EASTWOOD LOT 5

Traffic Impact Study

Reynoldsburg, Ohio

June, 2023

Prepared for:

Joe Ciminello

Kimley»Horn

Contents

Tables

INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Joe Ciminello to perform a traffic impact study for a proposed mixed-use development on the north side of US-40 (E Main Street) between Taylor Road and Summit Road, in Reynoldsburg, OH. The proposed development would replace existing agricultural land. Proposed access to the mixed-use development includes two full-access site driveways onto US-40, and one full-access site driveway onto Summit Road. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

As part of this study, the existing network was analyzed to determine the current and projected future operations at the study intersections. Trip generation characteristics for the new development were established and added to background traffic volumes to assess the site's impact on the area roadway network. This report presents and documents Kimley-Horn's data collection, summarizes the evaluation of existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential of site-generated traffic on the adjacent roadway network. The signed Traffic Memorandum of Understanding (MOU) outlining the complete scope of this traffic study can be found in the **Appendix**.

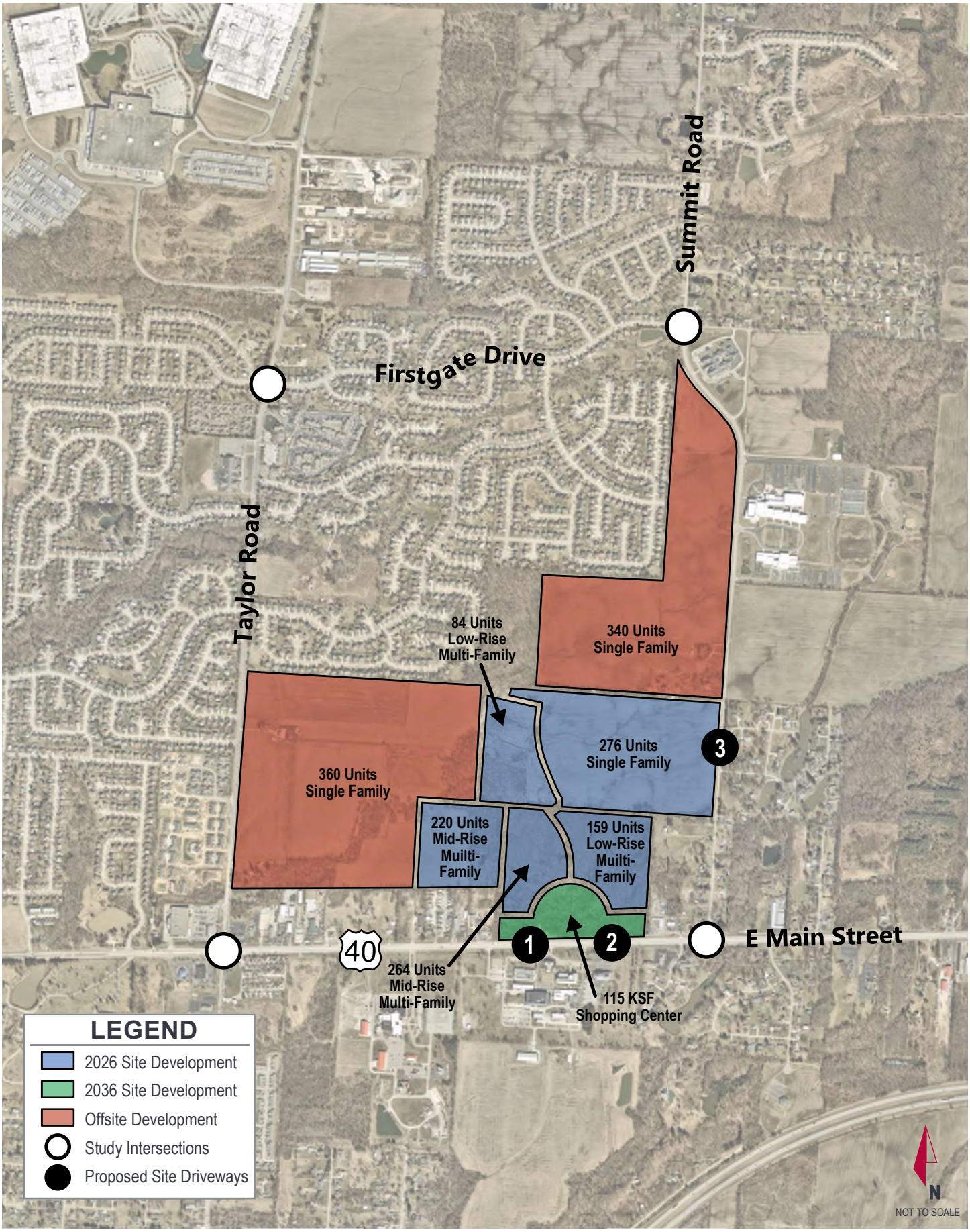

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EXHIBIT 1

PROJECT SITE LOCATION AND STUDY AREA

NO-BUILD CONDITIONS

Kimley-Horn conducted a field visit to collect relevant information pertaining to existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on these existing conditions.

AREA LAND USES & EXISTING ROADWAY CHARACTERISTICS

The subject site is located north of US-40 (E Main Street) between Taylor Road and Summit Road, in Reynoldsburg, OH. The project would replace approximately 138 acres of agricultural land. The immediate site vicinity generally consists of rural residential, commercial, and agricultural uses. The study area for this analysis includes the following intersections:

- US-40 (E Main Street) and Taylor Road
- US-40 (E Main Street) and Summit Road
- US-40 (E Main Street) and Access Drive 1
- US-40 (E Main Street) and Access Drive 2
- Summit Road and Access Drive 3 [1]
- Summit Road and Refugee Road/ Firstgate Drive[1]
- Taylor Road and Firstgate Drive[1]

[1]*Per a 6/23/2023 Discussion with the City, traffic analysis sis not required at these intersections*

US-40 (E Main Street) is a 5-lane urban principal arterial generally running east-west in the site vicinity and provides two travel lanes in each direction with a two-way left-turn lane in the center. At the signalized intersection with Taylor Road, an eastbound and westbound left-turn lane are provided. Regionally, US-40 runs east-west from Columbus to Reynoldsburg. This roadway has a posted speed limit of 50 miles per hour. No designated sidewalks are present on either side of the existing US-40.

Taylor Road is a 3-lane urban minor arterial generally running north-south in the site vicinity and provides one travel lane in each direction with a two-way left-turn lane in the center. At the signalized intersection with US-40, dual southbound left-turn lanes and a single northbound left-turn lane are provided. At the signalized intersection with Firstgate Drive, a northbound and southbound left-turn lane are provided. This roadway has a posted speed limit of 35 miles per hour. Sidewalks are present on both sides of Taylor Road, throughout the site vicinity.

Summit Road is a 2-lane urban local roadway generally running north-south in the site vicinity and provides one travel lane in each direction. A two-way left-turn lane is provided for some segments of Summit Road within the site vicinity. At the signalized intersection with Firstgate Drive, a northbound and southbound turn lane are provided. This roadway has a posted speed limit of 35 miles per hour. A designated sidewalk is present for some segments of Summit Road in the vicinity of the site. There are no sidewalks along Summit Road between US-40 and Summit Road Elementary School.

Firstgate Drive/ Refugee Road is a 2-lane urban major collector generally running east-west in the site vicinity and provides one travel lane in each direction. Firstgate Drive has a posted speed limit of 25 miles per hour within the vicinity of the site. Designated sidewalks are present on both sides of the Firstgate Drive.

TRAFFIC COUNT DATA COLLECTION

Base traffic volumes and turning movement counts for the study intersections were obtained via MioVision traffic cameras. The traffic cameras were placed on April 28th, 2021 along US-40 at Taylor Road, the Ohio Department of Agriculture campus private drive, and at Summit Road. Traffic cameras were placed at the Taylor Road and Firstgate Drive and at Summit Road and Firstgate Drive/ Refugee Road intersections on May 25th, 2021. The traffic counts were performed during the weekday morning (7:00AM-9:00AM) and evening (4:00PM-6:00PM) peak periods, coinciding with the peak hours of traffic activity on the adjacent roadways and peak conditions anticipated. A common AM and PM peak hour was determined based on the cumulative traffic counts of the study area. The AM and PM peak hours for the study intersections are 7:00-8:00 AM and 4:30-5:30 PM.

