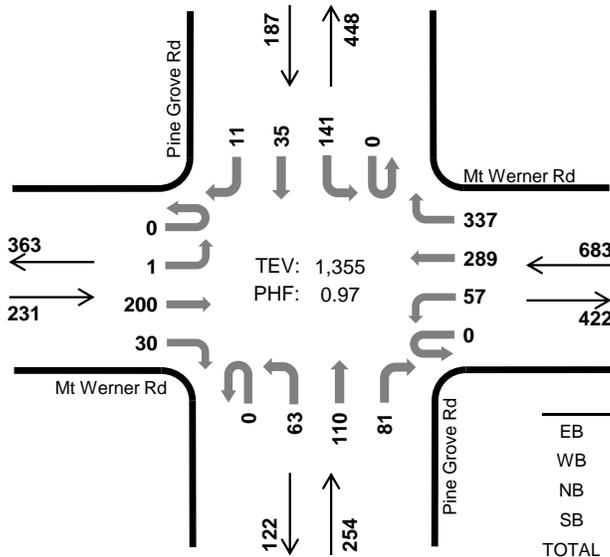
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Pine Grove Rd Mt Werner Rd



Peak Hour

Date: 03/21/2023
Count Period: 3:30 PM to 5:30 PM
Peak Hour: 3:30 PM to 4:30 PM



	HV %:	PHF
EB	10.0%	0.84
WB	7.9%	0.88
NB	5.1%	0.93
SB	5.9%	0.85
TOTAL	7.5%	0.97

Two-Hour Count Summaries

Interval Start	Mt Werner Rd Eastbound				Mt Werner Rd Westbound				Pine Grove Rd Northbound				Pine Grove Rd Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:30 PM	0	1	54	6	0	18	58	79	0	19	23	17	0	41	11	3	330	0	
3:45 PM	0	0	57	12	0	18	63	81	0	10	33	21	0	31	9	2	337	0	
4:00 PM	0	0	43	6	0	13	94	87	0	15	33	20	0	30	5	3	349	0	
4:15 PM	0	0	46	6	0	8	74	90	0	19	21	23	0	39	10	3	339	1,355	
4:30 PM	0	0	39	9	0	13	76	84	0	8	25	14	0	32	8	6	314	1,339	
4:45 PM	0	0	43	7	0	8	77	102	0	8	23	23	0	35	9	2	337	1,339	
5:00 PM	0	1	71	7	0	16	65	83	0	8	20	12	0	36	10	1	330	1,320	
5:15 PM	0	1	54	8	0	12	69	75	0	11	10	15	0	35	11	1	302	1,283	
Count Total	0	3	407	61	0	106	576	681	0	98	188	145	0	279	73	21	2,638	0	
Peak Hour	All	0	1	200	30	0	57	289	337	0	63	110	81	0	141	35	11	1,355	0
	HV	0	0	23	0	0	12	29	13	0	3	4	6	0	9	2	0	101	0
	HV%	-	0%	12%	0%	-	21%	10%	4%	-	5%	4%	7%	-	6%	6%	0%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:30 PM	8	16	2	5	31	0	0	0	0	0	1	0	0	2	3
3:45 PM	3	14	6	1	24	0	0	0	0	0	0	0	0	0	0
4:00 PM	6	12	2	3	23	0	0	0	0	0	0	1	0	9	10
4:15 PM	6	12	3	2	23	0	0	0	0	0	1	0	0	3	4
4:30 PM	5	15	2	4	26	0	1	0	0	1	2	1	0	6	9
4:45 PM	6	17	2	3	28	0	0	0	0	0	0	1	0	3	4
5:00 PM	10	16	3	4	33	0	0	0	0	0	0	0	0	0	0
5:15 PM	6	18	2	5	31	0	0	0	0	0	2	0	0	2	4
Count Total	50	120	22	27	219	0	1	0	0	1	6	3	0	25	34
Peak Hour	23	54	13	11	101	0	0	0	0	0	2	1	0	14	17

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Mt Werner Rd				Mt Werner Rd				Pine Grove Rd				Pine Grove Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:30 PM	0	0	8	0	0	3	10	3	0	0	0	2	0	4	1	0	31	0
3:45 PM	0	0	3	0	0	4	5	5	0	2	3	1	0	1	0	0	24	0
4:00 PM	0	0	6	0	0	4	7	1	0	0	0	2	0	2	1	0	23	0
4:15 PM	0	0	6	0	0	1	7	4	0	1	1	1	0	2	0	0	23	101
4:30 PM	0	0	5	0	0	2	8	5	0	1	0	1	0	4	0	0	26	96
4:45 PM	0	0	6	0	0	2	6	9	0	0	0	2	0	1	1	1	28	100
5:00 PM	0	0	10	0	0	4	7	5	0	0	0	3	0	4	0	0	33	110
5:15 PM	0	0	6	0	0	5	6	7	0	0	0	2	0	4	1	0	31	118
Count Total	0	0	50	0	0	25	56	39	0	4	4	14	0	22	4	1	219	0
Peak Hour	0	0	23	0	0	12	29	13	0	3	4	6	0	9	2	0	101	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Mt Werner Rd			Mt Werner Rd			Pine Grove Rd			Pine Grove Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

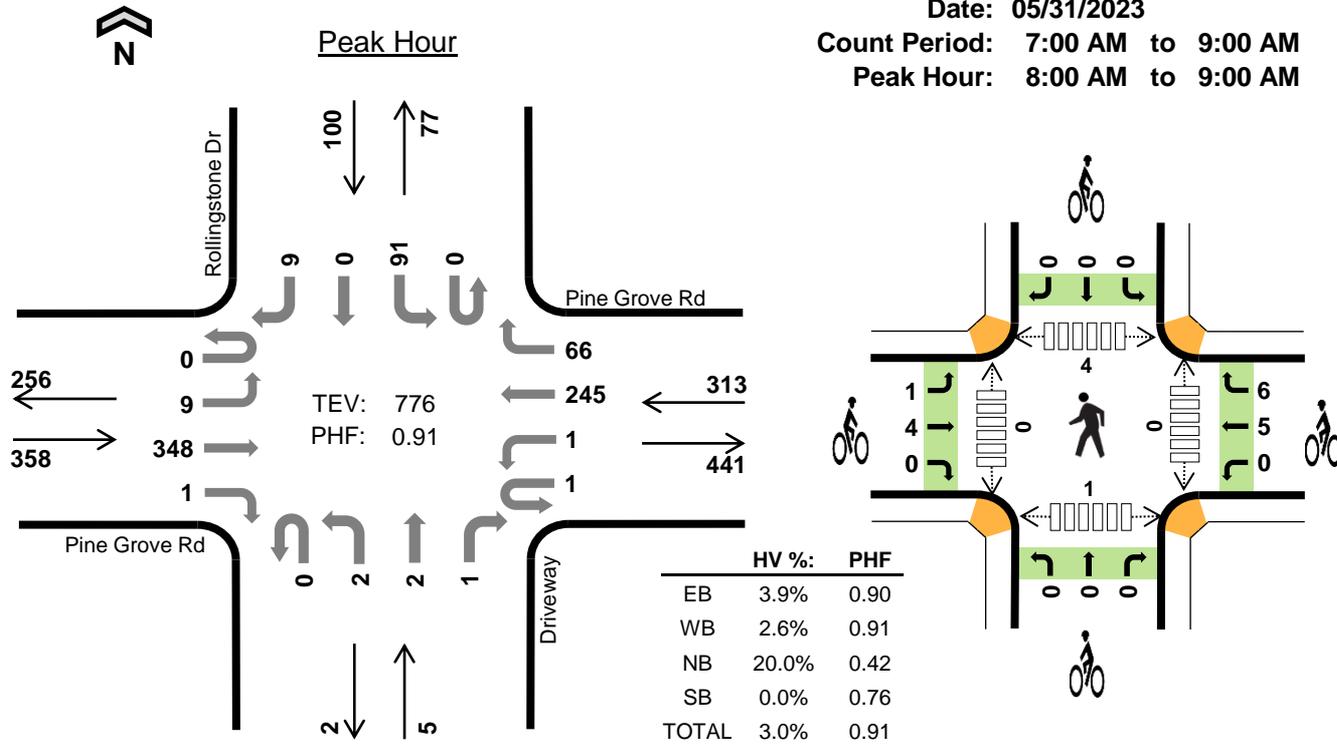
Rollingstone Dr Pine Grove Rd



Date: 05/31/2023

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 8:00 AM to 9:00 AM



Two-Hour Count Summaries

Interval Start	Pine Grove Rd				Pine Grove Rd				Driveway				Rollingstone Dr				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT				
7:00 AM	0	0	21	0	0	0	33	5	0	0	0	0	0	10	0	3	72	0	
7:15 AM	0	1	58	0	0	0	28	6	0	2	1	1	0	14	0	3	114	0	
7:30 AM	0	1	56	0	0	1	42	8	0	0	0	0	0	21	0	3	132	0	
7:45 AM	0	1	88	0	0	0	73	20	0	0	0	0	0	17	0	3	202	520	
8:00 AM	0	3	72	0	0	0	65	15	0	1	2	0	0	15	0	1	174	622	
8:15 AM	0	1	98	1	0	1	70	15	0	0	0	1	0	23	0	4	214	722	
8:30 AM	0	1	87	0	0	0	47	14	0	0	0	0	0	31	0	2	182	772	
8:45 AM	0	4	91	0	1	0	63	22	0	1	0	0	0	22	0	2	206	776	
Count Total	0	12	571	1	1	2	421	105	0	4	3	2	0	153	0	21	1,296	0	
Peak Hour	All	0	9	348	1	1	1	245	66	0	2	2	1	0	91	0	9	776	0
	HV	0	0	13	1	0	1	7	0	0	0	0	1	0	0	0	0	23	0
	HV%	-	0%	4%	100%	0%	100%	3%	0%	-	0%	0%	100%	-	0%	-	0%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	2	0	1	5	0	1	0	0	1	0	0	0	0	0
7:15 AM	2	1	0	0	3	0	3	0	1	4	0	2	0	2	4
7:30 AM	2	2	0	1	5	1	1	0	0	2	0	1	3	1	5
7:45 AM	4	1	0	0	5	1	2	0	0	3	0	0	0	0	0
8:00 AM	1	4	0	0	5	3	3	0	0	6	0	0	0	0	0
8:15 AM	5	3	1	0	9	0	3	0	0	3	0	0	0	1	1
8:30 AM	5	0	0	0	5	0	1	0	0	1	0	0	2	0	2
8:45 AM	3	1	0	0	4	2	4	0	0	6	0	0	2	0	2
Count Total	24	14	1	2	41	7	18	0	1	26	0	3	7	4	14
Peak Hour	14	8	1	0	23	5	11	0	0	16	0	0	4	1	5

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Pine Grove Rd				Pine Grove Rd				Driveway				Rollingstone Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	5	0
7:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0
7:30 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	5	0
7:45 AM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	18
8:00 AM	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	5	18
8:15 AM	0	0	4	1	0	1	2	0	0	0	0	1	0	0	0	0	9	24
8:30 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	24
8:45 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	23
Count Total	0	0	23	1	0	1	13	0	0	0	0	1	0	1	0	1	41	0
Peak Hour	0	0	13	1	0	1	7	0	0	0	0	1	0	0	0	0	23	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Pine Grove Rd			Pine Grove Rd			Driveway			Rollingstone Dr			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0		
7:15 AM	0	0	0	0	1	2	0	0	0	0	1	0	0	4	0			
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0			
7:45 AM	0	1	0	0	1	1	0	0	0	0	0	0	0	3	10			
8:00 AM	1	2	0	0	1	2	0	0	0	0	0	0	0	6	15			
8:15 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	3	14			
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	13			
8:45 AM	0	2	0	0	2	2	0	0	0	0	0	0	0	6	16			
Count Total	1	6	0	0	9	9	0	0	0	1	0	0	26	0				
Peak Hour	1	4	0	0	5	6	0	0	0	0	0	0	16	0				
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																		

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Pine Grove Rd				Pine Grove Rd				Driveway				Rollingstone Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	0	1	0	0	0	0	0	0	1	0	0	5	0
4:15 PM	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
4:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	1	0	0	5	17
5:00 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	15
5:15 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	14
5:30 PM	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5	16
5:45 PM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6	17
Count Total	0	1	13	0	0	0	18	0	0	0	0	0	0	2	0	0	34	0
Peak Hour	0	0	5	0	0	0	9	0	0	0	0	0	0	1	0	0	15	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Pine Grove Rd			Pine Grove Rd			Driveway			Rollingstone Dr			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	2	0	0	4	4	0	0	0	1	0	0	11	0			
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	2	0			
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0			
4:45 PM	0	1	0	0	1	1	0	0	0	0	0	0	3	18			
5:00 PM	0	2	0	0	1	1	0	0	0	1	0	0	5	12			
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	11			
5:30 PM	1	1	0	0	1	0	0	0	0	0	0	0	3	12			
5:45 PM	1	0	0	0	1	0	0	0	0	2	0	0	4	13			
Count Total	2	9	0	0	9	7	0	0	0	4	0	0	31	0			
Peak Hour	0	5	0	0	3	3	0	0	0	1	0	0	12	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Central Park Dr Alpine Plaza

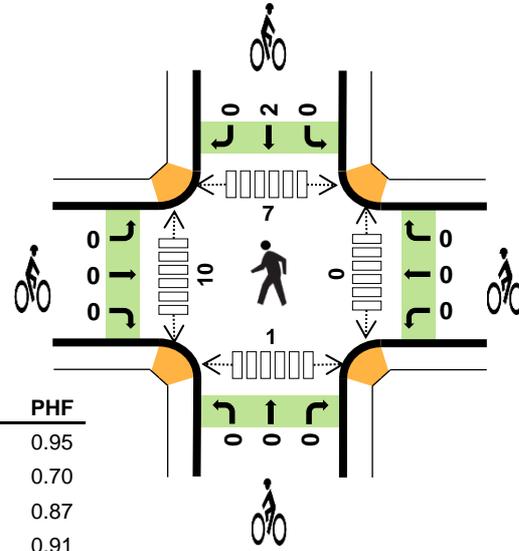
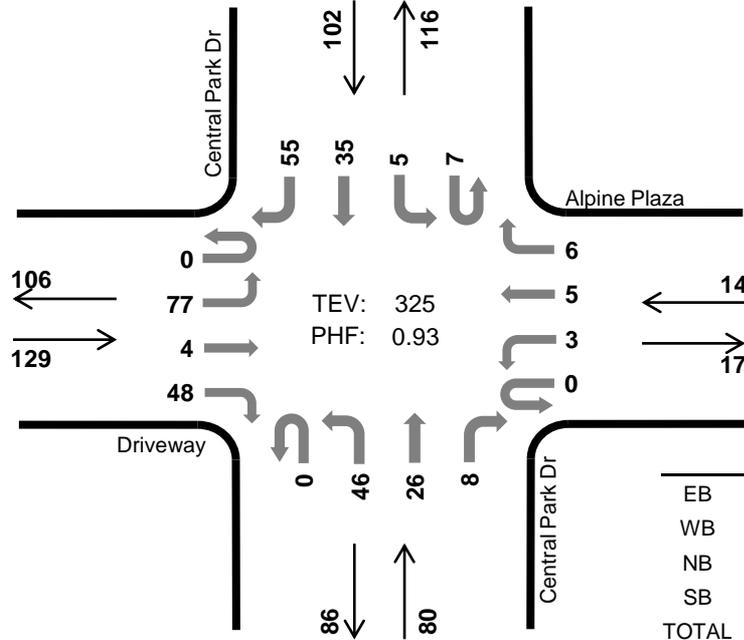


Peak Hour

Date: 05/31/2023

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	0.0%	0.95
WB	14.3%	0.70
NB	3.8%	0.87
SB	6.9%	0.91
TOTAL	3.7%	0.93

Two-Hour Count Summaries

Interval Start	Driveway				Alpine Plaza				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour	
	Eastbound		RT		Westbound		RT		Northbound		RT		Southbound		RT				
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	6	0	9	0	0	0	0	0	9	5	1	0	0	6	4	40	0	
7:15 AM	0	9	0	7	0	0	0	0	0	8	6	1	1	1	5	7	45	0	
7:30 AM	0	10	0	6	0	0	0	0	0	4	9	1	1	2	8	12	53	0	
7:45 AM	0	15	0	13	0	1	0	0	0	6	8	1	2	0	19	9	74	212	
8:00 AM	0	15	0	18	0	0	1	1	0	10	8	1	1	2	9	10	76	248	
8:15 AM	0	21	2	7	0	1	3	1	0	12	3	1	3	0	9	16	79	282	
8:30 AM	0	19	1	12	0	0	1	1	0	14	5	3	1	3	11	12	83	312	
8:45 AM	0	22	1	11	0	2	0	3	0	10	10	3	2	0	6	17	87	325	
Count Total	0	117	4	83	0	4	5	6	0	73	54	12	11	8	73	87	537	0	
Peak Hour	All	0	77	4	48	0	3	5	6	0	46	26	8	7	5	35	55	325	0
	HV	0	0	0	0	0	0	1	1	0	0	3	0	0	1	6	0	12	0
	HV%	-	0%	0%	0%	-	0%	20%	17%	-	0%	12%	0%	0%	20%	17%	0%	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	2	0	2
7:15 AM	0	0	2	0	2	0	0	0	0	0	2	1	0	1	4
7:30 AM	0	0	1	1	2	0	0	0	0	0	0	3	0	2	5
7:45 AM	0	0	0	1	1	0	0	0	0	0	0	2	1	0	3
8:00 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	1	0	0	0	0	0	0	1	3	0	4
8:30 AM	0	1	1	3	5	0	0	0	2	2	0	8	3	0	11
8:45 AM	0	1	0	2	3	0	0	0	0	0	0	1	1	1	3
Count Total	0	2	7	10	19	0	0	0	2	2	2	16	10	4	32
Peak Hour	0	2	3	7	12	0	0	0	2	2	0	10	7	1	18

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				Alpine Plaza				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7
8:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	1	2	0	5	10
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	3	12
Count Total	0	0	0	0	0	0	1	1	0	0	7	0	0	1	9	0	19	0
Peak Hour	0	0	0	0	0	0	1	1	0	0	3	0	0	1	6	0	12	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Driveway			Alpine Plaza			Central Park Dr			Central Park Dr			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

