TRAFFIC IMPACT ANALYSIS

Aurora Logistics Center (ALC)

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I. INTRODUCTION

The Aurora Logistics Center (ALC) development is an approximate 1,280-acre master plan development proposal located north of Interstate 70 (I-70) in Aurora, as shown on **Figure 1**. The uses will consist primarily of commercial and industrial uses with up to 16.4 million square feet of developed space. Buildout of this Framework Development Plan (FDP) will take many years to complete, possibly beyond the 2045 horizon of this analysis.

The site is rectangular in shape and bounded on the south by 26th Avenue and 48th Avenue on the north. A future extension of Aerotropolis Parkway (along the Powhaton Road land line) to the north will serve as the western boundary of the development, and Monaghan Road will serve as the eastern boundary of the site. **Figure 2** illustrates the proposed FDP site plan.

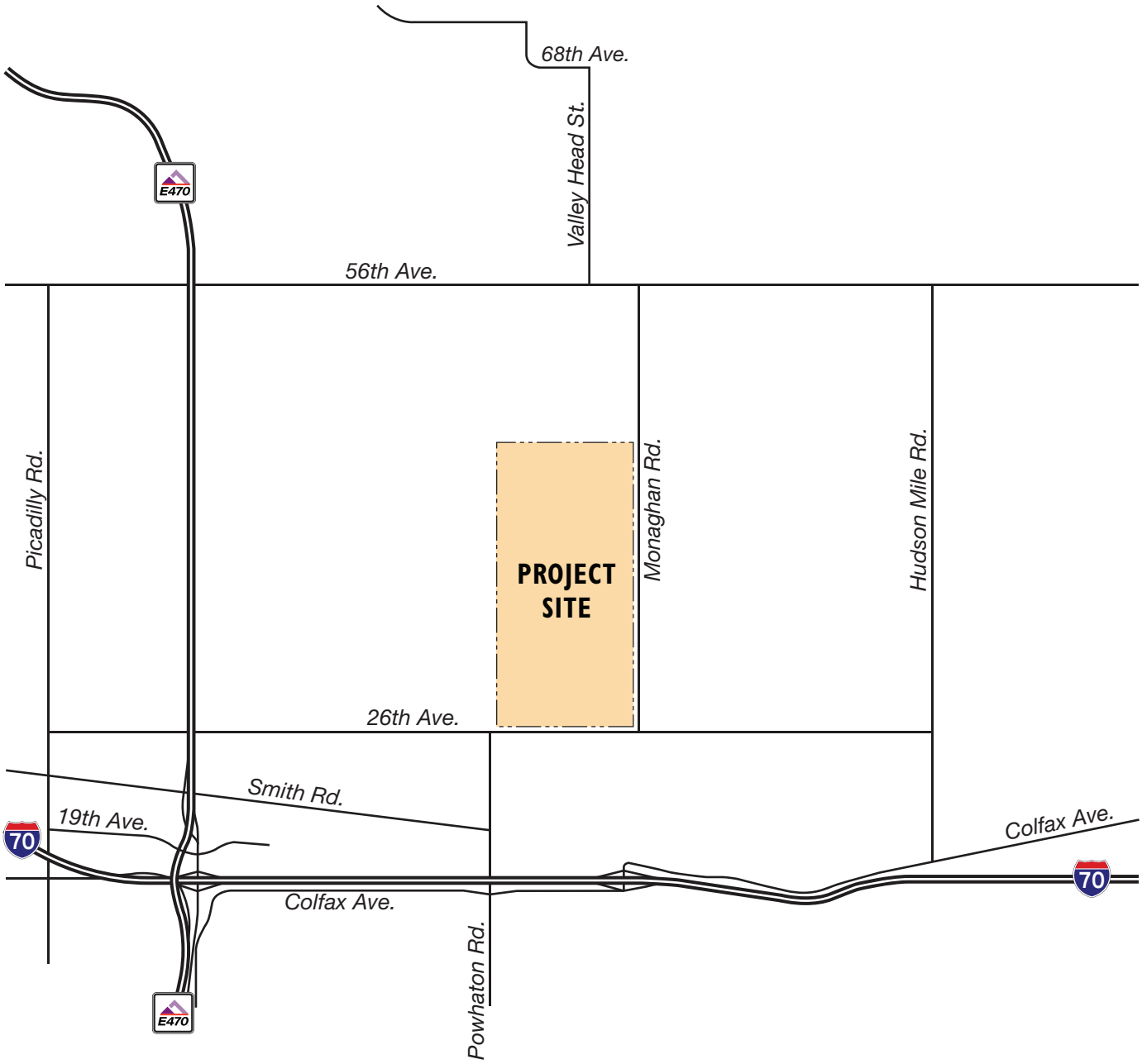
The master plan identifies a total of 25 planning areas (including open spaces parcels), bisected by an interior roadway network. Exact roadway alignments will be determined at the time of Contextual Site Plan (CSP), but roadway connection intentions are presented for the FDP's planning areas, consistent with the City's Roadway Design and Technical Criteria Manual per Section 4.04.1.

Currently, access into the area is limited. In this undeveloped area, 56th Avenue (one mile north of the site) and 26th Avenue are the primary means of access. 56th Avenue provides a direct connection to E-470 to the west. Powhaton Road provides a connection to E. Colfax Avenue to the south, which, in turn, provides a direct connection to I-70 approximately 0.9 mile to the east.

The purpose of this study is to assess the traffic impacts on the key roadways related to the proposed development to support projected traffic volumes. This report includes information on existing traffic conditions, vehicle-trips associated with the planned development, total traffic volume projections, and recommendations on future roadway needs, including supporting analysis for roadway classifications. A maximum development scenario was analyzed with respect to traffic impacts. More detailed traffic impact studies may be appropriate for individual parcels as they are developed.

This analysis focuses on the long-term timeframe, year 2045, using the *Aurora Northeast Area Transportation Study (NEATS) Refresh Transportation Plan* as a means of informing background traffic along study area roadways. More recently, traffic analysis work associated with the 26th Avenue/Powhaton Road/Aerotropolis Parkway intersection was used as a basis for this study as well. That study, prepared by AECOM in June 2022, presents long-term traffic projections along the perimeter ALC arterial roadways, and these were used in developing traffic projections in this traffic impact study.

A short-term timeframe was not specifically analyzed in this study because of the numerous variables associated with the surrounding development and the timing of that development. This study focuses on the long-term (year 2045) timeframe realizing that a roadway improvement phasing plan (in conjunction with other development) will be needed to serve this and the adjoining FDPs.



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NOTE: Drawing Not to Scale

FIGURE 1

Vicinity Map and Existing Roadway Network

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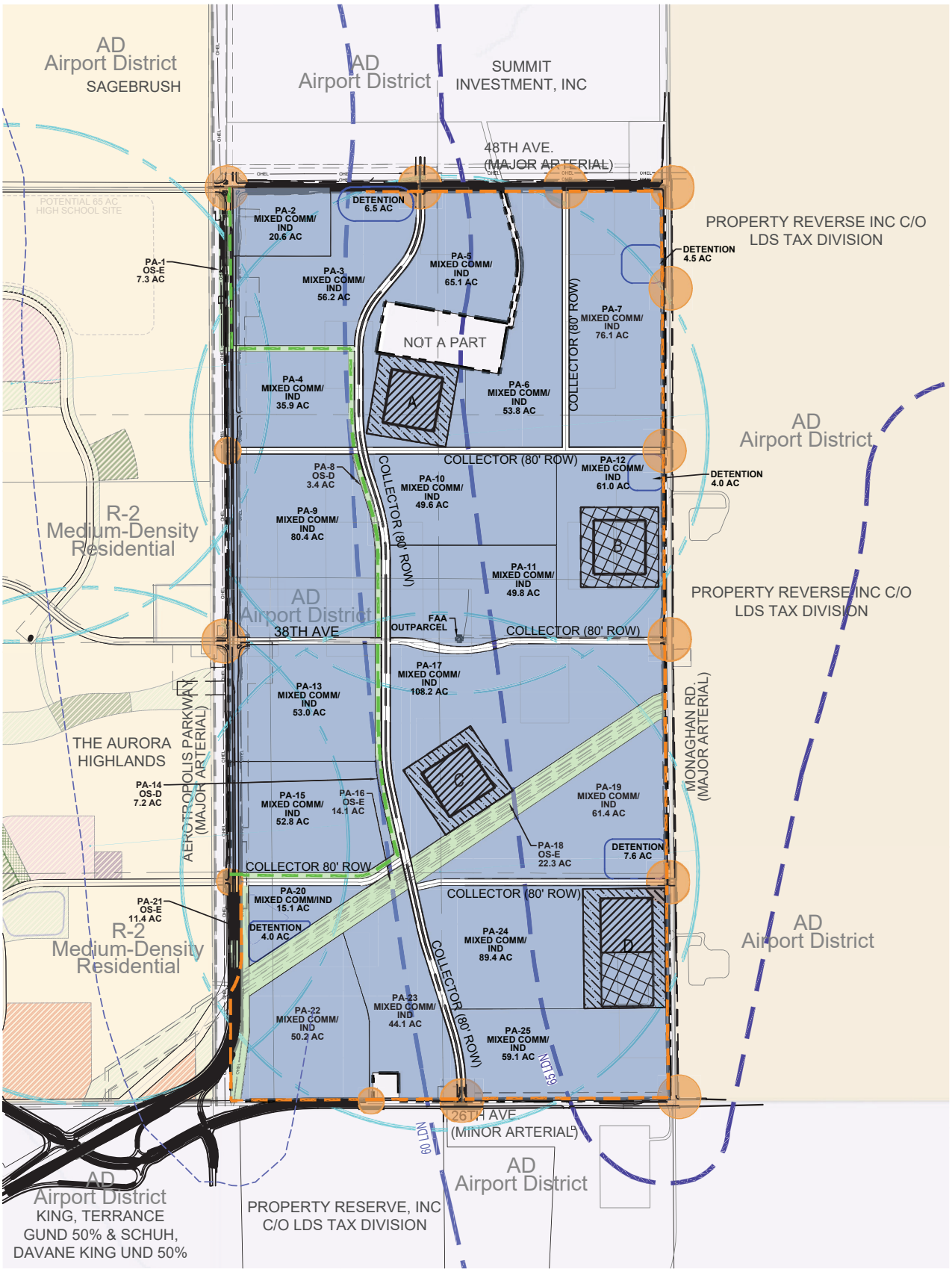

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FIGURE 2
ALC
Site Plan

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II. EXISTING CONDITIONS

II.A. Land Use

Currently, the site is undeveloped and lies entirely within the Aurora city limits. The area that immediately surrounds these two sections is undeveloped, but the Aurora Highlands to the west is developing and numerous homes have been built. Green Valley Ranch is a nearby residential area to the west (west of Picadilly Road), and the Majestic Commerce Center is an industrial/warehouse area located immediately south of Green Valley Ranch. Various other small commercial developments exist along I-70 directly south of the master plan, but there is little development near the ALC master plan site.

II.B. Transportation Network

Roadways

Key roadways that currently serve the site include the following:

- **E-470** is a north-south four-lane tollway located 2 miles to the west of the proposed development. A grade-separated interchange is provided at 56th Avenue. An interchange is planned at 48th Avenue where the bridge over E-470 at 48th Avenue is in place. An interchange at 38th Avenue is also underway in conjunction with the development of The Aurora Highlands.
- **26th Avenue** is a minor two-lane roadway facility along the south side of the ALC development that crosses E-470 (no interchange) and extends for 7 miles, from Picadilly Road to the west and Watkins Road to the east.
- **Powhaton Road** is a two-lane road that extends south from 26th Avenue as a two-lane facility, crossing the Union Pacific Railroad (UPRR) at-grade, spanning I-70, and extending south approximately 5 miles to Jewell Avenue. The northern extension of Powhaton Road north of 26th Avenue will ultimately define the west side of the development, but this road is not yet built.
- **Monaghan Road** is an existing two-lane road that serves as the eastern boundary for the proposed development. Monaghan Road extends 3 miles from 26th Avenue to 56th Avenue.

A key future roadway worth noting is Jackson Gap Way. Ultimately, Jackson Gap Way will serve as the primary entrance north into Denver International Airport (DEN), continuing south of the site, winding east to the Aerotropolis Parkway/Powhaton Road alignment, and connecting to I-70 via an interchange as a diagonal roadway toward the southwest from the Aerotropolis/Powhaton/26th Avenue intersection. The planned roadway network through the area contains many of the elements identified in the current NEATS study with respect to arterial roads.

Traffic Volumes and Operations

Since the area in the immediate vicinity of the ALC FDP is undeveloped, there is little existing traffic on the roadway network. Traffic counts were not specifically collected since only a portion of the ultimate network exists and the surrounding area is largely rural. Roadways that do exist are thought to serve relatively light traffic. A review of existing traffic in the area in the NEATS study shows that volumes tend to be under 1,000 vehicles per day. Precise existing traffic counts are not critical in this study given the lack of network and lack of development today. Existing traffic is not being used here in developing projections.

III. FUTURE ROADWAY NETWORK

In 2018, the City of Aurora completed the *NEATS Refresh* study, and subsequently the City commissioned a Powhaton Road Alignment study that concluded in 2021. The 2021 study served as an update to the 2018 *NEATS Refresh* study with respect to Year 2040 **and** Regional Buildout transportation recommendations for the roadways and a multimodal transportation system. The NEATS study area encompassed a regional area extending from approximately Tower Road east to Schumaker Road, and from Jewell Avenue on the south to 72nd Avenue on the north. Recommendations with respect to the ALC FDP include:

- **26th Avenue** would be designated as a four-lane minor arterial plus turn lanes. The existing grade separation over E-470 will be maintained to the west, and 26th Avenue would continue to end at Watkins Road to the east. Signalized and roundabout intersections would be allowed at a minimum of one-eighth-mile spacing with other public or private access usually restricted to right-in/right-out intersections spaced at a minimum of 300 feet from other intersections.
- **38th Avenue** would be a collector street with turn lanes as required serving the ALC development, from Monaghan Road through ALC to Aerotropolis Parkway and into the adjacent Aurora Highlands development. Signalized, roundabout and stop-controlled intersections would be allowed at a minimum one-eighth-mile spacing, with some restrictions on other public or private access intersections.
- **48th Avenue** would be designated as a major arterial with turn lanes between Monaghan Road and Aerotropolis Parkway. West of Aerotropolis Parkway, 48th Avenue would also be a six-lane major arterial with turn lanes through the interchange with E-470 and to the intersection with Picadilly Road. A four-lane facility is planned east of Aerotropolis Parkway. At-grade signalized intersections would be allowed at a minimum of one-eighth-mile spacing. Public or private access would be restricted to right-in/right-out intersections spaced at a minimum of 300 feet from each other from other intersections.
- **Aerotropolis Parkway (Powhaton Road)** would be designated as a six-lane major arterial with turn lanes along the western boundary of the ALC FDP, from 26th Avenue to 48th Avenue. North of 48th Avenue, the designation would continue as a six-lane major arterial as it winds to the west into the Jackson Gap Way alignment as the major primary north entrance into DEN. To the south of 26th Avenue, the designation would remain as a six-lane major arterial with turn lanes. A new grade separation over the UPRR would be constructed, and the existing grade separation over I-70 would remain. At-grade signalized intersections would be allowed at one-half-mile spacing with other public or private access usually restricted to right-in/right-out intersections with auxiliary turn lanes.
- **Monaghan Road**, immediately adjacent to the ALC FDP, would be designated as a four-lane minor arterial with turn lanes from 26th Avenue north to 64th Avenue. To the south, Monaghan Road would be extended as a major arterial with turn lanes to include a grade separation over the UPRR and tie into an interchange with I-70. South of the interstate, Monaghan Road would continue as a major arterial to Jewell Avenue. Signalized and roundabout intersections would be allowed at a minimum one-eighth-mile spacing with other public or private access usually restricted to right-in/right-out intersections.

- **Aerotropolis Parkway/Harvest Road** is proposed to be a six-lane major arterial with turn lanes from its current southern terminus at East 6th Avenue, continuing north through a new interchange with I-70, a grade separation over the UPRR, and its transition to the northeast to tie into Powhaton Road near the intersection with 26th Avenue as indicated in the current *NEATS Refresh*. Given the diagonal roadway south of 26th Avenue that will lead to the I-70/Harvest Road interchange, AECOM conducted more analysis that identified a diverging diamond interchange layout, which is the basis of analysis of this report. North of 26th Avenue, at-grade signalized intersections would be allowed at one-half-mile spacing with other public or private access usually restricted to right-in/right-out intersections.

Access-wise, development within the ALC FDP will primarily be served by 32nd Avenue, 38th Avenue, 42nd Avenue, and the north-south collector road. Aerotropolis Parkway will be access-limited, and direct access onto the other perimeter arterials will be controlled, and some may include turn restrictions.

IV. FUTURE PROJECTED CONDITIONS

This traffic study assesses the traffic conditions and impacts associated with the full buildout of the master plan. The intent is to assess the lane configuration of the major roadway network adjacent to the FDP and the collector roads planned to be built within. The buildout scenario assesses year 2045 conditions being informed by the *NEATS Refresh* buildout traffic volume projections and projections shown in the AECOM June 2, 2022, Traffic Forecasting Memorandum previously referenced. The AECOM memo refers to "Full Build 2040 Model," possibly implying that "2040" and Buildout are interchangeable terms. Their daily traffic forecasts far exceed the NEATS 2040 projections and are in line with the NEATS buildout forecasts. The AECOM traffic projections are thought to represent Buildout of the area, which this study has adopted as being the 2045 traffic projections.

The long-term analysis assesses the road system given daily traffic projections and peak hour traffic projections at the perimeter roadways. The same analyses incorporate the potential of ALC being built out to its maximum density. As individual parcels develop, a more refined traffic impact study may be appropriate to assess access specifics and/or to update information presented in this report. Traffic projections shown in this study are based on the premise that ALC would be built out to its maximum densities per the FDP proposal (and FAR=0.35). Traffic demands associated with the remainder of the area and region are based on the raw projections shown in the AECOM memo.

IV.A. Site Trip Generation

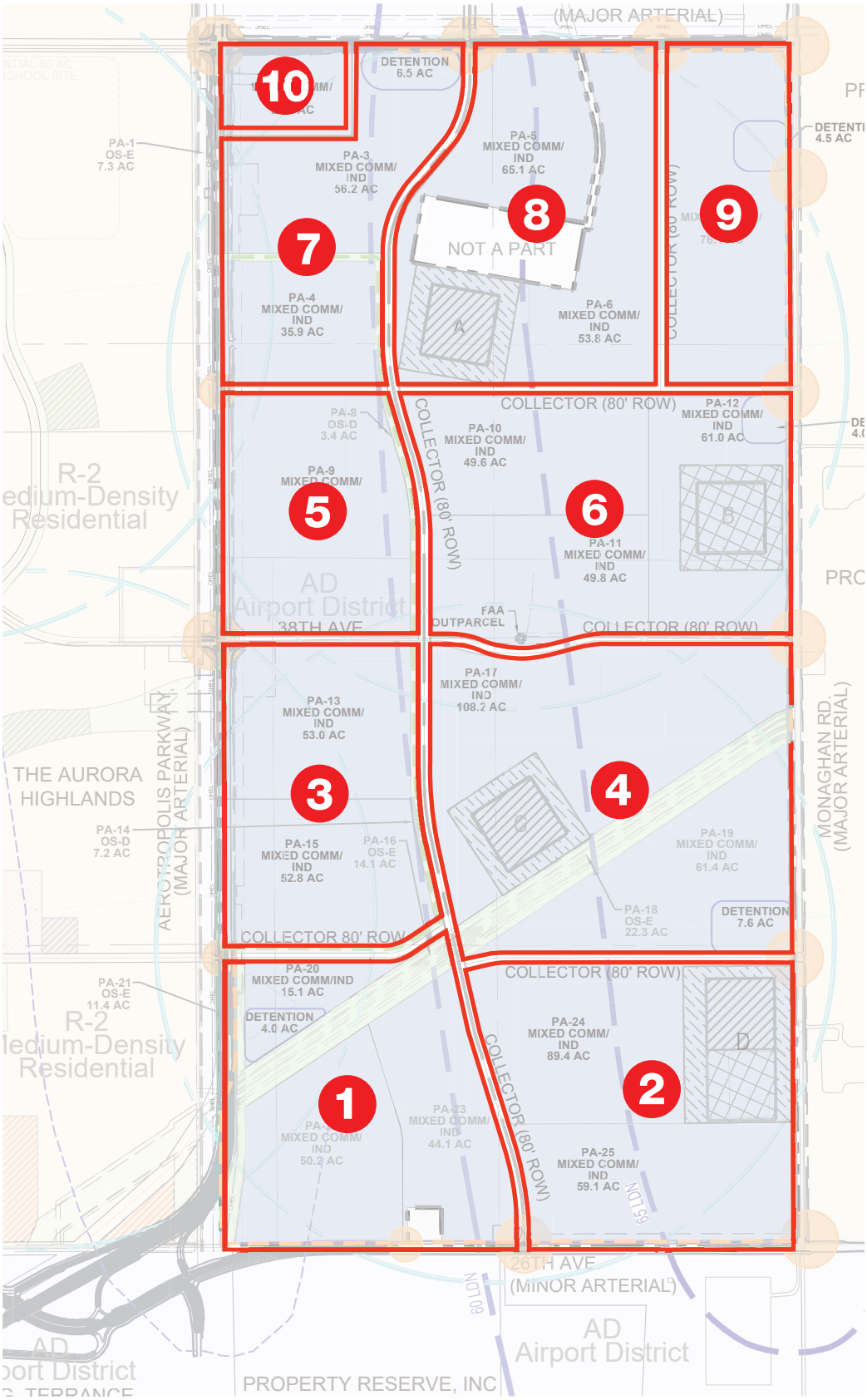
The number of vehicle-trips that will be generated by the proposed development was estimated based on trip rates and procedures documented in *Trip Generation* (Institute of Transportation Engineers, 11th Edition, 2021). The category used in this analysis includes industrial uses, ITE Code 130, Industrial Park, and ITE Code 820, Shopping Center. **Table 1** summarizes the trip generation estimates by planning area. In total, the entire ALC FDP is estimated to generate 39,300 external vehicle trips per day if built out to its absolute maximum. The planning areas shown in **Table 1** correspond to the Transportation Analysis Zones (TAZs) shown on **Figure 3**.