All three schools in the surrounding area (Taylor Road Elementary School, Reynoldsburg High School, and Summit Road Elementary School), were in session during the dates in which traffic cameras were placed. Existing geometry and intersection control are shown in **Exhibit 2**. The 2021 Raw Traffic Counts are provided in **Exhibit 3**. EB and WB traffic counts at the US-40 and Taylor Road intersection were significantly lower than the EB and WB counts at the US-40 and Summit Road intersection. Based on a 2021 ODOT traffic count along US-40, EB and WB thru volumes at the US-40 and Taylor Road intersection were balanced with the US-40 and Summit Road intersection. The referenced ODOT traffic count is provided in the **Appendix**, and the 2021 balanced counts are provided in **Exhibit 4.**

EXISTING TRAFFIC VOLUME ADJUSTMENT

Due to circumstances associated with the COVID-19 public health crisis, traffic volumes have been atypically low since mid-March 2020 and slowly increasing toward normal volumes over the past year. To estimate typical traffic conditions, a COVID adjustment factor was obtained from ODOT traffic count data using the study location, date, and time. Traffic counts on US-40, collected in April 2021, were increased by a factor of 10 percent and traffic counts on Firstgate Drive collected in May 2021 were increased by a factor of 10 percent to reflect typical conditions absent COVID-19 impacts on traffic conditions. The 2021 Balanced counts, with the COVID adjustment factor are provided in **Exhibit 5**. COVID Adjustment factor calculations are provided in the **Appendix**.

EXPECTED GROWTH TRAFFIC ASSIGNMENT

As development of the central Ohio region increases over the next 15 years, the expected vehicular volume is anticipated to increase in kind. Growth rates for each of the roadways within the study area were derived based on the Mid-Ohio Regional Planning Commission regional travel demand model and are summarized in **Table 1**. Email communications with MORPC regarding traffic growth are included in the **Appendix**. These growth rates were used to develop the turning movement volumes for the Opening Year (2026) No-Build and Horizon Year (2036) No-Build models. The calculated 2026 and 2036 No-Build vehicular volumes for the study are illustrated in **Exhibit 6** and **Exhibit 7**.

Table 1 – Background Growth Rates

Location	Linear Annual Growth Rate
US-40 (Main Street)	1.00%
Taylor Road	0.50%
Summit Road	0.50%
Firstgate Drive	0.50%