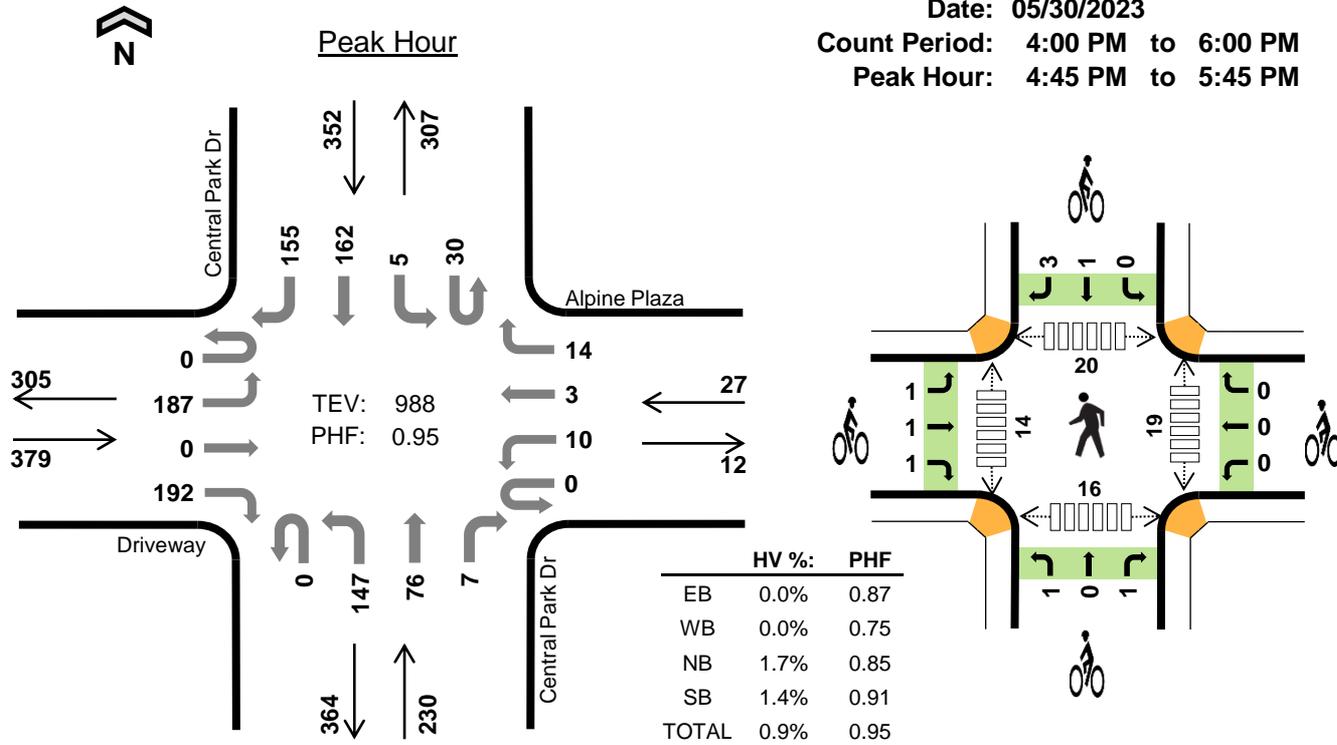
Central Park Dr Alpine Plaza



Date: 05/30/2023

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:45 PM to 5:45 PM



Two-Hour Count Summaries

Interval Start	Driveway				Alpine Plaza				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour	
	Eastbound		RT		Westbound		RT		Northbound		RT		Southbound		RT				
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	52	0	46	0	2	2	3	0	34	13	4	9	0	45	48	258	0	
4:15 PM	0	49	3	46	0	2	2	5	0	25	22	2	6	5	32	39	238	0	
4:30 PM	0	51	0	37	0	1	1	4	0	30	16	2	14	1	22	46	225	0	
4:45 PM	0	45	0	30	0	3	1	5	0	34	18	2	10	2	39	46	235	956	
5:00 PM	0	42	0	48	0	2	0	4	0	36	22	3	5	1	42	38	243	941	
5:15 PM	0	54	0	55	0	2	1	2	0	46	21	1	5	1	41	30	259	962	
5:30 PM	0	46	0	59	0	3	1	3	0	31	15	1	10	1	40	41	251	988	
5:45 PM	0	48	1	44	0	3	2	0	0	20	18	1	12	1	36	27	213	966	
Count Total	0	387	4	365	0	18	10	26	0	256	145	16	71	12	297	315	1,922	0	
Peak Hour	All	0	187	0	192	0	10	3	14	0	147	76	7	30	5	162	155	988	0
	HV	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	1	9	0
	HV%	-	0%	-	0%	-	0%	0%	0%	-	0%	5%	0%	0%	0%	2%	1%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	1	3	5	2	0	0	2	4	4	5	8	7	24
4:15 PM	0	0	1	1	2	1	0	1	2	4	7	16	13	9	45
4:30 PM	0	0	2	1	3	0	0	0	1	1	3	10	9	10	32
4:45 PM	0	0	0	3	3	1	0	2	0	3	2	5	4	2	13
5:00 PM	0	0	1	1	2	1	0	0	2	3	4	2	6	6	18
5:15 PM	0	0	2	0	2	1	0	0	0	1	11	2	6	8	27
5:30 PM	0	0	1	1	2	0	0	0	2	2	2	5	4	0	11
5:45 PM	0	0	0	1	1	1	0	0	0	1	1	1	2	0	4
Count Total	1	0	8	11	20	7	0	3	9	19	34	46	52	42	174
Peak Hour	0	0	4	5	9	3	0	2	4	9	19	14	20	16	69

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				Alpine Plaza				Central Park Dr				Central Park Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	1	0	5	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	13
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	10
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
Count Total	0	0	0	1	0	0	0	0	0	0	8	0	2	0	8	1	20	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	1	9	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Driveway			Alpine Plaza			Central Park Dr			Central Park Dr			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	1	0	1	0	0	0	0	0	0	0	1	1	4	0			
4:15 PM	0	0	1	0	0	0	0	1	0	0	2	0	4	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0			
4:45 PM	0	1	0	0	0	0	1	0	1	0	0	0	3	12			
5:00 PM	1	0	0	0	0	0	0	0	0	0	1	1	3	11			
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	8			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	9			
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	7			
Count Total	2	1	4	0	0	0	1	1	1	0	4	5	19	0			
Peak Hour	1	1	1	0	0	0	1	0	1	0	1	3	9	0			

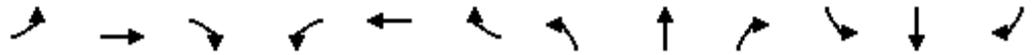
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Intersection Capacity Worksheets



HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2023 Existing AM Peak
 Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	29	21	5	20	108	25	165	10	195	207	106
Future Volume (veh/h)	62	29	21	5	20	108	25	165	10	195	207	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	32	23	5	22	117	27	179	11	212	225	115
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	476	353	253	120	286	267	403	327	20	487	508	430
Arrive On Green	0.06	0.35	0.35	0.17	0.17	0.17	0.03	0.19	0.19	0.12	0.27	0.27
Sat Flow, veh/h	1781	1012	727	125	1697	1585	1781	1744	107	1781	1870	1585
Grp Volume(v), veh/h	67	0	55	27	0	117	27	0	190	212	225	115
Grp Sat Flow(s),veh/h/ln	1781	0	1739	1822	0	1585	1781	0	1851	1781	1870	1585
Q Serve(g_s), s	1.2	0.0	0.9	0.0	0.0	2.9	0.5	0.0	4.0	4.0	4.3	2.5
Cycle Q Clear(g_c), s	1.2	0.0	0.9	0.5	0.0	2.9	0.5	0.0	4.0	4.0	4.3	2.5
Prop In Lane	1.00		0.42	0.19		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	476	0	606	406	0	267	403	0	347	487	508	430
V/C Ratio(X)	0.14	0.00	0.09	0.07	0.00	0.44	0.07	0.00	0.55	0.44	0.44	0.27
Avail Cap(c_a), veh/h	569	0	928	1043	0	846	553	0	1159	487	1171	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	9.4	15.1	0.0	16.1	13.3	0.0	15.9	11.7	13.0	12.3
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	3.1	0.1	0.0	3.7	0.9	1.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	0.2	0.0	1.1	0.2	0.0	1.8	1.4	1.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	9.6	15.3	0.0	19.2	13.4	0.0	19.5	12.6	14.7	13.2
LnGrp LOS	B	A	A	B	A	B	B	A	B	B	B	B
Approach Vol, veh/h		122			144			217			552	
Approach Delay, s/veh		10.9			18.5			18.8			13.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	13.1		20.0	6.4	16.7	7.8	12.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	6.0	6.0		2.9	2.5	6.3	3.2	4.9				
Green Ext Time (p_c), s	0.0	2.1		0.4	0.0	3.6	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay				15.0								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	375	82	8	96	20	31	18	13	32	18	47
Future Volume (veh/h)	108	375	82	8	96	20	31	18	13	32	18	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	408	89	9	104	22	34	20	14	35	20	51
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	678	910	771	440	1131	505	424	309	216	274	130	283
Arrive On Green	0.08	0.49	0.49	0.32	0.32	0.32	0.04	0.30	0.30	0.18	0.18	0.18
Sat Flow, veh/h	1781	1870	1585	901	3554	1585	1781	1024	717	838	730	1585
Grp Volume(v), veh/h	117	408	89	9	104	22	34	0	34	55	0	51
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	901	1777	1585	1781	0	1741	1568	0	1585
Q Serve(g_s), s	1.8	6.8	1.4	0.3	1.0	0.5	0.7	0.0	0.7	0.1	0.0	1.3
Cycle Q Clear(g_c), s	1.8	6.8	1.4	0.3	1.0	0.5	0.7	0.0	0.7	1.2	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	0.64		1.00
Lane Grp Cap(c), veh/h	678	910	771	440	1131	505	424	0	525	405	0	283
V/C Ratio(X)	0.17	0.45	0.12	0.02	0.09	0.04	0.08	0.00	0.06	0.14	0.00	0.18
Avail Cap(c_a), veh/h	737	910	771	573	1659	740	564	0	887	908	0	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	7.9	6.6	11.1	11.3	11.1	13.3	0.0	11.7	16.4	0.0	16.4
Incr Delay (d2), s/veh	0.1	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	0.4	0.1	0.3	0.1	0.3	0.0	0.2	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	8.3	6.6	11.1	11.3	11.1	13.4	0.0	11.8	16.5	0.0	16.7
LnGrp LOS	A	A	A	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		614			135			68				106
Approach Delay, s/veh		8.0			11.3			12.6				16.6
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		27.9	5.8	13.4	7.9	20.0		19.2				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		8.8	2.7	3.3	3.8	3.0		2.7				
Green Ext Time (p_c), s		2.3	0.0	0.4	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	304	88	118	109	164	10	34	122	165	33	3
Future Volume (veh/h)	0	304	88	118	109	164	10	34	122	165	33	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	330	96	128	118	178	11	37	133	179	36	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	447	379	346	1424	635	73	246	273	261	53	4
Arrive On Green	0.00	0.24	0.24	0.08	0.40	0.40	0.17	0.17	0.17	0.18	0.18	0.18
Sat Flow, veh/h	1083	1870	1585	1781	3554	1585	424	1425	1585	1472	296	25
Grp Volume(v), veh/h	0	330	96	128	118	178	48	0	133	218	0	0
Grp Sat Flow(s),veh/h/ln	1083	1870	1585	1781	1777	1585	1849	0	1585	1792	0	0
Q Serve(g_s), s	0.0	8.8	2.7	2.7	1.1	4.1	1.2	0.0	4.1	6.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.8	2.7	2.7	1.1	4.1	1.2	0.0	4.1	6.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.23		1.00	0.82		0.01
Lane Grp Cap(c), veh/h	133	447	379	346	1424	635	319	0	273	318	0	0
V/C Ratio(X)	0.00	0.74	0.25	0.37	0.08	0.28	0.15	0.00	0.49	0.68	0.00	0.00
Avail Cap(c_a), veh/h	484	1053	892	715	2000	892	700	0	600	678	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.1	16.7	13.4	10.1	11.0	19.0	0.0	20.3	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	0.3	0.7	0.0	0.2	0.2	0.0	1.3	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	0.9	1.0	0.4	1.2	0.5	0.0	1.5	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.5	17.1	14.1	10.1	11.2	19.3	0.0	21.6	23.5	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	B	A	C	C	A	A
Approach Vol, veh/h		426			424			181			218	
Approach Delay, s/veh		20.5			11.8			21.0			23.5	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.8	17.4		14.1		26.2		13.8				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	15.5	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	4.7	10.8		8.2		6.1		6.1				
Green Ext Time (p_c), s	0.2	2.1		0.9		1.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	189	206	22	10	4
Future Vol, veh/h	6	189	206	22	10	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	7	205	224	24	11	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	248	0	-	0	455 236
Stage 1	-	-	-	-	236 -
Stage 2	-	-	-	-	219 -
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	1318	-	-	-	563 803
Stage 1	-	-	-	-	803 -
Stage 2	-	-	-	-	817 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1318	-	-	-	560 803
Mov Cap-2 Maneuver	-	-	-	-	560 -
Stage 1	-	-	-	-	799 -
Stage 2	-	-	-	-	817 -

Approach	NB	SB	NE
HCM Control Delay, s	0.2	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	613	1318	-	-	-
HCM Lane V/C Ratio	0.025	0.005	-	-	-
HCM Control Delay (s)	11	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	7	132	13	5	95
Future Vol, veh/h	2	7	132	13	5	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	-	-	-	50	-
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	2	8	143	14	5	103

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	263	150	0	0	157
Stage 1	150	-	-	-	-
Stage 2	113	-	-	-	-
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	726	896	-	-	1423
Stage 1	878	-	-	-	-
Stage 2	912	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	723	896	-	-	1423
Mov Cap-2 Maneuver	723	-	-	-	-
Stage 1	878	-	-	-	-
Stage 2	908	-	-	-	-

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)	-	-	851	1423
HCM Lane V/C Ratio	-	-	0.011	0.004
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
8: Driveway/Rollingstone Dr & Pine Grove Rd

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS

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	9	348	1	1	245	66	2	2	1	91	0	9
Future Vol, veh/h	9	348	1	1	245	66	2	2	1	91	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	10	378	1	1	266	72	2	2	1	99	0	10

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	338	0	0	379	0	0	708	739	379	704	703	302
Stage 1	-	-	-	-	-	-	399	399	-	304	304	-
Stage 2	-	-	-	-	-	-	309	340	-	400	399	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1221	-	-	1179	-	-	350	345	668	352	362	738
Stage 1	-	-	-	-	-	-	627	602	-	705	663	-
Stage 2	-	-	-	-	-	-	701	639	-	626	602	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1221	-	-	1179	-	-	343	342	668	347	359	738
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	342	-	347	359	-
Stage 1	-	-	-	-	-	-	622	597	-	699	662	-
Stage 2	-	-	-	-	-	-	691	638	-	618	597	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	14.6	18.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	379	1221	-	-	1179	-	-	347	738
HCM Lane V/C Ratio	0.014	0.008	-	-	0.001	-	-	0.285	0.013
HCM Control Delay (s)	14.6	8	-	-	8.1	-	-	19.5	9.9
HCM Lane LOS		B	A	-	A	-	-	C	A
HCM 95th %tile Q(veh)		0	0	-	-	0	-	1.2	0

Queues
1: Pine Grove Road & Central Park Drive

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS

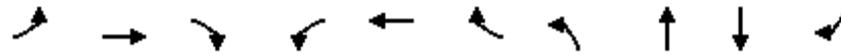


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	67	55	27	117	27	190	212	225	115
v/c Ratio	0.20	0.10	0.08	0.26	0.04	0.24	0.33	0.22	0.12
Control Delay	14.2	9.4	20.7	3.7	8.4	15.6	10.4	11.3	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	9.4	20.7	3.7	8.4	15.6	10.4	11.3	1.6
Queue Length 50th (ft)	13	6	7	0	4	47	38	40	0
Queue Length 95th (ft)	41	29	28	21	15	94	75	111	15
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	342	1275	926	924	613	1162	642	1170	1056
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	0.20	0.04	0.03	0.13	0.04	0.16	0.33	0.19	0.11

Intersection Summary

Queues
3: Central Park Drive & Mt Werner Road

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	117	408	89	9	104	22	34	34	55	51
v/c Ratio	0.15	0.32	0.08	0.02	0.06	0.03	0.10	0.06	0.15	0.10
Control Delay	7.1	8.3	2.8	14.0	12.8	0.1	11.8	9.1	18.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	8.3	2.8	14.0	12.8	0.1	11.8	9.1	18.5	0.4
Queue Length 50th (ft)	11	51	0	2	9	0	7	4	11	0
Queue Length 95th (ft)	43	148	18	11	27	0	20	18	41	0
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	789	1406	1216	595	2162	1023	347	1383	858	987
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	0.15	0.29	0.07	0.02	0.05	0.02	0.10	0.02	0.06	0.05

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	330	96	128	118	178	48	133	218
v/c Ratio	0.60	0.18	0.30	0.07	0.22	0.15	0.34	0.52
Control Delay	28.2	4.8	13.6	11.3	2.9	32.3	9.9	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	4.8	13.6	11.3	2.9	32.3	9.9	31.4
Queue Length 50th (ft)	125	0	30	14	0	18	0	83
Queue Length 95th (ft)	238	28	68	31	31	58	51	178
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	995	897	599	2668	1237	665	656	645
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.11	0.21	0.04	0.14	0.07	0.20	0.34