It should be noted that the rectangular white parcel shown on **Figure 3** in the northern portion of the FDP site is not included in this trip generation estimate since it is not part of the FDP and not planned for development at this time.

Table 1. Trip Generation Summary[1]

Fig. 3 TAZ Zone #	Acres	Land Use	Developed SF Area (KSF)	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
1	109.4	Commercial/ Industrial Park	1668	4056	459	108	567	125	442	567
2	148.5	Commercial/ Industrial Park	2264	4755	624	146	770	169	601	770
3	105.8	Commercial/ Industrial Park	1613	3986	444	104	548	121	427	548
4	169.6	Commercial/ Industrial Park	2586	5095	712	167	879	193	686	879
5	80.4	Commercial/ Industrial Park	1226	3456	338	79	417	92	325	417
6	160.4	Commercial/ Industrial Park	2445	4949	673	158	831	183	648	831
7	92.1	Commercial/ Industrial Park	1404	3709	386	91	477	105	372	477
8	118.9	Commercial/ Industrial Park	1813	4236	499	117	616	136	480	616
9	76.1	Commercial/ Industrial Park	1160	3359	319	75	394	87	307	394
10	20.6	Commercial/ Industrial Park	314	1702	87	20	107	24	83	107
			16493	**39303**	**4541**	**1065**	**5606**	**1235**	**4371**	**5606**

[1]Square footage amounts based on applying a Floor-Area Ratio (FAR) of 0.35.



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NOTE: Drawing Not to Scale

FIGURE 3
ALC TAZ Map

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IV.B. Trip Distribution and Traffic Assignment

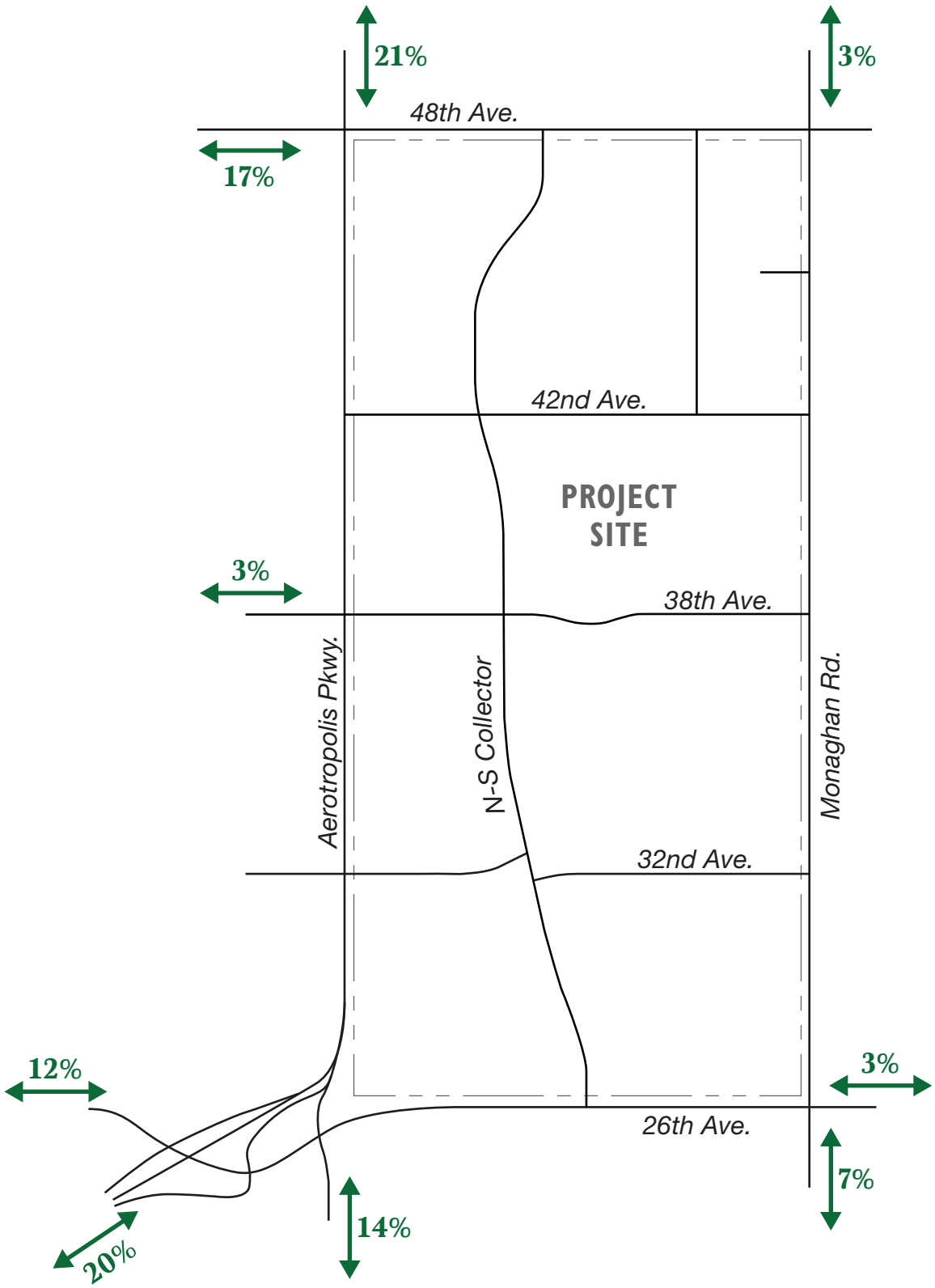
The site trip distribution assumptions for the ALC development have been estimated from the NEATS model TAZ centroid traffic loadings and professional judgment of the directionality of these trips apparent in the Buildout NEATS assignment results. The distribution percentages are based on patterns observed from NEATS travel demand modeling. That is, FHU staff reviewed the raw results of the model to help develop the percentages. Results were modified based on feedback from City staff on the first submittal of this report in September 2020.

Figure 4 shows the trip distribution percentages used in the study. The NEATS model indicates that the trip distribution for the site will be primarily focused to the south, west, and north. Numerous roads will serve the site traffic in these overall cardinal directions. However, westerly oriented traffic is anticipated to primarily make use of 48th Avenue, and to a lesser degree, 26th Avenue. The model does not suggest that 38th Avenue would necessarily play a significant role in serving westerly oriented site traffic. This is primarily due to the planned residential area to the west (The Aurora Highlands), which will not provide a direct east-west arterial connectivity through that area.

The direct diagonal connection heading away from the site toward the southwest via a new major road will directly connect to a future interchange to I-70, and this directional orientation will be a significant attraction of site traffic. The NEATS travel demand model suggests a significant amount of the site's traffic will use this direct regional access, and 20 percent of the site traffic is anticipated to do so. There will also be an attraction to DEN and other planned development, all of which would be served by Powhaton Road to Jackson Gap Way to the north, and to a lesser extent Monaghan Road to the north.

Applying the trip distribution percentages of **Figure 4** to the trip generation estimate of **Table 1** yields the site-generated traffic shown on **Figure 5**. These estimates have been developed assuming that the zones (shown on **Figure 3**) will have access to each adjacent roadway, with the exception of Aerotropolis Parkway, in which no direct access will be allowed other than the intersections with 32nd Avenue, 38th Avenue, and 42nd Avenue. Resulting projections will be greater than those in NEATS since this study considers the maximum buildout potential of ALC, whereas the *NEATS Refresh* considered a less-intense development level. Within ALC, very little development was assumed to occur in the ALC property with respect to the NEATS travel demand model.

The roadway that will be impacted the most by site traffic is 26th Avenue, which is projected to serve 11,000 vehicles per day (VPD) of ALC traffic adjacent to the site. The internal collector roads are anticipated to serve less than 8,500 VPD of site traffic.



LEGEND

XX% = Site Trip Distribution

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FIGURE 4

ALC Trip Distribution

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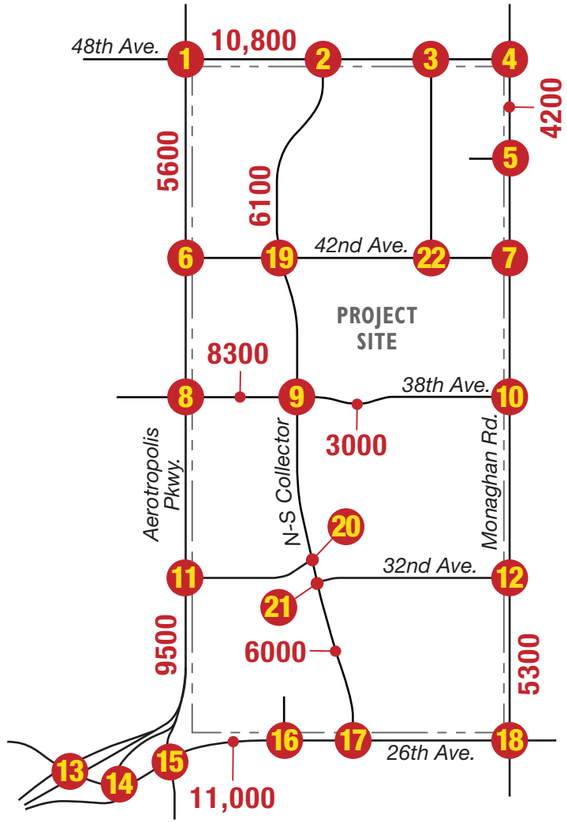
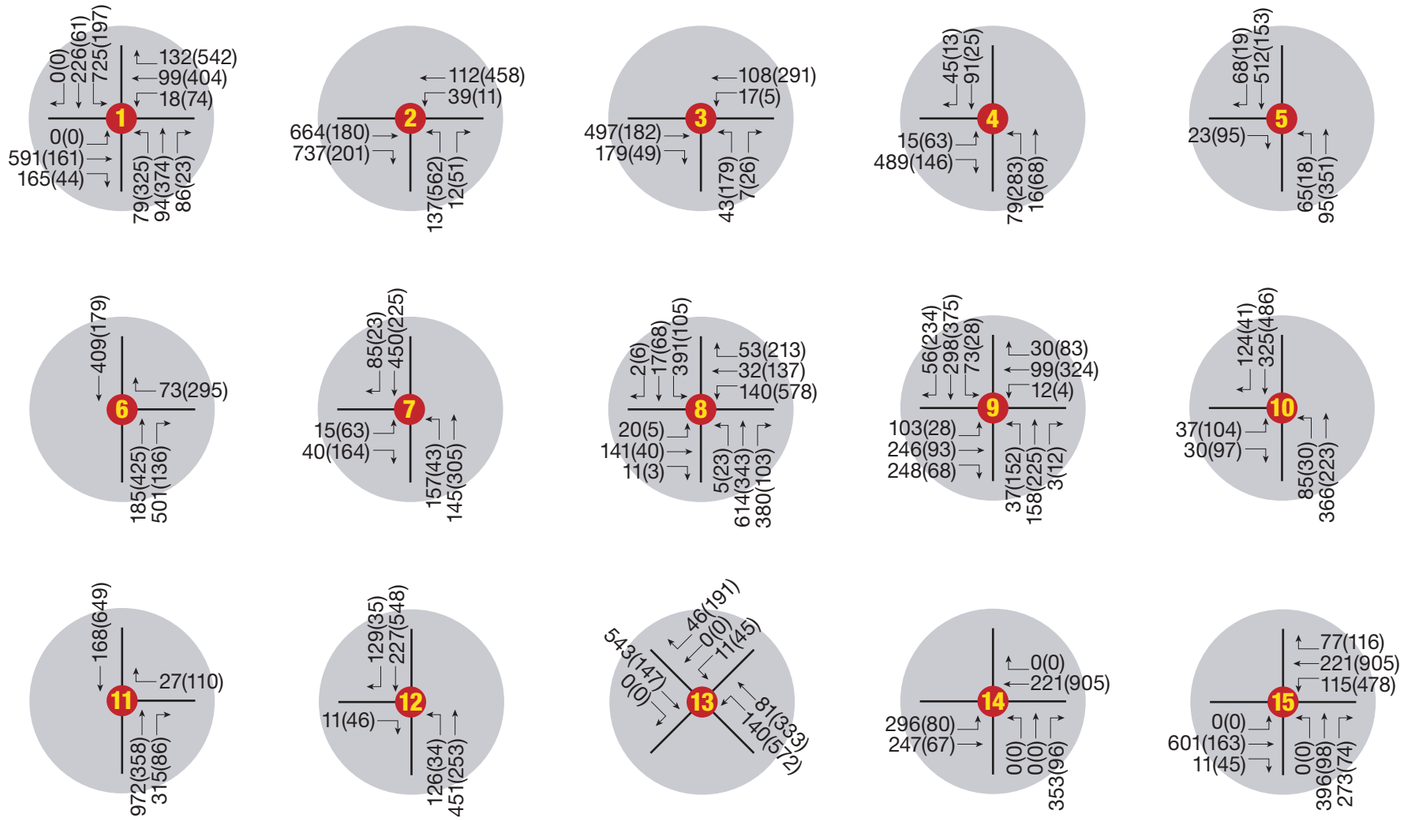
KEY MAP





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XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

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FIGURE 5

ALC Site Generated Traffic Volumes

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IV.C. Background Traffic Volumes

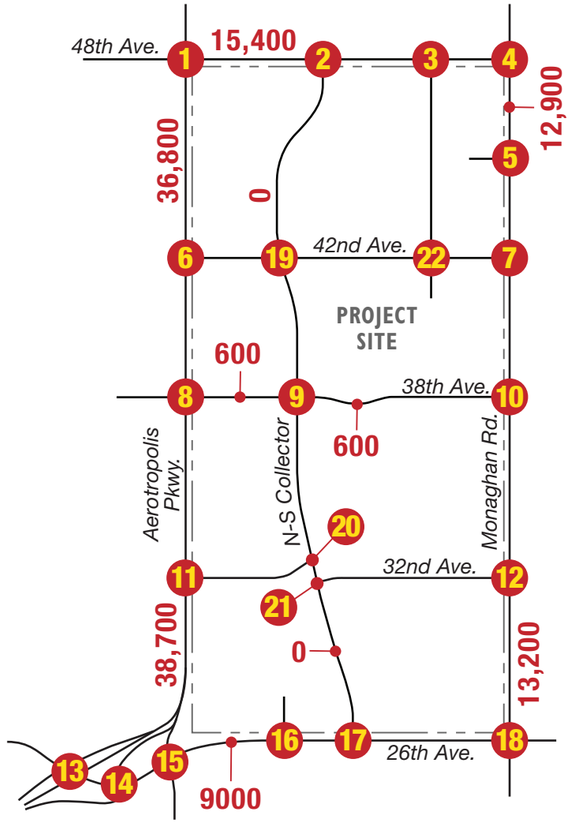
The AECOM Traffic Forecasting memo, previously referenced, was used as the primary means of developing background traffic for this ALC FDP traffic study. This memo provides daily traffic projections along all ALC perimeter roadways, which included trips generated by ACL property. Estimated trips from the ALC FDP area programmed into the AECOM memo were removed in developing 2045 background traffic for this study. As mentioned, the AECOM traffic projections align with the NEATS Buildout (as opposed to NEATS 2040), as well as the subsequent Powhaton Road Alignment Study Buildout traffic projections. The traffic numbers are a fallout of the NEATS Buildout generation, so using them as a basis for year 2045 background is conservative.

Resulting daily traffic was then converted to AM and PM peak hour traffic by applying an approximate 9 percent and 10 percent, respectively, peak hour percentage. Directional split of the peak hour traffic was estimated from the AM and PM peak period assignment results per the NEATS travel demand modeling.

The peak hour intersection turning movement projections were then developed by applying techniques developed by the National Cooperative Highway Research Program. Adjustments were made to produce reasonable AM and PM peak hour directional reflection patterns and to reasonably balance traffic flows between successive intersections.

Background traffic volume estimates are shown on **Figure 6**. Aerotropolis Parkway will be the busiest roadway in the study area serving an estimated background traffic demand of approximately 39,000 VPD north of 26th Avenue, which is the highest volume roadway along the ALC perimeter with respect to background traffic.

KEY MAP



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XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

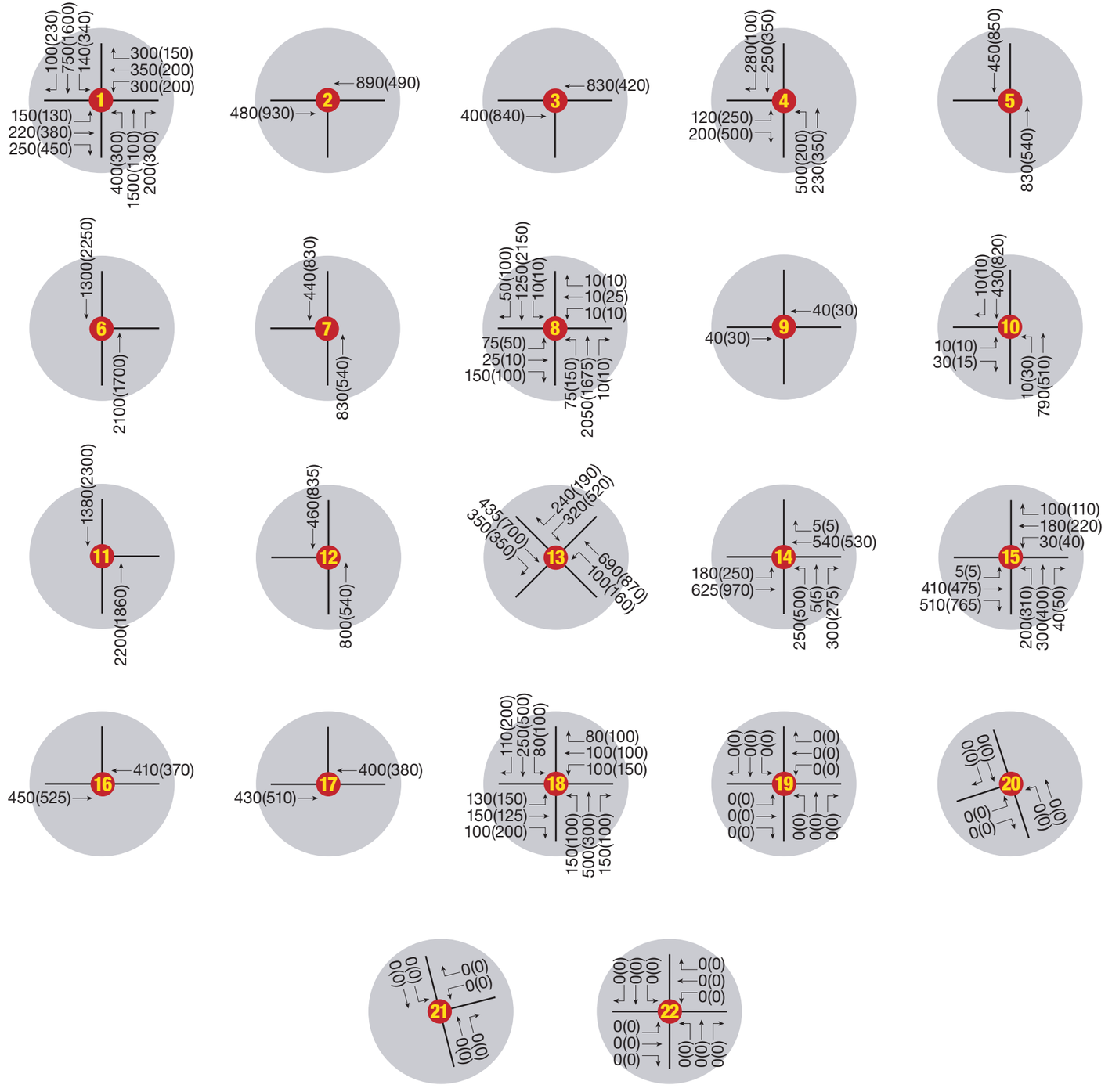

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FIGURE 6

ALC 2045 Background Traffic Volumes

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V. YEAR 2045 TOTAL TRAFFIC CONDITIONS

The daily and peak hour traffic volume estimates for the ALC site shown on **Figure 5** were combined with the Year 2045 background traffic volume projections of **Figure 6** to create the Year 2045 total traffic forecasts along the study area roads and intersections. These estimated forecasts are shown on **Figure 7**.