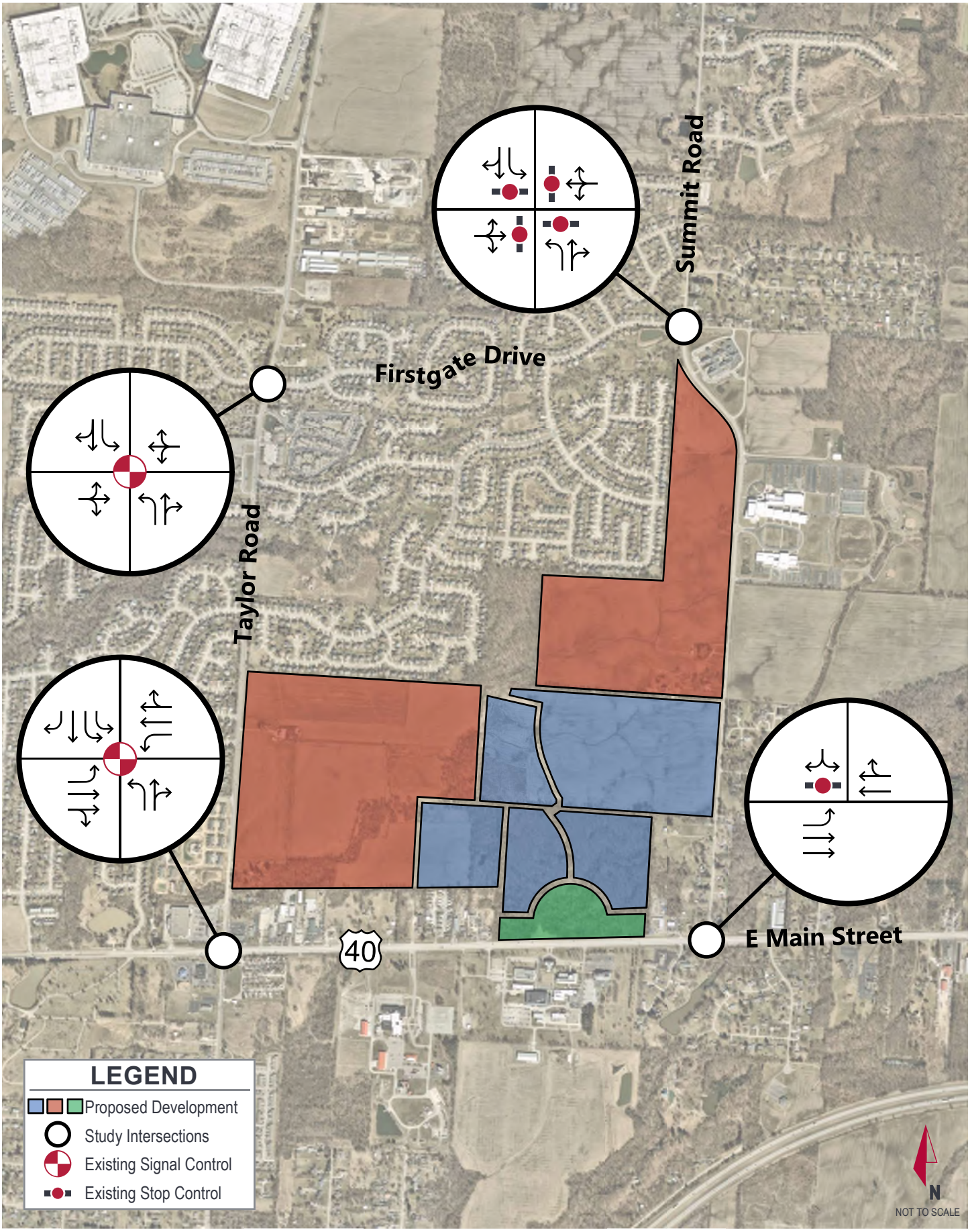

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EXHIBIT 2

EXISTING GEOMETRY AND INTERSECTION CONTROL

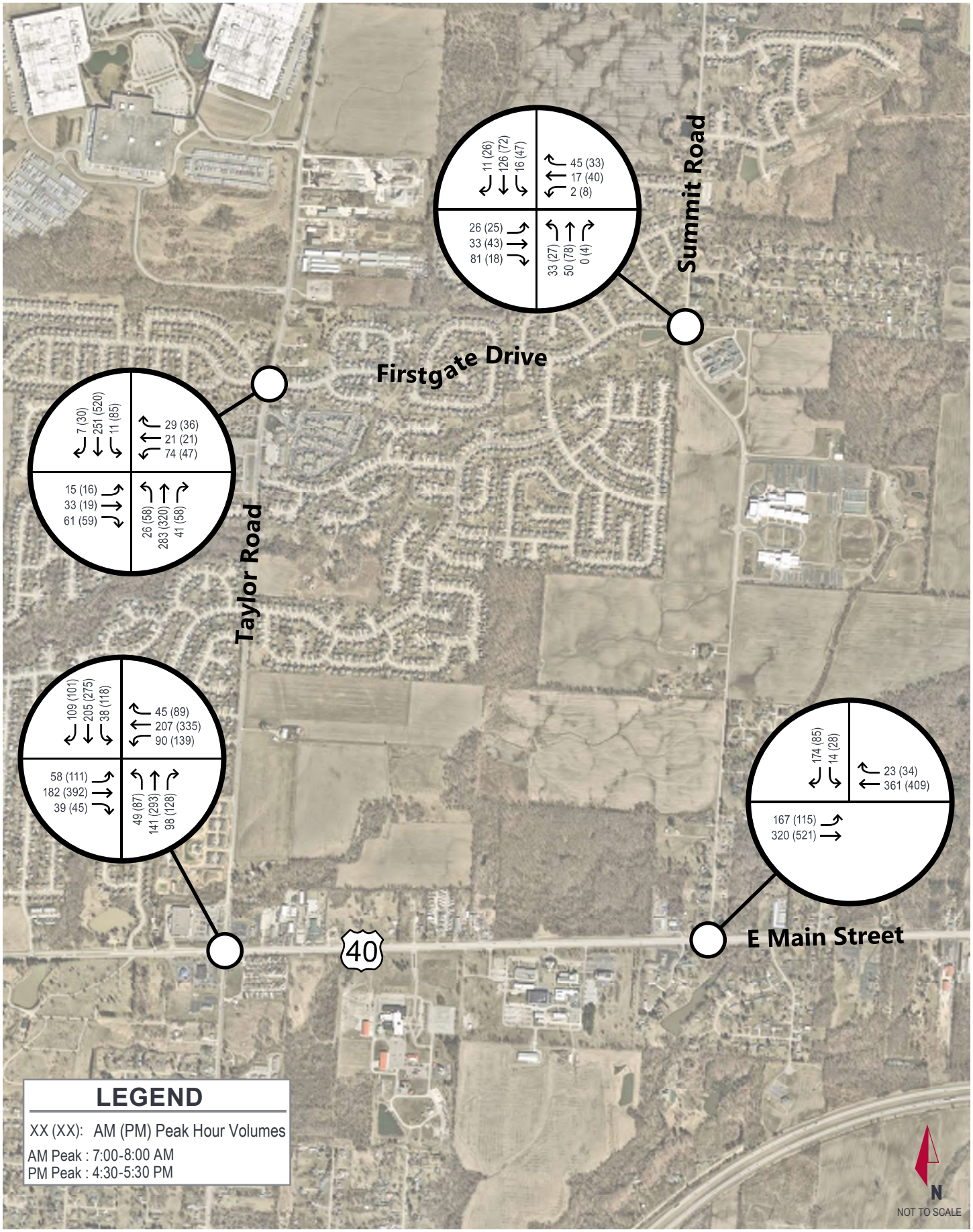

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EXHIBIT 3

2021 RAW COUNTS

PEAK HOUR TRAFFIC VOLUMES

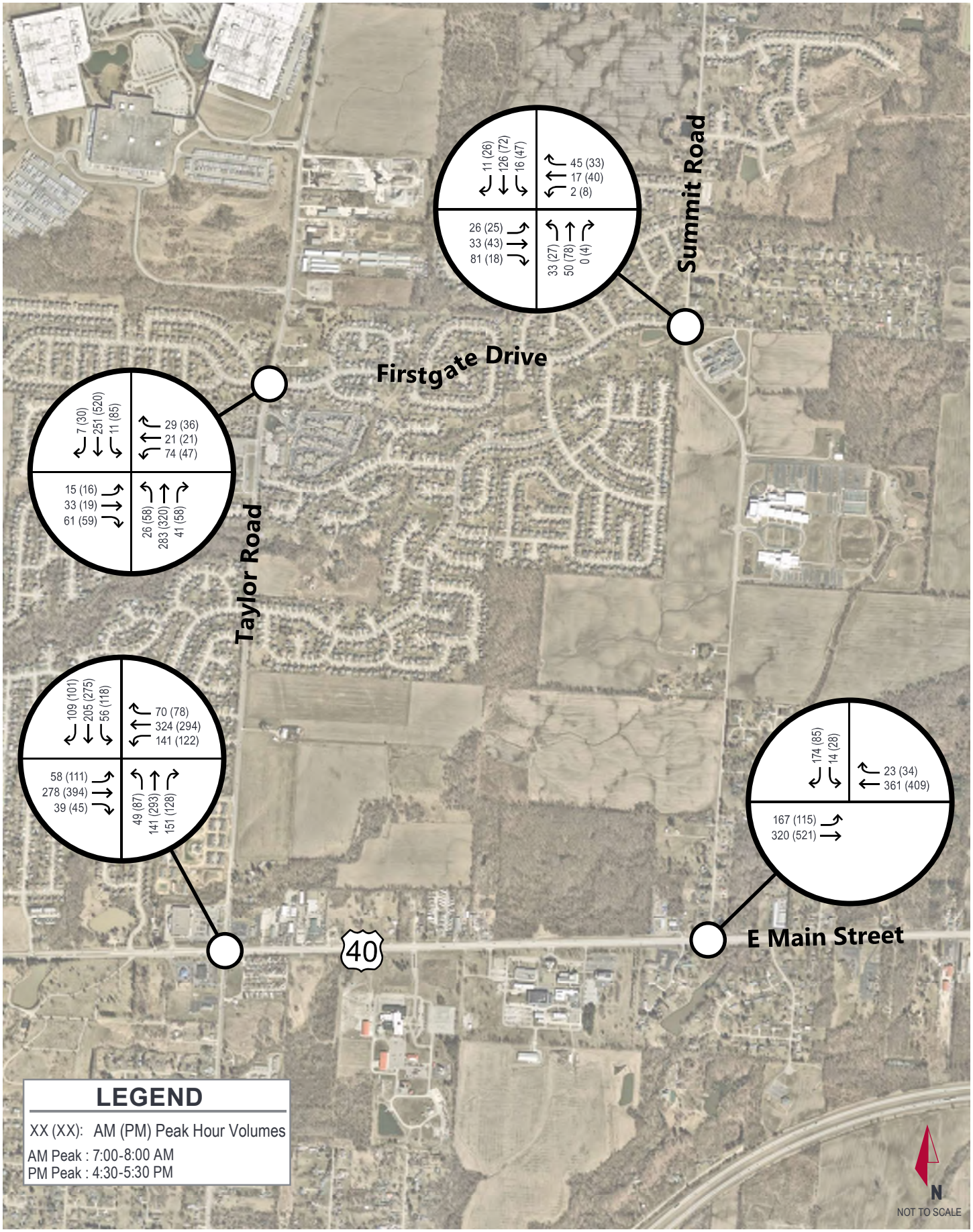

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EXHIBIT 4

2021 BALANCED COUNTS PEAK HOUR TRAFFIC VOLUMES

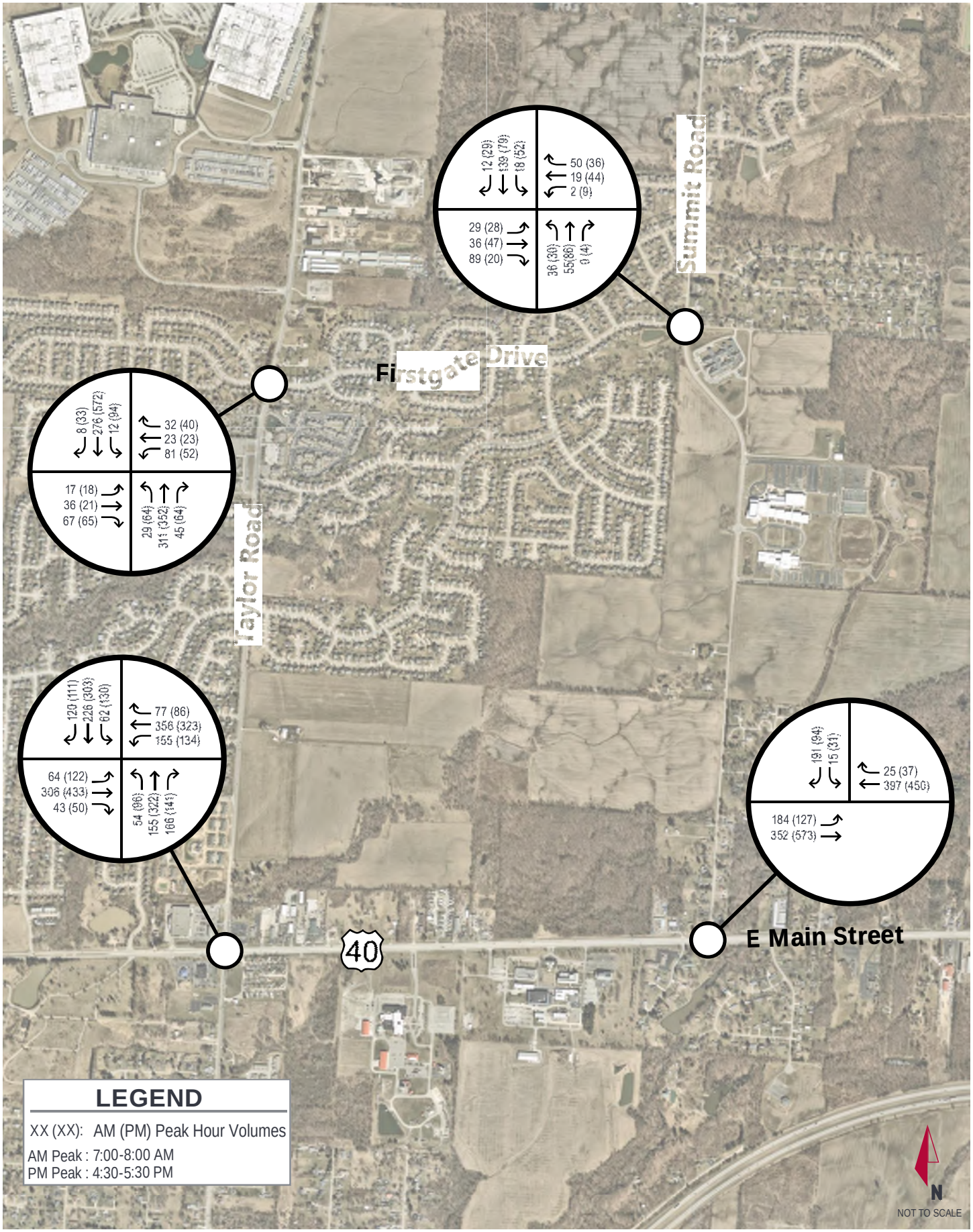

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EXHIBIT 5