Intersection Summary

HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2023 Existing AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	3.6			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	87	103	140	15
Demand Flow Rate, veh/h	89	105	143	15
Vehicles Circulating, veh/h	95	59	47	166
Vehicles Exiting, veh/h	95	122	117	18
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.5	3.5	3.7	3.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	89	105	143	15
Cap Entry Lane, veh/h	1252	1299	1315	1165
Entry HV Adj Factor	0.982	0.983	0.978	0.993
Flow Entry, veh/h	87	103	140	15
Cap Entry, veh/h	1230	1277	1287	1157
V/C Ratio	0.071	0.081	0.109	0.013
Control Delay, s/veh	3.5	3.5	3.7	3.2
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2023 Existing PM Peak
 Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	57	37	14	89	191	121	327	20	90	127	246
Future Volume (veh/h)	234	57	37	14	89	191	121	327	20	90	127	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	62	40	15	97	208	132	355	22	98	138	267
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	350	226	79	318	295	555	686	43	452	726	615
Arrive On Green	0.07	0.33	0.33	0.19	0.19	0.19	0.07	0.39	0.39	0.06	0.39	0.39
Sat Flow, veh/h	1781	1062	685	108	1713	1585	1781	1743	108	1781	1870	1585
Grp Volume(v), veh/h	254	0	102	112	0	208	132	0	377	98	138	267
Grp Sat Flow(s),veh/h/ln	1781	0	1747	1822	0	1585	1781	0	1851	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	2.9	0.0	0.0	8.6	3.0	0.0	10.8	2.2	3.4	8.6
Cycle Q Clear(g_c), s	5.0	0.0	2.9	3.6	0.0	8.6	3.0	0.0	10.8	2.2	3.4	8.6
Prop In Lane	1.00		0.39	0.13		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	375	0	576	397	0	295	555	0	729	452	726	615
V/C Ratio(X)	0.68	0.00	0.18	0.28	0.00	0.71	0.24	0.00	0.52	0.22	0.19	0.43
Avail Cap(c_a), veh/h	375	0	578	653	0	524	564	0	729	472	726	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	16.6	24.5	0.0	26.5	11.3	0.0	16.1	12.0	14.1	15.7
Incr Delay (d2), s/veh	5.3	0.0	0.4	1.1	0.0	8.2	0.3	0.0	2.6	0.3	0.6	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.2	1.7	0.0	3.8	1.1	0.0	4.7	0.8	1.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	0.0	17.0	25.6	0.0	34.8	11.6	0.0	18.7	12.4	14.6	17.9
LnGrp LOS	C	A	B	C	A	C	B	A	B	B	B	B
Approach Vol, veh/h		356			320			509			503	
Approach Delay, s/veh		25.4			31.6			16.8			15.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	32.4		27.9	9.6	32.0	10.0	17.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	4.2	12.8		4.9	5.0	10.6	7.0	10.6				
Green Ext Time (p_c), s	0.0	3.8		0.9	0.0	3.6	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

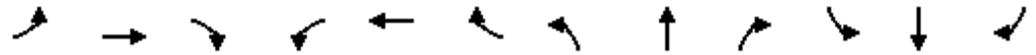
2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	128	60	18	278	58	91	34	17	86	32	335
Future Volume (veh/h)	202	128	60	18	278	58	91	34	17	86	32	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	220	139	65	20	302	63	99	37	18	93	35	364
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	479	781	662	424	908	405	451	490	238	385	129	437
Arrive On Green	0.09	0.42	0.42	0.26	0.26	0.26	0.07	0.41	0.41	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1178	3554	1585	1781	1188	578	1012	468	1585
Grp Volume(v), veh/h	220	139	65	20	302	63	99	0	55	128	0	364
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1178	1777	1585	1781	0	1766	1479	0	1585
Q Serve(g_s), s	5.1	2.7	1.5	0.8	4.1	1.8	2.1	0.0	1.1	3.1	0.0	12.7
Cycle Q Clear(g_c), s	5.1	2.7	1.5	0.8	4.1	1.8	2.1	0.0	1.1	3.9	0.0	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	0.73		1.00
Lane Grp Cap(c), veh/h	479	781	662	424	908	405	451	0	728	514	0	437
V/C Ratio(X)	0.46	0.18	0.10	0.05	0.33	0.16	0.22	0.00	0.08	0.25	0.00	0.83
Avail Cap(c_a), veh/h	479	781	662	564	1332	594	497	0	728	708	0	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	10.8	10.4	16.5	17.8	16.9	12.3	0.0	10.5	16.7	0.0	20.0
Incr Delay (d2), s/veh	0.7	0.1	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.3	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	0.5	0.2	1.5	0.6	0.8	0.0	0.4	1.3	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	10.9	10.4	16.6	18.0	17.1	12.6	0.0	10.5	17.0	0.0	25.9
LnGrp LOS	B	B	B	B	B	B	B	A	B	B	A	C
Approach Vol, veh/h		424			385			154				492
Approach Delay, s/veh		12.3			17.8			11.8				23.6
Approach LOS		B			B			B				C
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		29.5	8.0	21.2	9.5	20.0		29.2				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		4.7	4.1	14.7	7.1	6.1		3.1				
Green Ext Time (p_c), s		0.8	0.0	1.5	0.0	1.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				17.5								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	200	30	57	289	337	63	110	81	141	35	11
Future Volume (veh/h)	1	200	30	57	289	337	63	110	81	141	35	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	217	33	62	314	366	68	120	88	153	38	12
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	373	316	353	1234	550	130	229	310	253	63	20
Arrive On Green	0.20	0.20	0.20	0.06	0.35	0.35	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	760	1870	1585	1781	3554	1585	664	1173	1585	1345	334	105
Grp Volume(v), veh/h	1	217	33	62	314	366	188	0	88	203	0	0
Grp Sat Flow(s),veh/h/ln	760	1870	1585	1781	1777	1585	1837	0	1585	1784	0	0
Q Serve(g_s), s	0.1	5.3	0.9	1.3	3.2	9.8	4.6	0.0	2.4	5.2	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.3	0.9	1.3	3.2	9.8	4.6	0.0	2.4	5.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	0.75		0.06
Lane Grp Cap(c), veh/h	296	373	316	353	1234	550	359	0	310	335	0	0
V/C Ratio(X)	0.00	0.58	0.10	0.18	0.25	0.67	0.52	0.00	0.28	0.61	0.00	0.00
Avail Cap(c_a), veh/h	607	1139	965	429	2164	965	752	0	649	730	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.1	18.1	16.4	13.4	11.7	13.9	18.1	0.0	17.2	18.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.2	0.1	1.4	1.2	0.0	0.5	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.3	0.4	1.0	3.0	1.9	0.0	0.8	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	19.6	16.5	13.6	11.8	15.3	19.2	0.0	17.7	20.4	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	A
Approach Vol, veh/h		251			742			276			203	
Approach Delay, s/veh		19.2			13.7			18.7			20.4	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.4	14.5		13.9		21.9		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.0	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.3	7.3		7.2		11.8		6.6				
Green Ext Time (p_c), s	0.0	1.3		0.9		3.1		1.1				

Intersection Summary

HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	16	453	163	13	19	13
Future Vol, veh/h	16	453	163	13	19	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	17	492	177	14	21	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	191	0	-	0	710 184
Stage 1	-	-	-	-	184 -
Stage 2	-	-	-	-	526 -
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	1383	-	-	-	400 858
Stage 1	-	-	-	-	848 -
Stage 2	-	-	-	-	593 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1383	-	-	-	395 858
Mov Cap-2 Maneuver	-	-	-	-	395 -
Stage 1	-	-	-	-	838 -
Stage 2	-	-	-	-	593 -

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	506	1383	-	-	-
HCM Lane V/C Ratio	0.069	0.013	-	-	-
HCM Control Delay (s)	12.6	7.6	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	32	269	21	16	431
Future Vol, veh/h	20	32	269	21	16	431
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	-	-	-	50	-
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	22	35	292	23	17	468

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	806	304	0	0	315
Stage 1	304	-	-	-	-
Stage 2	502	-	-	-	-
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	351	736	-	-	1245
Stage 1	748	-	-	-	-
Stage 2	608	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	346	736	-	-	1245
Mov Cap-2 Maneuver	346	-	-	-	-
Stage 1	748	-	-	-	-
Stage 2	599	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	513	1245
HCM Lane V/C Ratio	-	-	0.11	0.014
HCM Control Delay (s)	-	-	12.9	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

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	10	348	1	1	517	111	1	0	2	74	2	15
Future Vol, veh/h	10	348	1	1	517	111	1	0	2	74	2	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	378	1	1	562	121	1	0	2	80	2	16

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	683	0	0	379	0	0	1035	1086	379	1027	1026	623
Stage 1	-	-	-	-	-	-	401	401	-	625	625	-
Stage 2	-	-	-	-	-	-	634	685	-	402	401	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	910	-	-	1179	-	-	210	216	668	213	235	486
Stage 1	-	-	-	-	-	-	626	601	-	473	477	-
Stage 2	-	-	-	-	-	-	467	448	-	625	601	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	910	-	-	1179	-	-	200	213	668	210	232	486
Mov Cap-2 Maneuver	-	-	-	-	-	-	200	213	-	210	232	-
Stage 1	-	-	-	-	-	-	618	594	-	467	477	-
Stage 2	-	-	-	-	-	-	449	448	-	615	594	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	14.7	29.3
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	375	910	-	-	1179	-	-	211	486
HCM Lane V/C Ratio	0.009	0.012	-	-	0.001	-	-	0.392	0.034
HCM Control Delay (s)	14.7	9	-	-	8.1	-	-	32.6	12.7
HCM Lane LOS		B	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)		0	0	-	0	-	-	1.7	0.1

Queues
1: Pine Grove Road & Central Park Drive

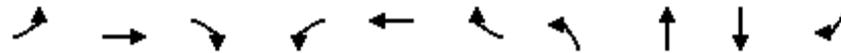
2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	254	102	112	208	132	377	98	138	267
v/c Ratio	0.68	0.16	0.33	0.44	0.22	0.51	0.23	0.19	0.34
Control Delay	28.9	11.5	27.1	7.2	10.8	19.9	10.9	16.1	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	11.5	27.1	7.2	10.8	19.9	10.9	16.1	3.8
Queue Length 50th (ft)	84	18	42	0	27	120	19	38	0
Queue Length 95th (ft)	143	48	84	49	62	222	48	83	46
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	375	877	605	676	607	741	429	745	793
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	0.68	0.12	0.19	0.31	0.22	0.51	0.23	0.19	0.34
Intersection Summary									

Queues
3: Central Park Drive & Mt Werner Road

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS

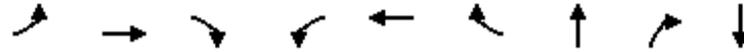


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	220	139	65	20	302	63	99	55	128	364
v/c Ratio	0.45	0.16	0.08	0.06	0.31	0.12	0.22	0.08	0.41	0.57
Control Delay	13.8	11.2	2.5	17.4	18.0	0.4	11.7	8.2	23.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	11.2	2.5	17.4	18.0	0.4	11.7	8.2	23.0	6.4
Queue Length 50th (ft)	41	26	0	5	41	0	20	8	37	0
Queue Length 95th (ft)	96	64	14	20	79	1	44	24	78	54
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	491	1089	961	508	1445	732	442	1108	622	907
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	0.45	0.13	0.07	0.04	0.21	0.09	0.22	0.05	0.21	0.40

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	1	217	33	62	314	366	188	88	203
v/c Ratio	0.00	0.50	0.07	0.19	0.28	0.49	0.47	0.20	0.50
Control Delay	22.0	26.8	0.3	16.4	16.0	4.6	27.5	3.9	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	26.8	0.3	16.4	16.0	4.6	27.5	3.9	27.1
Queue Length 50th (ft)	0	70	0	14	39	0	61	0	65
Queue Length 95th (ft)	4	159	0	45	86	53	143	21	150
Internal Link Dist (ft)		233			150		251		1041
Turn Bay Length (ft)	80		80	80		60		60	
Base Capacity (vph)	571	1018	920	328	2537	1238	672	658	656
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	0.00	0.21	0.04	0.19	0.12	0.30	0.28	0.13	0.31
Intersection Summary									

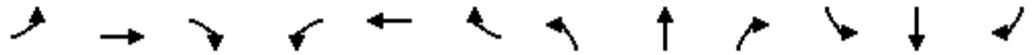
HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2023 Existing PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	6.3			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	251	349	412	29
Demand Flow Rate, veh/h	256	356	420	29
Vehicles Circulating, veh/h	212	177	196	455
Vehicles Exiting, veh/h	404	307	337	13
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	6.1	7.0	4.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	256	356	420	29
Cap Entry Lane, veh/h	1112	1152	1130	868
Entry HV Adj Factor	0.982	0.982	0.981	0.998
Flow Entry, veh/h	251	349	412	29
Cap Entry, veh/h	1091	1131	1108	866
V/C Ratio	0.230	0.309	0.372	0.033
Control Delay, s/veh	5.4	6.1	7.0	4.5
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2027 Background AM Peak
 Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	30	20	5	20	110	25	170	10	205	215	110
Future Volume (veh/h)	65	30	20	5	20	110	25	170	10	205	215	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	33	22	5	22	120	27	185	11	223	234	120
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	478	365	244	119	285	266	398	334	20	484	513	435
Arrive On Green	0.07	0.35	0.35	0.17	0.17	0.17	0.03	0.19	0.19	0.11	0.27	0.27
Sat Flow, veh/h	1781	1047	698	124	1698	1585	1781	1748	104	1781	1870	1585
Grp Volume(v), veh/h	71	0	55	27	0	120	27	0	196	223	234	120
Grp Sat Flow(s),veh/h/ln	1781	0	1745	1822	0	1585	1781	0	1852	1781	1870	1585
Q Serve(g_s), s	1.3	0.0	0.9	0.0	0.0	3.0	0.5	0.0	4.2	4.2	4.5	2.6
Cycle Q Clear(g_c), s	1.3	0.0	0.9	0.5	0.0	3.0	0.5	0.0	4.2	4.2	4.5	2.6
Prop In Lane	1.00		0.40	0.19		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	478	0	609	404	0	266	398	0	354	484	513	435
V/C Ratio(X)	0.15	0.00	0.09	0.07	0.00	0.45	0.07	0.00	0.55	0.46	0.46	0.28
Avail Cap(c_a), veh/h	564	0	922	1034	0	838	545	0	1149	484	1161	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	9.5	15.3	0.0	16.3	13.3	0.0	15.9	11.8	13.1	12.4
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	3.3	0.1	0.0	3.7	1.0	1.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.3	0.2	0.0	1.2	0.2	0.0	1.9	1.5	1.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	9.7	15.5	0.0	19.6	13.4	0.0	19.6	12.8	14.8	13.3
LnGrp LOS	B	A	A	B	A	B	B	A	B	B	B	B
Approach Vol, veh/h		126			147			223			577	
Approach Delay, s/veh		11.0			18.8			18.9			13.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	13.3		20.2	6.4	16.9	7.9	12.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	6.2	6.2		2.9	2.5	6.5	3.3	5.0				
Green Ext Time (p_c), s	0.0	2.2		0.4	0.0	3.7	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay				15.2								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	390	85	10	100	20	30	20	15	35	20	50
Future Volume (veh/h)	110	390	85	10	100	20	30	20	15	35	20	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	424	92	11	109	22	33	22	16	38	22	54
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	673	907	768	432	1125	502	423	306	223	276	133	289
Arrive On Green	0.08	0.48	0.48	0.32	0.32	0.32	0.04	0.30	0.30	0.18	0.18	0.18
Sat Flow, veh/h	1781	1870	1585	885	3554	1585	1781	1007	732	835	730	1585
Grp Volume(v), veh/h	120	424	92	11	109	22	33	0	38	60	0	54
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	885	1777	1585	1781	0	1739	1565	0	1585
Q Serve(g_s), s	1.9	7.2	1.5	0.4	1.0	0.5	0.7	0.0	0.7	0.2	0.0	1.4
Cycle Q Clear(g_c), s	1.9	7.2	1.5	0.4	1.0	0.5	0.7	0.0	0.7	1.3	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.63		1.00
Lane Grp Cap(c), veh/h	673	907	768	432	1125	502	423	0	529	410	0	289
V/C Ratio(X)	0.18	0.47	0.12	0.03	0.10	0.04	0.08	0.00	0.07	0.15	0.00	0.19
Avail Cap(c_a), veh/h	730	907	768	563	1650	736	563	0	881	902	0	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	8.1	6.7	11.2	11.4	11.2	13.3	0.0	11.7	16.4	0.0	16.4
Incr Delay (d2), s/veh	0.1	0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.1	0.4	0.1	0.3	0.1	0.2	0.0	0.3	0.5	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.1	8.5	6.7	11.2	11.5	11.3	13.3	0.0	11.8	16.5	0.0	16.7
LnGrp LOS	A	A	A	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		636			142			71				114
Approach Delay, s/veh		8.2			11.4			12.5				16.6
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		28.0	5.8	13.6	8.0	20.0		19.4				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		9.2	2.7	3.4	3.9	3.0		2.7				
Green Ext Time (p_c), s		2.3	0.0	0.4	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	315	90	125	115	170	10	35	125	170	35	5
Future Volume (veh/h)	0	315	90	125	115	170	10	35	125	170	35	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	342	98	136	125	185	11	38	136	185	38	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	458	388	348	1450	647	71	245	271	256	53	7
Arrive On Green	0.00	0.24	0.24	0.08	0.41	0.41	0.17	0.17	0.17	0.18	0.18	0.18
Sat Flow, veh/h	1069	1870	1585	1781	3554	1585	415	1434	1585	1453	298	39
Grp Volume(v), veh/h	0	342	98	136	125	185	49	0	136	228	0	0
Grp Sat Flow(s),veh/h/ln	1069	1870	1585	1781	1777	1585	1850	0	1585	1791	0	0
Q Serve(g_s), s	0.0	9.3	2.7	2.9	1.2	4.3	1.2	0.0	4.3	6.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.3	2.7	2.9	1.2	4.3	1.2	0.0	4.3	6.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.22		1.00	0.81		0.02
Lane Grp Cap(c), veh/h	131	458	388	348	1450	647	316	0	271	315	0	0
V/C Ratio(X)	0.00	0.75	0.25	0.39	0.09	0.29	0.16	0.00	0.50	0.72	0.00	0.00
Avail Cap(c_a), veh/h	461	1036	878	704	1968	878	688	0	590	666	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.2	16.7	13.5	10.0	10.9	19.5	0.0	20.7	21.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.3	0.7	0.0	0.2	0.2	0.0	1.4	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.9	1.0	0.4	1.3	0.5	0.0	1.6	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.7	17.1	14.2	10.0	11.2	19.7	0.0	22.2	24.6	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	B	A	C	C	A	A
Approach Vol, veh/h		440			446			185			228	
Approach Delay, s/veh		20.6			11.8			21.5			24.6	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.0	18.0		14.2		27.0		13.9				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	15.5	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	4.9	11.3		8.6		6.3		6.3				
Green Ext Time (p_c), s	0.2	2.2		1.0		1.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	5	195	215	25	10	5
Future Vol, veh/h	5	195	215	25	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	5	212	234	27	11	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	261	0	-	0	470 248
Stage 1	-	-	-	-	248 -
Stage 2	-	-	-	-	222 -
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	1303	-	-	-	552 791
Stage 1	-	-	-	-	793 -
Stage 2	-	-	-	-	815 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1303	-	-	-	550 791
Mov Cap-2 Maneuver	-	-	-	-	550 -
Stage 1	-	-	-	-	790 -
Stage 2	-	-	-	-	815 -