Aerotropolis Parkway is projected to carry the greatest traffic in the immediate study area. There is a strong background pattern projected involving vehicles traveling the diagonal segment of Aerotropolis Parkway to/from south of 26th Avenue to/from the north via Jackson Gap Way into and out of DEN. This roadway will ultimately provide a new interchange with I-70. Other notable volume forecasts include 48th Avenue, which could serve 26,200 VDP adjacent to the site. Monaghan Road and 26th Avenue are both projected to serve 18,000 to 20,000 VPD.

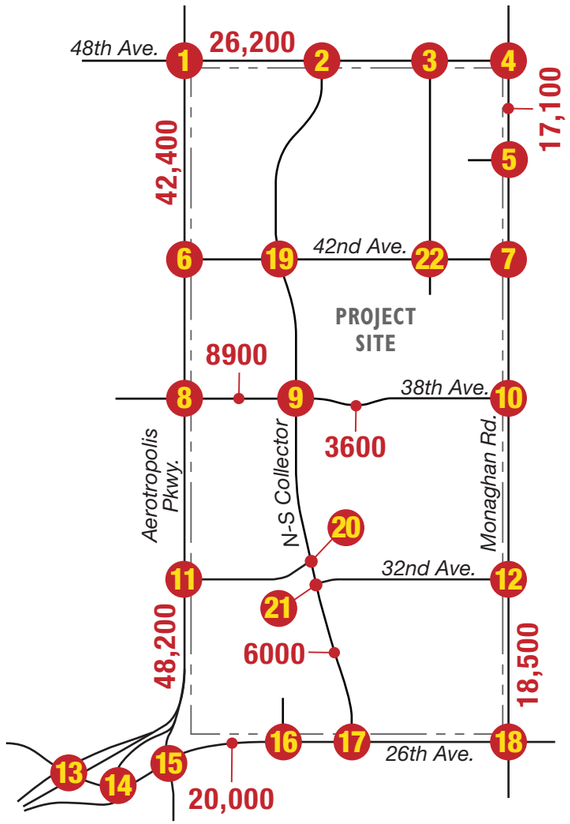
V.A. Traffic Signalization Warrant Analyses

The *Manual on Uniform Traffic Control Devices* (MUTCD) identifies eight warrants that provide guidance to determine whether installation of a traffic signal is justified. Some of these warrants are based on traffic volume levels, while others are based on the accident history of an intersection or whether the intersection is a designated school crossing. The four-hour warrant has been applied to assess the need. Forecasts for the four highest hours of a typical weekday were developed by applying factors to the AM and PM peak hours. Other than the planned interchange at Powhaton Road/Aerotropolis Parkway/26th Avenue (which will clearly involve signalization), other intersections were evaluated as shown in **Appendix A**. The following were found to meet warrants based on the 2045 traffic projections:

- Aerotropolis Parkway/38th Avenue
- Aerotropolis Parkway/48th Avenue
- Monaghan Road/26th Avenue
- Monaghan Road/38th Avenue
- Monaghan Road /42nd Avenue
- Monaghan Road/48th Avenue
- 26th Avenue/ North-south internal collector road
- 26th Avenue/Powhaton Road
- 26th Avenue/Diverging Diamond intersections
- 48th Avenue/North-south internal collector roads (both intersections)

Other intersections onto the adjacent arterials are recommended for restricted movements, which is discussed later in this report.

KEY MAP



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

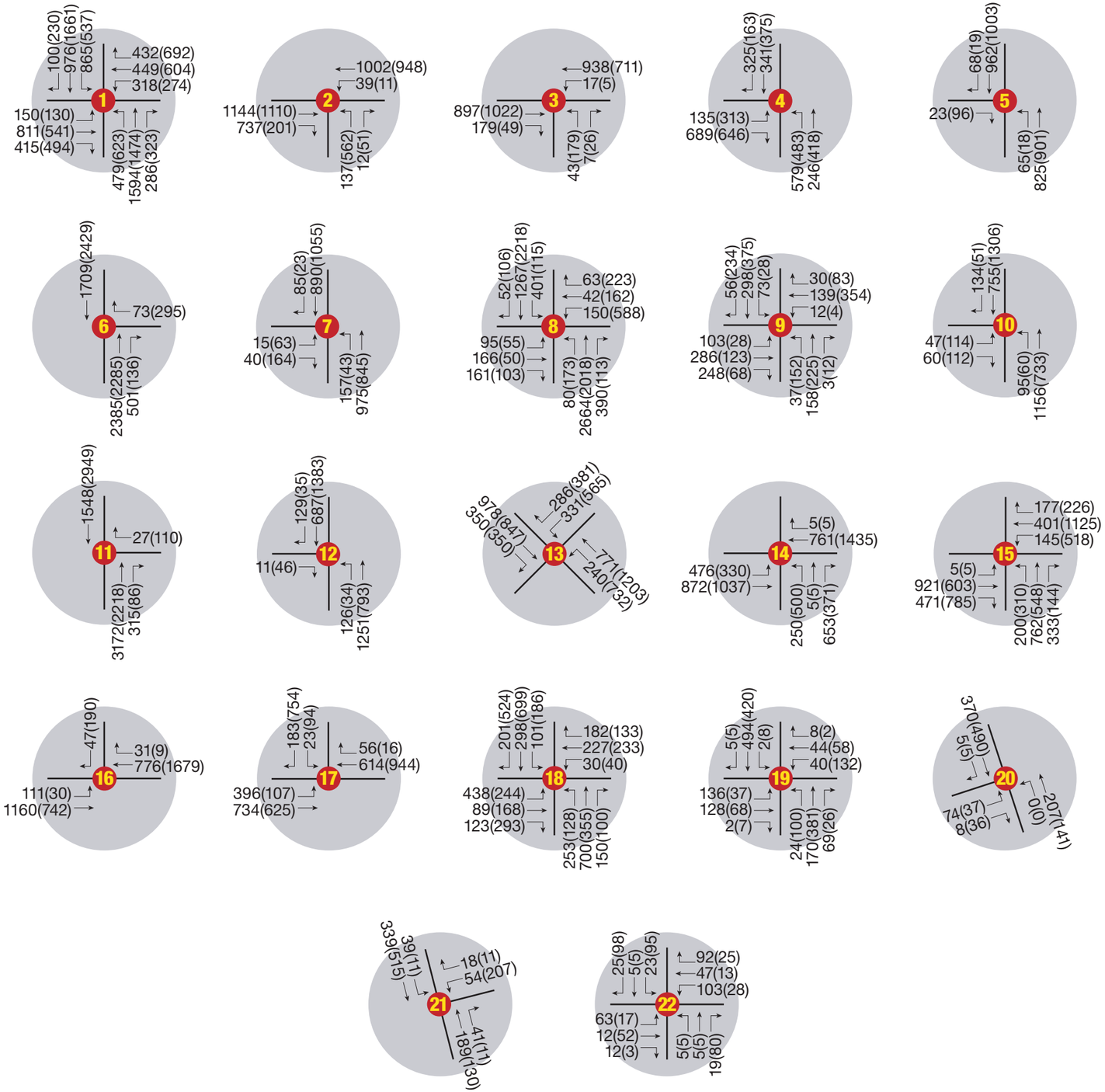


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FIGURE 7

ALC 2045 Total Traffic Volumes

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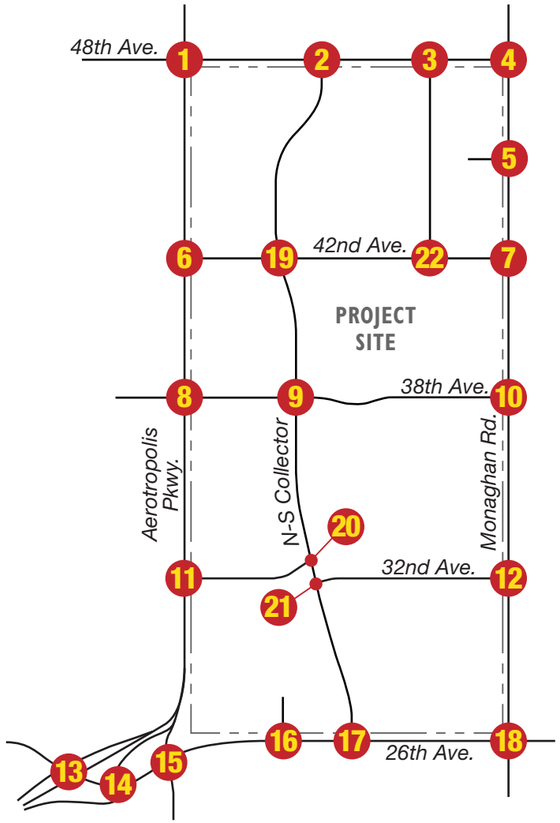
V.B. Roadway and Intersection Capacity Analyses

Capacity analyses were conducted for the surrounding roadway network using the traffic volume estimates of **Figure 7**. The level of service (LOS) analysis results and intersection lane requirements can be found on **Figure 8** (worksheets are shown in **Appendix B**). With respect to the roadways, **Figure 9** shows the roadway needs in map form with the following cross-sections descriptions below:

- **Aerotropolis Parkway (diagonally to the southwest)** should ultimately be built to a major arterial classification to include six through lanes of traffic. Turn lanes are needed at the major intersections as described in the following section.
- **Aerotropolis Parkway**, from 26th Avenue to 48th Avenue, should ultimately be built to a major arterial classification to include six through lanes of traffic. North of 48th Avenue, the cross section would continue as a six-lane arterial, connecting with Jackson Gap Way near 56th Avenue (on further into DEN). South of 26th Avenue, the cross-section would narrow to a four-lane section. Turn lanes are needed at the intersections as described in the following section.
- **Monaghan Road**, from 26th Avenue to 48th Avenue, should be built to a four-lane minor arterial cross-section with widened sections for turn lanes at major intersections as described in the following section.
- **26th Avenue** should be built to a four-lane minor arterial standard. Left turn lanes will be needed at all cross-streets, and right turn lanes will be needed at the heavier-used cross-streets.
- **38th Avenue** should be built to a three-lane collector standard through the site, which includes a center left turn lane and one through lane in each direction. Additional turn lanes will be needed at the Aerotropolis Parkway intersection.
- **48th Avenue** will be a four-lane arterial adjacent to the ALC site, widening to a six-lane arterial west of Aerotropolis Parkway. Turn lanes will be required at all intersections.
- The **North-South collector road** through the site should be built to a three-lane collector standard through the site, which includes a center left turn lane and one through lane in each direction. Additional turn lanes will be needed at the 26th Avenue, 38th Avenue, and 48th Avenue intersections.
- The **North-South collector road** in the northeastern area of the master plan (which connects 48th and 42nd Avenues) should be built to a two-lane collector standard for its length.
- **32nd and 42nd Avenues** should be built to include two through lanes, with a two-lane collector roadway classification being most appropriate.

KEY MAP



LEGEND

X/X	= AM/PM Peak Hour Signalized Intersection Level of Service	STOP	= Stop Sign
x/x	= AM/PM Peak Hour Unsignalized Intersection Level of Service		= Traffic Signal

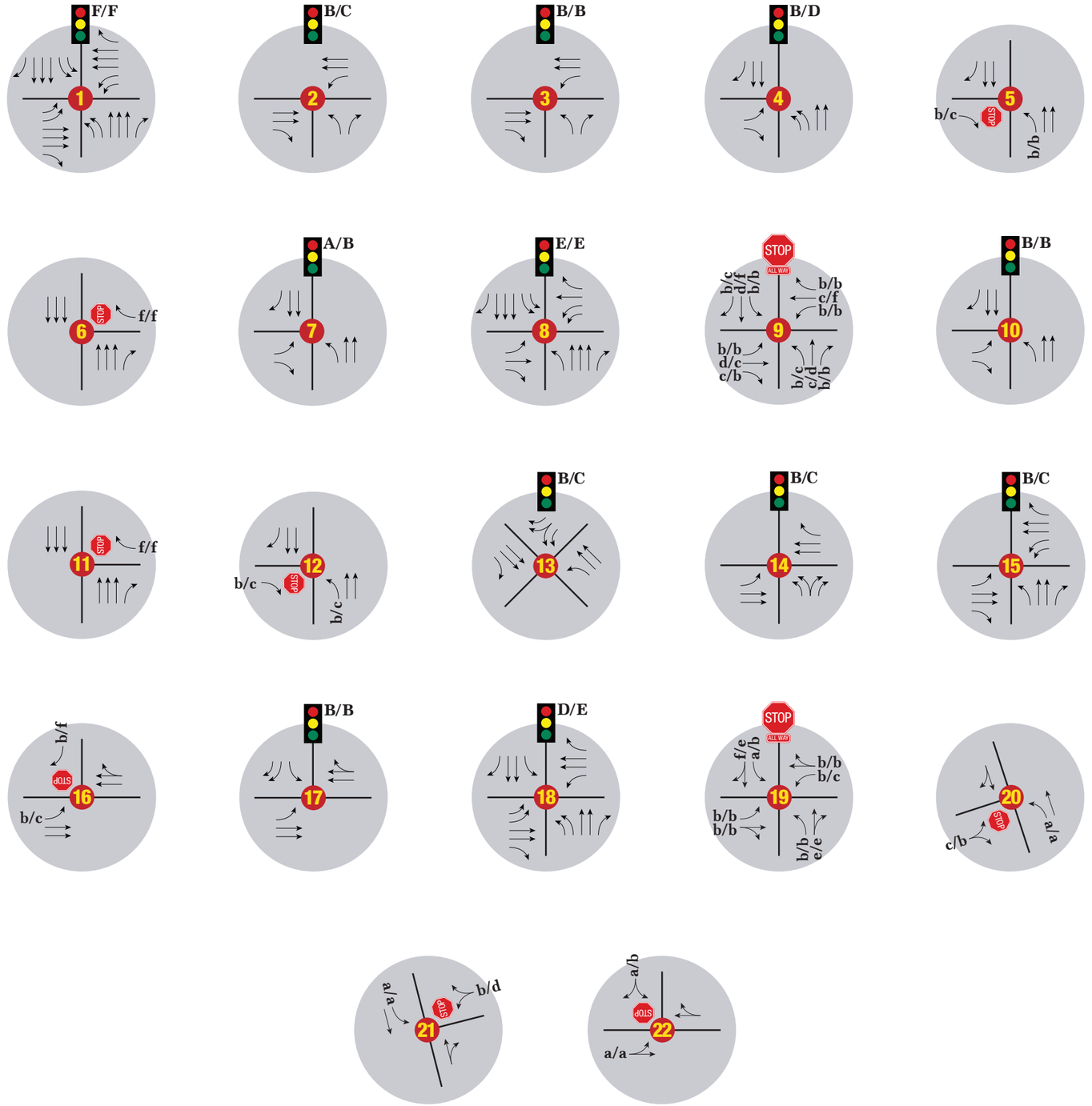


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FIGURE 8

ALC 2045 Total
Lane Geometry and Level of Service

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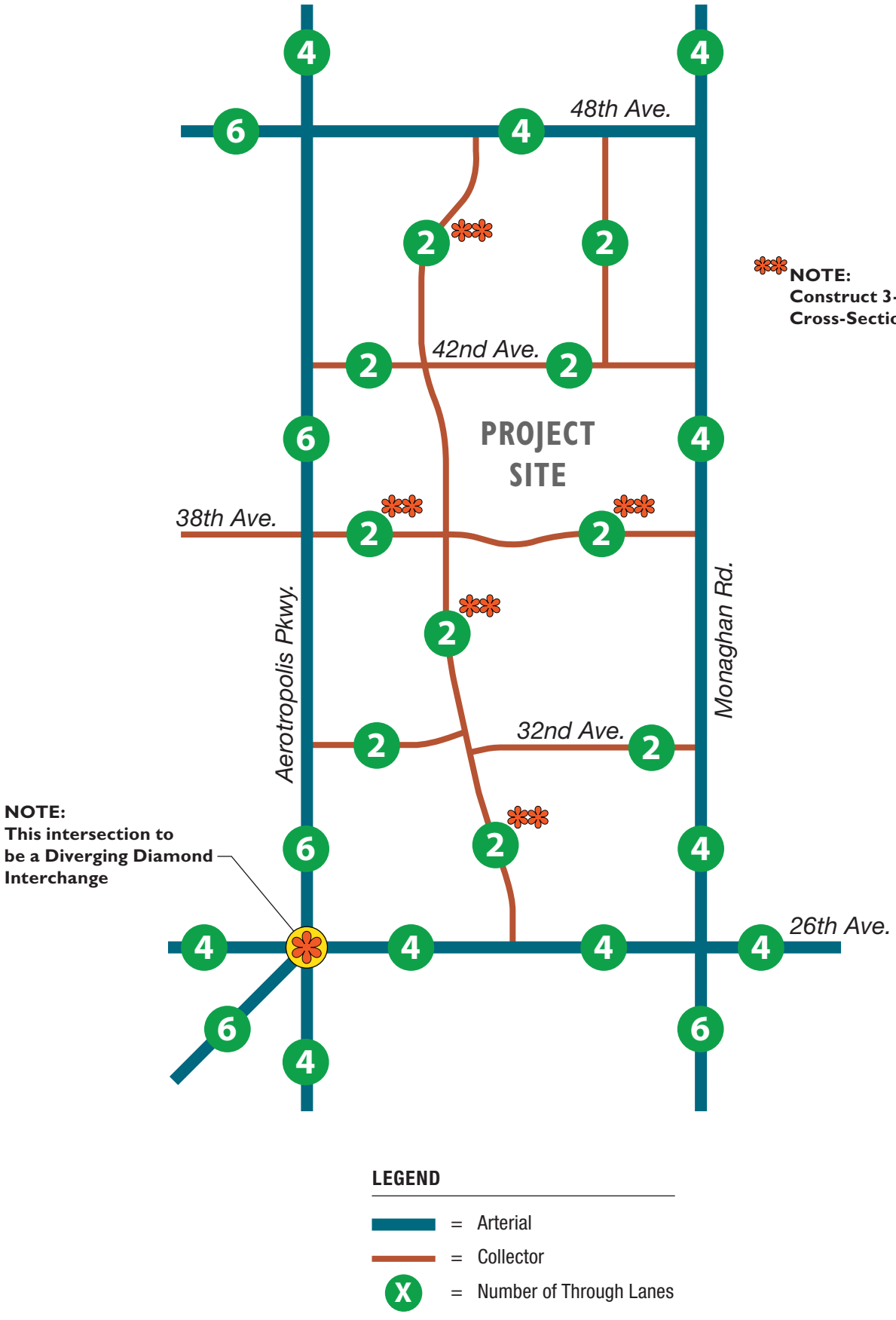

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FIGURE 9

ALC

Roadway Classification and Laneage

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With respect to the intersections, the following illustrate the turn lane geometry needs at specific intersections analyzed in this study:

- **Aerotropolis/48th.** Lane needs include three though lanes and dual left turn lanes along all four approaches. Each approach should also provide separate right turn lanes. Even with this "maxed-out" intersection geometry, this intersection could still experience operational challenges during peak hours given the high level of background traffic projected along Aerotropolis Parkway. A 150-second cycle length may be needed for this intersection to function properly (which was applied to this analysis).
- **48th/North-South Collector Road.** As a tee intersection, this intersection should function no worse than LOS C. While not needed from a LOS perspective, dual left turn lanes should be considered along the northbound approach. Dual left turns were not specifically analyzed in this report, but a more detailed future traffic impact study should consider this possibility, especially if any future development on the north side of 48th Avenue accesses this location.
- **48th/Monaghan**. With 48th Avenue terminating at Monaghan, this will be a tee-intersection. Background traffic will be the primary culprit to warranting signalization. Dual left turn lanes should be provided along the northbound approach.
- **26th/Monaghan**. Each approach should ultimately provide dual through lanes, a separate right turn lane, and a separate left turn lane. The northbound and eastbound approaches should also include a second left turn lane.
- **Aerotropolis/38th.** Lane needs include dual left turn lanes along the southbound and westbound approaches. Separate right turn lanes should also be provided along all four approaches. One east-west through lane should be provided in each direction.
- **38th/North-South Collector Road.** This internal intersection will not warrant signalization. Acceptable operations can be achieved with an all-way-stop intersection. A separate lane should be provided for each movement along all four approaches.
- **38th/Monaghan.** With 38th Avenue terminating at Monaghan, this will be a tee-intersection that is anticipated to warrant signalization. Single turn lanes for all turning movements should be provided as should dual through lanes north-south.
- **26th/North-South Collector.** Signalization will be warranted based on the 2045 traffic, and this intersection will experience a heavy pattern of traffic between the north and west legs of this intersection. Given the heavy southbound right turn movement, dual right turn lanes should be provided for this movement. An option could be to provide a free-flow southbound right turn lane provided that a westbound acceleration lane is added to 26th Avenue to receive free-flowing traffic.
- **32nd/ Monaghan**. This intersection is recommended to be three-quarter movement in which the eastbound left-out movement would be prohibited. A planned signal at 38th Avenue can instead serve this left turn demand.
- **26th/Monaghan**. This intersection will need dual left turn lanes along the northbound and eastbound approaches. All four approaches should also be built with a separate right turn lane and dual through lanes. Signalization should be planned.
- **Powhaton/Aerotropolis/26th**. This is a planned diverging diamond interchange. The analyses presented in this report indicate that this configuration will function well.