2021 COVID ADJUSTED PEAK HOUR TRAFFIC VOLUMES

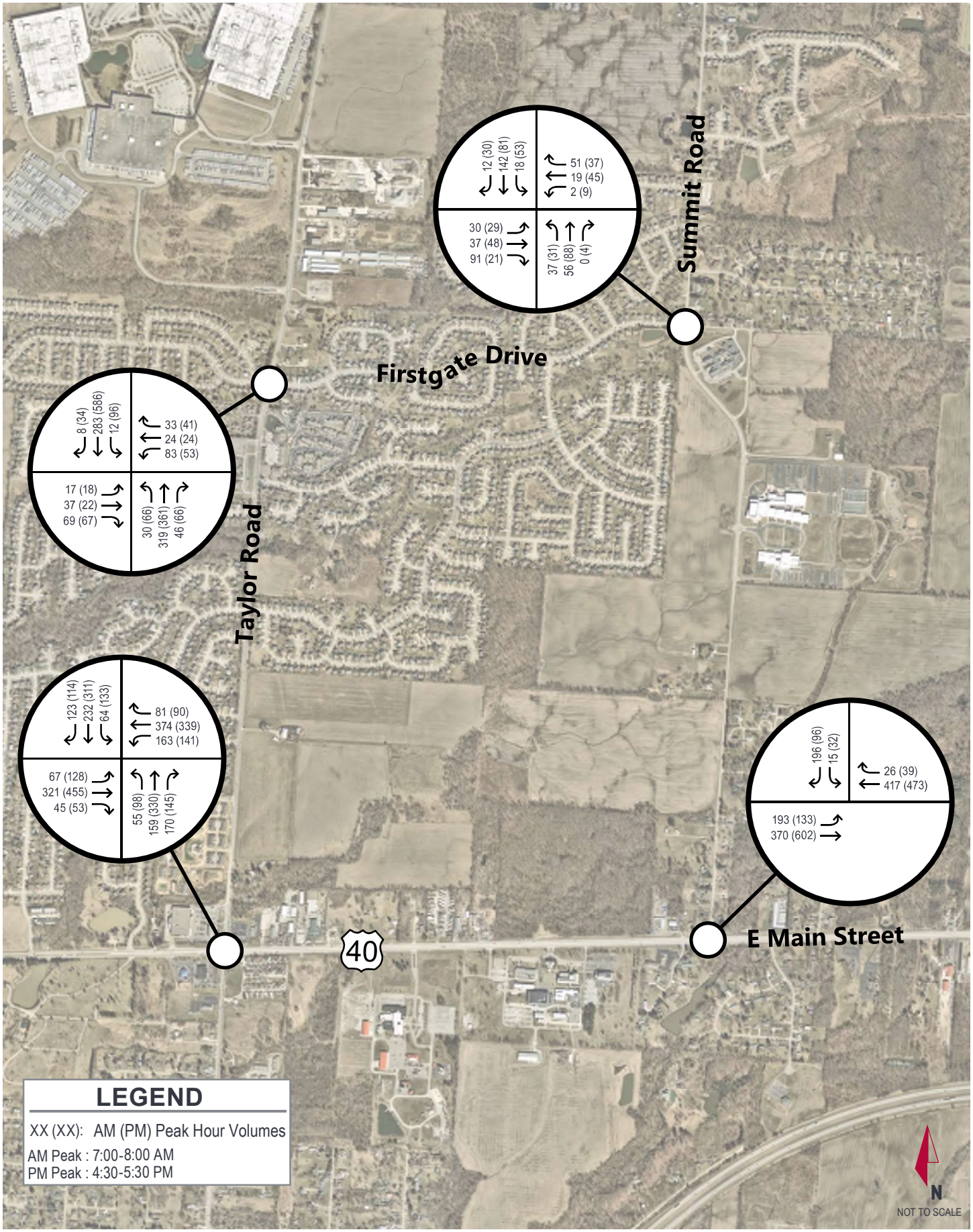

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EXHIBIT 6

OPENING YEAR (2026) NO-BUILD PEAK HOUR TRAFFIC VOLUMES

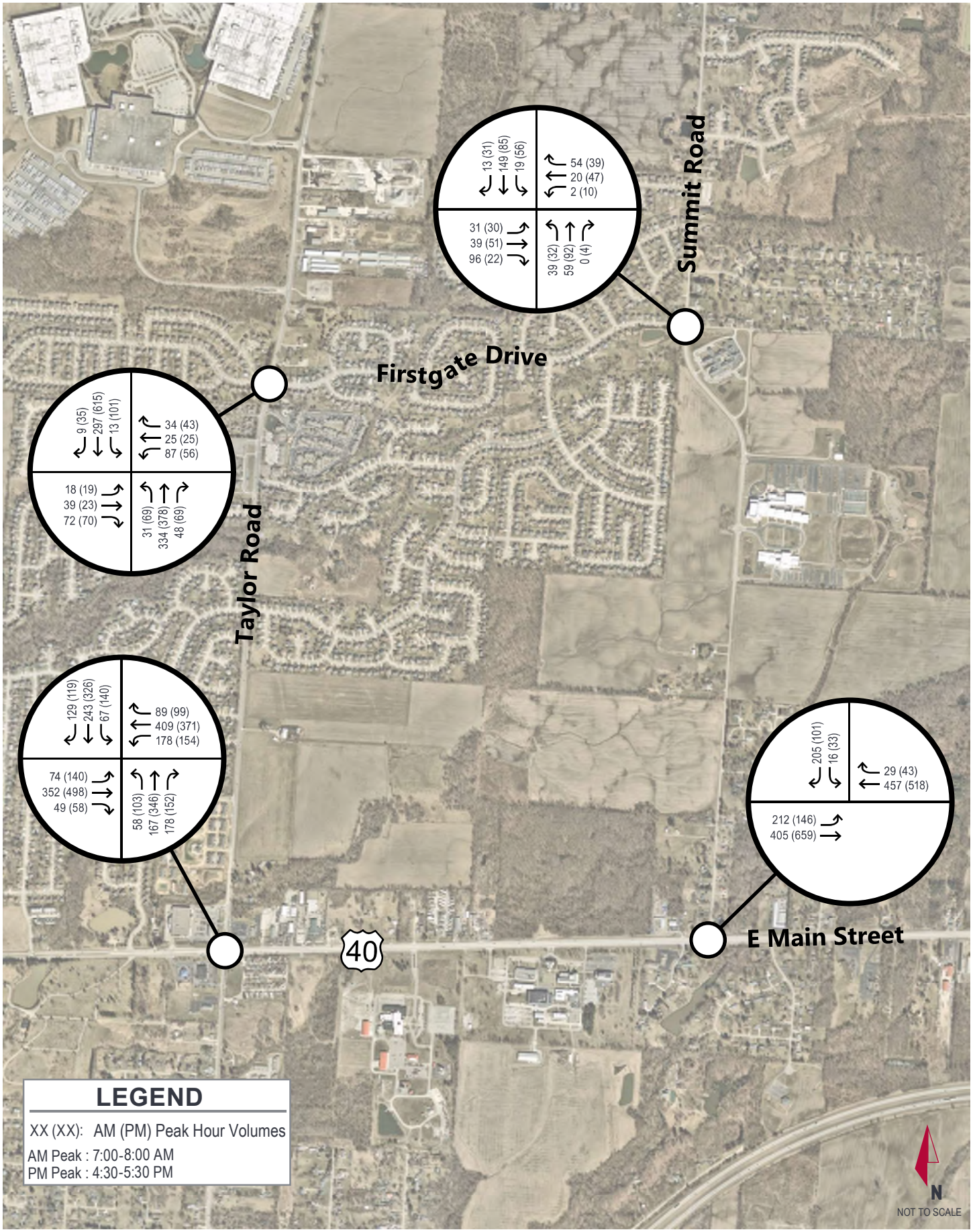

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EXHIBIT 7

HORIZON YEAR (2036) NO-BUILD PEAK HOUR TRAFFIC VOLUMES

BUILD CONDITIONS

This section of the report outlines the proposed site plan and summarizes site-specific traffic characteristics.