Approach	NB	SB	NE
HCM Control Delay, s	0.2	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	612	1303	-	-	-
HCM Lane V/C Ratio	0.027	0.004	-	-	-
HCM Control Delay (s)	11	7.8	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	135	15	5	100
Future Vol, veh/h	0	5	135	15	5	100
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	-	-	-	50	-
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	5	147	16	5	109

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	274	155	0	0	163
Stage 1	155	-	-	-	-
Stage 2	119	-	-	-	-
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	716	891	-	-	1416
Stage 1	873	-	-	-	-
Stage 2	906	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	713	891	-	-	1416
Mov Cap-2 Maneuver	713	-	-	-	-
Stage 1	873	-	-	-	-
Stage 2	902	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	891	1416
HCM Lane V/C Ratio	-	-	0.006	0.004
HCM Control Delay (s)	-	-	9.1	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
8: Driveway/Rollingstone Dr & Pine Grove Rd

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

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	10	360	0	0	255	70	0	0	0	95	0	10
Future Vol, veh/h	10	360	0	0	255	70	0	0	0	95	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	391	0	0	277	76	0	0	0	103	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	353	0	0	391	0	0	734	766	391	728	728	315
Stage 1	-	-	-	-	-	-	413	413	-	315	315	-
Stage 2	-	-	-	-	-	-	321	353	-	413	413	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1206	-	-	1168	-	-	336	333	658	339	350	725
Stage 1	-	-	-	-	-	-	616	594	-	696	656	-
Stage 2	-	-	-	-	-	-	691	631	-	616	594	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1206	-	-	1168	-	-	329	330	658	337	347	725
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	330	-	337	347	-
Stage 1	-	-	-	-	-	-	610	589	-	690	656	-
Stage 2	-	-	-	-	-	-	681	631	-	610	589	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	19.3
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1206	-	-	1168	-	-	337	725
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	0.306	0.015
HCM Control Delay (s)		0	8	-	0	-	-	20.3	10
HCM Lane LOS		A	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	1.3	0

Queues
1: Pine Grove Road & Central Park Drive

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

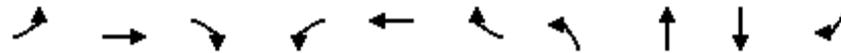


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	55	27	120	27	196	223	234	120
v/c Ratio	0.21	0.10	0.08	0.27	0.05	0.32	0.36	0.23	0.13
Control Delay	14.5	9.6	20.9	4.0	8.3	16.3	10.8	11.3	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	9.6	20.9	4.0	8.3	16.3	10.8	11.3	1.8
Queue Length 50th (ft)	14	6	7	0	4	49	40	42	0
Queue Length 95th (ft)	43	29	28	22	15	96	79	115	17
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	337	1275	902	903	575	1132	612	1140	1032
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	0.21	0.04	0.03	0.13	0.05	0.17	0.36	0.21	0.12

Intersection Summary

Queues
3: Central Park Drive & Mt Werner Road

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	120	424	92	11	109	22	33	38	60	54
v/c Ratio	0.15	0.33	0.08	0.02	0.06	0.03	0.10	0.07	0.17	0.11
Control Delay	7.2	8.4	2.8	14.1	12.8	0.1	11.7	9.0	18.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	8.4	2.8	14.1	12.8	0.1	11.7	9.0	18.6	0.4
Queue Length 50th (ft)	12	53	0	2	9	0	6	4	12	0
Queue Length 95th (ft)	43	156	19	12	28	0	20	19	43	0
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	785	1406	1217	586	2162	1023	347	1382	855	987
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	0.15	0.30	0.08	0.02	0.05	0.02	0.10	0.03	0.07	0.05

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	342	98	136	125	185	49	136	228
v/c Ratio	0.69	0.20	0.35	0.08	0.23	0.18	0.39	0.62
Control Delay	32.3	5.1	14.4	11.3	2.7	33.8	10.7	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	5.1	14.4	11.3	2.7	33.8	10.7	35.4
Queue Length 50th (ft)	133	0	33	15	0	19	0	89
Queue Length 95th (ft)	249	29	72	33	31	60	52	191
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	813	752	509	2558	1195	540	560	524
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.13	0.27	0.05	0.15	0.09	0.24	0.44

Intersection Summary

HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2027 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	3.6			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	92	103	146	15
Demand Flow Rate, veh/h	94	105	149	15
Vehicles Circulating, veh/h	99	65	49	172
Vehicles Exiting, veh/h	99	122	121	21
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.5	3.7	3.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	94	105	149	15
Cap Entry Lane, veh/h	1247	1291	1313	1158
Entry HV Adj Factor	0.984	0.983	0.979	0.993
Flow Entry, veh/h	92	103	146	15
Cap Entry, veh/h	1227	1270	1285	1150
V/C Ratio	0.075	0.081	0.114	0.013
Control Delay, s/veh	3.6	3.5	3.7	3.2
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2027 Background PM Peak
 Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	60	40	15	95	200	125	340	20	95	130	255
Future Volume (veh/h)	245	60	40	15	95	200	125	340	20	95	130	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	266	65	43	16	103	217	136	370	22	103	141	277
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	351	232	79	328	304	548	683	41	438	718	609
Arrive On Green	0.07	0.33	0.33	0.19	0.19	0.19	0.07	0.39	0.39	0.06	0.38	0.38
Sat Flow, veh/h	1781	1050	695	111	1709	1585	1781	1748	104	1781	1870	1585
Grp Volume(v), veh/h	266	0	108	119	0	217	136	0	392	103	141	277
Grp Sat Flow(s),veh/h/ln	1781	0	1745	1820	0	1585	1781	0	1852	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	3.1	0.0	0.0	9.0	3.2	0.0	11.5	2.4	3.5	9.2
Cycle Q Clear(g_c), s	5.0	0.0	3.1	3.9	0.0	9.0	3.2	0.0	11.5	2.4	3.5	9.2
Prop In Lane	1.00		0.40	0.13		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	374	0	583	407	0	304	548	0	724	438	718	609
V/C Ratio(X)	0.71	0.00	0.19	0.29	0.00	0.71	0.25	0.00	0.54	0.24	0.20	0.45
Avail Cap(c_a), veh/h	374	0	583	646	0	519	553	0	724	455	718	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	16.6	24.5	0.0	26.6	11.5	0.0	16.5	12.4	14.4	16.2
Incr Delay (d2), s/veh	6.8	0.0	0.4	1.1	0.0	8.3	0.3	0.0	2.9	0.4	0.6	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.3	1.8	0.0	4.0	1.2	0.0	5.1	0.9	1.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	0.0	17.0	25.6	0.0	34.9	11.8	0.0	19.4	12.8	15.0	18.6
LnGrp LOS	C	A	B	C	A	C	B	A	B	B	B	B
Approach Vol, veh/h		374			336			528			521	
Approach Delay, s/veh		26.8			31.6			17.5			16.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	32.5		28.5	9.8	32.0	10.0	18.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	4.4	13.5		5.1	5.2	11.2	7.0	11.0				
Green Ext Time (p_c), s	0.0	3.9		1.0	0.0	3.6	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay				21.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	135	60	20	290	60	95	35	20	90	35	350
Future Volume (veh/h)	210	135	60	20	290	60	95	35	20	90	35	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	228	147	65	22	315	65	103	38	22	98	38	380
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	769	652	416	895	399	452	467	271	389	135	451
Arrive On Green	0.09	0.41	0.41	0.25	0.25	0.25	0.07	0.42	0.42	0.28	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1170	3554	1585	1781	1111	643	1002	474	1585
Grp Volume(v), veh/h	228	147	65	22	315	65	103	0	60	136	0	380
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1170	1777	1585	1781	0	1755	1476	0	1585
Q Serve(g_s), s	5.4	3.0	1.5	0.9	4.3	1.9	2.2	0.0	1.2	3.4	0.0	13.4
Cycle Q Clear(g_c), s	5.4	3.0	1.5	0.9	4.3	1.9	2.2	0.0	1.2	4.1	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	0.72		1.00
Lane Grp Cap(c), veh/h	465	769	652	416	895	399	452	0	738	525	0	451
V/C Ratio(X)	0.49	0.19	0.10	0.05	0.35	0.16	0.23	0.00	0.08	0.26	0.00	0.84
Avail Cap(c_a), veh/h	465	769	652	553	1313	586	494	0	738	697	0	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	11.2	10.8	17.0	18.3	17.4	12.2	0.0	10.3	16.6	0.0	20.0
Incr Delay (d2), s/veh	0.8	0.1	0.1	0.1	0.2	0.2	0.3	0.0	0.0	0.3	0.0	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.1	0.5	0.2	1.6	0.6	0.8	0.0	0.4	1.4	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.5	11.3	10.8	17.0	18.5	17.6	12.5	0.0	10.4	16.9	0.0	27.1
LnGrp LOS	B	B	B	B	B	B	B	A	B	B	A	C
Approach Vol, veh/h		440			402			163				516
Approach Delay, s/veh		12.9			18.3			11.7				24.4
Approach LOS		B			B			B				C
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		29.5	8.1	22.0	9.5	20.0		30.1				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		5.0	4.2	15.4	7.4	6.3		3.2				
Green Ext Time (p_c), s		0.8	0.0	1.5	0.0	2.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				18.1								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	210	30	60	300	350	65	115	85	145	35	10
Future Volume (veh/h)	0	210	30	60	300	350	65	115	85	145	35	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	228	33	65	326	380	71	125	92	158	38	11
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	372	315	347	1236	551	130	229	310	256	62	18
Arrive On Green	0.00	0.20	0.20	0.06	0.35	0.35	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	742	1870	1585	1781	3554	1585	665	1172	1585	1363	328	95
Grp Volume(v), veh/h	0	228	33	65	326	380	196	0	92	207	0	0
Grp Sat Flow(s),veh/h/ln	742	1870	1585	1781	1777	1585	1837	0	1585	1785	0	0
Q Serve(g_s), s	0.0	5.6	0.9	1.3	3.3	10.3	4.8	0.0	2.5	5.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.6	0.9	1.3	3.3	10.3	4.8	0.0	2.5	5.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	0.76		0.05
Lane Grp Cap(c), veh/h	143	372	315	347	1236	551	359	0	310	336	0	0
V/C Ratio(X)	0.00	0.61	0.10	0.19	0.26	0.69	0.55	0.00	0.30	0.62	0.00	0.00
Avail Cap(c_a), veh/h	446	1135	962	419	2157	962	750	0	647	728	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.4	16.5	13.5	11.8	14.1	18.2	0.0	17.3	18.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.1	0.3	0.1	1.5	1.3	0.0	0.5	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.3	0.5	1.1	3.2	2.0	0.0	0.9	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.0	16.6	13.7	11.9	15.6	19.5	0.0	17.8	20.6	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	C	A	A
Approach Vol, veh/h		261			771			288			207	
Approach Delay, s/veh		19.6			13.9			19.0			20.6	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.5	14.5		13.9		22.0		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.0	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.3	7.6		7.4		12.3		6.8				
Green Ext Time (p_c), s	0.0	1.3		0.9		3.3		1.1				

Intersection Summary

HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	15	470	170	15	20	15
Future Vol, veh/h	15	470	170	15	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	16	511	185	16	22	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	201	0	-	0	736 193
Stage 1	-	-	-	-	193 -
Stage 2	-	-	-	-	543 -
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	1371	-	-	-	386 849
Stage 1	-	-	-	-	840 -
Stage 2	-	-	-	-	582 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1371	-	-	-	381 849
Mov Cap-2 Maneuver	-	-	-	-	381 -
Stage 1	-	-	-	-	830 -
Stage 2	-	-	-	-	582 -

Approach	NB	SB	NE
HCM Control Delay, s	0.2	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	499	1371	-	-	-
HCM Lane V/C Ratio	0.076	0.012	-	-	-
HCM Control Delay (s)	12.8	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T		T	T
Traffic Vol, veh/h	20	35	280	20	15	450
Future Vol, veh/h	20	35	280	20	15	450
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	-	-	-	50	-
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	22	38	304	22	16	489

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	836	315	0	0	326
Stage 1	315	-	-	-	-
Stage 2	521	-	-	-	-
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	337	725	-	-	1234
Stage 1	740	-	-	-	-
Stage 2	596	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	333	725	-	-	1234
Mov Cap-2 Maneuver	333	-	-	-	-
Stage 1	740	-	-	-	-
Stage 2	588	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	508	1234
HCM Lane V/C Ratio	-	-	0.118	0.013
HCM Control Delay (s)	-	-	13	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

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	10	360	0	0	540	115	0	0	0	75	0	15
Future Vol, veh/h	10	360	0	0	540	115	0	0	0	75	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	391	0	0	587	125	0	0	0	82	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	712	0	0	391	0	0	1071	1125	391	1063	1063	650
Stage 1	-	-	-	-	-	-	413	413	-	650	650	-
Stage 2	-	-	-	-	-	-	658	712	-	413	413	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	888	-	-	1168	-	-	198	205	658	201	223	469
Stage 1	-	-	-	-	-	-	616	594	-	458	465	-
Stage 2	-	-	-	-	-	-	453	436	-	616	594	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	888	-	-	1168	-	-	189	203	658	199	220	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	189	203	-	199	220	-
Stage 1	-	-	-	-	-	-	609	587	-	453	465	-
Stage 2	-	-	-	-	-	-	437	436	-	608	587	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	31.4
HCM LOS			A	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	888	-	-	1168	-	-	199	469
HCM Lane V/C Ratio	-	0.012	-	-	-	-	-	0.41	0.035
HCM Control Delay (s)	0	9.1	-	-	0	-	-	35.1	13
HCM Lane LOS		A	A	-	-	A	-	E	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	1.8	0.1

Queues
1: Pine Grove Road & Central Park Drive

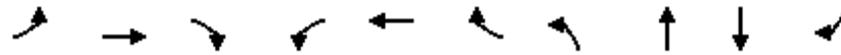
2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	266	108	119	217	136	392	103	141	277
v/c Ratio	0.71	0.17	0.35	0.45	0.23	0.53	0.25	0.19	0.35
Control Delay	30.3	11.4	27.3	7.1	11.0	20.5	11.3	16.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	11.4	27.3	7.1	11.0	20.5	11.3	16.3	3.8
Queue Length 50th (ft)	89	19	45	0	28	127	21	39	0
Queue Length 95th (ft)	150	50	89	50	64	235	51	86	47
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	377	875	601	681	603	739	413	742	797
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	0.71	0.12	0.20	0.32	0.23	0.53	0.25	0.19	0.35
Intersection Summary									

Queues
3: Central Park Drive & Mt Werner Road

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	228	147	65	22	315	65	103	60	136	380
v/c Ratio	0.47	0.17	0.09	0.06	0.32	0.12	0.23	0.09	0.43	0.58
Control Delay	14.4	11.5	2.5	17.8	18.3	0.5	11.7	7.9	23.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	11.5	2.5	17.8	18.3	0.5	11.7	7.9	23.2	6.4
Queue Length 50th (ft)	43	28	0	5	43	0	21	8	40	0
Queue Length 95th (ft)	100	69	14	22	84	1	45	25	82	55
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	485	1084	957	502	1438	729	444	1098	618	913
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	0.47	0.14	0.07	0.04	0.22	0.09	0.23	0.05	0.22	0.42

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	228	33	65	326	380	196	92	207
v/c Ratio	0.52	0.07	0.20	0.29	0.50	0.49	0.21	0.51
Control Delay	27.6	0.3	17.0	16.5	4.7	28.0	4.4	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	0.3	17.0	16.5	4.7	28.0	4.4	27.9
Queue Length 50th (ft)	75	0	15	42	0	65	0	68
Queue Length 95th (ft)	172	0	49	93	55	151	23	158
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	1003	908	320	2500	1229	662	650	646
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.04	0.20	0.13	0.31	0.30	0.14	0.32
Intersection Summary								

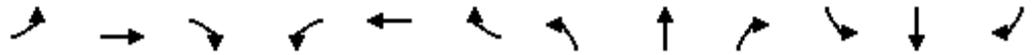
HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2027 Background PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	6.5			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	260	364	429	32
Demand Flow Rate, veh/h	265	371	437	32
Vehicles Circulating, veh/h	221	187	205	476
Vehicles Exiting, veh/h	421	321	353	10
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	6.4	7.3	4.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	265	371	437	32
Cap Entry Lane, veh/h	1101	1140	1120	849
Entry HV Adj Factor	0.982	0.982	0.982	0.997
Flow Entry, veh/h	260	364	429	32
Cap Entry, veh/h	1082	1120	1099	847
V/C Ratio	0.241	0.325	0.390	0.038
Control Delay, s/veh	5.6	6.4	7.3	4.6
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