Several perimeter intersections have been identified to be limited turns to avoid installing too many signals and also realizing that another nearby signal would be accessible. These intersections include:

- Monaghan/42nd Avenue
- Monaghan/32nd Avenue
- 26th/Access (first one east of Powhaton). Development served by this access should ideally be able to access the north-south collector road. That is, Planning Area 22 on the master plan should be provided access to the north-south collector road through Planning Area 23.

In addition to the turn lane needs described previously, a queuing analysis at the study area intersections was also completed, the results of which are shown in **Table 2**

The City of Aurora's *Traffic Impact Study Guidelines* indicate that the CDOT State Highway Access Code (SHAC) be used to determine storage and taper lengths. These values often yield overly conservative results and provide storage well in excess of 95th percentile queues (which already incorporate a heavy vehicle percentage of 10 percent), often by a factor of two to three. The SHAC procedures do not account for other conditions in the intersection such as low opposing through movements if a left turn movement is in question. As such, there are instances above where the final recommendation would more appropriately align with the 95th percentile lengths relative to informing design.

Lead-in taper lengths should be informed by speeds per the CDOT SHAC as follows:

- 50 MPH – 15:1 taper (180 feet for one lane, 360 feet for dual lanes)
- 45 MPH – 13.5:1 taper (162 feet for one lane, 324 feet for dual lanes)
- 40 MPH – 12:1 taper (144 feet for one lane, 288 feet for dual lanes)
- 35 MPH – 10:1 taper (120 feet for one lane, 240 feet for dual lanes)
- 30 MPH – 8:1 taper (96 feet for one lane, 192 feet for dual lanes)

Table 2 indicates which movements are more appropriately sized from the 95th percentile result. The second to last column reflects our recommended lane length based on the results and engineering judgment.

Table 2. Year 2045 Intersection Queuing Results*

Location	Critical Movements*	95% Queue Length (ft) 2045 Build (AM/PM Peak)	Recommended Storage Length***	SHAC** Recommended Auxiliary Lane Length
48th Avenue & Aerotropolis Parkway (Intersection 1)	EB Left-turn	131 / 127	150	175
	EB Through	435 / 201	Continuous	Continuous
	EB Right-turn	Free Movement	Continuous	Continuous
	WB Left-turn	288 / 178	300	350
	WB Through	189 / 203	Continuous	Continuous
	WB Right-turn	154 / 690	700	775
	NB Left-turn	289 / 415	425	700
	NB Through	709 / 545	Continuous	Continuous
	NB Right-turn	Free Movement	Continuous	Continuous
	SB Left-turn	642 / 345	650	950
	SB Through	334 / 676	Continuous	Continuous
	SB Right-turn	16 / 111	125	250
48th Avenue & N-S Collector (Intersection 2)	EB Through	215 / 257	Continuous	Continuous
	EB Right-turn	44 / 29	50	825
	WB Left-turn	30 / 5	50	50
	WB Through	176 / 189	200	Continuous
	NB Left-turn	81 / 313	325	625
	NB Right-turn	10 / 21	25	75
48th Avenue & N Access (Intersection 3)	EB Through	159 / 207	Continuous	Continuous
	EB Right-turn	27 / 6	50	200
	WB Left-turn	13 / 5	25	25
	WB Through	168 / 118	Continuous	Continuous
	NB Left-turn	21 / 67	75	200
	NB Right-turn	6 / 11	25	50
48th Avenue & Monaghan Road (Intersection 4)	EB Left-turn	80 / 429	450	350
	EB Right-turn	65 / 52	75	750
	NB Left-turn	171 / 146	175	650
	NB Through	75 / 97	Continuous	Continuous
	SB Through	88 / 86	Continuous	Continuous
	SB Right-turn	60 / 23	75	375
E Access & Monaghan Road (Intersection 5)	EB Right-turn	4 / 19	25	100
	NB Left-turn	10 / 3	25	125
	NB Through	N/A	Continuous	Continuous
	SB Through	N/A	Continuous	Continuous
	SB Right-turn	N/A	25	75

Location	Critical Movements*	95% Queue Length (ft) 2045 Build (AM/PM Peak)	Recommended Storage Length***	SHAC** Recommended Auxiliary Lane Length
42nd Avenue & Aerotropolis Parkway (Intersection 6)	WB Right-turn	85 / 693	Continuous	Continuous
	NB Through	N/A	Continuous	Continuous
	NB Right-turn	N/A	25	525
	SB Through	N/A	Continuous	Continuous
42nd Avenue & Monaghan Road (Intersection 7)	EB Left-turn	16 / 36	50	75
	EB Right-turn	20 / 65	75	200
	NB Left-turn	143 / 31	150	175
	NB Through	150 / 128	Continuous	Continuous
	SB Through	131 / 175	Continuous	Continuous
	SB Right-turn	19 / 8	25	100
38th Avenue & Aerotropolis Parkway (Intersection 8)	EB Left-turn	142 / 358	375	125
	EB Through	1186 / 686	Continuous	Continuous
	EB Right-turn	213 / 10	225	175
	WB Left-turn	234 / 109	500	650
	WB Through	304 / 96	Continuous	Continuous
	WB Right-turn	73 / 36	75	250
	NB Left-turn	124 / 493	500	200
	NB Through	85 / 243	Continuous	Continuous
	NB Right-turn	17 / 186	200	425
	SB Left-turn	369 / 113	375	450
	SB Through	314 / 971	Continuous	Continuous
	SB Right-turn	0 / 22	25	125
38th Avenue & N-S Collector (Intersection 9)	EB Left-turn	8 / 63	25	125
	EB Through	53 / 118	Continuous	Continuous
	EB Right-turn	0 / 6	25	250
	WB Left-turn	25 / 8	25	25
	WB Through	125 / 210	Continuous	Continuous
	WB Right-turn	78 / 18	25	100
	NB Left-turn	3 / 0	50	175
	NB Through	43 / 310	Continuous	Continuous
	NB Right-turn	6 / 20	25	25
	SB Left-turn	18 / 8	25	75
	SB Through	150 / 333	Continuous	Continuous
	SB Right-turn	10 / 95	25	250
38th Avenue & Monaghan Road (Intersection 10)	EB Left-turn	31 / 70	175	125
	EB Right-turn	21 / 59	75	125
	NB Left-turn	54 / 73	50	125
	NB Through	218 / 114	Continuous	Continuous
	SB Through	121 / 261	Continuous	Continuous
	SB Right-turn	21 / 12	25	150

Location	Critical Movements*	95% Queue Length (ft) 2045 Build (AM/PM Peak)	Recommended Storage Length***	SHAC** Recommended Auxiliary Lane Length
32nd Avenue & Aerotropolis Parkway (Intersection 11)	WB Right	48 / 135	150	125
	NB Through	N/A	Continuous	Continuous
	NB Right-turn	N/A	25	325
	SB Through	N/A	Continuous	Continuous
32nd Avenue & Monaghan Road (Intersection 12)	EB Left-turn	6 / 8	25	0
	EB Right-turn	3 / 13	25	50
	NB Left-turn	18 / 8	25	150
	NB Through	N/A	Continuous	Continuous
	SB Through	N/A	Continuous	Continuous
	SB Right-turn	N/A	25	150
26th Avenue & Powhaton Road (Intersection 15)	EB Left-turn	5 / 5	25	25
	EB Through	164 / 148	Continuous	Continuous
	EB Right-turn	44 / 274	275	875
	WB Left-turn	38 / 83	100	575
	WB Through	64 / 345	Continuous	Continuous
	WB Right-turn	52 / 18	75	250
	NB Left-turn	140 / 178	200	400
	NB Through	128 / 136	Continuous	Continuous
	NB Right-turn	124 / 34	125	375
26th Avenue & S Access (Intersection 16)	EB Left-turn	15 / 11	25	125
	EB Through	N/A	Continuous	Continuous
	WB Through	N/A	Continuous	Continuous
	WB Right-turn	N/A	25	50
	SB Right-turn	8 / 153	175	175
26th Avenue & N-S Collector (Intersection 17)	EB Left-turn	266 / 68	275	450
	EB Through	111 / 114	Continuous	Continuous
	WB Through	206 / 248	Continuous	Continuous
	SB Left-turn	25 / 60	75	125
	SB Right-turn	25 / 173	175	825
26th Avenue & Monaghan Road (Intersection 18)	EB Left-turn	236 / 118	250	500
	EB Through	52 / 54	Continuous	Continuous
	EB Right-turn	29 / 48	50	325
	WB Left-turn	56 / 44	75	50
	WB Through	131 / 72	Continuous	Continuous
	WB Right-turn	57 / 0	75	200
	NB Left-turn	132 / 68	150	275
	NB Through	311 / 104	Continuous	Continuous
	NB Right-turn	44 / 0	50	175

Location	Critical Movements*	95% Queue Length (ft) 2045 Build (AM/PM Peak)	Recommended Storage Length***	SHAC** Recommended Auxiliary Lane Length
26th Avenue & Monaghan Road (Intersection 18) (Continued)	SB Left-turn	82 / 180	200	225
	SB Through	166 / 248	Continuous	Continuous
	SB Right-turn	67 / 145	150	575
46th Avenue & N-S Collector (Intersection 19)	EB Left-turn	38 / 9	50	150
	EB Through-Right	31 / 16	Continuous	Continuous
	WB Left-turn	9 / 38	50	150
	WB Through-Right	12 / 13	Continuous	Continuous
	NB Left-turn	6 / 22	25	100
	NB Through-Right	70 / 220	Continuous	Continuous
	SB Left-turn	0 / 3	25	25
	SB Through-Right	365 / 258	Continuous	Continuous
West 32nd Avenue & N-S Collector (Intersection 20)	EB Left-Right	18 / 16	Continuous	Continuous
	NB Left-turn	0 / 0	25	25
	NB Through	N/A	Continuous	Continuous
	SB Through	N/A	Continuous	Continuous
	SB Right	N/A	25	25
East 32nd Avenue & N-S Collector (Intersection 21)	WB Left-Right	16 / 98	Continuous	Continuous
	NB Through	N/A	Continuous	Continuous
	NB Right	N/A	25	50
	SB Left	3 / 0	25	50
	SB Through	N/A	Continuous	Continuous
42nd Avenue & Northeast Access Road (Intersection 22)	EB Through-Left	6 / 0	Continuous	Continuous
	WB Through-Right	N/A	Continuous	Continuous
	SB Left-Right	6 / 22	25	100

Notes:
*Where dual lanes are provided the presented value is on a per lane basis.
**The State Highway Access Code recommended auxiliary storage lengths in Table 2 represent the storage length without the inclusion of taper length.
*** Recommended length based primarily on 95th percentile queue than SHAC.

VI. SUMMARY AND RECOMMENDATIONS

Stream Realty is planning to develop an approximate 1,280-acre site in Aurora, Colorado, referred to as Aurora Logistics Center (ALC). The FDP site is located along the east side of the future Aerotropolis Parkway between 26th Avenue and the future 48th Avenue. If built to its maximum allowed density, up to 16.4 million square feet of industrial and commercial building space could occur, estimated to generate up to 39,300 external vehicle-trips per day.

The recently updated *NEATS Refresh* identifies the appropriate roadway classification and laneage of the surrounding street system. The NEATS study and the AECOM traffic forecasting memo were key resources in preparing this traffic impact study with respect to the major roadways and the traffic demand for the rest of the area outside the ALC FDP.

The overarching roadway recommendations include:

- **Aerotropolis Parkway**. This roadway will ultimately serve as a busy north-south major arterial facility through the region. As such, ultimate traffic demands will be significant requiring a six-lane facility and dual left turn lanes along select approaches at all study area intersections. Its intersection with 26th Avenue and Powhaton Road will be a diverging diamond interchange, which is projected to function well.
- **48th Avenue**. West of Aerotropolis Parkway, 48th Avenue is planned to provide six through lanes. East of Aerotropolis Parkway, 48th Avenue need only be a four-lane arterial with turn lanes at intersections. This roadway will not continue east beyond Monaghan Road.
- **38th Avenue.** This road will not extend east of Monaghan Road. Passing through the ALC Master Plan, this road should be planned as a three-lane collector road, with additional turn lanes needed at intersections, especially the Aerotropolis Parkway intersection.
- **Monaghan Road**. Projected traffic along this roadway suggests the need for a four-lane arterial road, which is consistent with NEATS. Center left turn lanes should be provided at all cross-streets; dual northbound left turn lanes should be provided at 48th Avenue.
- **26th Avenue**. The NEATS plan identifies this roadway to be a four-lane minor arterial that will suffice given the 2045 traffic projections. Turn lanes are needed at the intersections. Its intersection with Aerotropolis Parkway and Powhaton Road will include a diverging diamond interchange.
- **North-south Internal Road**. Passing through the FDP, this road should be planned as a three-lane collector road, with additional turn lanes needed at intersections.
- **32nd and 42nd Avenues** should be built to a two-lane collector roadway.

Relative to the study area intersections, traffic signals are anticipated to be installed at the major intersections, including:

- Aerotropolis Parkway/48th Avenue
- Aerotropolis Parkway/38th Avenue
- Monaghan Road/26th Avenue
- Monaghan Road/38th Avenue
- Monaghan Road/42nd Avenue
- Monaghan Road/48th Avenue
- 26th Avenue/North-South Collector Road
- 48th Avenue/North-South Collector Road
- 48th Avenue NE collector Road

As individual parcels develop, specific traffic analyses may be appropriate to update and refine the findings presented in this study. This analysis considers a potential maximum land use for each parcel, and the likely development will be less intense, thereby possibly leading to lesser improvement needs.

APPENDIX A. YEAR 2045 SIGNAL WARRANT ANALYSIS

MUTCD Volume-based Warrant Evaluation
48th & Powhaton
Intersection # 1
2040 Total Traffic

Major Street:	48th Ave	Minor Street:	Powhaton Rd
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	4513	979
95% PM Peak Hour	4287	930
85% PM Peak Hour	3836	832
AM Peak Hour	3972	1142

Satisfied	Yes

(100% Factor)

MUTCD Volume-based Warrant Evaluation
48th & N-S Collector
Intersection # 2
2040 Total Traffic

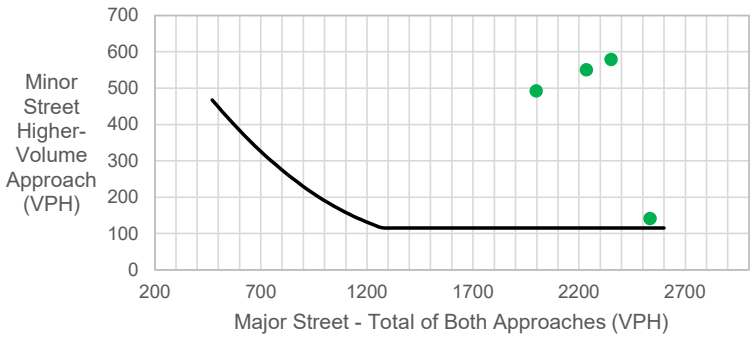
Major Street:	48th Ave	Minor Street:	N-S Collector
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	2351	579
95% PM Peak Hour	2233	550
85% PM Peak Hour	1998	492
AM Peak Hour	2533	141

Satisfied	Yes

(100% Factor)



MUTCD Volume-based Warrant Evaluation
48th & NE Access
Intersection # 3
2040 Total Traffic

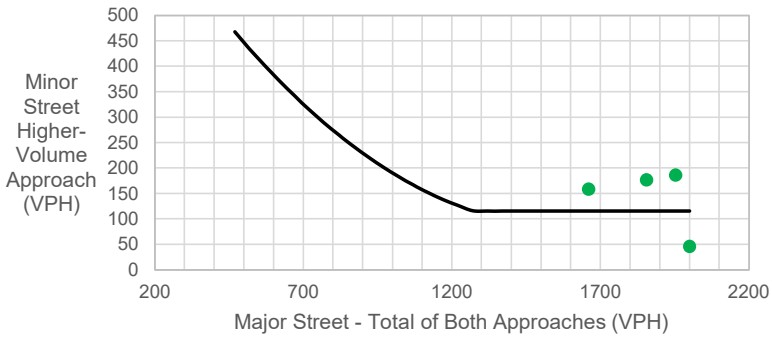
Major Street:	48th Ave	Minor Street:	North East Access
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	1953	186
95% PM Peak Hour	1855	177
85% PM Peak Hour	1660	158
AM Peak Hour	2000	46

Satisfied	No

(100% Factor)



MUTCD Volume-based Warrant Evaluation
Monaghan Rd & 48th Street
Intersection # 4
2040 Total Traffic

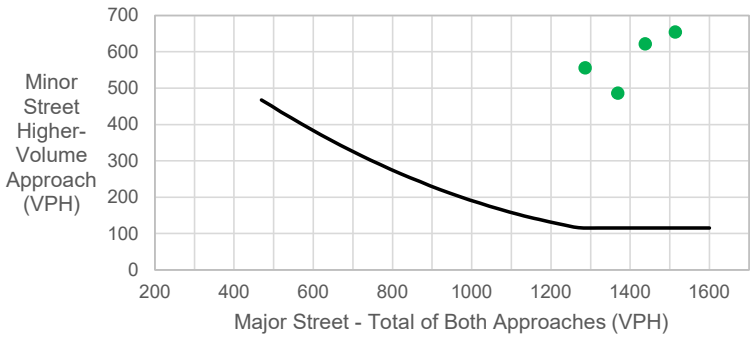
Major Street:	Monaghan Rd	Minor Street:	48th Ave
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	1514	654
95% PM Peak Hour	1438	621
85% PM Peak Hour	1287	556
AM Peak Hour	1369	486

Satisfied	Yes

(100% Factor)



MUTCD Volume-based Warrant Evaluation
Northern E-W Collector & Monaghan
Intersection # 7
2040 Total Traffic