DEVELOPMENT CHARACTERISTICS

A mix of commercial, multifamily, and single-family developments are proposed for the roughly 360-acre site. **Exhibit 1** summarizes the approximate locations, size, and timeline of each piece of the proposed development at the time of this analysis. For this study, it is assumed that the residential component of the proposed development will be complete by 2026, and includes 243 low-rise multifamily dwelling units, 484 mid-rise multifamily dwelling units, and 276 single family dwelling units. These portions of the site will be accessed by two new access points on US-40 and one new access point on Summit Road. The commercial development is not included in the 2026 opening year scenario.

By 2036, the 115,000 square-feet of commercial space, on 13.5 acres of land directly adjacent to US-40 is expected to be completed. The specific land use and building square footage has not yet been determined. The sum of commercial space was estimated using the size of the site, maximum portion of allowable impervious area on the site, and the estimated ratio of parking to building space.

It is estimated that there is the potential for 700 additional single-family dwelling units adjacent to the proposed development that could be constructed by 2036. Of these additional 700 offsite units, it is expected that 360 will be constructed between Taylor Road and the 2026 developments, and 340 offsite units will be constructed north of the 2026 developments along Summit Road. These single-family developments are expected to necessitate new access points along Taylor Road and Summit Road, in addition to the 3 access points identified in 2026. However, these additional entrances are not analyzed in this study as there are no current site plans for the developments.

TRIP GENERATION

The trip generating potential of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Tenth Edition*. Standard ITE trip rates were used to develop the trips generated by each portion of the development. The ITE Land Use Codes used for the site are listed below:

- Single-Family Detached Housing (ITE LUC 210)
- Multifamily Housing (Low-Rise) (ITE LUC 220)
- Multifamily Housing (Mid-Rise) (ITE LUC 221)
- Shopping Center (ITE LUC 820)

The ITE Land Use Codes were used to calculate the trip generation potential of the site. **Table 2** summarizes the trips generated by the residential development expected to be completed by the opening year (2026). For the purpose of this study, all site generated trips are expected to be “Primary Trips” when traveling to and from the subject site during the opening year. Primary trips are trips to the proposed industrial site would not normally travel on the study roadways and are considered new trips within the study area.

Table 3 summarizes the trips generated by the site residential development and site commercial development expected to be completed by the horizon year (2036). Internal tips (between residential and commercial developments), and pass-by trips (for commercial developments) are expected to occur during the horizon year.

Table 4 summarizes the trips generated by the site residential development, site commercial development, and off-site residential development expected to be completed by the horizon year (2036).

Internal tips (between residential and commercial developments), and pass-by trips (for commercial developments) are expected to occur during the horizon year. Internal site trips and pass-by trips are assumed to be negligible during the AM peak hour. The percentage of pass-by trips occurring during the PM peak hour for the commercial development was determined using the ITE Trip Generation Handbook, 3rd Edition, and are illustrated in **Exhibits 12-14**. The percentage of pass-by trips was assumed to be 35% during the PM Peak Hour. A fitted curve equation is not present for LUC-820, therefore the primary trip percentage was approximated using the data plot provided in the **Appendix**. Additionally, internal trip capture calculations are provided in the **Appendix**.

Table 2 – Opening Year (2026) Residential Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	276	Dwelling Units	2,646	201	50	151	269	169	100
Multi-Family Housing (Low-Rise) (220)	243	Dwelling Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Dwelling Units	2,638	161	42	119	201	123	78
Total Opening Year Trips			7,082	473	118	355	600	374	226

Table 3 - Horizon Year (2036) Residential + Commercial Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	276	Units	2,646	201	50	151	269	169	100
Multi-Family Housing (Low-Rise) (220)	243	Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Units	2,638	161	42	119	201	123	78
Total - Residential				473	118	355	600	374	226
Internal Capture				-	-	-	*-111*	*-82*	*-29*
Sub Total - Residential (less internal capture)				473	118	355	489	292	197
Shopping Center (820)	115	KSF	6,612	209	130	79	603	289	314
Internal Capture				-	-	-	*-111*	*-29*	*-82*
Pass-by Reduction				-	-	-	*-210*	*-105*	*-105*
Sub Total – Commercial (less internal & pass-by)				209	130	79	282	155	127
Total Project Trips				**682**	**248**	**434**	**771**	**447**	**324**

Table 4 - Horizon Year (2036) Residential + Commercial + Offsite Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	976	Units	8,458	698	174	524	905	570	335
Multi-Family Housing (Low-Rise) (220)	243	Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Units	2,638	161	42	119	201	123	78
Total - Residential				970	242	728	1236	775	461
Internal Capture				-	-	-	*-111*	*-82*	*-29*
Sub Total - Residential (less internal capture)				970	242	728	1125	693	432
Shopping Center (820)	115	KSF	6,612	209	130	79	603	289	314
Internal Capture				-	-	-	*-111*	*-29*	*-82*
Pass-by Reduction				-	-	-	*-210*	*-105*	*-105*
Sub Total – Commercial (less internal & pass-by)				209	130	79	282	155	127
Total Project Trips				**1179**	**373**	**807**	**1407**	**848**	**559**

DIRECTIONAL DISTRIBUTION

The estimated distributions of site-generated traffic on the study area roadway network as it enters and departs the site is a function of several variables, such as the nature of the surrounding land uses, prevailing traffic conditions, characteristics of the roadway network internal to and external to the site, and ease of travel to other areas of the greater Columbus region. Separate trip distributions were developed for the 2026 project site residential development, the 2036 project site and offsite residential developments, and the 2036 commercial development. The anticipated directional distributions estimated for site and offsite related trips are outlined in **Table 5** and can be seen on **Exhibits 8-10**.

Table 5 - Estimated Trip Distribution

Traveling to/from:	Estimated Trip Distribution		
	2026 Project Site Residential	2036 Project Site Commercial	2036 Offsite + Project Site Residential
South on Taylor Road	35%	40%	35%
West on US-40	20%	35%	20%
North on Taylor Road	25%	15%	20%
East on US-40	10%	10%	10%
North on Summit Road	10%	-	15%

TOTAL BUILD TRAFFIC ASSIGNMENT

The total traffic assignment represents the additional traffic volumes at study area intersections generated by the proposed site development. **Exhibit 11** summarizes the total project site trip assignment for development expected to be completed by the Opening Year (2026) for this study. **Exhibit 15** summarizes the total project site trip assignment for the residential developments and commercial

developments to be completed by the Horizon Year (2036). **Exhibit 16** summarizes the total site trip assignment for all development expected to be completed by the Horizon Year (2036) for this study, which includes the offsite residential development expected to be completed prior to 2036.

Opening Year (2026) Build, Horizon Year (2036) Build, Horizon Year (2036) No Build + Offsite peak hour, and Horizon Year (2036) Build + Offsite peak hour turning movement volumes are summarized in **Exhibits 17-20.**