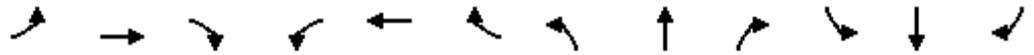
2027 Background+Project AM Peak
 Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	32	31	7	20	110	25	170	10	205	237	110
Future Volume (veh/h)	101	32	31	7	20	110	25	170	10	205	237	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	35	34	8	22	120	27	185	11	223	258	120
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	502	316	307	139	261	265	371	330	20	471	503	427
Arrive On Green	0.08	0.36	0.36	0.17	0.17	0.17	0.03	0.19	0.19	0.11	0.27	0.27
Sat Flow, veh/h	1781	871	847	223	1557	1585	1781	1748	104	1781	1870	1585
Grp Volume(v), veh/h	110	0	69	30	0	120	27	0	196	223	258	120
Grp Sat Flow(s),veh/h/ln	1781	0	1718	1780	0	1585	1781	0	1852	1781	1870	1585
Q Serve(g_s), s	2.1	0.0	1.2	0.0	0.0	3.0	0.5	0.0	4.3	4.4	5.2	2.7
Cycle Q Clear(g_c), s	2.1	0.0	1.2	0.6	0.0	3.0	0.5	0.0	4.3	4.4	5.2	2.7
Prop In Lane	1.00		0.49	0.27		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	502	0	623	400	0	265	371	0	350	471	503	427
V/C Ratio(X)	0.22	0.00	0.11	0.07	0.00	0.45	0.07	0.00	0.56	0.47	0.51	0.28
Avail Cap(c_a), veh/h	553	0	1271	988	0	817	514	0	1120	471	1132	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	9.4	15.7	0.0	16.7	13.8	0.0	16.4	12.3	13.8	12.9
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.2	0.0	3.3	0.1	0.0	3.8	1.1	2.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.4	0.3	0.0	1.2	0.2	0.0	1.9	1.6	2.2	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	9.7	15.9	0.0	20.0	13.9	0.0	20.2	13.4	16.0	13.9
LnGrp LOS	B	A	A	B	A	C	B	A	C	B	B	B
Approach Vol, veh/h		179			150			223			601	
Approach Delay, s/veh		11.2			19.2			19.5			14.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	13.4		21.2	6.4	17.0	8.7	12.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		33.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	6.4	6.3		3.2	2.5	7.2	4.1	5.0				
Green Ext Time (p_c), s	0.0	2.1		0.7	0.0	4.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay				15.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	390	85	10	100	20	30	20	15	35	20	65
Future Volume (veh/h)	153	390	85	10	100	20	30	20	15	35	20	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	166	424	92	11	109	22	33	22	16	38	22	71
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	678	910	771	425	1106	493	421	308	224	278	135	295
Arrive On Green	0.09	0.49	0.49	0.31	0.31	0.31	0.04	0.31	0.31	0.19	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	885	3554	1585	1781	1007	732	839	725	1585
Grp Volume(v), veh/h	166	424	92	11	109	22	33	0	38	60	0	71
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	885	1777	1585	1781	0	1739	1564	0	1585
Q Serve(g_s), s	2.7	7.3	1.5	0.4	1.1	0.5	0.7	0.0	0.7	0.2	0.0	1.8
Cycle Q Clear(g_c), s	2.7	7.3	1.5	0.4	1.1	0.5	0.7	0.0	0.7	1.3	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.63		1.00
Lane Grp Cap(c), veh/h	678	910	771	425	1106	493	421	0	532	413	0	295
V/C Ratio(X)	0.24	0.47	0.12	0.03	0.10	0.04	0.08	0.00	0.07	0.15	0.00	0.24
Avail Cap(c_a), veh/h	717	1222	1036	553	1622	723	559	0	1208	887	0	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	8.2	6.7	11.6	11.8	11.6	13.4	0.0	11.9	16.5	0.0	16.7
Incr Delay (d2), s/veh	0.2	0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.2	0.4	0.1	0.3	0.1	0.2	0.0	0.3	0.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	8.6	6.8	11.6	11.8	11.6	13.5	0.0	11.9	16.7	0.0	17.1
LnGrp LOS	A	A	A	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		682			142			71				131
Approach Delay, s/veh		8.3			11.8			12.7				16.9
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		28.5	5.8	14.0	8.5	20.0		19.7				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		31.5	5.5	24.0	5.5	22.0		33.5				
Max Q Clear Time (g_c+I1), s		9.3	2.7	3.8	4.7	3.1		2.7				
Green Ext Time (p_c), s		2.8	0.0	0.5	0.0	0.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	315	90	125	115	182	10	37	125	180	36	5
Future Volume (veh/h)	0	315	90	125	115	182	10	37	125	180	36	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	342	98	136	125	198	11	40	136	196	39	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	461	390	346	1447	646	68	247	270	261	52	7
Arrive On Green	0.00	0.25	0.25	0.08	0.41	0.41	0.17	0.17	0.17	0.18	0.18	0.18
Sat Flow, veh/h	1057	1870	1585	1781	3554	1585	399	1451	1585	1462	291	37
Grp Volume(v), veh/h	0	342	98	136	125	198	51	0	136	240	0	0
Grp Sat Flow(s),veh/h/ln	1057	1870	1585	1781	1777	1585	1850	0	1585	1791	0	0
Q Serve(g_s), s	0.0	9.3	2.8	2.9	1.2	4.7	1.3	0.0	4.3	7.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.3	2.8	2.9	1.2	4.7	1.3	0.0	4.3	7.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.22		1.00	0.82		0.02
Lane Grp Cap(c), veh/h	130	461	390	346	1447	646	315	0	270	320	0	0
V/C Ratio(X)	0.00	0.74	0.25	0.39	0.09	0.31	0.16	0.00	0.50	0.75	0.00	0.00
Avail Cap(c_a), veh/h	528	1165	987	509	3112	1388	685	0	587	727	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	19.3	16.8	13.6	10.1	11.1	19.6	0.0	20.8	21.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	0.3	0.7	0.0	0.3	0.2	0.0	1.5	3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	0.9	1.0	0.4	1.4	0.5	0.0	1.6	3.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.6	17.1	14.3	10.1	11.4	19.8	0.0	22.3	25.1	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	B	A	C	C	A	A
Approach Vol, veh/h		440			459			187			240	
Approach Delay, s/veh		20.6			11.9			21.6			25.1	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.9	18.1		14.4		27.1		13.9				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	9.5	34.5		22.5		48.5		20.5				
Max Q Clear Time (g_c+I1), s	4.9	11.3		9.0		6.7		6.3				
Green Ext Time (p_c), s	0.1	2.3		1.1		1.5		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				18.6								
HCM 6th LOS				B								

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	195	226	49	10	5
Future Vol, veh/h	19	195	226	49	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	21	212	246	53	11	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	299	0	-	0	527 273
Stage 1	-	-	-	-	273 -
Stage 2	-	-	-	-	254 -
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	1262	-	-	-	512 766
Stage 1	-	-	-	-	773 -
Stage 2	-	-	-	-	788 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1262	-	-	-	503 766
Mov Cap-2 Maneuver	-	-	-	-	503 -
Stage 1	-	-	-	-	760 -
Stage 2	-	-	-	-	788 -

Approach	NB	SB	NE
HCM Control Delay, s	0.7	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	568	1262	-	-	-
HCM Lane V/C Ratio	0.029	0.016	-	-	-
HCM Control Delay (s)	11.5	7.9	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	43	178	15	5	115
Future Vol, veh/h	0	43	178	15	5	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	-	-	-	50	-
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	47	193	16	5	125

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	336	201	0	0	209
Stage 1	201	-	-	-	-
Stage 2	135	-	-	-	-
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	659	840	-	-	1362
Stage 1	833	-	-	-	-
Stage 2	891	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	656	840	-	-	1362
Mov Cap-2 Maneuver	656	-	-	-	-
Stage 1	833	-	-	-	-
Stage 2	887	-	-	-	-

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)	-	-	840	1362
HCM Lane V/C Ratio	-	-	0.056	0.004
HCM Control Delay (s)	-	-	9.5	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	2.1					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	0	145	81	0	64
Future Vol, veh/h	0	0	145	81	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	158	88	0	70

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	10	380	0	0	290	71	0	0	0	96	0	10
Future Vol, veh/h	10	380	0	0	290	71	0	0	0	96	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	413	0	0	315	77	0	0	0	104	0	11

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	392	0	0	413	0	0	794	827	413	789	789	354
Stage 1	-	-	-	-	-	-	435	435	-	354	354	-
Stage 2	-	-	-	-	-	-	359	392	-	435	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1167	-	-	1146	-	-	306	307	639	308	323	690
Stage 1	-	-	-	-	-	-	600	580	-	663	630	-
Stage 2	-	-	-	-	-	-	659	606	-	600	580	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1167	-	-	1146	-	-	299	304	639	306	320	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	304	-	306	320	-
Stage 1	-	-	-	-	-	-	595	575	-	657	630	-
Stage 2	-	-	-	-	-	-	649	606	-	594	575	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	21.5
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1167	-	-	1146	-	-	306	690
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	0.341	0.016
HCM Control Delay (s)		0	8.1	-	-	0	-	22.7	10.3
HCM Lane LOS		A	A	-	-	A	-	C	B
HCM 95th %tile Q(veh)		-	0	-	-	0	-	1.5	0

Queues
1: Pine Grove Road & Central Park Drive

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

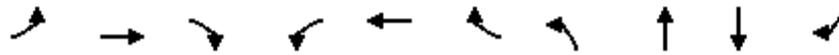


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	110	69	30	120	27	196	223	258	120
v/c Ratio	0.30	0.11	0.09	0.27	0.05	0.24	0.36	0.27	0.13
Control Delay	16.2	9.2	22.1	3.9	8.1	15.8	11.2	13.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	9.2	22.1	3.9	8.1	15.8	11.2	13.7	1.7
Queue Length 50th (ft)	22	7	8	0	4	49	41	48	0
Queue Length 95th (ft)	64	34	30	23	15	96	79	127	17
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	366	1179	884	920	591	1093	621	1100	1002
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	0.30	0.06	0.03	0.13	0.05	0.18	0.36	0.23	0.12

Intersection Summary

Queues
3: Central Park Drive & Mt Werner Road

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	166	424	92	11	109	22	33	38	60	71
v/c Ratio	0.23	0.38	0.09	0.03	0.07	0.03	0.09	0.07	0.19	0.15
Control Delay	8.0	9.5	2.8	14.2	13.5	0.1	11.8	8.9	19.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	9.5	2.8	14.2	13.5	0.1	11.8	8.9	19.3	1.4
Queue Length 50th (ft)	17	53	0	2	9	0	6	4	12	0
Queue Length 95th (ft)	58	156	19	12	28	0	20	19	43	6
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	714	1296	1130	537	1983	950	355	1296	775	907
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	0.23	0.33	0.08	0.02	0.05	0.02	0.09	0.03	0.08	0.08

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2027 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	342	98	136	125	198	51	136	240
v/c Ratio	0.69	0.20	0.37	0.08	0.24	0.19	0.39	0.63
Control Delay	32.3	5.1	15.2	11.9	2.9	33.5	10.7	34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	5.1	15.2	11.9	2.9	33.5	10.7	34.7
Queue Length 50th (ft)	134	0	33	15	0	20	0	95
Queue Length 95th (ft)	248	29	76	34	35	61	52	192
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	920	837	395	2458	1160	540	560	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.12	0.34	0.05	0.17	0.09	0.24	0.42
Intersection Summary								

Intersection				
Intersection Delay, s/veh	3.8			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	161	103	146	15
Demand Flow Rate, veh/h	164	105	149	15
Vehicles Circulating, veh/h	99	81	65	242
Vehicles Exiting, veh/h	115	176	121	21
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.6	3.8	3.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	164	105	149	15
Cap Entry Lane, veh/h	1247	1270	1291	1078
Entry HV Adj Factor	0.982	0.983	0.979	0.993
Flow Entry, veh/h	161	103	146	15
Cap Entry, veh/h	1225	1249	1264	1071
V/C Ratio	0.131	0.083	0.115	0.014
Control Delay, s/veh	4.0	3.6	3.8	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

HCM 6th Signalized Intersection Summary
1: Pine Grove Road & Central Park Drive

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	62	53	18	95	200	125	340	20	95	153	255
Future Volume (veh/h)	290	62	53	18	95	200	125	340	20	95	153	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	315	67	58	20	103	217	136	370	22	103	166	277
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	309	268	87	319	305	531	683	41	437	718	608
Arrive On Green	0.07	0.33	0.33	0.19	0.19	0.19	0.07	0.39	0.39	0.06	0.38	0.38
Sat Flow, veh/h	1781	925	801	144	1658	1585	1781	1748	104	1781	1870	1585
Grp Volume(v), veh/h	315	0	125	123	0	217	136	0	392	103	166	277
Grp Sat Flow(s),veh/h/ln	1781	0	1726	1802	0	1585	1781	0	1852	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	3.7	0.0	0.0	9.0	3.2	0.0	11.5	2.4	4.2	9.2
Cycle Q Clear(g_c), s	5.0	0.0	3.7	4.0	0.0	9.0	3.2	0.0	11.5	2.4	4.2	9.2
Prop In Lane	1.00		0.46	0.16		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	372	0	577	406	0	305	531	0	724	437	718	608
V/C Ratio(X)	0.85	0.00	0.22	0.30	0.00	0.71	0.26	0.00	0.54	0.24	0.23	0.46
Avail Cap(c_a), veh/h	372	0	810	640	0	518	536	0	724	454	718	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	16.8	24.6	0.0	26.6	11.6	0.0	16.6	12.4	14.7	16.2
Incr Delay (d2), s/veh	16.8	0.0	0.5	1.1	0.0	8.2	0.4	0.0	2.9	0.4	0.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	1.5	1.9	0.0	4.0	1.2	0.0	5.1	0.9	1.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	17.3	25.7	0.0	34.8	11.9	0.0	19.5	12.8	15.4	18.6
LnGrp LOS	D	A	B	C	A	C	B	A	B	B	B	B
Approach Vol, veh/h		440			340			528			546	
Approach Delay, s/veh		35.4			31.5			17.5			16.6	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	32.5		28.5	9.8	32.0	10.0	18.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		33.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	4.4	13.5		5.7	5.2	11.2	7.0	11.0				
Green Ext Time (p_c), s	0.0	3.9		1.5	0.0	3.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay				24.0								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

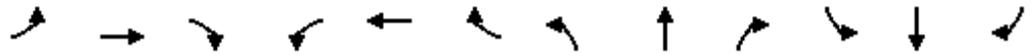
2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	135	60	20	290	60	95	35	20	90	35	368
Future Volume (veh/h)	255	135	60	20	290	60	95	35	20	90	35	368
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	277	147	65	22	315	65	103	38	22	98	38	400
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	758	642	409	881	393	456	477	276	399	139	468
Arrive On Green	0.09	0.41	0.41	0.25	0.25	0.25	0.07	0.43	0.43	0.30	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1170	3554	1585	1781	1111	643	1005	471	1585
Grp Volume(v), veh/h	277	147	65	22	315	65	103	0	60	136	0	400
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1170	1777	1585	1781	0	1755	1476	0	1585
Q Serve(g_s), s	5.5	3.1	1.5	0.9	4.4	1.9	2.2	0.0	1.2	3.4	0.0	14.4
Cycle Q Clear(g_c), s	5.5	3.1	1.5	0.9	4.4	1.9	2.2	0.0	1.2	4.1	0.0	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	0.72		1.00
Lane Grp Cap(c), veh/h	456	758	642	409	881	393	456	0	754	538	0	468
V/C Ratio(X)	0.61	0.19	0.10	0.05	0.36	0.17	0.23	0.00	0.08	0.25	0.00	0.85
Avail Cap(c_a), veh/h	456	974	825	544	1293	577	497	0	972	686	0	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	11.6	11.2	17.4	18.8	17.8	12.0	0.0	10.2	16.4	0.0	20.1
Incr Delay (d2), s/veh	2.3	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.2	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.1	0.5	0.2	1.7	0.7	0.8	0.0	0.4	1.4	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	11.7	11.2	17.5	19.0	18.0	12.3	0.0	10.2	16.6	0.0	28.6
LnGrp LOS	B	B	B	B	B	B	B	A	B	B	A	C
Approach Vol, veh/h		489			402			163				536
Approach Delay, s/veh		15.3			18.8			11.5				25.6
Approach LOS		B			B			B				C
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		29.5	8.1	22.9	9.5	20.0		31.0				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		31.5	5.5	24.0	5.5	22.0		33.5				
Max Q Clear Time (g_c+I1), s		5.1	4.2	16.4	7.5	6.4		3.2				
Green Ext Time (p_c), s		1.0	0.0	1.5	0.0	2.0		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				19.3								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	210	30	60	300	363	65	117	85	157	37	10
Future Volume (veh/h)	0	210	30	60	300	363	65	117	85	157	37	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	228	33	65	326	395	71	127	92	171	40	11
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	371	315	346	1234	550	129	230	309	261	61	17
Arrive On Green	0.00	0.20	0.20	0.06	0.35	0.35	0.20	0.20	0.20	0.19	0.19	0.19
Sat Flow, veh/h	732	1870	1585	1781	3554	1585	659	1179	1585	1375	322	88
Grp Volume(v), veh/h	0	228	33	65	326	395	198	0	92	222	0	0
Grp Sat Flow(s),veh/h/ln	732	1870	1585	1781	1777	1585	1837	0	1585	1786	0	0
Q Serve(g_s), s	0.0	5.6	0.9	1.3	3.3	10.9	4.9	0.0	2.5	5.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.6	0.9	1.3	3.3	10.9	4.9	0.0	2.5	5.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	0.77		0.05
Lane Grp Cap(c), veh/h	143	371	315	346	1234	550	359	0	309	339	0	0
V/C Ratio(X)	0.00	0.61	0.10	0.19	0.26	0.72	0.55	0.00	0.30	0.66	0.00	0.00
Avail Cap(c_a), veh/h	441	1133	960	417	2822	1259	748	0	645	727	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.4	16.5	13.5	11.8	14.3	18.3	0.0	17.3	18.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.1	0.3	0.1	1.8	1.3	0.0	0.5	2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.3	0.5	1.1	3.4	2.0	0.0	0.9	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.1	16.7	13.8	11.9	16.1	19.6	0.0	17.9	21.0	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	B	A	B	C	A	A
Approach Vol, veh/h		261			786			290			222	
Approach Delay, s/veh		19.6			14.2			19.1			21.0	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.5	14.5		14.1		22.0		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.0	30.5		20.5		40.0		20.5				
Max Q Clear Time (g_c+I1), s	3.3	7.6		7.8		12.9		6.9				
Green Ext Time (p_c), s	0.0	1.3		1.0		3.6		1.2				

Intersection Summary

HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	29	470	183	40	20	15
Future Vol, veh/h	29	470	183	40	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	32	511	199	43	22	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	242	0	-	0	796 221
Stage 1	-	-	-	-	221 -
Stage 2	-	-	-	-	575 -
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	1324	-	-	-	356 819
Stage 1	-	-	-	-	816 -
Stage 2	-	-	-	-	563 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1324	-	-	-	347 819
Mov Cap-2 Maneuver	-	-	-	-	347 -
Stage 1	-	-	-	-	796 -
Stage 2	-	-	-	-	563 -

Approach	NB	SB	NE
HCM Control Delay, s	0.5	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	461	1324	-	-	-
HCM Lane V/C Ratio	0.083	0.024	-	-	-
HCM Control Delay (s)	13.5	7.8	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	74	325	20	15	468
Future Vol, veh/h	20	74	325	20	15	468
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	-	-	-	50	-
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	22	80	353	22	16	509