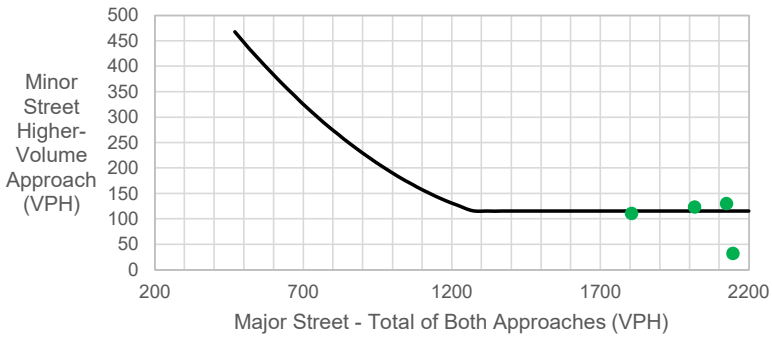
Major Street:	Monaghan Rd	Minor Street:	Northern E-W Collector
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	2124	130
95% PM Peak Hour	2018	124
85% PM Peak Hour	1805	111
AM Peak Hour	2146	32

Satisfied	No

(100% Factor)



MUTCD Volume-based Warrant Evaluation
38th & Powhaton
Intersection # 8
2040 Total Traffic

Major Street:	Powhaton Rd	Minor Street:	38th Ave
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	5394	174
95% PM Peak Hour	5124	165
85% PM Peak Hour	4585	148
AM Peak Hour	4533	304

Satisfied	Yes

(100% Factor)

MUTCD Volume-based Warrant Evaluation
38th & Monaghan
Intersection # 10
2040 Total Traffic

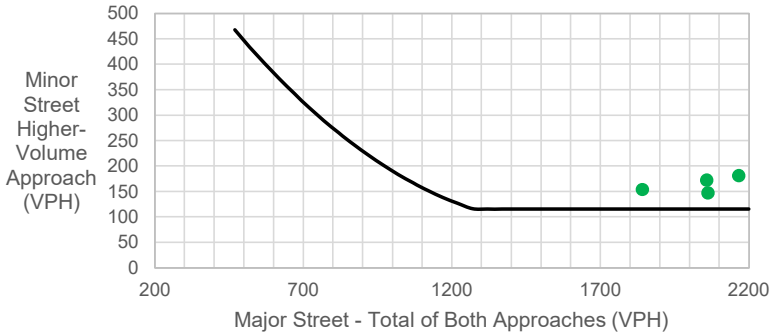
Major Street:	Monaghan Rd	Minor Street:	38th Ave
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	2166	181
95% PM Peak Hour	2058	172
85% PM Peak Hour	1841	154
AM Peak Hour	2062	147

Satisfied	Yes

(100% Factor)



MUTCD Volume-based Warrant Evaluation
26th & Powhatan
Intersection # 15
2040 Total Traffic

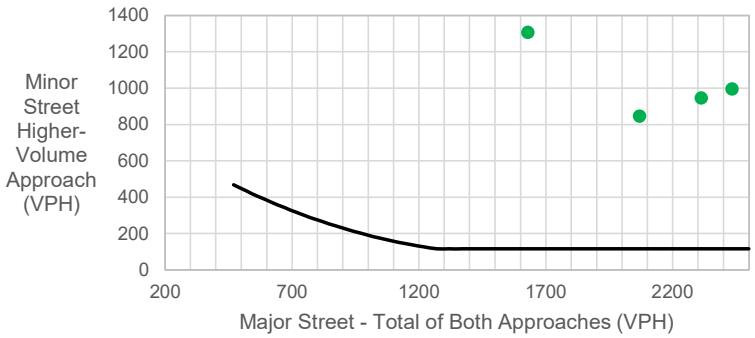
Major Street:	26th Ave	Minor Street:	Powhatan
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% WB, & 50% NB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	2434	995
95% PM Peak Hour	2312	945
85% PM Peak Hour	2069	846
AM Peak Hour	1629	1307

Satisfied	Yes

(100% Factor)



MUTCD Volume-based Warrant Evaluation
26th & N-S Collector
Intersection # 17
2040 Total Traffic

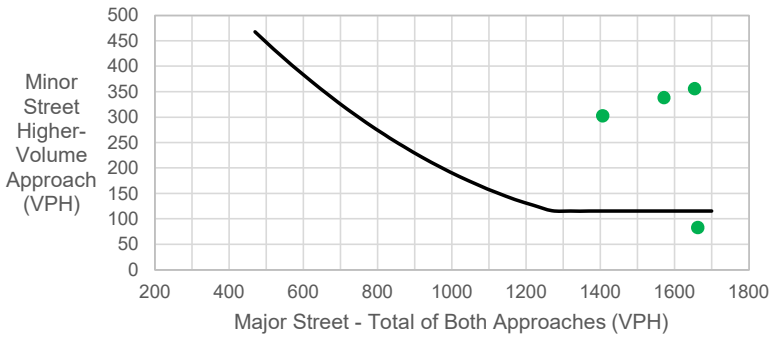
Major Street:	26th Ave	Minor Street:	N-S Collector
Approach Speed:	40 MPH	Right Turn Volume Included:	50% SB, 50% WB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	1654	356
95% PM Peak Hour	1571	338
85% PM Peak Hour	1406	303
AM Peak Hour	1662	83

Satisfied	No

(100% Factor)



MUTCD Volume-based Warrant Evaluation
26th & Monaghan
Intersection # 18
2040 Total Traffic

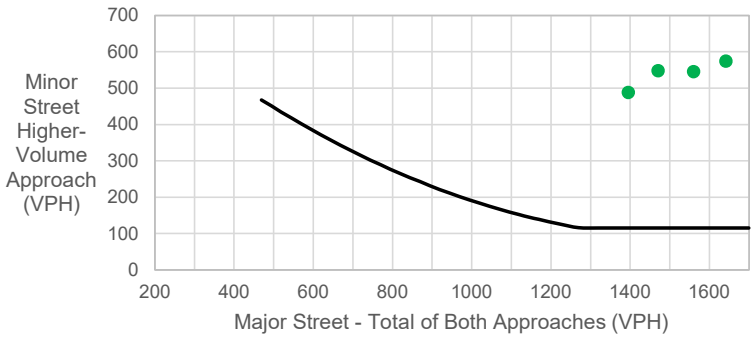
Major Street:	26th Ave	Minor Street:	Monaghan Rd
Approach Speed:	40 MPH	Right Turn Volume Included:	50% EB, 50% NB, 50% SB
Lanes Moving Traffic:	2 or more	Lanes Moving Traffic:	2 or more
Option:	Low Speed, Urban		

WARRANT 2, Four Hour Vehicular Volume

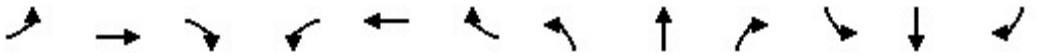
	Both Apprchs. Major Street	Higher Vol. Apprch. Minor Street
PM Peak Hour	1642	574
95% PM Peak Hour	1560	545
85% PM Peak Hour	1396	488
AM Peak Hour	1471	548

Satisfied	Yes

(100% Factor)



APPENDIX B. YEAR 2045 TOTAL TRAFFIC LEVEL OF SERVICE WORKSHEETS

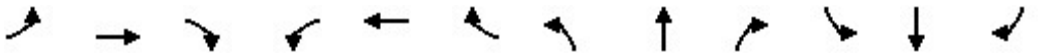


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	163	882	451	346	488	470	521	1733	311	940	1061	109
v/c Ratio	0.76	1.14	0.67	1.12	0.53	0.74	0.68	1.02	0.47	1.13	0.59	0.17
Control Delay	86.7	128.7	21.7	143.4	53.9	14.2	54.7	73.1	13.7	120.0	37.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.7	128.7	21.7	143.4	53.9	14.2	54.7	73.1	13.7	120.0	37.7	2.1
Queue Length 50th (ft)	76	~341	177	~186	148	27	225	~613	64	~509	285	0
Queue Length 95th (ft)	#131	#435	268	#288	189	154	289	#709	152	#642	334	16
Internal Link Dist (ft)		930			718			3220			574	
Turn Bay Length (ft)	250		250	250		250	350		350	350		350
Base Capacity (vph)	214	776	675	309	917	639	762	1693	665	833	1799	654
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.14	0.67	1.12	0.53	0.74	0.68	1.02	0.47	1.13	0.59	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	811	415	318	449	432	479	1594	286	865	976	100
Future Volume (veh/h)	150	811	415	318	449	432	479	1594	286	865	976	100
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	163	882	451	346	488	470	521	1733	311	940	1061	109
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	214	772	588	309	948	294	760	1685	523	832	1825	567
Arrive On Green	0.06	0.15	0.15	0.09	0.19	0.19	0.23	0.34	0.34	0.25	0.37	0.37
Sat Flow, veh/h	3374	4985	1547	3374	4985	1547	3374	4985	1547	3374	4985	1547
Grp Volume(v), veh/h	163	882	451	346	488	470	521	1733	311	940	1061	109
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1687	1662	1547	1687	1662	1547	1687	1662	1547
Q Serve(g_s), s	6.8	22.0	22.0	13.0	12.5	16.0	20.1	48.0	23.6	35.0	24.3	6.8
Cycle Q Clear(g_c), s	6.8	22.0	22.0	13.0	12.5	16.0	20.1	48.0	23.6	35.0	24.3	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	772	588	309	948	294	760	1685	523	832	1825	567
V/C Ratio(X)	0.76	1.14	0.77	1.12	0.51	1.60	0.69	1.03	0.59	1.13	0.58	0.19
Avail Cap(c_a), veh/h	214	772	588	309	948	294	760	1685	523	832	1825	567
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.4	60.0	19.4	64.5	51.6	20.1	50.4	47.0	38.9	53.5	36.2	30.7
Incr Delay (d2), s/veh	22.3	79.1	9.2	87.7	2.0	284.3	5.0	29.6	4.9	73.7	1.4	0.8
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	3.5	14.7	9.5	9.2	5.3	28.8	8.8	23.7	9.5	22.9	9.8	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.8	139.1	28.6	152.2	53.6	304.4	55.4	76.6	43.9	127.2	37.6	31.4
LnGrp LOS	F	F	C	F	D	F	E	F	D	F	D	C
Approach Vol, veh/h		1496			1304			2565			2110	
Approach Delay, s/veh		100.2			170.2			68.3			77.2	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.0	54.0	19.0	28.0	37.0	58.0	14.0	33.0
Change Period (Y+Rc), s	6.0	* 6	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	35.0	* 48	13.0	* 22	32.0	51.0	9.0	26.0
Max Q Clear Time (g_c+I1), s	37.0	50.0	15.0	24.0	22.1	26.3	8.8	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	1.4	7.9	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	95.0
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1243	801	42	1089	149	13
v/c Ratio	0.67	0.69	0.31	0.58	0.30	0.03
Control Delay	12.1	4.3	15.0	10.8	17.8	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	4.3	15.0	10.8	17.8	8.4
Queue Length 50th (ft)	152	0	8	125	40	0
Queue Length 95th (ft)	215	44	30	176	81	10
Internal Link Dist (ft)	1226			1935	3283	
Turn Bay Length (ft)		200	200			
Base Capacity (vph)	1862	1162	137	1862	505	461
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.69	0.31	0.58	0.30	0.03

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1144	737	39	1002	137	12
Future Volume (veh/h)	1144	737	39	1002	137	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1752	1752	1826	1752	1752
Adj Flow Rate, veh/h	1243	801	42	1089	149	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	10	5	10	10
Cap, veh/h	1879	804	175	1879	514	458
Arrive On Green	0.54	0.54	0.54	0.54	0.31	0.31
Sat Flow, veh/h	3561	1485	193	3561	1668	1485
Grp Volume(v), veh/h	1243	801	42	1089	149	13
Grp Sat Flow(s),veh/h/ln	1735	1485	193	1735	1668	1485
Q Serve(g_s), s	15.4	32.2	11.9	12.6	4.1	0.4
Cycle Q Clear(g_c), s	15.4	32.2	27.3	12.6	4.1	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1879	804	175	1879	514	458
V/C Ratio(X)	0.66	1.00	0.24	0.58	0.29	0.03
Avail Cap(c_a), veh/h	1879	804	175	1879	514	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	13.7	19.6	9.2	15.8	14.5
Incr Delay (d2), s/veh	1.8	30.8	3.2	1.3	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	15.1	0.6	4.1	1.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	44.5	22.8	10.5	17.2	14.6
LnGrp LOS	B	D	C	B	B	B
Approach Vol, veh/h	2044			1131	162	
Approach Delay, s/veh	24.5			11.0	17.0	
Approach LOS	C			B	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	23.0	37.0	37.0
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	32.5	32.5
Max Q Clear Time (g_c+I1), s	6.1	34.2	29.3
Green Ext Time (p_c), s	0.3	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	975	195	18	1020	47	8
v/c Ratio	0.71	0.28	0.12	0.74	0.07	0.01
Control Delay	14.8	3.1	10.9	15.6	8.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	3.1	10.9	15.6	8.8	5.4
Queue Length 50th (ft)	104	0	3	111	7	0
Queue Length 95th (ft)	159	27	13	168	21	6
Internal Link Dist (ft)	1935			1111	3264	
Turn Bay Length (ft)		150	150			200
Base Capacity (vph)	1375	704	153	1375	656	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.28	0.12	0.74	0.07	0.01

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	897	179	17	938	43	7
Future Volume (veh/h)	897	179	17	938	43	7
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1752	1752	1826	1752	1752
Adj Flow Rate, veh/h	975	195	18	1020	47	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	10	5	10	10
Cap, veh/h	1388	594	234	1388	667	594
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	3561	1485	449	3561	1668	1485
Grp Volume(v), veh/h	975	195	18	1020	47	8
Grp Sat Flow(s),veh/h/ln	1735	1485	449	1735	1668	1485
Q Serve(g_s), s	10.6	4.1	1.6	11.2	0.8	0.1
Cycle Q Clear(g_c), s	10.6	4.1	12.1	11.2	0.8	0.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1388	594	234	1388	667	594
V/C Ratio(X)	0.70	0.33	0.08	0.74	0.07	0.01
Avail Cap(c_a), veh/h	1388	594	234	1388	667	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	9.3	16.3	11.5	8.3	8.1
Incr Delay (d2), s/veh	3.0	1.5	0.6	3.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.3	0.2	4.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	10.8	17.0	15.0	8.5	8.2
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	1170			1038	55	
Approach Delay, s/veh	13.7			15.0	8.5	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	22.5	22.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	12.6	14.1
Green Ext Time (p_c), s	0.1	3.3	2.4

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	147	749	629	267	371	353
v/c Ratio	0.29	0.45	0.61	0.15	0.39	0.36
Control Delay	18.0	4.6	21.6	15.2	18.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	4.6	21.6	15.2	18.1	4.1
Queue Length 50th (ft)	40	35	118	43	55	30
Queue Length 95th (ft)	80	65	171	75	88	60
Internal Link Dist (ft)	1111			680	660	
Turn Bay Length (ft)			250			250
Base Capacity (vph)	515	1660	1039	1749	954	990
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.45	0.61	0.15	0.39	0.36

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	689	579	246	341	325
Future Volume (veh/h)	135	689	579	246	341	325
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1674	1674	1674	1674
Adj Flow Rate, veh/h	147	749	629	267	371	353
Adj No. of Lanes	1	2	2	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	517	1286	1044	1749	954	854
Arrive On Green	0.30	0.30	0.17	0.55	0.30	0.30
Sat Flow, veh/h	1723	2707	3093	3264	3264	1423
Grp Volume(v), veh/h	147	749	629	267	371	353
Grp Sat Flow(s),veh/h/ln	1723	1354	1546	1590	1590	1423
Q Serve(g_s), s	3.9	12.0	7.5	2.5	5.5	7.9
Cycle Q Clear(g_c), s	3.9	12.0	7.5	2.5	5.5	7.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	517	1286	1044	1749	954	854
V/C Ratio(X)	0.28	0.58	0.60	0.15	0.39	0.41
Avail Cap(c_a), veh/h	517	1286	1044	1749	954	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	11.4	10.0	6.6	16.6	6.4
Incr Delay (d2), s/veh	1.4	1.9	2.6	0.2	1.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	14.9	6.2	2.0	4.6	9.7
LnGrp Delay(d),s/veh	17.4	13.4	12.6	6.8	17.8	7.9
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	896			896	724	
Approach Delay, s/veh	14.0			10.9	13.0	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.5		22.5	15.0	22.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		33.0		18.0	10.5	18.0		
Max Q Clear Time (g_c+I1), s		4.5		14.0	9.5	9.9		
Green Ext Time (p_c), s		1.8		1.5	0.3	2.4		

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	65	825	962	68
Future Vol, veh/h	0	23	65	825	962	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	15	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	5	5	10
Mvmt Flow	0	25	71	897	1046	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1637	523	1120	0	-	0
Stage 1	1046	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Critical Hdwy	7	7.1	4.3	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.6	3.4	2.3	-	-	-
Pot Cap-1 Maneuver	84	478	575	-	-	-
Stage 1	282	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	74	478	575	-	-	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	247	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	575	-	-	478	-	-
HCM Lane V/C Ratio	0.123	-	-	0.052	-	-
HCM Control Delay (s)	12.1	-	0	12.9	-	-
HCM Lane LOS	B	-	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	73	2385	501	0	1709
Future Vol, veh/h	0	73	2385	501	0	1709
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	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	5	10	10	5
Mvmt Flow	0	79	2592	545	0	1858

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1296	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.3	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4	-	-	-	-
Pot Cap-1 Maneuver	0	123	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	123	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	76.4	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	123	-
HCM Lane V/C Ratio	-	-	0.645	-
HCM Control Delay (s)	-	-	76.4	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	3.4	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	16	43	171	1060	967	92
v/c Ratio	0.04	0.10	0.71	0.56	0.47	0.10
Control Delay	16.7	7.0	29.8	8.6	8.1	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	7.0	29.8	8.6	8.1	3.0
Queue Length 50th (ft)	4	0	37	104	87	0
Queue Length 95th (ft)	16	20	#143	150	131	19
Internal Link Dist (ft)	1068			1855	2501	
Turn Bay Length (ft)		200	250			250
Base Capacity (vph)	437	423	240	1908	2062	917
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.10	0.71	0.56	0.47	0.10

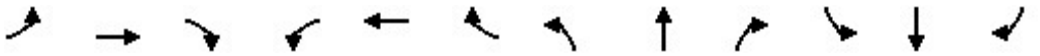
Intersection Summary

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	40	157	975	890	85
Future Volume (veh/h)	15	40	157	975	890	85
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1598	1674	1810	1727
Adj Flow Rate, veh/h	16	43	171	1060	967	92
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	5	5	10
Cap, veh/h	439	392	322	1908	2063	881
Arrive On Green	0.27	0.27	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1645	1468	455	3264	3529	1468
Grp Volume(v), veh/h	16	43	171	1060	967	92
Grp Sat Flow(s),veh/h/ln	1645	1468	455	1590	1719	1468
Q Serve(g_s), s	0.4	1.3	20.1	12.0	9.4	1.6
Cycle Q Clear(g_c), s	0.4	1.3	29.5	12.0	9.4	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	439	392	322	1908	2063	881
V/C Ratio(X)	0.04	0.11	0.53	0.56	0.47	0.10
Avail Cap(c_a), veh/h	439	392	322	1908	2063	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	16.6	14.9	7.2	6.7	5.1
Incr Delay (d2), s/veh	0.2	0.6	6.2	1.2	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	1.1	5.4	9.3	8.2	1.3
LnGrp Delay(d),s/veh	16.4	17.2	21.0	8.4	7.4	5.4
LnGrp LOS	B	B	C	A	A	A
Approach Vol, veh/h	59			1231	1059	
Approach Delay, s/veh	17.0			10.1	7.3	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		40.0		20.0		40.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		36.0		16.0		36.0		
Max Q Clear Time (g_c+I1), s		31.5		3.3		11.4		
Green Ext Time (p_c), s		3.3		0.1		8.0		