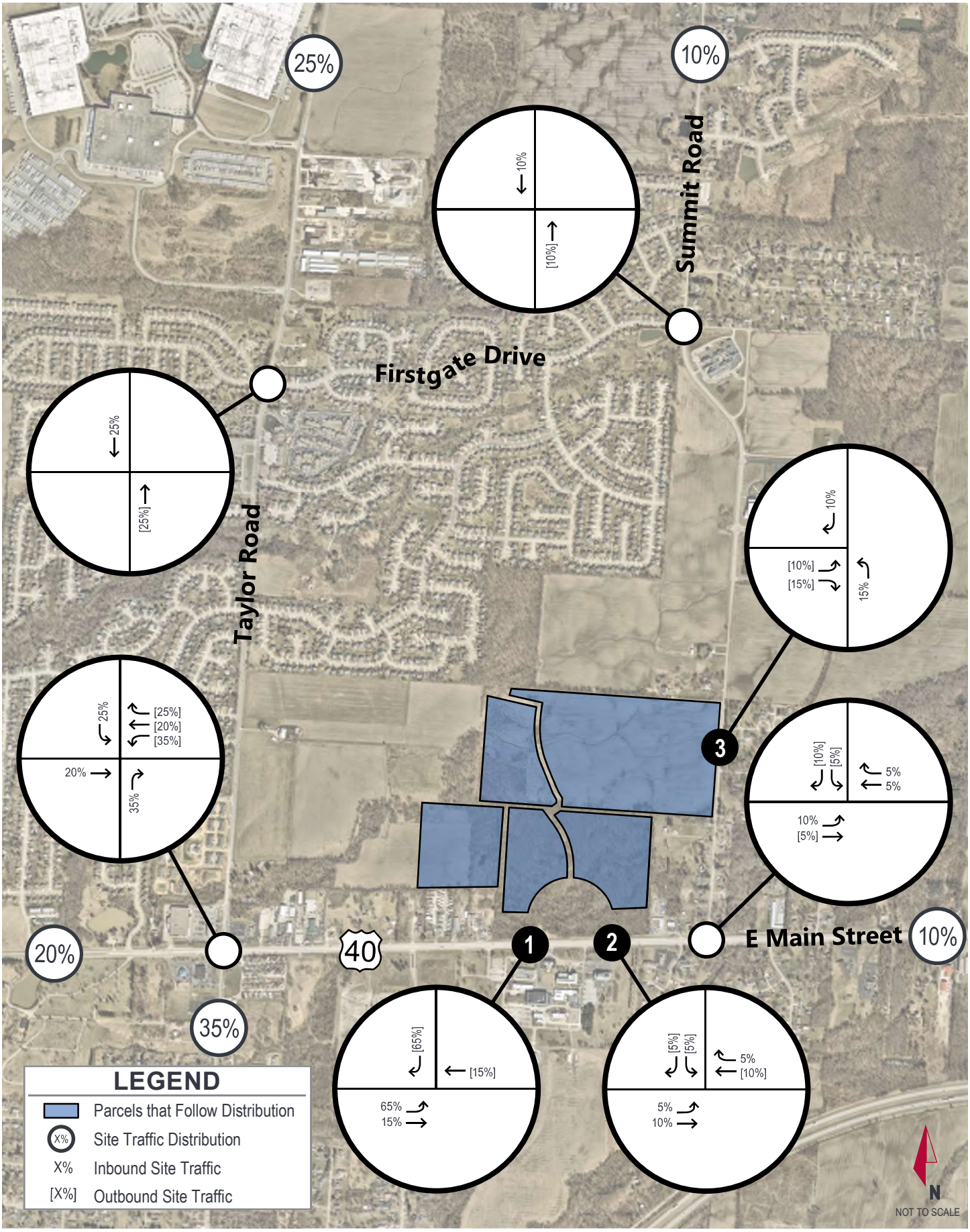

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EXHIBIT 8

2026 RESIDENTIAL DEVELOPMENT
PRIMARY SITE TRIP DISTRIBUTION

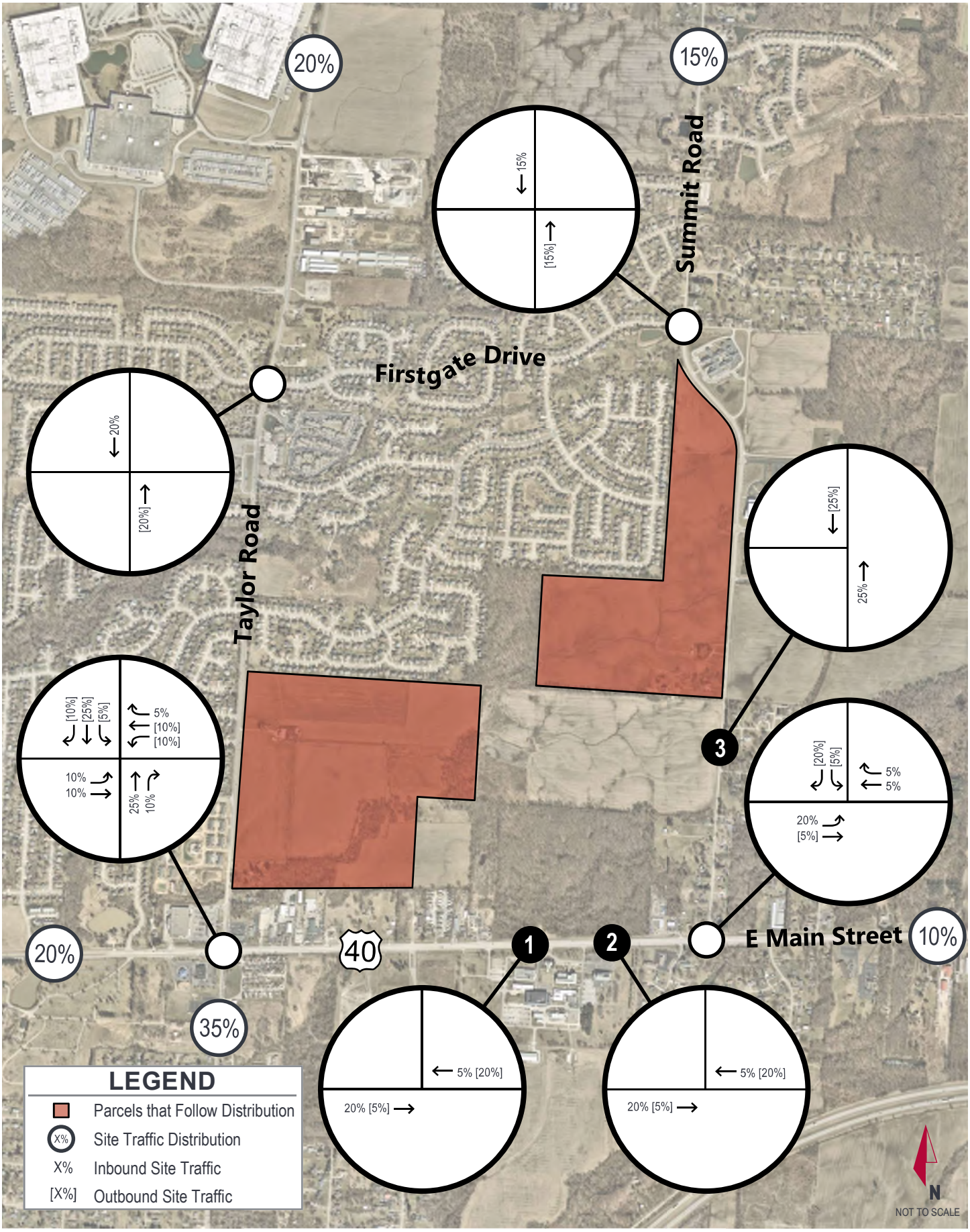

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EXHIBIT 9

2036 OFFSITE RESIDENTIAL DEVELOPMENT PRIMARY SITE TRIP DISTRIBUTION

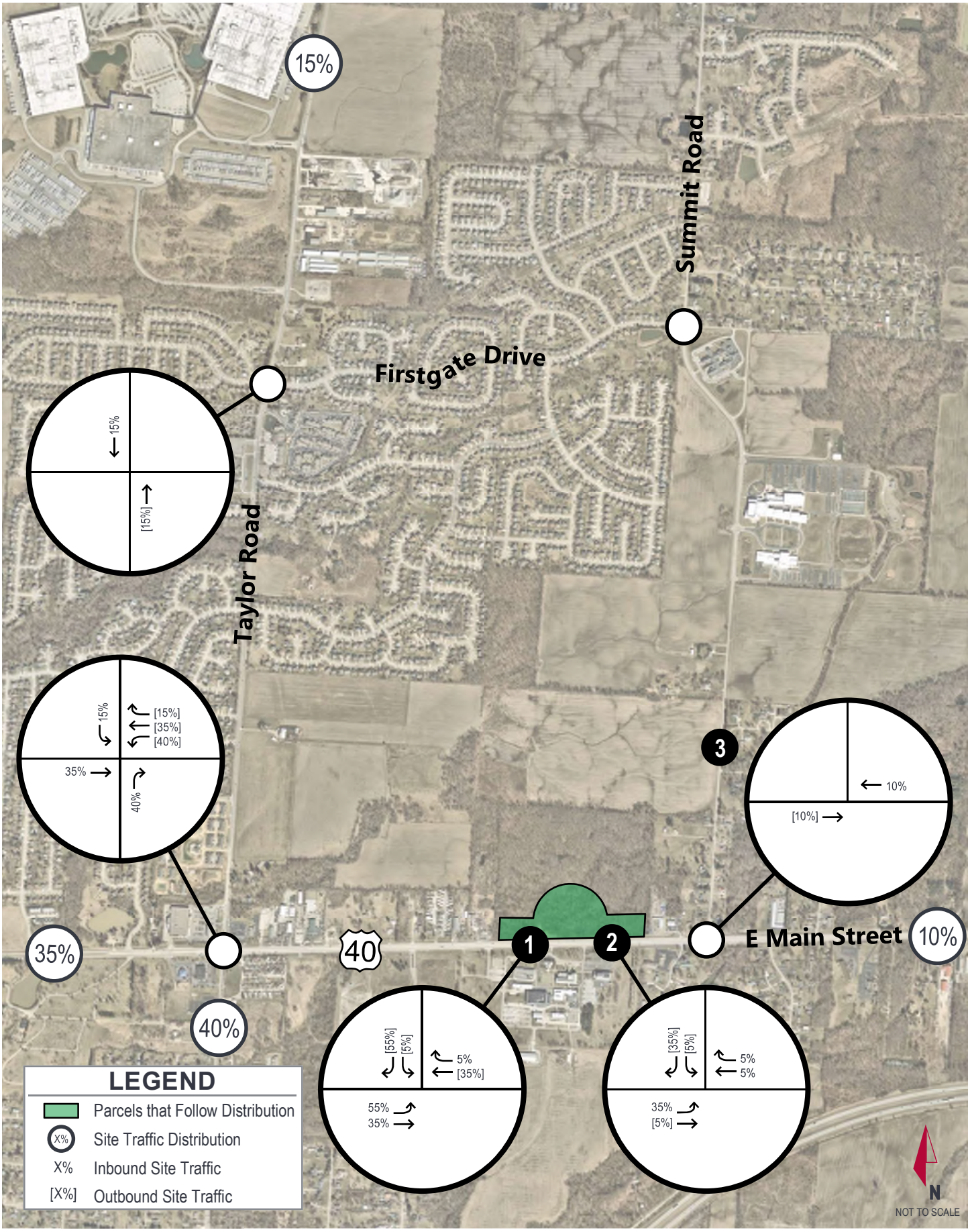