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	905	364	0	0	375
Stage 1	364	-	-	-	-
Stage 2	541	-	-	-	-
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	307	681	-	-	1183
Stage 1	703	-	-	-	-
Stage 2	583	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	303	681	-	-	1183
Mov Cap-2 Maneuver	303	-	-	-	-
Stage 1	703	-	-	-	-
Stage 2	575	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	538	1183
HCM Lane V/C Ratio	-	-	0.19	0.014
HCM Control Delay (s)	-	-	13.3	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Intersection						
Int Delay, s/veh	1.9					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	0	315	84	0	79
Future Vol, veh/h	0	0	315	84	0	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	342	91	0	86

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	660
HCM Lane V/C Ratio	-	-	0.13
HCM Control Delay (s)	-	-	11.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	10	381	0	0	583	117	0	0	0	77	0	15
Future Vol, veh/h	10	381	0	0	583	117	0	0	0	77	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	414	0	0	634	127	0	0	0	84	0	16

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	761	0	0	414	0	0	1142	1197	414	1134	1134	698
Stage 1	-	-	-	-	-	-	436	436	-	698	698	-
Stage 2	-	-	-	-	-	-	706	761	-	436	436	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	851	-	-	1145	-	-	177	186	638	180	203	440
Stage 1	-	-	-	-	-	-	599	580	-	431	442	-
Stage 2	-	-	-	-	-	-	427	414	-	599	580	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	851	-	-	1145	-	-	169	184	638	178	200	440
Mov Cap-2 Maneuver	-	-	-	-	-	-	169	184	-	178	200	-
Stage 1	-	-	-	-	-	-	591	572	-	425	442	-
Stage 2	-	-	-	-	-	-	411	414	-	591	572	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	37.4
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	851	-	-	1145	-	-	178	440
HCM Lane V/C Ratio	-	0.013	-	-	-	-	-	0.47	0.037
HCM Control Delay (s)	0	9.3	-	-	0	-	-	42	13.5
HCM Lane LOS		A	A	-	-	A	-	E	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	2.2	0.1

Queues
1: Pine Grove Road & Central Park Drive

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



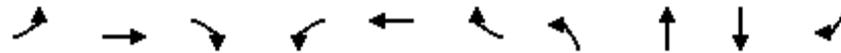
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	315	125	123	217	136	392	103	166	277
v/c Ratio	0.83	0.20	0.36	0.45	0.23	0.53	0.25	0.22	0.35
Control Delay	40.7	10.4	27.5	7.0	11.2	20.6	11.4	16.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	10.4	27.5	7.0	11.2	20.6	11.4	16.7	3.8
Queue Length 50th (ft)	109	20	47	0	28	128	21	47	0
Queue Length 95th (ft)	#213	53	91	49	65	236	51	100	47
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	379	871	591	679	591	737	411	740	796
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	0.83	0.14	0.21	0.32	0.23	0.53	0.25	0.22	0.35

Intersection Summary

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

Queues
3: Central Park Drive & Mt Werner Road

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	277	147	65	22	315	65	103	60	136	400
v/c Ratio	0.57	0.17	0.09	0.06	0.32	0.12	0.23	0.09	0.43	0.60
Control Delay	17.1	11.5	2.5	17.8	18.3	0.5	11.7	7.9	23.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	11.5	2.5	17.8	18.3	0.5	11.7	7.9	23.2	6.5
Queue Length 50th (ft)	55	28	0	5	43	0	21	8	40	0
Queue Length 95th (ft)	#129	69	14	22	84	1	45	25	82	56
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	485	1084	957	502	1438	729	444	1098	618	924
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	0.57	0.14	0.07	0.04	0.22	0.09	0.23	0.05	0.22	0.43

Intersection Summary

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

Queues
5: Pine Grove Road & Mt Werner Road

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	228	33	65	326	395	198	92	222
v/c Ratio	0.53	0.07	0.21	0.29	0.52	0.49	0.21	0.54
Control Delay	28.0	0.3	17.4	16.8	4.8	28.4	4.4	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	0.3	17.4	16.8	4.8	28.4	4.4	28.4
Queue Length 50th (ft)	77	0	16	43	0	67	0	74
Queue Length 95th (ft)	173	0	50	94	57	153	23	169
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	993	900	317	2474	1225	655	644	639
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.04	0.21	0.13	0.32	0.30	0.14	0.35

Intersection Summary

HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2027 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	6.9			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	346	364	429	32
Demand Flow Rate, veh/h	352	371	437	32
Vehicles Circulating, veh/h	221	207	225	563
Vehicles Exiting, veh/h	441	388	353	10
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	6.6	7.5	5.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	352	371	437	32
Cap Entry Lane, veh/h	1101	1117	1097	777
Entry HV Adj Factor	0.982	0.982	0.982	0.997
Flow Entry, veh/h	346	364	429	32
Cap Entry, veh/h	1081	1097	1077	775
V/C Ratio	0.320	0.332	0.398	0.041
Control Delay, s/veh	6.5	6.6	7.5	5.1
LOS	A	A	A	A
95th %tile Queue, veh	1	1	2	0

HCM 6th Signalized Intersection Summary
1: Pine Grove Road & Central Park Drive

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	35	25	5	25	130	30	200	10	240	255	130
Future Volume (veh/h)	75	35	25	5	25	130	30	200	10	240	255	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	38	27	5	27	141	33	217	11	261	277	141
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	355	252	109	289	266	379	372	19	470	530	449
Arrive On Green	0.07	0.35	0.35	0.17	0.17	0.17	0.04	0.21	0.21	0.11	0.28	0.28
Sat Flow, veh/h	1781	1017	723	104	1725	1585	1781	1765	89	1781	1870	1585
Grp Volume(v), veh/h	82	0	65	32	0	141	33	0	228	261	277	141
Grp Sat Flow(s),veh/h/ln	1781	0	1740	1829	0	1585	1781	0	1854	1781	1870	1585
Q Serve(g_s), s	1.6	0.0	1.1	0.0	0.0	3.7	0.6	0.0	5.0	5.0	5.7	3.2
Cycle Q Clear(g_c), s	1.6	0.0	1.1	0.7	0.0	3.7	0.6	0.0	5.0	5.0	5.7	3.2
Prop In Lane	1.00		0.42	0.16		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	471	0	607	398	0	266	379	0	390	470	530	449
V/C Ratio(X)	0.17	0.00	0.11	0.08	0.00	0.53	0.09	0.00	0.58	0.56	0.52	0.31
Avail Cap(c_a), veh/h	541	0	882	996	0	803	509	0	1103	470	1113	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	10.0	16.0	0.0	17.3	13.1	0.0	16.1	12.6	13.7	12.8
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	4.5	0.1	0.0	3.8	1.8	2.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	0.3	0.0	1.5	0.2	0.0	2.2	1.9	2.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	10.2	16.2	0.0	21.7	13.3	0.0	19.9	14.5	15.9	13.9
LnGrp LOS	B	A	B	B	A	C	B	A	B	B	B	B
Approach Vol, veh/h		147			173			261			679	
Approach Delay, s/veh		11.5			20.7			19.1			14.9	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	14.6		20.8	6.7	17.9	8.2	12.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	7.0	7.0		3.1	2.6	7.7	3.6	5.7				
Green Ext Time (p_c), s	0.0	2.5		0.5	0.0	4.4	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay				16.2								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	460	100	10	115	25	40	20	15	40	20	55
Future Volume (veh/h)	130	460	100	10	115	25	40	20	15	40	20	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	500	109	11	125	27	43	22	16	43	22	60
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	658	900	763	386	1103	492	430	314	228	286	122	291
Arrive On Green	0.09	0.48	0.48	0.31	0.31	0.31	0.05	0.31	0.31	0.18	0.18	0.18
Sat Flow, veh/h	1781	1870	1585	812	3554	1585	1781	1007	732	882	665	1585
Grp Volume(v), veh/h	141	500	109	11	125	27	43	0	38	65	0	60
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	812	1777	1585	1781	0	1739	1548	0	1585
Q Serve(g_s), s	2.3	9.1	1.9	0.5	1.2	0.6	0.9	0.0	0.7	0.5	0.0	1.6
Cycle Q Clear(g_c), s	2.3	9.1	1.9	1.4	1.2	0.6	0.9	0.0	0.7	1.5	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.66		1.00
Lane Grp Cap(c), veh/h	658	900	763	386	1103	492	430	0	542	408	0	291
V/C Ratio(X)	0.21	0.56	0.14	0.03	0.11	0.05	0.10	0.00	0.07	0.16	0.00	0.21
Avail Cap(c_a), veh/h	704	900	763	504	1618	722	552	0	864	880	0	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.9	7.0	12.3	11.9	11.7	13.3	0.0	11.7	16.7	0.0	16.7
Incr Delay (d2), s/veh	0.2	0.8	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.8	0.5	0.1	0.4	0.2	0.3	0.0	0.3	0.6	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	9.6	7.1	12.3	12.0	11.7	13.4	0.0	11.7	16.9	0.0	17.1
LnGrp LOS	A	A	A	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		750			163			81				125
Approach Delay, s/veh		9.1			11.9			12.6				17.0
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		28.2	6.2	13.9	8.2	20.0		20.1				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		11.1	2.9	3.6	4.3	3.4		2.7				
Green Ext Time (p_c), s		2.6	0.0	0.5	0.0	0.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				10.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	370	105	145	135	200	10	40	150	200	40	5
Future Volume (veh/h)	0	370	105	145	135	200	10	40	150	200	40	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	402	114	158	147	217	11	43	163	217	43	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	509	431	341	1544	689	60	233	251	276	55	6
Arrive On Green	0.00	0.27	0.27	0.09	0.43	0.43	0.16	0.16	0.16	0.19	0.19	0.19
Sat Flow, veh/h	1018	1870	1585	1781	3554	1585	377	1474	1585	1467	291	34
Grp Volume(v), veh/h	0	402	114	158	147	217	54	0	163	265	0	0
Grp Sat Flow(s),veh/h/ln	1018	1870	1585	1781	1777	1585	1852	0	1585	1791	0	0
Q Serve(g_s), s	0.0	12.3	3.5	3.6	1.5	5.5	1.6	0.0	5.9	8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.3	3.5	3.6	1.5	5.5	1.6	0.0	5.9	8.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.20		1.00	0.82		0.02
Lane Grp Cap(c), veh/h	117	509	431	341	1544	689	293	0	251	337	0	0
V/C Ratio(X)	0.00	0.79	0.26	0.46	0.10	0.32	0.18	0.00	0.65	0.79	0.00	0.00
Avail Cap(c_a), veh/h	343	925	784	629	1758	784	616	0	527	595	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.8	17.6	14.4	10.3	11.4	22.5	0.0	24.3	23.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	0.3	1.0	0.0	0.3	0.3	0.0	2.8	4.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	1.2	1.3	0.5	1.7	0.7	0.0	2.3	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.6	17.9	15.4	10.3	11.7	22.8	0.0	27.2	27.9	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	C	A	C	C	A	A
Approach Vol, veh/h		516			522			217			265	
Approach Delay, s/veh		22.3			12.4			26.1			27.9	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.0	21.3		16.1		31.3		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	15.5	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	5.6	14.3		10.7		7.5		7.9				
Green Ext Time (p_c), s	0.3	2.5		1.0		1.6		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	5	230	250	25	10	5
Future Vol, veh/h	5	230	250	25	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	5	250	272	27	11	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	299	0	-	0	546 286
Stage 1	-	-	-	-	286 -
Stage 2	-	-	-	-	260 -
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	1262	-	-	-	499 753
Stage 1	-	-	-	-	763 -
Stage 2	-	-	-	-	783 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1262	-	-	-	497 753
Mov Cap-2 Maneuver	-	-	-	-	497 -
Stage 1	-	-	-	-	760 -
Stage 2	-	-	-	-	783 -

Approach	NB	SB	NE
HCM Control Delay, s	0.2	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	561	1262	-	-	-
HCM Lane V/C Ratio	0.029	0.004	-	-	-
HCM Control Delay (s)	11.6	7.9	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	160	15	5	115
Future Vol, veh/h	0	10	160	15	5	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	-	-	-	50	-
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	11	174	16	5	125

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	317	182	0	0	190
Stage 1	182	-	-	-	-
Stage 2	135	-	-	-	-
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	676	861	-	-	1384
Stage 1	849	-	-	-	-
Stage 2	891	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	673	861	-	-	1384
Mov Cap-2 Maneuver	673	-	-	-	-
Stage 1	849	-	-	-	-
Stage 2	887	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1384
HCM Lane V/C Ratio	-	-	0.013	0.004
HCM Control Delay (s)	-	-	9.2	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	10	425	0	0	300	80	0	0	0	110	0	10
Future Vol, veh/h	10	425	0	0	300	80	0	0	0	110	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	462	0	0	326	87	0	0	0	120	0	11

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	413	0	0	462	0	0	859	897	462	854	854	370
Stage 1	-	-	-	-	-	-	484	484	-	370	370	-
Stage 2	-	-	-	-	-	-	375	413	-	484	484	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1146	-	-	1099	-	-	277	279	600	279	296	676
Stage 1	-	-	-	-	-	-	564	552	-	650	620	-
Stage 2	-	-	-	-	-	-	646	594	-	564	552	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1146	-	-	1099	-	-	271	276	600	277	293	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	276	-	277	293	-
Stage 1	-	-	-	-	-	-	558	546	-	644	620	-
Stage 2	-	-	-	-	-	-	636	594	-	559	546	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	26.1
HCM LOS			A	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1146	-	-	1099	-	-	277	676
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	0.432	0.016
HCM Control Delay (s)		0	8.2	-	-	0	-	27.5	10.4
HCM Lane LOS		A	A	-	-	A	-	D	B
HCM 95th %tile Q(veh)		-	0	-	-	0	-	2.1	0

Queues
1: Pine Grove Road & Central Park Drive

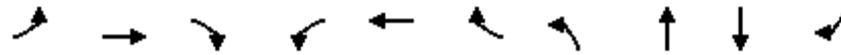
2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	82	65	32	141	33	228	261	277	141
v/c Ratio	0.24	0.12	0.09	0.31	0.06	0.37	0.43	0.27	0.15
Control Delay	16.4	10.4	22.5	5.7	8.2	16.4	12.1	13.1	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	10.4	22.5	5.7	8.2	16.4	12.1	13.1	2.7
Queue Length 50th (ft)	17	8	9	0	5	59	49	52	0
Queue Length 95th (ft)	53	35	33	34	18	115	98	141	24
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	341	1223	938	924	569	1121	600	1128	1023
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	0.24	0.05	0.03	0.15	0.06	0.20	0.43	0.25	0.14
Intersection Summary									

Queues
3: Central Park Drive & Mt Werner Road

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	141	500	109	11	125	27	43	38	65	60
v/c Ratio	0.20	0.45	0.11	0.03	0.08	0.03	0.12	0.07	0.20	0.13
Control Delay	7.9	10.3	3.0	14.2	13.5	0.1	12.1	8.9	19.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	10.3	3.0	14.2	13.5	0.1	12.1	8.9	19.5	0.6
Queue Length 50th (ft)	14	67	1	2	11	0	8	4	14	0
Queue Length 95th (ft)	50	192	22	12	32	0	24	19	46	1
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	707	1297	1133	501	1984	951	355	1296	769	908
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	0.20	0.39	0.10	0.02	0.06	0.03	0.12	0.03	0.08	0.07

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	402	114	158	147	217	54	163	265
v/c Ratio	0.75	0.21	0.44	0.09	0.25	0.22	0.46	0.69
Control Delay	35.5	6.4	16.0	11.6	2.6	36.9	11.1	40.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	6.4	16.0	11.6	2.6	36.9	11.1	40.0
Queue Length 50th (ft)	178	2	43	20	0	25	0	119
Queue Length 95th (ft)	306	39	83	37	34	65	57	231
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	748	701	470	2355	1126	498	546	482
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.16	0.34	0.06	0.19	0.11	0.30	0.55