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

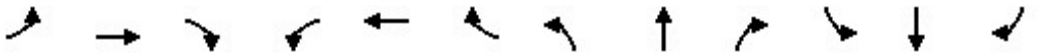


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	180	175	163	46	68	87	2896	424	436	1377	57
v/c Ratio	1.00	0.83	0.50	0.72	0.25	0.28	0.48	1.03	0.43	1.14	0.48	0.06
Control Delay	156.9	92.5	13.2	81.2	65.4	6.0	72.4	58.9	11.0	148.1	19.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	156.9	92.5	13.2	81.2	65.4	6.0	72.4	58.9	11.0	148.1	19.0	0.1
Queue Length 50th (ft)	103	174	0	78	42	0	81	~1111	142	~256	276	0
Queue Length 95th (ft)	#234	#304	73	#124	85	17	142	#1186	213	#369	314	0
Internal Link Dist (ft)		530			1744			2609			488	
Turn Bay Length (ft)	350		350	350		250	350		350	350		350
Base Capacity (vph)	103	218	347	225	184	247	183	2799	985	381	2865	950
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.83	0.50	0.72	0.25	0.28	0.48	1.03	0.43	1.14	0.48	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	166	161	150	42	63	80	2664	390	401	1267	52
Future Volume (veh/h)	95	166	161	150	42	63	80	2664	390	401	1267	52
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	1826	1752	1826	1752	1752	1752	1826	1826	1752	1752	1826	1826
Adj Flow Rate, veh/h	103	180	175	163	46	0	87	2896	424	436	1377	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	5	10	10	10	5	5	10	10	5	5
Cap, veh/h	104	232	205	224	186		184	2806	895	386	2872	
Arrive On Green	0.06	0.13	0.13	0.04	0.11	0.00	0.11	0.56	0.56	0.12	0.58	0.00
Sat Flow, veh/h	1739	1752	1547	3237	1752	1485	1739	4985	1485	3237	4985	1547
Grp Volume(v), veh/h	103	180	175	163	46	0	87	2896	424	436	1377	0
Grp Sat Flow(s),veh/h/ln	1739	1752	1547	1618	1752	1485	1739	1662	1485	1618	1662	1547
Q Serve(g_s), s	8.9	15.0	16.7	6.0	3.6	0.0	7.1	85.0	24.0	18.0	24.4	0.0
Cycle Q Clear(g_c), s	8.9	15.0	16.7	6.0	3.6	0.0	7.1	85.0	24.0	18.0	24.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	232	205	224	186		184	2806	895	386	2872	
V/C Ratio(X)	0.99	0.78	0.85	0.73	0.25		0.47	1.03	0.47	1.13	0.48	
Avail Cap(c_a), veh/h	104	232	205	224	186		184	2806	895	386	2872	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	71.0	63.3	64.1	67.6	62.0	0.0	63.5	33.0	16.7	66.5	18.7	0.0
Incr Delay (d2), s/veh	86.7	22.0	33.9	18.6	3.2	0.0	8.4	25.9	1.8	86.1	0.6	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	6.5	8.1	8.5	1.1	1.8	0.0	3.6	39.8	8.6	12.1	9.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	157.7	85.4	97.9	86.3	65.1	0.0	72.0	58.9	18.5	152.6	19.3	0.0
LnGrp LOS	F	F	F	F	E		E	F	B	F	B	
Approach Vol, veh/h		458			209			3407			1813	
Approach Delay, s/veh		106.4			81.6			54.2			51.4	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	91.0	11.0	26.0	21.0	93.0	15.0	22.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	6.0	* 6
Max Green Setting (Gmax), s	18.0	85.0	6.0	19.0	16.0	87.0	9.0	* 16
Max Q Clear Time (g_c+I1), s	20.0	87.0	8.0	18.7	9.1	26.4	10.9	5.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.1	15.3	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	103	286	248	12	139	30	37	158	3	73	298	56
Future Vol, veh/h	103	286	248	12	139	30	37	158	3	73	298	56
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
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	112	311	270	13	151	33	40	172	3	79	324	61
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	20.9	15.9	17.2	25.7
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	158	3	103	286	248	12	139	30	73	298	56
LT Vol	37	0	0	103	0	0	12	0	0	73	0	0
Through Vol	0	158	0	0	286	0	0	139	0	0	298	0
RT Vol	0	0	3	0	0	248	0	0	30	0	0	56
Lane Flow Rate	40	172	3	112	311	270	13	151	33	79	324	61
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.105	0.425	0.007	0.26	0.68	0.537	0.034	0.376	0.075	0.193	0.741	0.127
Departure Headway (Hd)	9.399	8.899	8.199	8.369	7.869	7.169	9.462	8.962	8.262	8.74	8.24	7.54
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	404	435	429	457	501	377	400	432	409	437	474
Service Time	7.185	6.685	5.985	6.137	5.637	4.937	7.25	6.75	6.05	6.513	6.013	5.313
HCM Lane V/C Ratio	0.105	0.426	0.007	0.261	0.681	0.539	0.034	0.378	0.076	0.193	0.741	0.129
HCM Control Delay	13.3	18.2	11	14.1	25.9	18	12.6	17.1	11.7	13.6	31.3	11.4
HCM Lane LOS	B	C	B	B	D	C	B	C	B	B	D	B
HCM 95th-tile Q	0.3	2.1	0	1	5	3.1	0.1	1.7	0.2	0.7	6	0.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	51	65	103	1257	821	146
v/c Ratio	0.09	0.12	0.40	0.72	0.47	0.18
Control Delay	13.5	5.0	14.3	13.4	9.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	5.0	14.3	13.4	9.8	2.2
Queue Length 50th (ft)	11	0	19	152	83	0
Queue Length 95th (ft)	31	21	54	218	121	21
Internal Link Dist (ft)	3296			2768	1855	
Turn Bay Length (ft)			250			250
Base Capacity (vph)	537	524	257	1750	1750	819
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12	0.40	0.72	0.47	0.18

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	60	95	1156	755	134
Future Volume (veh/h)	47	60	95	1156	755	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1826	1826	1752
Adj Flow Rate, veh/h	51	65	103	1257	821	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	5	5	10
Cap, veh/h	546	486	325	1766	1766	756
Arrive On Green	0.33	0.33	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1668	1485	544	3561	3561	1485
Grp Volume(v), veh/h	51	65	103	1257	821	146
Grp Sat Flow(s),veh/h/ln	1668	1485	544	1735	1735	1485
Q Serve(g_s), s	1.2	1.7	8.3	15.3	8.4	2.9
Cycle Q Clear(g_c), s	1.2	1.7	16.6	15.3	8.4	2.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	546	486	325	1766	1766	756
V/C Ratio(X)	0.09	0.13	0.32	0.71	0.46	0.19
Avail Cap(c_a), veh/h	546	486	325	1766	1766	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	13.0	14.0	10.4	8.7	7.4
Incr Delay (d2), s/veh	0.3	0.6	2.5	2.5	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	1.1	5.1	2.7	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	13.6	16.6	12.9	9.6	7.9
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	116			1360	967	
Approach Delay, s/veh	13.4			13.1	9.3	
Approach LOS	B			B	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		32.5		22.5		32.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		28.0		18.0		28.0
Max Q Clear Time (g_c+I1), s		18.6		3.7		10.4
Green Ext Time (p_c), s		6.3		0.2		6.0

Intersection Summary		
HCM 6th Ctrl Delay		11.6
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	27	3172	315	0	1548
Future Vol, veh/h	0	27	3172	315	0	1548
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	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	5	10	10	5
Mvmt Flow	0	29	3448	342	0	1683

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1724	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.3	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4	-	-	-	-
Pot Cap-1 Maneuver	0	61	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	61	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	109.8	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	61	-
HCM Lane V/C Ratio	-	-	0.481	-
HCM Control Delay (s)	-	-	109.8	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	1.9	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	11	126	1251	687	129
Future Vol, veh/h	0	11	126	1251	687	129
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	250	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	5	5	10
Mvmt Flow	0	12	137	1360	747	140

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	374	887	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	4.3	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.4	2.3	-	-	-
Pot Cap-1 Maneuver	0	601	711	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	601	711	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

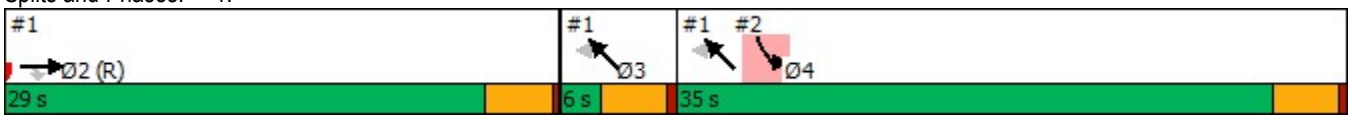
Approach	EB	NB	SB
HCM Control Delay, s	11.1	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	711	-	601	-	-
HCM Lane V/C Ratio	0.193	-	0.02	-	-
HCM Control Delay (s)	11.3	-	11.1	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	-	-

Lane Group	EBT	EBR2	NWL	NWT	Ø3	Ø4
Lane Configurations						
Traffic Volume (vph)	978	350	240	771		
Future Volume (vph)	978	350	240	771		
Ideal Flow (vphpl)	1900	1900	1900	1900		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	3539	1583	1770	3539		
Flt Permitted			0.950			
Satd. Flow (perm)	3539	1583	1770	3539		
Right Turn on Red		Yes				
Satd. Flow (RTOR)		380				
Link Speed (mph)	30			30		
Link Distance (ft)	322			317		
Travel Time (s)	7.3			7.2		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	1063	380	261	838		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1063	380	261	838		
Turn Type	NA	Perm	Perm	NA		
Protected Phases	2			4 3	3	4
Permitted Phases		2	4 3			
Total Split (s)	29.0	29.0			6.0	35.0
Total Lost Time (s)	4.0	4.0				
Act Effct Green (s)	29.4	29.4	32.6	32.6		
Actuated g/C Ratio	0.42	0.42	0.47	0.47		
v/c Ratio	0.71	0.43	0.32	0.51		
Control Delay	21.5	3.7	10.9	12.2		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	21.5	3.7	10.9	12.2		
LOS	C	A	B	B		
Approach Delay	16.8			11.9		
Approach LOS	B			B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 40 (57%), Referenced to phase 2:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1:



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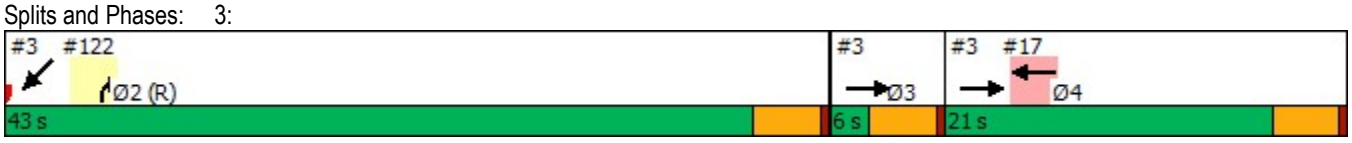
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	872	0	0	0	0	0	0	0	0	761	0
Future Volume (vph)	0	872	0	0	0	0	0	0	0	0	761	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	0	0	0	3539	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	0	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		187			321			181			334	
Travel Time (s)		4.3			7.3			4.1			7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	948	0	0	0	0	0	0	0	0	827	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	948	0	0	0	0	0	0	0	0	827	0
Turn Type		NA									NA	
Protected Phases		4 3									2	
Permitted Phases												
Total Split (s)											43.0	
Total Lost Time (s)											4.0	
Act Effct Green (s)		31.0									31.0	
Actuated g/C Ratio		0.44									0.44	
v/c Ratio		0.60									0.53	
Control Delay		19.6									15.1	
Queue Delay		0.0									0.0	
Total Delay		19.6									15.1	
LOS		B									B	
Approach Delay		19.6									15.1	
Approach LOS		B									B	

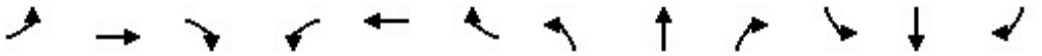
Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:SWT, Start of Green, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3:



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	5	1001	512	158	436	192	391	828	362
v/c Ratio	0.01	0.73	0.56	0.51	0.32	0.29	0.57	0.60	0.57
Control Delay	8.4	15.2	3.9	17.3	10.1	7.5	14.5	13.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	15.2	3.9	17.3	10.1	7.5	14.5	13.0	13.6
Queue Length 50th (ft)	1	108	0	14	38	20	74	83	60
Queue Length 95th (ft)	5	164	44	38	64	52	140	128	124
Internal Link Dist (ft)		309			1460			166	
Turn Bay Length (ft)				200		200			
Base Capacity (vph)	361	1375	922	311	1375	656	687	1375	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.73	0.56	0.51	0.32	0.29	0.57	0.60	0.57

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	921	471	145	401	177	360	762	333	0	0	0
Future Volume (veh/h)	5	921	471	145	401	177	360	762	333	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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				
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	5	1001	512	158	436	192	391	828	362			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5			
Cap, veh/h	404	1388	619	423	1388	619	696	1388	619			
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40			
Sat Flow, veh/h	779	3469	1547	654	3469	1547	1739	3469	1547			
Grp Volume(v), veh/h	5	1001	512	158	436	192	391	828	362			
Grp Sat Flow(s),veh/h/ln	779	1735	1547	327	1735	1547	1739	1735	1547			
Q Serve(g_s), s	0.2	11.0	13.4	7.0	3.9	3.8	7.8	8.5	8.2			
Cycle Q Clear(g_c), s	4.1	11.0	13.4	18.0	3.9	3.8	7.8	8.5	8.2			
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	404	1388	619	423	1388	619	696	1388	619			
V/C Ratio(X)	0.01	0.72	0.83	0.37	0.31	0.31	0.56	0.60	0.58			
Avail Cap(c_a), veh/h	404	1388	619	423	1388	619	696	1388	619			
HCM Platoon Ratio	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	1.00	1.00			
Uniform Delay (d), s/veh	10.7	11.4	12.1	20.2	9.3	9.2	10.4	10.6	10.6			
Incr Delay (d2), s/veh	0.1	3.3	12.1	2.5	0.6	1.3	3.3	1.9	4.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.9	5.6	0.9	1.3	1.2	3.0	2.9	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	14.7	24.2	22.7	9.9	10.5	13.7	12.5	14.6			
LnGrp LOS	B	B	C	C	A	B	B	B	B			
Approach Vol, veh/h		1518			786			1581				
Approach Delay, s/veh		17.8			12.6			13.3				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		22.5		22.5				22.5				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		18.0		18.0				18.0				
Max Q Clear Time (g_c+I1), s		10.5		15.4				20.0				
Green Ext Time (p_c), s		4.7		2.0				0.0				
Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

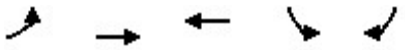
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1160	776	31	0	47
Future Vol, veh/h	111	1160	776	31	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	5	5	10	10	10
Mvmt Flow	121	1261	843	34	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	877	0	-	0	-	439
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.3	-	-	-	-	3.4
Pot Cap-1 Maneuver	717	-	-	-	0	544
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	717	-	-	-	-	544
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	12.3
HCM LOS			B

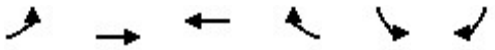
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	717	-	-	-	544
HCM Lane V/C Ratio	0.168	-	-	-	0.094
HCM Control Delay (s)	11	-	-	-	12.3
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.3



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	430	798	728	25	199
v/c Ratio	0.81	0.38	0.75	0.06	0.13
Control Delay	27.3	7.5	28.1	20.1	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	7.5	28.1	20.1	4.0
Queue Length 50th (ft)	118	80	146	8	11
Queue Length 95th (ft)	#266	111	206	25	25
Internal Link Dist (ft)		1009	2543	2452	
Turn Bay Length (ft)					200
Base Capacity (vph)	534	2107	970	424	1551
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.38	0.75	0.06	0.13

Intersection Summary

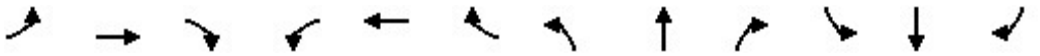
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	396	734	614	56	23	183
Future Volume (veh/h)	396	734	614	56	23	183
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1752	1826	1826	1752	1752	1752
Adj Flow Rate, veh/h	430	798	667	61	25	199
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	5	5	10	10	10
Cap, veh/h	610	2126	914	83	431	1366
Arrive On Green	0.26	0.61	0.28	0.28	0.26	0.26
Sat Flow, veh/h	1668	3561	3305	294	1668	2613
Grp Volume(v), veh/h	430	798	360	368	25	199
Grp Sat Flow(s),veh/h/ln	1668	1735	1735	1773	1668	1306
Q Serve(g_s), s	10.3	8.1	13.1	13.1	0.8	2.8
Cycle Q Clear(g_c), s	10.3	8.1	13.1	13.1	0.8	2.8
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	610	2126	493	504	431	1366
V/C Ratio(X)	0.71	0.38	0.73	0.73	0.06	0.15
Avail Cap(c_a), veh/h	610	2126	493	504	431	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	6.8	22.6	22.6	19.5	8.6
Incr Delay (d2), s/veh	6.7	0.5	9.2	9.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.5	6.2	6.4	0.3	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.1	7.3	31.8	31.6	19.8	8.8
LnGrp LOS	B	A	C	C	B	A
Approach Vol, veh/h		1228	728		224	
Approach Delay, s/veh		11.1	31.7		10.1	
Approach LOS		B	C		B	

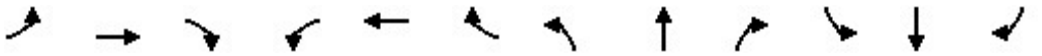
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.4		22.6	23.0	24.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		42.9		18.1	18.5	19.9
Max Q Clear Time (g_c+I1), s		10.1		4.8	12.3	15.1
Green Ext Time (p_c), s		6.5		0.7	0.8	1.9

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	476	97	134	33	247	198	275	761	163	110	324	218
v/c Ratio	0.69	0.10	0.25	0.17	0.39	0.44	0.35	0.59	0.24	0.51	0.49	0.46
Control Delay	49.7	32.9	3.7	50.1	45.3	8.1	40.0	32.4	4.6	31.4	46.2	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	32.9	3.7	50.1	45.3	8.1	40.0	32.4	4.6	31.4	46.2	8.9
Queue Length 50th (ft)	176	29	0	23	89	0	92	246	0	47	118	0
Queue Length 95th (ft)	236	52	29	56	131	57	132	311	44	82	166	67
Internal Link Dist (ft)		2543			565			435			2472	
Turn Bay Length (ft)	350		350	350		350	350		350	350		350
Base Capacity (vph)	694	945	541	200	630	452	778	1289	679	217	658	471
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.10	0.25	0.17	0.39	0.44	0.35	0.59	0.24	0.51	0.49	0.46

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	89	123	30	227	182	253	700	150	101	298	201
Future Volume (veh/h)	438	89	123	30	227	182	253	700	150	101	298	201
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	476	97	134	33	247	198	275	761	163	110	324	218
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	703	954	426	203	636	284	787	1301	580	260	665	297
Arrive On Green	0.21	0.28	0.28	0.12	0.18	0.18	0.23	0.38	0.38	0.05	0.19	0.19
Sat Flow, veh/h	3374	3469	1547	1739	3469	1547	3374	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	476	97	134	33	247	198	275	761	163	110	324	218
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1739	1735	1547	1687	1735	1547	1739	1735	1547
Q Serve(g_s), s	15.6	2.5	8.2	2.1	7.5	14.4	8.2	21.1	8.8	6.0	10.0	15.9
Cycle Q Clear(g_c), s	15.6	2.5	8.2	2.1	7.5	14.4	8.2	21.1	8.8	6.0	10.0	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	703	954	426	203	636	284	787	1301	580	260	665	297
V/C Ratio(X)	0.68	0.10	0.31	0.16	0.39	0.70	0.35	0.58	0.28	0.42	0.49	0.74
Avail Cap(c_a), veh/h	703	954	426	203	636	284	787	1301	580	260	665	297
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	32.4	34.5	47.7	43.1	45.9	38.4	30.0	26.2	36.8	43.2	45.6
Incr Delay (d2), s/veh	5.2	0.2	1.9	1.7	1.8	13.4	1.2	1.9	1.2	5.0	2.5	15.0
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	7.0	1.1	3.3	1.0	3.4	6.6	3.5	9.1	3.5	3.0	4.5	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	32.7	36.5	49.4	44.9	59.2	39.6	32.0	27.4	41.8	45.8	60.6
LnGrp LOS	D	C	D	D	D	E	D	C	C	D	D	E
Approach Vol, veh/h		707			478			1199			652	
Approach Delay, s/veh		44.4			51.1			33.1			50.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	51.0	19.0	39.0	33.0	29.0	30.0	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	6.0	45.0	14.0	33.0	28.0	23.0	25.0	22.0
Max Q Clear Time (g_c+I1), s	8.0	23.1	4.1	10.2	10.2	17.9	17.6	16.4
Green Ext Time (p_c), s	0.0	6.1	0.0	1.0	0.9	1.3	1.1	1.1