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EXHIBIT 10

2036 COMMERCIAL DEVELOPMENT PRIMARY SITE TRIP DISTRIBUTION

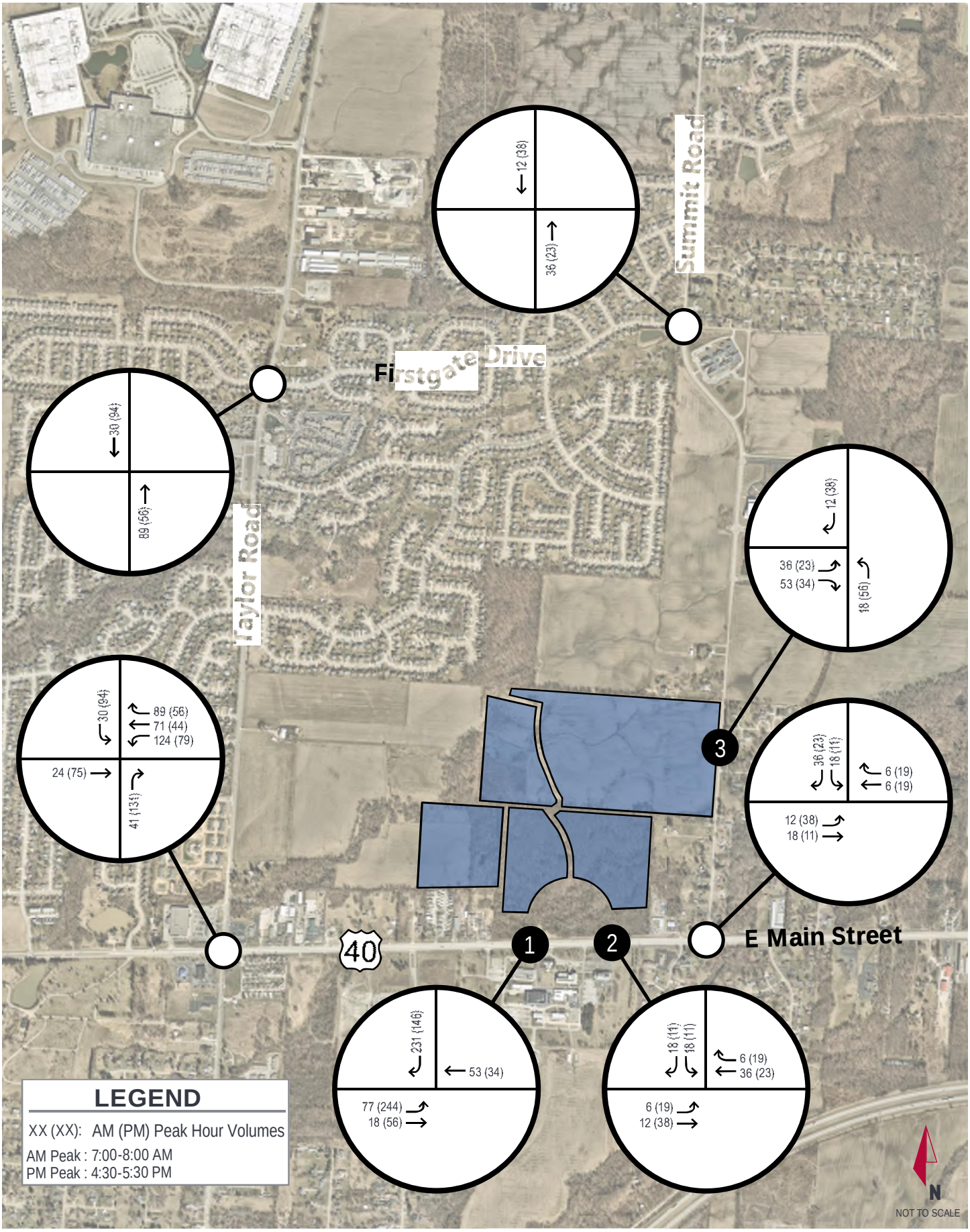

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EXHIBIT 11

2026 PROJECT TRAFFIC TRIP ASSIGNMENT

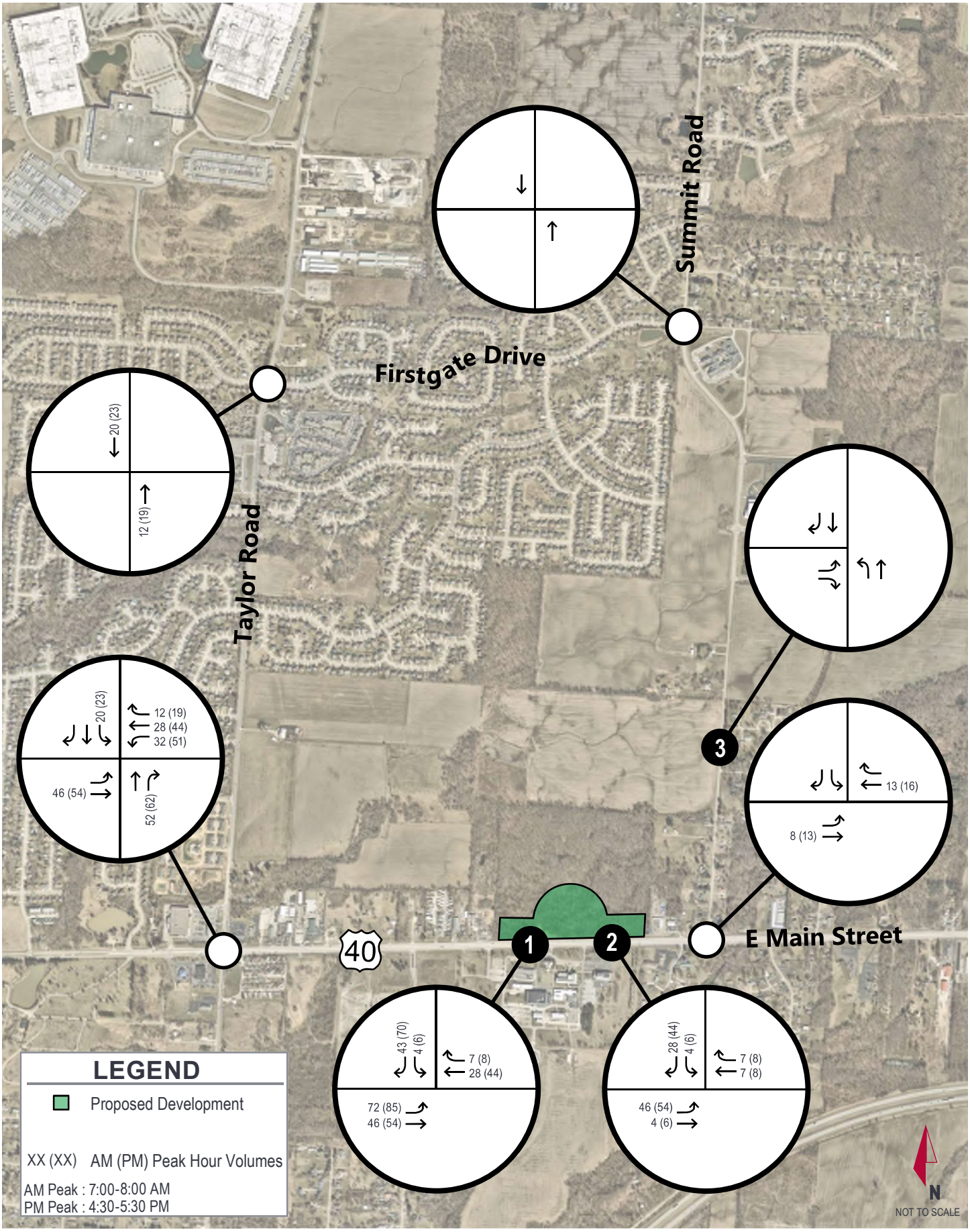

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EXHIBIT 12