Intersection Summary

HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2043 Background AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	3.8			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	104	125	173	15
Demand Flow Rate, veh/h	106	127	176	15
Vehicles Circulating, veh/h	115	71	60	200
Vehicles Exiting, veh/h	121	144	138	21
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.7	3.9	3.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	106	127	176	15
Cap Entry Lane, veh/h	1227	1283	1298	1125
Entry HV Adj Factor	0.984	0.984	0.982	0.993
Flow Entry, veh/h	104	125	173	15
Cap Entry, veh/h	1208	1263	1275	1118
V/C Ratio	0.086	0.099	0.136	0.013
Control Delay, s/veh	3.7	3.7	3.9	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2043 Background PM Peak
 Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	70	45	15	110	235	150	400	35	110	155	300
Future Volume (veh/h)	285	70	45	15	110	235	150	400	35	110	155	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	310	76	49	16	120	255	163	435	38	120	168	326
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	374	241	76	371	339	502	642	56	362	696	590
Arrive On Green	0.07	0.35	0.35	0.21	0.21	0.21	0.07	0.38	0.38	0.06	0.37	0.37
Sat Flow, veh/h	1781	1062	685	94	1731	1585	1781	1696	148	1781	1870	1585
Grp Volume(v), veh/h	310	0	125	136	0	255	163	0	473	120	168	326
Grp Sat Flow(s),veh/h/ln	1781	0	1747	1825	0	1585	1781	0	1844	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	3.6	0.0	0.0	10.9	4.1	0.0	15.6	3.0	4.5	11.8
Cycle Q Clear(g_c), s	5.0	0.0	3.6	4.5	0.0	10.9	4.1	0.0	15.6	3.0	4.5	11.8
Prop In Lane	1.00		0.39	0.12		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	376	0	615	446	0	339	502	0	698	362	696	590
V/C Ratio(X)	0.82	0.00	0.20	0.30	0.00	0.75	0.32	0.00	0.68	0.33	0.24	0.55
Avail Cap(c_a), veh/h	376	0	615	629	0	503	502	0	698	373	696	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	0.0	16.4	24.2	0.0	26.7	12.6	0.0	18.9	14.2	15.7	18.0
Incr Delay (d2), s/veh	14.5	0.0	0.4	1.1	0.0	8.9	0.5	0.0	5.2	0.8	0.8	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	1.5	2.1	0.0	4.8	1.6	0.0	7.1	1.2	2.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	16.8	25.2	0.0	35.6	13.2	0.0	24.1	15.0	16.5	21.7
LnGrp LOS	D	A	B	C	A	D	B	A	C	B	B	C
Approach Vol, veh/h		435			391			636			614	
Approach Delay, s/veh		33.4			32.0			21.3			19.0	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	32.4		30.5	10.0	32.0	10.0	20.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		23.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	5.0	17.6		5.6	6.1	13.8	7.0	12.9				
Green Ext Time (p_c), s	0.0	3.7		1.2	0.0	3.9	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				25.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	155	75	20	340	70	110	40	20	105	40	410
Future Volume (veh/h)	245	155	75	20	340	70	110	40	20	105	40	410
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	266	168	82	22	370	76	120	43	22	114	43	446
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	727	616	383	846	377	457	528	270	422	144	506
Arrive On Green	0.09	0.39	0.39	0.24	0.24	0.24	0.07	0.45	0.45	0.32	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1130	3554	1585	1781	1166	597	1013	452	1585
Grp Volume(v), veh/h	266	168	82	22	370	76	120	0	65	157	0	446
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1130	1777	1585	1781	0	1763	1466	0	1585
Q Serve(g_s), s	5.5	3.8	2.1	1.0	5.6	2.4	2.6	0.0	1.3	4.2	0.0	16.8
Cycle Q Clear(g_c), s	5.5	3.8	2.1	1.0	5.6	2.4	2.6	0.0	1.3	5.0	0.0	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	0.73		1.00
Lane Grp Cap(c), veh/h	411	727	616	383	846	377	457	0	798	567	0	506
V/C Ratio(X)	0.65	0.23	0.13	0.06	0.44	0.20	0.26	0.00	0.08	0.28	0.00	0.88
Avail Cap(c_a), veh/h	411	727	616	509	1241	553	488	0	798	656	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	12.9	12.4	18.7	20.4	19.2	11.8	0.0	9.8	16.2	0.0	20.3
Incr Delay (d2), s/veh	3.5	0.2	0.1	0.1	0.4	0.3	0.3	0.0	0.0	0.3	0.0	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.4	0.7	0.2	2.2	0.8	1.0	0.0	0.5	1.7	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	13.1	12.5	18.7	20.8	19.5	12.1	0.0	9.8	16.5	0.0	32.9
LnGrp LOS	C	B	B	B	C	B	B	A	A	B	A	C
Approach Vol, veh/h		516			468			185				603
Approach Delay, s/veh		17.1			20.5			11.3				28.6
Approach LOS		B			C			B				C
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		29.5	8.4	25.1	9.5	20.0		33.5				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		22.0	5.5	24.0	5.5	22.0		24.0				
Max Q Clear Time (g_c+I1), s		5.8	4.6	18.8	7.5	7.6		3.3				
Green Ext Time (p_c), s		1.0	0.0	1.3	0.0	2.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	245	35	70	355	410	75	135	100	170	45	15
Future Volume (veh/h)	0	245	35	70	355	410	75	135	100	170	45	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	266	38	76	386	446	82	147	109	185	49	16
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	392	333	338	1282	572	126	226	303	248	66	21
Arrive On Green	0.00	0.21	0.21	0.06	0.36	0.36	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	660	1870	1585	1781	3554	1585	658	1180	1585	1320	350	114
Grp Volume(v), veh/h	0	266	38	76	386	446	229	0	109	250	0	0
Grp Sat Flow(s),veh/h/ln	660	1870	1585	1781	1777	1585	1837	0	1585	1784	0	0
Q Serve(g_s), s	0.0	6.8	1.0	1.6	4.0	13.0	6.0	0.0	3.1	6.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.8	1.0	1.6	4.0	13.0	6.0	0.0	3.1	6.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	0.74		0.06
Lane Grp Cap(c), veh/h	139	392	333	338	1282	572	352	0	303	335	0	0
V/C Ratio(X)	0.00	0.68	0.11	0.22	0.30	0.78	0.65	0.00	0.36	0.75	0.00	0.00
Avail Cap(c_a), veh/h	388	1100	932	395	2090	932	726	0	627	705	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.9	16.6	13.6	11.9	14.7	19.4	0.0	18.2	19.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.2	0.3	0.1	2.4	2.0	0.0	0.7	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.3	0.6	1.3	4.2	2.5	0.0	1.1	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.9	16.7	13.9	12.0	17.1	21.4	0.0	18.9	23.2	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	C	A	B	C	A	A
Approach Vol, veh/h		304			908			338			250	
Approach Delay, s/veh		20.4			14.7			20.6			23.2	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.8	15.4		14.2		23.2		14.4				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.0	30.5		20.5		30.5		20.5				
Max Q Clear Time (g_c+I1), s	3.6	8.8		8.9		15.0		8.0				
Green Ext Time (p_c), s	0.0	1.5		1.1		3.7		1.3				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0.9					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	20	555	200	15	25	15
Future Vol, veh/h	20	555	200	15	25	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	22	603	217	16	27	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	233	0	-	0	872 225
Stage 1	-	-	-	-	225 -
Stage 2	-	-	-	-	647 -
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	1335	-	-	-	321 814
Stage 1	-	-	-	-	812 -
Stage 2	-	-	-	-	521 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1335	-	-	-	316 814
Mov Cap-2 Maneuver	-	-	-	-	316 -
Stage 1	-	-	-	-	799 -
Stage 2	-	-	-	-	521 -

Approach	NB	SB	NE
HCM Control Delay, s	0.3	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	410	1335	-	-	-
HCM Lane V/C Ratio	0.106	0.016	-	-	-
HCM Control Delay (s)	14.8	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	-

HCM 6th TWSC
4: Central Park Drive & Snapdragon Way

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	40	330	25	20	525
Future Vol, veh/h	25	40	330	25	20	525
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	-	-	-	50	-
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	27	43	359	27	22	571

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	988	373	0	0	386
Stage 1	373	-	-	-	-
Stage 2	615	-	-	-	-
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	274	673	-	-	1172
Stage 1	696	-	-	-	-
Stage 2	539	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	269	673	-	-	1172
Mov Cap-2 Maneuver	269	-	-	-	-
Stage 1	696	-	-	-	-
Stage 2	529	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	427	1172
HCM Lane V/C Ratio	-	-	0.165	0.019
HCM Control Delay (s)	-	-	15.1	8.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↔			↖	↗
Traffic Vol, veh/h	10	425	0	0	630	135	0	0	0	90	0	20
Future Vol, veh/h	10	425	0	0	630	135	0	0	0	90	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	462	0	0	685	147	0	0	0	98	0	22

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	832	0	0	462	0	0	1254	1316	462	1243	1243	759
Stage 1	-	-	-	-	-	-	484	484	-	759	759	-
Stage 2	-	-	-	-	-	-	770	832	-	484	484	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	801	-	-	1099	-	-	149	158	600	151	174	406
Stage 1	-	-	-	-	-	-	564	552	-	399	415	-
Stage 2	-	-	-	-	-	-	393	384	-	564	552	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	801	-	-	1099	-	-	140	156	600	149	172	406
Mov Cap-2 Maneuver	-	-	-	-	-	-	140	156	-	149	172	-
Stage 1	-	-	-	-	-	-	556	544	-	393	415	-
Stage 2	-	-	-	-	-	-	372	384	-	556	544	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	56.9
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	801	-	-	1099	-	-	149	406
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.657	0.054
HCM Control Delay (s)	0	9.6	-	-	0	-	-	66.4	14.4
HCM Lane LOS		A	A	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	3.7	0.2

Queues
1: Pine Grove Road & Central Park Drive

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS



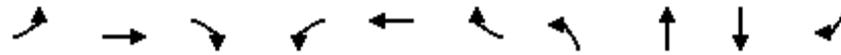
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	310	125	136	255	163	473	120	168	326
v/c Ratio	0.82	0.20	0.38	0.49	0.28	0.63	0.34	0.24	0.41
Control Delay	39.4	11.0	27.3	6.8	12.4	23.7	13.4	17.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	11.0	27.3	6.8	12.4	23.7	13.4	17.6	4.1
Queue Length 50th (ft)	107	23	52	0	35	165	25	48	0
Queue Length 95th (ft)	#190	55	98	52	82	#323	62	106	52
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	377	835	573	682	581	754	354	703	800
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	0.82	0.15	0.24	0.37	0.28	0.63	0.34	0.24	0.41

Intersection Summary

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

Queues
3: Central Park Drive & Mt Werner Road

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	266	168	82	22	370	76	120	65	157	446
v/c Ratio	0.58	0.20	0.11	0.07	0.38	0.14	0.26	0.10	0.46	0.63
Control Delay	18.4	12.5	3.7	18.7	19.6	1.2	12.0	8.1	23.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	12.5	3.7	18.7	19.6	1.2	12.0	8.1	23.5	7.1
Queue Length 50th (ft)	56	34	0	6	54	0	25	9	47	5
Queue Length 95th (ft)	#133	83	22	23	103	6	54	28	96	65
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	461	1052	932	478	1396	712	454	1071	596	924
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	0.58	0.16	0.09	0.05	0.27	0.11	0.26	0.06	0.26	0.48

Intersection Summary

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

Queues
5: Pine Grove Road & Mt Werner Road

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	266	38	76	386	446	229	109	250
v/c Ratio	0.60	0.08	0.25	0.32	0.53	0.58	0.25	0.62
Control Delay	31.3	0.3	18.2	17.4	4.7	32.5	6.4	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	0.3	18.2	17.4	4.7	32.5	6.4	33.0
Queue Length 50th (ft)	99	0	20	57	0	86	0	92
Queue Length 95th (ft)	201	0	56	111	58	183	34	199
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	900	827	304	2242	1166	594	595	580
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.05	0.25	0.17	0.38	0.39	0.18	0.43
Intersection Summary								

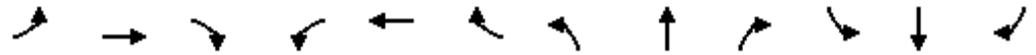
HCM 6th Roundabout
6: Alpine Plaza & Central Park Drive

2043 Background PM Peak
Central Park Workforce Housing & Hotel TIS

Intersection				
Intersection Delay, s/veh	7.7			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	310	429	505	32
Demand Flow Rate, veh/h	316	437	515	32
Vehicles Circulating, veh/h	260	216	237	560
Vehicles Exiting, veh/h	492	376	416	16
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	7.4	8.8	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	316	437	515	32
Cap Entry Lane, veh/h	1058	1107	1084	779
Entry HV Adj Factor	0.981	0.981	0.981	0.997
Flow Entry, veh/h	310	429	505	32
Cap Entry, veh/h	1038	1086	1063	777
V/C Ratio	0.299	0.395	0.475	0.041
Control Delay, s/veh	6.4	7.4	8.8	5.0
LOS	A	A	A	A
95th %tile Queue, veh	1	2	3	0

HCM 6th Signalized Intersection Summary
 1: Pine Grove Road & Central Park Drive

2043 Background+Project AM Peak
 Central Park Workforce Housing & Hotel TIS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	37	36	7	25	130	30	200	10	240	277	130
Future Volume (veh/h)	110	37	36	7	25	130	30	200	10	240	277	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	40	39	8	27	141	33	217	11	261	301	141
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	489	312	304	124	269	263	357	372	19	462	525	445
Arrive On Green	0.08	0.36	0.36	0.17	0.17	0.17	0.04	0.21	0.21	0.11	0.28	0.28
Sat Flow, veh/h	1781	870	848	174	1624	1585	1781	1765	89	1781	1870	1585
Grp Volume(v), veh/h	120	0	79	35	0	141	33	0	228	261	301	141
Grp Sat Flow(s),veh/h/ln	1781	0	1718	1798	0	1585	1781	0	1854	1781	1870	1585
Q Serve(g_s), s	2.4	0.0	1.4	0.0	0.0	3.8	0.7	0.0	5.1	5.0	6.4	3.3
Cycle Q Clear(g_c), s	2.4	0.0	1.4	0.7	0.0	3.8	0.7	0.0	5.1	5.0	6.4	3.3
Prop In Lane	1.00		0.49	0.23		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	489	0	616	394	0	263	357	0	390	462	525	445
V/C Ratio(X)	0.25	0.00	0.13	0.09	0.00	0.54	0.09	0.00	0.58	0.56	0.57	0.32
Avail Cap(c_a), veh/h	530	0	1221	957	0	786	483	0	1079	462	1088	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	10.0	16.4	0.0	17.7	13.5	0.0	16.5	13.2	14.3	13.2
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.3	0.0	4.6	0.2	0.0	3.8	2.0	2.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5	0.3	0.0	1.6	0.2	0.0	2.3	2.0	2.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	10.3	16.7	0.0	22.3	13.6	0.0	20.3	15.2	17.0	14.3
LnGrp LOS	B	A	B	B	A	C	B	A	C	B	B	B
Approach Vol, veh/h		199			176			261			703	
Approach Delay, s/veh		11.8			21.2			19.4			15.8	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	14.8		21.6	6.7	18.0	8.9	12.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		33.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	7.0	7.1		3.4	2.7	8.4	4.4	5.8				
Green Ext Time (p_c), s	0.0	2.5		0.9	0.0	4.6	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay				16.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	460	100	10	115	25	40	20	15	40	20	70
Future Volume (veh/h)	173	460	100	10	115	25	40	20	15	40	20	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	500	109	11	125	27	43	22	16	43	22	76
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	667	906	768	387	1084	483	427	314	228	286	123	294
Arrive On Green	0.10	0.48	0.48	0.30	0.30	0.30	0.05	0.31	0.31	0.19	0.19	0.19
Sat Flow, veh/h	1781	1870	1585	812	3554	1585	1781	1007	732	886	661	1585
Grp Volume(v), veh/h	188	500	109	11	125	27	43	0	38	65	0	76
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	812	1777	1585	1781	0	1739	1547	0	1585
Q Serve(g_s), s	3.2	9.3	1.9	0.5	1.2	0.6	0.9	0.0	0.8	0.5	0.0	2.0
Cycle Q Clear(g_c), s	3.2	9.3	1.9	0.9	1.2	0.6	0.9	0.0	0.8	1.6	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	0.66		1.00
Lane Grp Cap(c), veh/h	667	906	768	387	1084	483	427	0	543	409	0	294
V/C Ratio(X)	0.28	0.55	0.14	0.03	0.12	0.06	0.10	0.00	0.07	0.16	0.00	0.26
Avail Cap(c_a), veh/h	691	1198	1015	503	1589	709	545	0	1184	864	0	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	8.9	7.0	12.3	12.3	12.1	13.5	0.0	11.9	16.9	0.0	17.1
Incr Delay (d2), s/veh	0.2	0.5	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.8	0.5	0.1	0.4	0.2	0.3	0.0	0.3	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	9.4	7.1	12.4	12.4	12.1	13.6	0.0	12.0	17.1	0.0	17.6
LnGrp LOS	A	A	A	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		797			163			81				141
Approach Delay, s/veh		9.0			12.3			12.8				17.4
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		28.8	6.2	14.1	8.8	20.0		20.4				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		31.5	5.5	24.0	5.5	22.0		33.5				
Max Q Clear Time (g_c+I1), s		11.3	2.9	4.0	5.2	3.2		2.8				
Green Ext Time (p_c), s		3.4	0.0	0.5	0.0	0.7		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	370	105	145	135	212	10	42	150	210	41	5
Future Volume (veh/h)	0	370	105	145	135	212	10	42	150	210	41	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	402	114	158	147	230	11	46	163	228	45	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	512	434	336	1536	685	56	233	247	289	57	6
Arrive On Green	0.00	0.27	0.27	0.09	0.43	0.43	0.16	0.16	0.16	0.20	0.20	0.20
Sat Flow, veh/h	1006	1870	1585	1781	3554	1585	357	1495	1585	1469	290	32
Grp Volume(v), veh/h	0	402	114	158	147	230	57	0	163	278	0	0
Grp Sat Flow(s),veh/h/ln	1006	1870	1585	1781	1777	1585	1852	0	1585	1791	0	0
Q Serve(g_s), s	0.0	12.5	3.5	3.7	1.5	6.1	1.7	0.0	6.1	9.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.5	3.5	3.7	1.5	6.1	1.7	0.0	6.1	9.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.19		1.00	0.82		0.02
Lane Grp Cap(c), veh/h	115	512	434	336	1536	685	289	0	247	353	0	0
V/C Ratio(X)	0.00	0.78	0.26	0.47	0.10	0.34	0.20	0.00	0.66	0.79	0.00	0.00
Avail Cap(c_a), veh/h	408	1057	896	422	2745	1224	605	0	517	642	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	21.1	17.8	14.8	10.6	11.8	23.1	0.0	24.9	24.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	0.3	1.0	0.0	0.3	0.3	0.0	3.0	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	1.2	1.4	0.5	1.9	0.7	0.0	2.4	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.8	18.2	15.8	10.6	12.1	23.4	0.0	27.9	27.9	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	C	A	C	C	A	A
Approach Vol, veh/h		516			535			220			278	
Approach Delay, s/veh		22.5			12.8			26.8			27.9	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.9	21.7		16.9		31.6		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	8.5	35.5		22.5		48.5		20.5				
Max Q Clear Time (g_c+I1), s	5.7	14.5		11.3		8.1		8.1				
Green Ext Time (p_c), s	0.1	2.7		1.2		1.7		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				20.7								
HCM 6th LOS				C								

HCM 6th TWSC
2: Snapdragon Way & Pine Grove Road

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

Intersection						
Int Delay, s/veh	0.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	230	261	49	10	5
Future Vol, veh/h	19	230	261	49	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	21	250	284	53	11	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	337	0	-	0	603
Stage 1	-	-	-	-	311
Stage 2	-	-	-	-	292
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1222	-	-	-	462
Stage 1	-	-	-	-	743
Stage 2	-	-	-	-	758
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1222	-	-	-	454
Mov Cap-2 Maneuver	-	-	-	-	454
Stage 1	-	-	-	-	730
Stage 2	-	-	-	-	758

Approach	NB	SB	NE
HCM Control Delay, s	0.6	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	519	1222	-	-	-
HCM Lane V/C Ratio	0.031	0.017	-	-	-
HCM Control Delay (s)	12.2	8	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	0	48	203	15	5	130
Future Vol, veh/h	0	48	203	15	5	130
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	-	-	-	50	-
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	52	221	16	5	141