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	37.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	136	128	2	40	44	8	24	170	69	2	494	5
Future Vol, veh/h	136	128	2	40	44	8	24	170	69	2	494	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
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	148	139	2	43	48	9	26	185	75	2	537	5
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	14.4	12.2	16	66.4
HCM LOS	B	B	C	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	71%	0%	98%	0%	85%	0%	99%
Vol Right, %	0%	29%	0%	2%	0%	15%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	239	136	130	40	52	2	499
LT Vol	24	0	136	0	40	0	2	0
Through Vol	0	170	0	128	0	44	0	494
RT Vol	0	69	0	2	0	8	0	5
Lane Flow Rate	26	260	148	141	43	57	2	542
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.056	0.501	0.335	0.3	0.105	0.127	0.004	1.009
Departure Headway (Hd)	7.662	6.943	8.158	7.633	8.721	8.093	7.216	6.7
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	520	441	471	410	442	499	548
Service Time	5.417	4.697	5.915	5.39	6.492	5.863	4.916	4.4
HCM Lane V/C Ratio	0.056	0.5	0.336	0.299	0.105	0.129	0.004	0.989
HCM Control Delay	10.9	16.5	15	13.7	12.5	12	9.9	66.6
HCM Lane LOS	B	C	B	B	B	B	A	F
HCM 95th-tile Q	0.2	2.8	1.5	1.2	0.3	0.4	0	14.6

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	74	8	0	207	370	0
Future Vol, veh/h	74	8	0	207	370	0
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	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	80	9	0	225	402	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	627	402	402	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	435	631	1115	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	631	1115	-	-	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1115	-	449	-	-
HCM Lane V/C Ratio	-	-	0.199	-	-
HCM Control Delay (s)	0	-	15	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	18	189	41	39	339
Future Vol, veh/h	54	18	189	41	39	339
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	-	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	59	20	205	45	42	368

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	657	205	0	0	250	0
Stage 1	205	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	417	816	-	-	1270	-
Stage 1	811	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	403	816	-	-	1270	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	603	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	461	1270	-
HCM Lane V/C Ratio	-	-	0.17	0.033	-
HCM Control Delay (s)	-	-	14.4	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

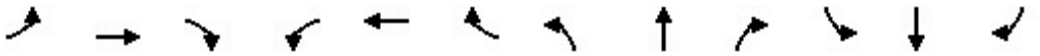
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	63	12	47	92	23	25
Future Vol, veh/h	63	12	47	92	23	25
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, %	10	10	10	10	10	10
Mvmt Flow	68	13	51	100	25	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	151	0	-	0	250	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1382	-	-	-	721	933
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1382	-	-	-	685	933
Mov Cap-2 Maneuver	-	-	-	-	685	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	SB
HCM Control Delay, s	6.5	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1382	-	-	-	795
HCM Lane V/C Ratio	0.05	-	-	-	0.066
HCM Control Delay (s)	7.7	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

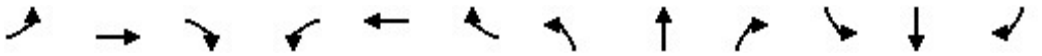


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	588	537	298	657	752	677	1602	351	584	1805	250
v/c Ratio	1.02	0.68	0.78	0.77	0.53	1.14	1.06	0.95	0.54	0.96	1.10	0.40
Control Delay	139.0	50.9	21.9	65.2	40.8	100.6	98.9	51.6	17.9	75.8	91.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	139.0	50.9	21.9	65.2	40.8	100.6	98.9	51.6	17.9	75.8	91.6	11.8
Queue Length 50th (ft)	~58	157	159	117	161	~449	~296	440	99	232	~579	42
Queue Length 95th (ft)	#127	201	258	#178	203	#690	#415	#545	195	#345	#676	111
Internal Link Dist (ft)		930			718			3220			574	
Turn Bay Length (ft)	250		250	250		250	350		350	350		350
Base Capacity (vph)	138	864	690	389	1235	662	639	1687	647	611	1646	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.68	0.78	0.77	0.53	1.14	1.06	0.95	0.54	0.96	1.10	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	541	494	274	604	692	623	1474	323	537	1661	230
Future Volume (veh/h)	130	541	494	274	604	692	623	1474	323	537	1661	230
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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	141	588	537	298	657	752	677	1602	351	584	1805	250
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	139	865	563	390	1236	384	641	1689	524	613	1689	524
Arrive On Green	0.04	0.17	0.17	0.12	0.25	0.25	0.19	0.34	0.34	0.18	0.34	0.34
Sat Flow, veh/h	3374	4985	1547	3374	4985	1547	3374	4985	1547	3374	4985	1547
Grp Volume(v), veh/h	141	588	537	298	657	752	677	1602	351	584	1805	250
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1687	1662	1547	1687	1662	1547	1687	1662	1547
Q Serve(g_s), s	5.0	13.4	21.0	10.4	13.8	30.0	23.0	37.9	23.5	20.7	41.0	12.3
Cycle Q Clear(g_c), s	5.0	13.4	21.0	10.4	13.8	30.0	23.0	37.9	23.5	20.7	41.0	12.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	865	563	390	1236	384	641	1689	524	613	1689	524
V/C Ratio(X)	1.01	0.68	0.95	0.76	0.53	1.96	1.06	0.95	0.67	0.95	1.07	0.48
Avail Cap(c_a), veh/h	139	865	563	390	1236	384	641	1689	524	613	1689	524
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	46.8	18.1	51.9	39.4	45.5	49.0	39.0	34.2	49.0	40.0	20.2
Incr Delay (d2), s/veh	79.3	4.3	28.2	13.2	1.6	441.4	51.2	12.7	6.7	26.3	42.9	3.1
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	3.6	5.7	12.2	5.0	5.7	58.1	13.9	16.7	9.4	10.7	22.6	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.3	51.1	46.3	65.1	41.1	486.9	100.2	51.7	40.9	75.3	82.9	23.3
LnGrp LOS	F	D	D	E	D	F	F	D	D	E	F	C
Approach Vol, veh/h		1266			1707			2630			2639	
Approach Delay, s/veh		58.7			241.7			62.7			75.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	47.0	19.0	27.0	28.0	47.0	10.0	36.0
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	22.0	* 41	14.0	21.0	23.0	40.0	5.0	30.0
Max Q Clear Time (g_c+I1), s	22.7	39.9	12.4	23.0	25.0	43.0	7.0	32.0
Green Ext Time (p_c), s	0.0	1.0	0.2	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	103.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1207	218	12	1030	611	55
v/c Ratio	0.88	0.30	0.08	0.75	0.93	0.09
Control Delay	22.5	3.1	9.5	16.3	39.2	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	3.1	9.5	16.3	39.2	6.9
Queue Length 50th (ft)	143	0	3	140	142	6
Queue Length 95th (ft)	#257	29	m5	189	#313	21
Internal Link Dist (ft)	1226			1935	3283	
Turn Bay Length (ft)		200	200			
Base Capacity (vph)	1375	718	153	1375	656	598
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.30	0.08	0.75	0.93	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1110	201	11	948	562	51
Future Volume (veh/h)	1110	201	11	948	562	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1752	1752	1826	1752	1752
Adj Flow Rate, veh/h	1207	218	12	1030	611	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	10	5	10	10
Cap, veh/h	1388	594	188	1388	667	594
Arrive On Green	0.40	0.40	0.13	0.13	0.40	0.40
Sat Flow, veh/h	3561	1485	352	3561	1668	1485
Grp Volume(v), veh/h	1207	218	12	1030	611	55
Grp Sat Flow(s),veh/h/ln	1735	1485	352	1735	1668	1485
Q Serve(g_s), s	14.4	4.6	1.5	12.9	15.6	1.0
Cycle Q Clear(g_c), s	14.4	4.6	15.9	12.9	15.6	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1388	594	188	1388	667	594
V/C Ratio(X)	0.87	0.37	0.06	0.74	0.92	0.09
Avail Cap(c_a), veh/h	1388	594	188	1388	667	594
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	9.5	25.7	17.3	12.8	8.4
Incr Delay (d2), s/veh	7.7	1.7	0.7	3.6	19.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	1.3	0.2	5.8	8.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.1	11.2	26.4	20.9	32.2	8.7
LnGrp LOS	C	B	C	C	C	A
Approach Vol, veh/h	1425			1042	666	
Approach Delay, s/veh	18.7			21.0	30.2	
Approach LOS	B			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	22.5	22.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	17.6	16.4	17.9
Green Ext Time (p_c), s	0.1	1.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1111	53	5	773	195	28
v/c Ratio	0.81	0.09	0.03	0.56	0.30	0.05
Control Delay	17.3	5.1	9.0	12.4	10.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	5.1	9.0	12.4	10.8	4.7
Queue Length 50th (ft)	179	6	1	76	32	1
Queue Length 95th (ft)	m207	m6	5	118	67	11
Internal Link Dist (ft)	1935			1111	3264	
Turn Bay Length (ft)		150	150			200
Base Capacity (vph)	1375	619	153	1375	656	602
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.09	0.03	0.56	0.30	0.05

Intersection Summary

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1022	49	5	711	179	26
Future Volume (veh/h)	1022	49	5	711	179	26
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1752	1752	1826	1752	1752
Adj Flow Rate, veh/h	1111	53	5	773	195	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	10	5	10	10
Cap, veh/h	1388	594	200	1388	667	594
Arrive On Green	0.13	0.13	0.40	0.40	0.40	0.40
Sat Flow, veh/h	3561	1485	452	3561	1668	1485
Grp Volume(v), veh/h	1111	53	5	773	195	28
Grp Sat Flow(s),veh/h/ln	1735	1485	452	1735	1668	1485
Q Serve(g_s), s	14.0	1.4	0.5	7.7	3.6	0.5
Cycle Q Clear(g_c), s	14.0	1.4	14.4	7.7	3.6	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1388	594	200	1388	667	594
V/C Ratio(X)	0.80	0.09	0.02	0.56	0.29	0.05
Avail Cap(c_a), veh/h	1388	594	200	1388	667	594
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	12.3	18.9	10.4	9.2	8.3
Incr Delay (d2), s/veh	4.9	0.3	0.2	1.6	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.4	0.1	2.3	1.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.7	12.6	19.1	12.0	10.3	8.4
LnGrp LOS	C	B	B	B	B	A
Approach Vol, veh/h	1164			778	223	
Approach Delay, s/veh	22.3			12.1	10.0	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		5.6		16.0		16.4
Green Ext Time (p_c), s		0.5		1.3		0.8

Intersection Summary		
HCM 6th Ctrl Delay		17.3
HCM 6th LOS		B

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	340	702	525	454	408	177
v/c Ratio	0.78	0.58	0.47	0.21	0.19	0.17
Control Delay	62.4	4.9	12.1	8.5	8.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	4.9	12.1	8.5	8.4	1.4
Queue Length 50th (ft)	290	0	106	74	65	0
Queue Length 95th (ft)	#429	52	146	97	86	23
Internal Link Dist (ft)	1111			680	660	
Turn Bay Length (ft)			250			250
Base Capacity (vph)	435	1210	1116	2169	2169	1026
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.58	0.47	0.21	0.19	0.17

Intersection Summary

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	313	646	483	418	375	163
Future Volume (veh/h)	313	646	483	418	375	163
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1674	1674	1674	1674
Adj Flow Rate, veh/h	340	702	525	454	408	177
Adj No. of Lanes	1	2	2	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	437	686	1019	2169	2169	971
Arrive On Green	0.25	0.25	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1723	2707	1441	3264	3264	1423
Grp Volume(v), veh/h	340	702	525	454	408	177
Grp Sat Flow(s),veh/h/ln	1723	1354	721	1590	1590	1423
Q Serve(g_s), s	25.7	35.5	29.2	7.4	6.5	6.3
Cycle Q Clear(g_c), s	25.7	35.5	35.8	7.4	6.5	6.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	437	686	1019	2169	2169	971
V/C Ratio(X)	0.78	1.02	0.52	0.21	0.19	0.18
Avail Cap(c_a), veh/h	437	686	1019	2169	2169	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	52.3	14.6	8.3	8.1	8.1
Incr Delay (d2), s/veh	12.8	40.2	1.9	0.2	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	17.1	6.0	3.3	2.9	2.6
LnGrp Delay(d),s/veh	61.4	92.5	16.5	8.5	8.3	8.5
LnGrp LOS	E	F	B	A	A	A
Approach Vol, veh/h	1042			979	585	
Approach Delay, s/veh	82.3			12.8	8.4	
Approach LOS	F			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		100.0		40.0		100.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		95.5		35.5		95.5		
Max Q Clear Time (g_c+I1), s		37.8		37.5		8.5		
Green Ext Time (p_c), s		9.7		0.0		3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	96	18	901	1003	19
Future Vol, veh/h	0	96	18	901	1003	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	15	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	5	5	10
Mvmt Flow	0	104	20	979	1090	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1620	545	1111	0	-	0
Stage 1	1090	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Critical Hdwy	7	7.1	4.3	-	-	-
Critical Hdwy Stg 1	6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.6	3.4	2.3	-	-	-
Pot Cap-1 Maneuver	87	462	580	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	84	462	580	-	-	-
Mov Cap-2 Maneuver	84	-	-	-	-	-
Stage 1	258	-	-	-	-	-
Stage 2	533	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	580	-	-	462	-	-
HCM Lane V/C Ratio	0.034	-	-	0.226	-	-
HCM Control Delay (s)	11.4	-	0	15.1	-	-
HCM Lane LOS	B	-	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	-	-

Intersection	
Int Delay, s/veh	40.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	295	2285	136	0	2429
Future Vol, veh/h	0	295	2285	136	0	2429
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	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	5	10	10	5
Mvmt Flow	0	321	2484	148	0	2640

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1242	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.3	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4	-	-	-	-
Pot Cap-1 Maneuver	0	~ 134	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	~ 134	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 701.9	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	134	-
HCM Lane V/C Ratio	-	-	2.393	-
HCM Control Delay (s)	-	-	$ 701.9	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	27.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

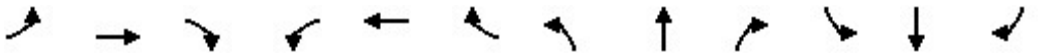
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	68	178	47	918	1147	25
v/c Ratio	0.13	0.35	0.33	0.56	0.64	0.03
Control Delay	12.9	11.4	15.1	9.7	10.7	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	11.4	15.1	9.7	10.7	3.0
Queue Length 50th (ft)	14	26	7	85	113	0
Queue Length 95th (ft)	36	65	31	128	166	8
Internal Link Dist (ft)	1068			1855	2501	
Turn Bay Length (ft)		200	250			250
Base Capacity (vph)	525	508	141	1653	1787	775
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.35	0.33	0.56	0.64	0.03

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	63	164	43	845	1055	23
Future Volume (veh/h)	63	164	43	845	1055	23
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1598	1674	1810	1727
Adj Flow Rate, veh/h	68	178	47	918	1147	25
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	5	5	10
Cap, veh/h	526	470	258	1654	1788	763
Arrive On Green	0.32	0.32	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1645	1468	409	3264	3529	1468
Grp Volume(v), veh/h	68	178	47	918	1147	25
Grp Sat Flow(s),veh/h/ln	1645	1468	409	1590	1719	1468
Q Serve(g_s), s	1.5	4.7	4.7	9.7	12.0	0.4
Cycle Q Clear(g_c), s	1.5	4.7	16.7	9.7	12.0	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	526	470	258	1654	1788	763
V/C Ratio(X)	0.13	0.38	0.18	0.56	0.64	0.03
Avail Cap(c_a), veh/h	526	470	258	1654	1788	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	13.2	14.7	8.1	8.6	5.9
Incr Delay (d2), s/veh	0.5	2.3	1.5	1.3	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.2	0.6	4.5	6.0	0.2
LnGrp Delay(d),s/veh	12.6	15.5	16.2	9.4	10.4	5.9
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	246			965	1172	
Approach Delay, s/veh	14.7			9.8	10.3	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		30.0		20.0		30.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		26.0		16.0		26.0		
Max Q Clear Time (g_c+I1), s		18.7		6.7		14.0		
Green Ext Time (p_c), s		3.6		0.5		5.9		

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

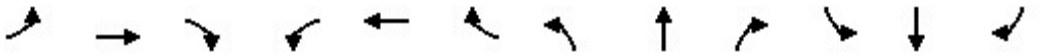


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	60	54	112	639	176	242	188	2193	123	125	2411	115
v/c Ratio	0.48	0.29	0.40	1.11	0.57	0.63	1.03	0.81	0.12	0.74	0.99	0.14
Control Delay	79.8	66.5	8.8	126.7	64.2	30.4	137.5	30.8	0.8	94.7	53.3	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	66.5	8.8	126.7	64.2	30.4	137.5	30.8	0.8	94.7	53.3	2.0
Queue Length 50th (ft)	58	50	0	~368	159	87	~195	622	0	63	838	0
Queue Length 95th (ft)	109	96	36	#493	243	186	#358	686	10	#113	#971	22
Internal Link Dist (ft)		530			1744			2609			488	
Turn Bay Length (ft)	350		350	350		250	350		350	350		350
Base Capacity (vph)	126	184	279	574	310	383	183	2700	1064	169	2437	828
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.29	0.40	1.11	0.57	0.63	1.03	0.81	0.12	0.74	0.99	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	50	103	588	162	223	173	2018	113	115	2218	106
Future Volume (veh/h)	55	50	103	588	162	223	173	2018	113	115	2218	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	1826	1752	1752	1752	1752	1752	1826	1826	1752	1752	1826	1826
Adj Flow Rate, veh/h	60	54	112	639	176	0	188	2193	123	125	2411	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	10	10	10	10	10	5	5	10	10	5	5
Cap, veh/h	127	197	167	567	313		184	2707	1022	171	2443	
Arrive On Green	0.07	0.11	0.11	0.15	0.18	0.00	0.11	0.54	0.54	0.05	0.49	0.00
Sat Flow, veh/h	1739	1752	1485	3237	1752	1485	1739	4985	1485	3237	4985	1547
Grp Volume(v), veh/h	60	54	112	639	176	0	188	2193	123	125	2411	0
Grp Sat Flow(s),veh/h/ln	1739	1752	1485	1618	1752	1485	1739	1662	1485	1618	1662	1547
Q Serve(g_s), s	5.0	4.3	8.7	22.0	13.8	0.0	16.0	54.2	2.1	5.7	72.1	0.0
Cycle Q Clear(g_c), s	5.0	4.3	8.7	22.0	13.8	0.0	16.0	54.2	2.1	5.7	72.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	197	167	567	313		184	2707	1022	171	2443	
V/C Ratio(X)	0.47	0.27	0.67	1.13	0.56		1.02	0.81	0.12	0.73	0.99	
Avail Cap(c_a), veh/h	127	197	167	567	313		184	2707	1022	171	2443	
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.2	61.3	41.0	64.7	56.6	0.0	67.5	28.1	2.5	70.4	38.0	0.0
Incr Delay (d2), s/veh	12.2	3.4	19.4	77.9	7.1	0.0	71.7	2.7	0.2	23.6	15.4	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	2.7	2.1	4.1	17.2	6.8	0.0	10.7	21.1	0.9	2.9	31.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.4	64.8	60.4	142.6	63.7	0.0	139.2	30.9	2.8	94.1	53.4	0.0
LnGrp LOS	E	E	E	F	E		F	C	A	F	D	
Approach Vol, veh/h		226			815			2504			2536	
Approach Delay, s/veh		66.5			125.5			37.6			55.4	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	88.0	27.0	23.0	21.0	80.0	17.0	33.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	6.0	* 6
Max Green Setting (Gmax), s	8.0	82.0	22.0	16.0	16.0	74.0	11.0	* 27
Max Q Clear Time (g_c+I1), s	7.7	56.2	24.0	10.7	18.0	74.1	7.0	15.8
Green Ext Time (p_c), s	0.0	18.7	0.0	0.3	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	57.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	49.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	123	68	4	354	83	152	225	12	28	375	234
Future Vol, veh/h	28	123	68	4	354	83	152	225	12	28	375	234
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
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	30	134	74	4	385	90	165	245	13	30	408	254
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	17.7	69.7	26.7	60.5
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	152	225	12	28	123	68	4	354	83	28	375	234
LT Vol	152	0	0	28	0	0	4	0	0	28	0	0
Through Vol	0	225	0	0	123	0	0	354	0	0	375	0
RT Vol	0	0	12	0	0	68	0	0	83	0	0	234
Lane Flow Rate	165	245	13	30	134	74	4	385	90	30	408	254
Geometry Grp	6	6	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.477	0.673	0.033	0.093	0.392	0.203	0.012	1.019	0.222	0.082	1.039	0.6
Departure Headway (Hd)	10.398	9.908	9.222	11.055	10.568	9.887	10.093	9.663	8.963	9.783	9.283	8.496
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	350	369	394	327	344	368	354	377	403	369	395	422
Service Time	8.051	7.551	6.851	8.719	8.219	7.519	7.863	7.363	6.663	7.483	6.983	6.283
HCM Lane V/C Ratio	0.471	0.664	0.033	0.092	0.39	0.201	0.011	1.021	0.223	0.081	1.033	0.602
HCM Control Delay	22.1	30.6	12.2	14.8	19.8	15	13	83.3	14.2	13.4	87.2	23.3
HCM Lane LOS	C	D	B	B	C	B	B	F	B	B	F	C
HCM 95th-tile Q	2.5	4.7	0.1	0.3	1.8	0.7	0	12.4	0.8	0.3	13.3	3.8