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	380	229	0	0	237
Stage 1	229	-	-	-	-
Stage 2	151	-	-	-	-
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	622	810	-	-	1330
Stage 1	809	-	-	-	-
Stage 2	877	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	620	810	-	-	1330
Mov Cap-2 Maneuver	620	-	-	-	-
Stage 1	809	-	-	-	-
Stage 2	873	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	810	1330
HCM Lane V/C Ratio	-	-	0.064	0.004
HCM Control Delay (s)	-	-	9.8	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	2					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	0	170	81	0	64
Future Vol, veh/h	0	0	170	81	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	185	88	0	70

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	-
HCM Lane LOS	-	-	-
HCM 95th %tile Q(veh)	-	-	-

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↔			↖	↗
Traffic Vol, veh/h	10	445	0	0	335	81	0	0	0	111	0	10
Future Vol, veh/h	10	445	0	0	335	81	0	0	0	111	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	484	0	0	364	88	0	0	0	121	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	484	0	0	920	958	484	914	914	408
Stage 1	-	-	-	-	-	-	506	506	-	408	408	-
Stage 2	-	-	-	-	-	-	414	452	-	506	506	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1109	-	-	1079	-	-	251	257	583	254	273	643
Stage 1	-	-	-	-	-	-	549	540	-	620	597	-
Stage 2	-	-	-	-	-	-	616	570	-	549	540	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1109	-	-	1079	-	-	245	254	583	252	270	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	245	254	-	252	270	-
Stage 1	-	-	-	-	-	-	544	535	-	614	597	-
Stage 2	-	-	-	-	-	-	606	570	-	544	535	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	30
HCM LOS			A	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1109	-	-	1079	-	-	252	643
HCM Lane V/C Ratio	-	0.01	-	-	-	-	-	0.479	0.017
HCM Control Delay (s)	0	8.3	-	-	0	-	-	31.7	10.7
HCM Lane LOS		A	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	2.4	0.1

Queues
1: Pine Grove Road & Central Park Drive

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS

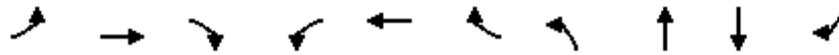


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	79	35	141	33	228	261	301	141
v/c Ratio	0.33	0.13	0.10	0.31	0.06	0.38	0.45	0.31	0.16
Control Delay	17.6	9.7	23.1	5.9	8.3	17.2	12.8	13.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	9.7	23.1	5.9	8.3	17.2	12.8	13.8	2.7
Queue Length 50th (ft)	25	8	9	0	5	59	49	57	0
Queue Length 95th (ft)	74	39	36	34	18	115	97	153	24
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	360	1150	865	891	542	1066	577	1072	981
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	0.33	0.07	0.04	0.16	0.06	0.21	0.45	0.28	0.14

Intersection Summary

Queues
3: Central Park Drive & Mt Werner Road

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	188	500	109	11	125	27	43	38	65	76
v/c Ratio	0.26	0.44	0.11	0.03	0.09	0.04	0.13	0.08	0.22	0.17
Control Delay	8.0	10.1	2.9	13.9	13.3	0.1	12.8	9.5	20.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	10.1	2.9	13.9	13.3	0.1	12.8	9.5	20.4	1.8
Queue Length 50th (ft)	19	67	1	2	11	0	8	4	14	0
Queue Length 95th (ft)	65	193	22	12	32	0	26	21	49	7
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	710	1319	1150	437	1733	849	341	1210	717	857
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	0.26	0.38	0.09	0.03	0.07	0.03	0.13	0.03	0.09	0.09

Intersection Summary

Queues
5: Pine Grove Road & Mt Werner Road

2043 Background+Project AM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	402	114	158	147	230	57	163	278
v/c Ratio	0.74	0.21	0.47	0.09	0.27	0.23	0.46	0.70
Control Delay	33.7	6.0	17.5	12.2	2.8	36.7	11.1	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	6.0	17.5	12.2	2.8	36.7	11.1	39.0
Queue Length 50th (ft)	172	2	43	20	0	25	0	122
Queue Length 95th (ft)	293	37	87	40	36	69	57	239
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	880	805	345	2286	1103	503	550	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.14	0.46	0.06	0.21	0.11	0.30	0.52

Intersection Summary

Intersection				
Intersection Delay, s/veh	4.0			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	173	125	173	15
Demand Flow Rate, veh/h	176	127	176	15
Vehicles Circulating, veh/h	115	87	76	270
Vehicles Exiting, veh/h	137	198	138	21
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	3.7	4.0	3.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	176	127	176	15
Cap Entry Lane, veh/h	1227	1263	1277	1048
Entry HV Adj Factor	0.983	0.984	0.982	0.993
Flow Entry, veh/h	173	125	173	15
Cap Entry, veh/h	1206	1243	1254	1041
V/C Ratio	0.143	0.101	0.138	0.014
Control Delay, s/veh	4.2	3.7	4.0	3.6
LOS	A	A	A	A
95th %tile Queue, veh	1	0	0	0

HCM 6th Signalized Intersection Summary
1: Pine Grove Road & Central Park Drive

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	72	58	18	110	235	150	400	25	110	178	300
Future Volume (veh/h)	330	72	58	18	110	235	150	400	25	110	178	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	359	78	63	20	120	255	163	435	27	120	193	326
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	337	273	83	361	340	486	659	41	370	696	590
Arrive On Green	0.07	0.35	0.35	0.21	0.21	0.21	0.07	0.38	0.38	0.06	0.37	0.37
Sat Flow, veh/h	1781	958	773	124	1685	1585	1781	1743	108	1781	1870	1585
Grp Volume(v), veh/h	359	0	141	140	0	255	163	0	462	120	193	326
Grp Sat Flow(s),veh/h/ln	1781	0	1731	1808	0	1585	1781	0	1851	1781	1870	1585
Q Serve(g_s), s	5.0	0.0	4.2	0.0	0.0	10.9	4.1	0.0	15.0	3.0	5.2	11.8
Cycle Q Clear(g_c), s	5.0	0.0	4.2	4.6	0.0	10.9	4.1	0.0	15.0	3.0	5.2	11.8
Prop In Lane	1.00		0.45	0.14		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	374	0	610	445	0	340	486	0	700	370	696	590
V/C Ratio(X)	0.96	0.00	0.23	0.31	0.00	0.75	0.34	0.00	0.66	0.32	0.28	0.55
Avail Cap(c_a), veh/h	374	0	787	623	0	502	486	0	700	381	696	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	16.6	24.2	0.0	26.7	12.7	0.0	18.7	14.1	16.0	18.0
Incr Delay (d2), s/veh	36.1	0.0	0.5	1.1	0.0	8.9	0.6	0.0	4.8	0.7	1.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	1.7	2.1	0.0	4.8	1.6	0.0	6.9	1.2	2.3	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	0.0	17.1	25.3	0.0	35.5	13.3	0.0	23.5	14.8	16.9	21.7
LnGrp LOS	E	A	B	C	A	D	B	A	C	B	B	C
Approach Vol, veh/h		500			395			625			639	
Approach Delay, s/veh		50.2			31.9			20.9			19.0	
Approach LOS		D			C			C			B	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	32.4		30.6	10.0	32.0	10.0	20.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	27.0		33.0	5.0	27.0	5.0	23.0				
Max Q Clear Time (g_c+I1), s	5.0	17.0		6.2	6.1	13.8	7.0	12.9				
Green Ext Time (p_c), s	0.0	3.8		1.7	0.0	4.2	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				29.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
3: Central Park Drive & Mt Werner Road

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	155	75	20	340	70	110	40	20	105	40	428
Future Volume (veh/h)	290	155	75	20	340	70	110	40	20	105	40	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	315	168	82	22	370	76	120	43	22	114	43	465
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	717	608	378	834	372	459	536	274	431	148	521
Arrive On Green	0.09	0.38	0.38	0.23	0.23	0.23	0.07	0.46	0.46	0.33	0.33	0.33
Sat Flow, veh/h	1781	1870	1585	1130	3554	1585	1781	1166	597	1015	450	1585
Grp Volume(v), veh/h	315	168	82	22	370	76	120	0	65	157	0	465
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1130	1777	1585	1781	0	1763	1465	0	1585
Q Serve(g_s), s	5.5	3.9	2.1	1.0	5.7	2.5	2.6	0.0	1.3	4.2	0.0	17.8
Cycle Q Clear(g_c), s	5.5	3.9	2.1	1.0	5.7	2.5	2.6	0.0	1.3	5.0	0.0	17.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	0.73		1.00
Lane Grp Cap(c), veh/h	404	717	608	378	834	372	459	0	811	578	0	521
V/C Ratio(X)	0.78	0.23	0.13	0.06	0.44	0.20	0.26	0.00	0.08	0.27	0.00	0.89
Avail Cap(c_a), veh/h	404	922	782	502	1224	546	490	0	924	647	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	13.3	12.8	19.1	20.9	19.6	11.6	0.0	9.7	16.0	0.0	20.4
Incr Delay (d2), s/veh	9.5	0.2	0.1	0.1	0.4	0.3	0.3	0.0	0.0	0.3	0.0	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.5	0.7	0.2	2.2	0.9	1.0	0.0	0.5	1.7	0.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	13.5	12.9	19.1	21.2	19.9	11.9	0.0	9.7	16.3	0.0	35.0
LnGrp LOS	C	B	B	B	C	B	B	A	A	B	A	C
Approach Vol, veh/h		565			468			185				622
Approach Delay, s/veh		22.5			20.9			11.1				30.2
Approach LOS		C			C			B				C
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		29.5	8.4	26.0	9.5	20.0		34.4				
Change Period (Y+Rc), s		5.0	4.0	5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		31.5	5.5	24.0	5.5	22.0		33.5				
Max Q Clear Time (g_c+I1), s		5.9	4.6	19.8	7.5	7.7		3.3				
Green Ext Time (p_c), s		1.1	0.0	1.2	0.0	2.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				23.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
5: Pine Grove Road & Mt Werner Road

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	245	35	70	355	423	75	137	100	182	47	15
Future Volume (veh/h)	0	245	35	70	355	423	75	137	100	182	47	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	266	38	76	386	460	82	149	109	198	51	16
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	425	360	351	1326	591	120	217	291	259	67	21
Arrive On Green	0.00	0.23	0.23	0.06	0.37	0.37	0.18	0.18	0.18	0.19	0.19	0.19
Sat Flow, veh/h	651	1870	1585	1781	3554	1585	652	1185	1585	1333	343	108
Grp Volume(v), veh/h	0	266	38	76	386	460	231	0	109	265	0	0
Grp Sat Flow(s),veh/h/ln	651	1870	1585	1781	1777	1585	1838	0	1585	1784	0	0
Q Serve(g_s), s	0.0	6.9	1.0	1.6	4.1	13.9	6.4	0.0	3.3	7.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.9	1.0	1.6	4.1	13.9	6.4	0.0	3.3	7.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.35		1.00	0.75		0.06
Lane Grp Cap(c), veh/h	133	425	360	351	1326	591	337	0	291	347	0	0
V/C Ratio(X)	0.00	0.63	0.11	0.22	0.29	0.78	0.69	0.00	0.37	0.76	0.00	0.00
Avail Cap(c_a), veh/h	352	1053	892	404	2624	1170	695	0	600	675	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.9	16.6	13.6	11.9	15.0	20.7	0.0	19.4	20.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.3	0.1	2.3	2.5	0.0	0.8	3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.3	0.6	1.4	4.5	2.7	0.0	1.2	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.4	16.7	13.9	12.1	17.3	23.1	0.0	20.2	24.2	0.0	0.0
LnGrp LOS	A	C	B	B	B	B	C	A	C	C	A	A
Approach Vol, veh/h		304			922			340			265	
Approach Delay, s/veh		19.9			14.8			22.2			24.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.9	16.8		15.0		24.7		14.4				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	5.0	30.5		20.5		40.0		20.5				
Max Q Clear Time (g_c+I1), s	3.6	8.9		9.6		15.9		8.4				
Green Ext Time (p_c), s	0.0	1.5		1.1		4.3		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	1.1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	34	555	213	40	25	15
Future Vol, veh/h	34	555	213	40	25	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	37	603	232	43	27	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	275	0	-	0	931 254
Stage 1	-	-	-	-	254 -
Stage 2	-	-	-	-	677 -
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	1288	-	-	-	296 785
Stage 1	-	-	-	-	788 -
Stage 2	-	-	-	-	505 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1288	-	-	-	287 785
Mov Cap-2 Maneuver	-	-	-	-	287 -
Stage 1	-	-	-	-	765 -
Stage 2	-	-	-	-	505 -

Approach	NB	SB	NE
HCM Control Delay, s	0.5	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	377	1288	-	-	-
HCM Lane V/C Ratio	0.115	0.029	-	-	-
HCM Control Delay (s)	15.8	7.9	-	-	-
HCM Lane LOS	C	A	-	-	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	-

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	79	375	25	20	543
Future Vol, veh/h	25	79	375	25	20	543
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	-	-	-	50	-
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	27	86	408	27	22	590

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1056	422	0	0	435
Stage 1	422	-	-	-	-
Stage 2	634	-	-	-	-
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	250	632	-	-	1125
Stage 1	662	-	-	-	-
Stage 2	529	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	245	632	-	-	1125
Mov Cap-2 Maneuver	245	-	-	-	-
Stage 1	662	-	-	-	-
Stage 2	518	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	458	1125
HCM Lane V/C Ratio	-	-	0.247	0.019
HCM Control Delay (s)	-	-	15.4	8.3
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1	0.1

Intersection						
Int Delay, s/veh	1.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	0	365	84	0	79
Future Vol, veh/h	0	0	365	84	0	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	397	91	0	86

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	615
HCM Lane V/C Ratio	-	-	0.14
HCM Control Delay (s)	-	-	11.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.5

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	446	0	0	673	137	0	0	0	92	0	20
Future Vol, veh/h	10	446	0	0	673	137	0	0	0	92	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	100	-	-	-	-	-	-	-	100
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	11	485	0	0	732	149	0	0	0	100	0	22

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	881	0	0	485	0	0	1325	1388	485	1314	1314	807
Stage 1	-	-	-	-	-	-	507	507	-	807	807	-
Stage 2	-	-	-	-	-	-	818	881	-	507	507	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	767	-	-	1078	-	-	133	143	582	135	158	381
Stage 1	-	-	-	-	-	-	548	539	-	375	394	-
Stage 2	-	-	-	-	-	-	370	365	-	548	539	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	767	-	-	1078	-	-	124	141	582	134	156	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	141	-	134	156	-
Stage 1	-	-	-	-	-	-	540	531	-	370	394	-
Stage 2	-	-	-	-	-	-	349	365	-	540	531	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	73
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	767	-	-	1078	-	-	134	381
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.746	0.057
HCM Control Delay (s)	0	9.8	-	-	0	-	-	85.6	15
HCM Lane LOS	A	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	4.4	0.2

Queues
1: Pine Grove Road & Central Park Drive

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



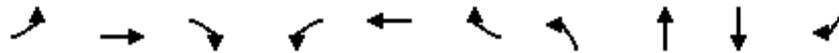
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	359	141	140	255	163	462	120	193	326
v/c Ratio	0.95	0.22	0.39	0.48	0.29	0.61	0.33	0.28	0.41
Control Delay	58.5	10.3	27.5	6.7	12.7	23.5	13.4	18.2	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.5	10.3	27.5	6.7	12.7	23.5	13.4	18.2	4.1
Queue Length 50th (ft)	128	24	54	0	35	161	25	57	0
Queue Length 95th (ft)	#259	59	100	52	82	306	63	121	52
Internal Link Dist (ft)		271	124			149		164	
Turn Bay Length (ft)	80			75	105		125		125
Base Capacity (vph)	379	833	563	680	564	753	361	701	799
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	0.95	0.17	0.25	0.38	0.29	0.61	0.33	0.28	0.41

Intersection Summary

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

Queues
3: Central Park Drive & Mt Werner Road

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	315	168	82	22	370	76	120	65	157	465
v/c Ratio	0.68	0.20	0.11	0.07	0.38	0.14	0.26	0.10	0.46	0.65
Control Delay	23.5	12.7	3.7	19.0	19.8	1.2	11.9	8.0	23.3	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	12.7	3.7	19.0	19.8	1.2	11.9	8.0	23.3	7.9
Queue Length 50th (ft)	69	34	0	6	54	0	25	9	47	10
Queue Length 95th (ft)	#199	86	22	23	105	5	54	28	96	76
Internal Link Dist (ft)		453			277			144	99	
Turn Bay Length (ft)	115		115	130		130	120			85
Base Capacity (vph)	460	1048	929	476	1391	710	456	1067	594	923
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	0.16	0.09	0.05	0.27	0.11	0.26	0.06	0.26	0.50

Intersection Summary

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

Queues
5: Pine Grove Road & Mt Werner Road

2043 Background+Project PM Peak
Central Park Workforce Housing & Hotel TIS



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	266	38	76	386	460	231	109	265
v/c Ratio	0.61	0.08	0.25	0.32	0.55	0.58	0.25	0.64
Control Delay	31.7	0.3	18.5	17.6	4.7	33.0	6.4	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	0.3	18.5	17.6	4.7	33.0	6.4	33.7
Queue Length 50th (ft)	101	0	21	59	0	89	0	100
Queue Length 95th (ft)	201	0	56	111	59	185	34	211
Internal Link Dist (ft)	233			150		251		1041
Turn Bay Length (ft)		80	80		60		60	
Base Capacity (vph)	892	821	301	2223	1165	589	591	575
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.05	0.25	0.17	0.39	0.39	0.18	0.46

Intersection Summary

Intersection				
Intersection Delay, s/veh	8.1			
Intersection LOS	A			
Approach	EB	WB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	397	429	505	32
Demand Flow Rate, veh/h	404	437	515	32
Vehicles Circulating, veh/h	260	236	257	648
Vehicles Exiting, veh/h	512	444	416	16
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.5	7.7	9.1	5.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	404	437	515	32
Cap Entry Lane, veh/h	1058	1085	1062	713
Entry HV Adj Factor	0.981	0.981	0.981	0.997
Flow Entry, veh/h	396	429	505	32
Cap Entry, veh/h	1038	1064	1041	710
V/C Ratio	0.382	0.403	0.485	0.045
Control Delay, s/veh	7.5	7.7	9.1	5.5
LOS	A	A	A	A
95th %tile Queue, veh	2	2	3	0