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	124	122	65	797	1420	55
v/c Ratio	0.25	0.26	0.57	0.42	0.75	0.07
Control Delay	17.6	13.9	34.7	8.8	13.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	13.9	34.7	8.8	13.6	2.4
Queue Length 50th (ft)	34	24	14	79	185	0
Queue Length 95th (ft)	70	59	#73	114	261	12
Internal Link Dist (ft)	3296			2768	1855	
Turn Bay Length (ft)			250			250
Base Capacity (vph)	492	463	114	1890	1890	832
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.26	0.57	0.42	0.75	0.07

Intersection Summary

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	114	112	60	733	1306	51
Future Volume (veh/h)	114	112	60	733	1306	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1826	1826	1752
Adj Flow Rate, veh/h	124	122	65	797	1420	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	5	5	10
Cap, veh/h	501	445	200	1908	1908	817
Arrive On Green	0.30	0.30	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1668	1485	336	3561	3561	1485
Grp Volume(v), veh/h	124	122	65	797	1420	55
Grp Sat Flow(s),veh/h/ln	1668	1485	336	1735	1735	1485
Q Serve(g_s), s	3.4	3.8	11.0	8.1	18.7	1.0
Cycle Q Clear(g_c), s	3.4	3.8	29.7	8.1	18.7	1.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	501	445	200	1908	1908	817
V/C Ratio(X)	0.25	0.27	0.33	0.42	0.74	0.07
Avail Cap(c_a), veh/h	501	445	200	1908	1908	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	16.0	21.6	7.9	10.3	6.3
Incr Delay (d2), s/veh	1.2	1.5	4.3	0.7	2.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.4	1.0	2.2	5.4	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.1	17.5	25.9	8.6	13.0	6.5
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	246			862	1475	
Approach Delay, s/veh	17.3			9.9	12.7	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		37.5		22.5		37.5
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		33.0		18.0		33.0
Max Q Clear Time (g_c+I1), s		31.7		5.8		20.7
Green Ext Time (p_c), s		0.8		0.6		7.5

Intersection Summary		
HCM 6th Ctrl Delay		12.2
HCM 6th LOS		B

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	110	2218	86	0	2949
Future Vol, veh/h	0	110	2218	86	0	2949
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	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	5	10	10	5
Mvmt Flow	0	120	2411	93	0	3205

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1206	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.3	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	4	-	-	-	-
Pot Cap-1 Maneuver	0	142	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	142	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	99.1	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	142	-
HCM Lane V/C Ratio	-	-	0.842	-
HCM Control Delay (s)	-	-	99.1	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	5.4	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	46	34	793	1383	35
Future Vol, veh/h	0	46	34	793	1383	35
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	250	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	5	5	10
Mvmt Flow	0	50	37	862	1503	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	752	1541	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	4.3	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.4	2.3	-	-	-
Pot Cap-1 Maneuver	0	336	390	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	336	390	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

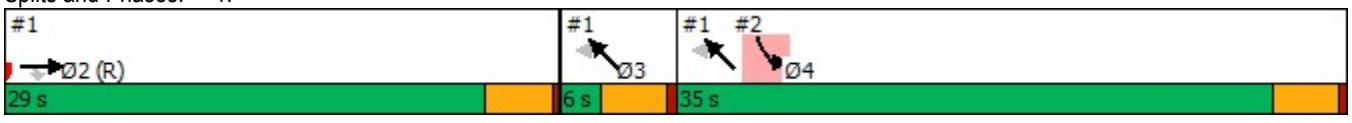
Approach	EB	NB	SB
HCM Control Delay, s	17.6	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	390	-	336	-	-
HCM Lane V/C Ratio	0.095	-	0.149	-	-
HCM Control Delay (s)	15.2	-	17.6	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Lane Group	EBT	EBR2	NWL	NWT	Ø3	Ø4
Lane Configurations						
Traffic Volume (vph)	847	350	732	1203		
Future Volume (vph)	847	350	732	1203		
Ideal Flow (vphpl)	1900	1900	1900	1900		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	3539	1583	1770	3539		
Flt Permitted			0.950			
Satd. Flow (perm)	3539	1583	1770	3539		
Right Turn on Red		Yes				
Satd. Flow (RTOR)		380				
Link Speed (mph)	30			30		
Link Distance (ft)	322			317		
Travel Time (s)	7.3			7.2		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	921	380	796	1308		
Shared Lane Traffic (%)						
Lane Group Flow (vph)	921	380	796	1308		
Turn Type	NA	Perm	Perm	NA		
Protected Phases	2			4 3	3	4
Permitted Phases		2	4 3			
Total Split (s)	29.0	29.0			6.0	35.0
Total Lost Time (s)	4.0	4.0				
Act Effct Green (s)	25.3	25.3	36.7	36.7		
Actuated g/C Ratio	0.36	0.36	0.52	0.52		
v/c Ratio	0.72	0.47	0.86	0.71		
Control Delay	23.3	4.1	25.2	14.8		
Queue Delay	0.0	0.0	0.5	0.0		
Total Delay	23.3	4.1	25.7	14.8		
LOS	C	A	C	B		
Approach Delay	17.7			19.0		
Approach LOS	B			B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 40 (57%), Referenced to phase 2:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1:

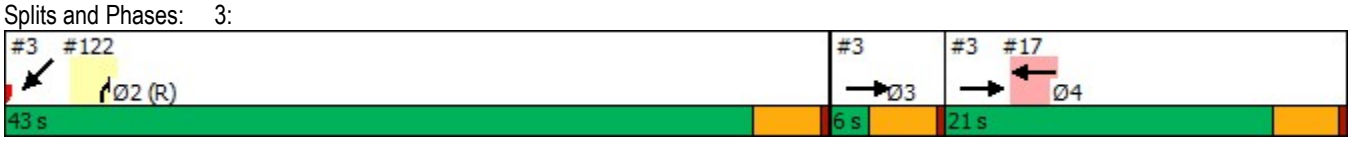


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	1037	0	0	0	0	0	0	0	0	1435	0
Future Volume (vph)	0	1037	0	0	0	0	0	0	0	0	1435	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	0	0	0	3539	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	0	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		187			321			181			334	
Travel Time (s)		4.3			7.3			4.1			7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1127	0	0	0	0	0	0	0	0	1560	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1127	0	0	0	0	0	0	0	0	1560	0
Turn Type		NA									NA	
Protected Phases		4 3									2	
Permitted Phases												
Total Split (s)											43.0	
Total Lost Time (s)											4.0	
Act Effct Green (s)		23.3									38.7	
Actuated g/C Ratio		0.33									0.55	
v/c Ratio		0.96									0.80	
Control Delay		43.7									16.4	
Queue Delay		0.0									0.0	
Total Delay		43.7									16.4	
LOS		D									B	
Approach Delay		43.7									16.4	
Approach LOS		D									B	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:SWT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 27.9 Intersection LOS: C
Intersection Capacity Utilization 75.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3:



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	5	655	853	563	1223	246	337	596	157
v/c Ratio	0.02	0.58	0.76	0.73	0.95	0.34	0.62	0.55	0.26
Control Delay	7.2	19.1	10.7	13.7	29.7	3.3	23.4	19.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	19.1	10.7	13.7	29.7	3.3	23.4	19.2	4.5
Queue Length 50th (ft)	1	101	132	54	143	5	102	92	0
Queue Length 95th (ft)	5	148	274	m83	#345	m18	178	136	34
Internal Link Dist (ft)		309			1460			166	
Turn Bay Length (ft)				200		200			
Base Capacity (vph)	264	1134	1121	776	1289	730	544	1088	594
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.58	0.76	0.73	0.95	0.34	0.62	0.55	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	603	785	518	1125	226	310	548	144	0	0	0
Future Volume (veh/h)	5	603	785	518	1125	226	310	548	144	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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				
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	5	655	853	563	1223	246	337	596	157			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5			
Cap, veh/h	280	1145	1001	787	1301	580	551	1099	490			
Arrive On Green	0.08	0.33	0.33	0.17	0.50	0.50	0.32	0.32	0.32			
Sat Flow, veh/h	1739	3469	1547	3374	3469	1547	1739	3469	1547			
Grp Volume(v), veh/h	5	655	853	563	1223	246	337	596	157			
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1687	1735	1547	1739	1735	1547			
Q Serve(g_s), s	0.1	9.4	19.8	6.6	20.0	6.1	9.9	8.5	4.6			
Cycle Q Clear(g_c), s	0.1	9.4	19.8	6.6	20.0	6.1	9.9	8.5	4.6			
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	280	1145	1001	787	1301	580	551	1099	490			
V/C Ratio(X)	0.02	0.57	0.85	0.72	0.94	0.42	0.61	0.54	0.32			
Avail Cap(c_a), veh/h	280	1145	1001	787	1301	580	551	1099	490			
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	12.9	16.6	8.3	12.1	14.4	10.9	17.4	16.9	15.6			
Incr Delay (d2), s/veh	0.1	2.1	9.1	5.5	14.2	2.3	5.0	1.9	1.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.4	7.0	2.3	7.2	1.9	4.0	3.1	1.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	18.7	17.5	17.6	28.6	13.2	22.4	18.8	17.3			
LnGrp LOS	B	B	B	B	C	B	C	B	B			
Approach Vol, veh/h		1513			2032			1090				
Approach Delay, s/veh		18.0			23.7			19.7				
Approach LOS		B			C			B				

Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		23.5	12.2	24.3			9.5	27.0				
Change Period (Y+Rc), s		4.5	4.5	4.5			4.5	4.5				
Max Green Setting (Gmax), s		19.0	7.7	19.8			5.0	22.5				
Max Q Clear Time (g_c+I1), s		11.9	8.6	21.8			2.1	22.0				
Green Ext Time (p_c), s		3.1	0.0	0.0			0.0	0.4				

Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									

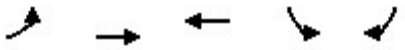
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	742	1679	9	0	190
Future Vol, veh/h	30	742	1679	9	0	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	5	5	10	10	10
Mvmt Flow	33	807	1825	10	0	207

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1835	0	-	0	-	918
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.3	-	-	-	-	3.4
Pot Cap-1 Maneuver	297	-	-	-	0	259
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	297	-	-	-	-	259
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	57.4
HCM LOS			F

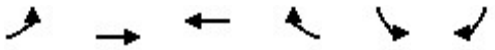
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	297	-	-	-	259
HCM Lane V/C Ratio	0.11	-	-	-	0.797
HCM Control Delay (s)	18.6	-	-	-	57.4
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	6.1



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	116	679	1043	102	820
v/c Ratio	0.42	0.36	0.81	0.21	0.66
Control Delay	22.3	10.3	23.0	17.1	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	10.3	23.0	17.1	14.4
Queue Length 50th (ft)	31	57	171	27	113
Queue Length 95th (ft)	m68	114	#248	60	173
Internal Link Dist (ft)		1009	2543	2452	
Turn Bay Length (ft)					200
Base Capacity (vph)	276	1890	1293	492	1248
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.36	0.81	0.21	0.66

Intersection Summary

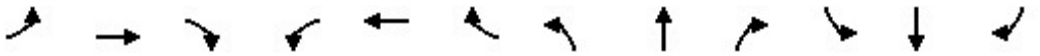
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	107	625	944	16	94	754
Future Volume (veh/h)	107	625	944	16	94	754
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1752	1826	1826	1752	1752	1752
Adj Flow Rate, veh/h	116	679	1026	17	102	820
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	5	5	10	10	10
Cap, veh/h	344	1908	1315	22	501	1041
Arrive On Green	0.20	1.00	0.38	0.38	0.30	0.30
Sat Flow, veh/h	1668	3561	3584	58	1668	2613
Grp Volume(v), veh/h	116	679	510	533	102	820
Grp Sat Flow(s),veh/h/ln	1668	1735	1735	1815	1668	1306
Q Serve(g_s), s	2.1	0.0	15.6	15.6	2.7	16.5
Cycle Q Clear(g_c), s	2.1	0.0	15.6	15.6	2.7	16.5
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	344	1908	653	684	501	1041
V/C Ratio(X)	0.34	0.36	0.78	0.78	0.20	0.79
Avail Cap(c_a), veh/h	344	1908	653	684	501	1041
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	16.5	16.5	15.7	15.8
Incr Delay (d2), s/veh	2.6	0.5	9.0	8.6	0.9	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	6.6	6.8	1.1	11.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	0.5	25.5	25.1	16.6	21.9
LnGrp LOS	B	A	C	C	B	C
Approach Vol, veh/h		795	1043		922	
Approach Delay, s/veh		2.3	25.3		21.3	
Approach LOS		A	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.4	27.1
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	5.9	22.6
Max Q Clear Time (g_c+I1), s		2.0		18.5	4.1	17.6
Green Ext Time (p_c), s		4.6		0.0	0.0	2.6

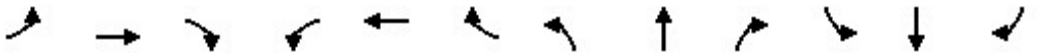
Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	265	183	318	43	253	145	139	386	109	202	760	570
v/c Ratio	0.90	0.23	0.52	0.28	0.31	0.24	0.71	0.45	0.18	0.92	0.89	0.75
Control Delay	65.8	20.5	5.8	32.8	21.3	0.9	52.4	22.1	0.6	70.1	37.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	20.5	5.8	32.8	21.3	0.9	52.4	22.1	0.6	70.1	37.7	11.6
Queue Length 50th (ft)	55	30	0	16	43	0	28	66	0	66	151	21
Queue Length 95th (ft)	#118	54	48	44	72	0	#68	104	0	#180	#248	#145
Internal Link Dist (ft)		2543			565			435			2472	
Turn Bay Length (ft)	350		350	350		350	350		350	350		350
Base Capacity (vph)	293	807	614	151	807	601	195	858	619	219	858	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.23	0.52	0.28	0.31	0.24	0.71	0.45	0.18	0.92	0.89	0.75

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	168	293	40	233	133	128	355	100	186	699	524
Future Volume (veh/h)	244	168	293	40	233	133	128	355	100	186	699	524
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	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	265	183	318	43	253	145	139	386	109	202	760	570
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	290	795	355	149	845	377	193	894	399	227	845	377
Arrive On Green	0.09	0.24	0.24	0.09	0.25	0.25	0.06	0.27	0.27	0.06	0.25	0.25
Sat Flow, veh/h	3237	3328	1485	1668	3328	1485	3237	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	265	183	318	43	253	145	139	386	109	202	760	570
Grp Sat Flow(s),veh/h/ln	1618	1664	1485	1668	1664	1485	1618	1664	1485	1668	1664	1485
Q Serve(g_s), s	5.4	3.0	13.9	1.6	4.1	5.4	2.8	6.4	2.5	4.0	14.8	11.2
Cycle Q Clear(g_c), s	5.4	3.0	13.9	1.6	4.1	5.4	2.8	6.4	2.5	4.0	14.8	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	795	355	149	845	377	193	894	399	227	845	377
V/C Ratio(X)	0.91	0.23	0.90	0.29	0.30	0.38	0.72	0.43	0.27	0.89	0.90	1.51
Avail Cap(c_a), veh/h	290	795	355	149	845	377	193	894	399	227	845	377
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	20.5	24.7	28.5	20.2	20.7	30.9	20.3	7.7	27.5	24.2	10.9
Incr Delay (d2), s/veh	34.8	0.7	27.7	4.8	0.9	3.0	20.5	1.5	1.7	36.9	14.5	244.3
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	3.3	1.1	7.0	0.8	1.5	2.0	1.6	2.4	1.3	3.5	6.8	28.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	21.2	52.4	33.3	21.1	23.6	51.5	21.8	9.4	64.4	38.7	255.2
LnGrp LOS	E	C	D	C	C	C	D	C	A	E	D	F
Approach Vol, veh/h		766			441			634			1532	
Approach Delay, s/veh		49.3			23.1			26.2			122.6	
Approach LOS		D			C			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	24.0	12.0	22.0	10.0	23.0	11.0	23.0
Change Period (Y+Rc), s	5.0	6.0	6.0	* 6	6.0	* 6	5.0	6.0
Max Green Setting (Gmax), s	4.0	17.0	6.0	* 16	4.0	* 17	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.0	8.4	3.6	15.9	4.8	16.8	7.4	7.4
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	0.1	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	74.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	32.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	68	7	132	58	2	100	381	26	8	420	5
Future Vol, veh/h	37	68	7	132	58	2	100	381	26	8	420	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
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	40	74	8	143	63	2	109	414	28	9	457	5
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.1	14.8	32.1	44.7
HCM LOS	B	B	D	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	94%	0%	91%	0%	97%	0%	99%
Vol Right, %	0%	6%	0%	9%	0%	3%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	407	37	75	132	60	8	425
LT Vol	100	0	37	0	132	0	8	0
Through Vol	0	381	0	68	0	58	0	420
RT Vol	0	26	0	7	0	2	0	5
Lane Flow Rate	109	442	40	82	143	65	9	462
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.225	0.846	0.1	0.19	0.345	0.147	0.018	0.9
Departure Headway (Hd)	7.441	6.885	8.995	8.409	8.661	8.12	7.531	7.012
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	526	398	426	415	441	475	517
Service Time	5.19	4.633	6.762	6.175	6.42	5.879	5.279	4.759
HCM Lane V/C Ratio	0.226	0.84	0.101	0.192	0.345	0.147	0.019	0.894
HCM Control Delay	12.4	37	12.8	13.2	15.9	12.3	10.4	45.3
HCM Lane LOS	B	E	B	B	C	B	B	E
HCM 95th-tile Q	0.9	8.8	0.3	0.7	1.5	0.5	0.1	10.3

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	36	0	141	490	0
Future Vol, veh/h	37	36	0	141	490	0
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	-	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	40	39	0	153	533	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	686	533	533	0	-	0
Stage 1	533	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.5	6.3	4.2	-	-	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	2.29	-	-	-
Pot Cap-1 Maneuver	401	531	995	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	401	531	995	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	995	-	456	-	-
HCM Lane V/C Ratio	-	-	0.174	-	-
HCM Control Delay (s)	0	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	207	11	130	11	11	515
Future Vol, veh/h	207	11	130	11	11	515
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	-	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	225	12	141	12	12	560

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	725	141	0	0	153	0
Stage 1	141	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	380	886	-	-	1380	-
Stage 1	867	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	377	886	-	-	1380	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1380	-
HCM Lane V/C Ratio	-	-	0.611	0.009	-
HCM Control Delay (s)	-	-	27.8	7.6	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	3.9	0	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	52	13	25	95	98
Future Vol, veh/h	17	52	13	25	95	98
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, %	10	10	10	10	10	10
Mvmt Flow	18	57	14	27	103	107

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	121	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1518	-	-	-	856	1025
Stage 1	-	-	-	-	974	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1518	-	-	-	846	1025
Mov Cap-2 Maneuver	-	-	-	-	846	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1518	-	-	-	928
HCM Lane V/C Ratio	0.012	-	-	-	0.226
HCM Control Delay (s)	7.4	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.9