COMMERCIAL SHOPPING CENTER
PRIMARY TRIPS

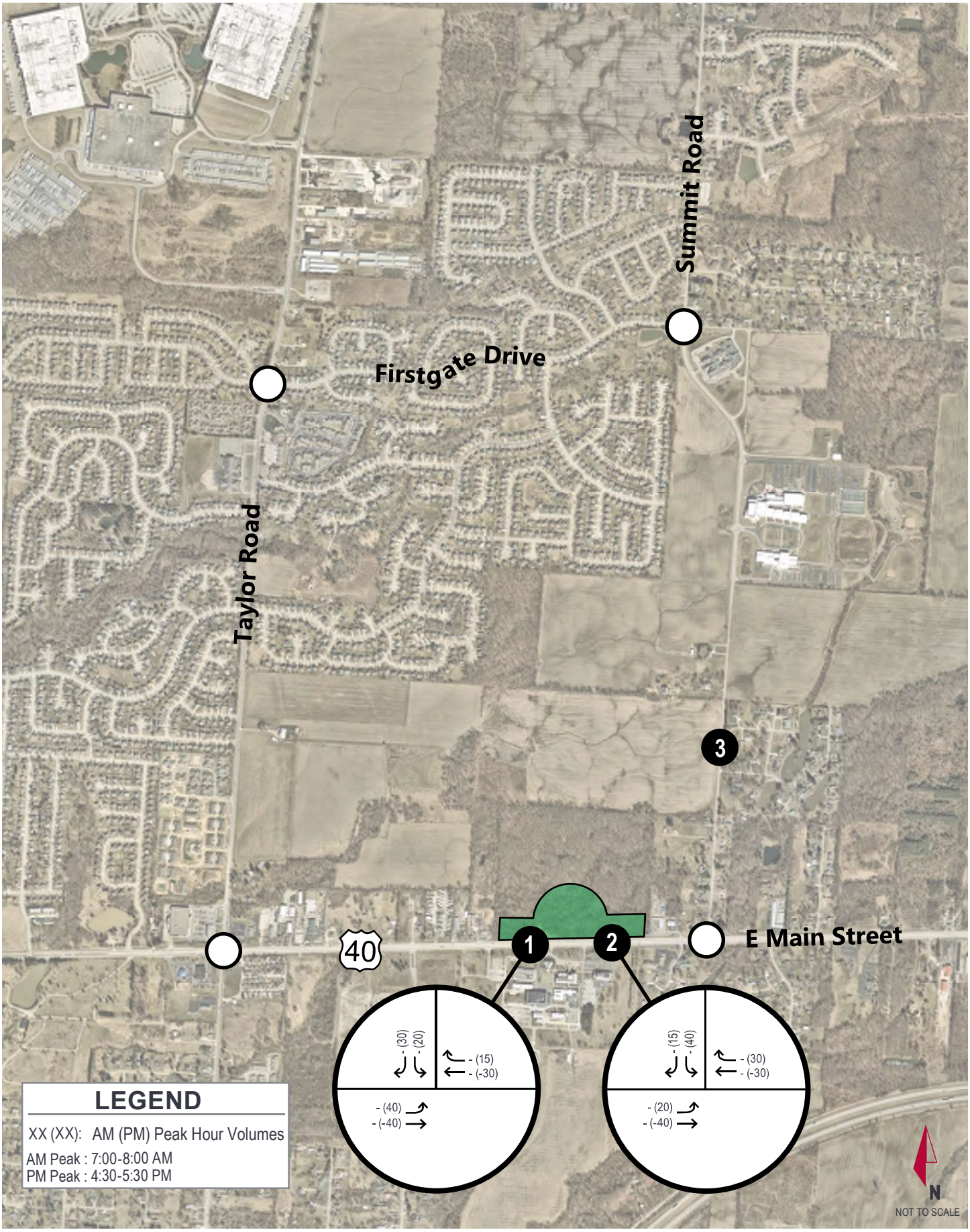

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EXHIBIT 13

COMMERCIAL SHOPPING CENTER PASS-BY TRIPS

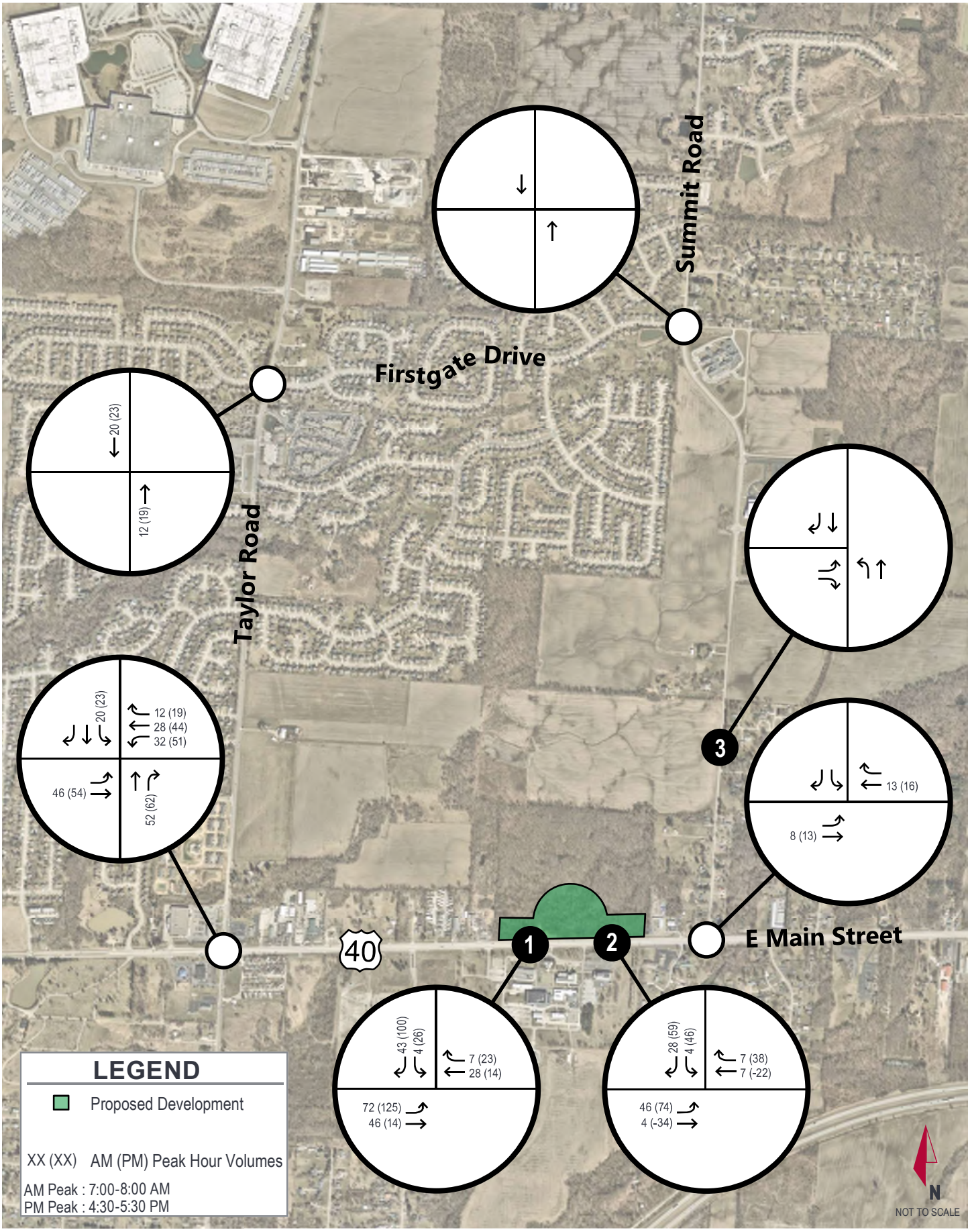

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EXHIBIT 14

COMMERCIAL SHOPPING CENTER
TOTAL TRIPS (PRIMARY + PASS-BY)

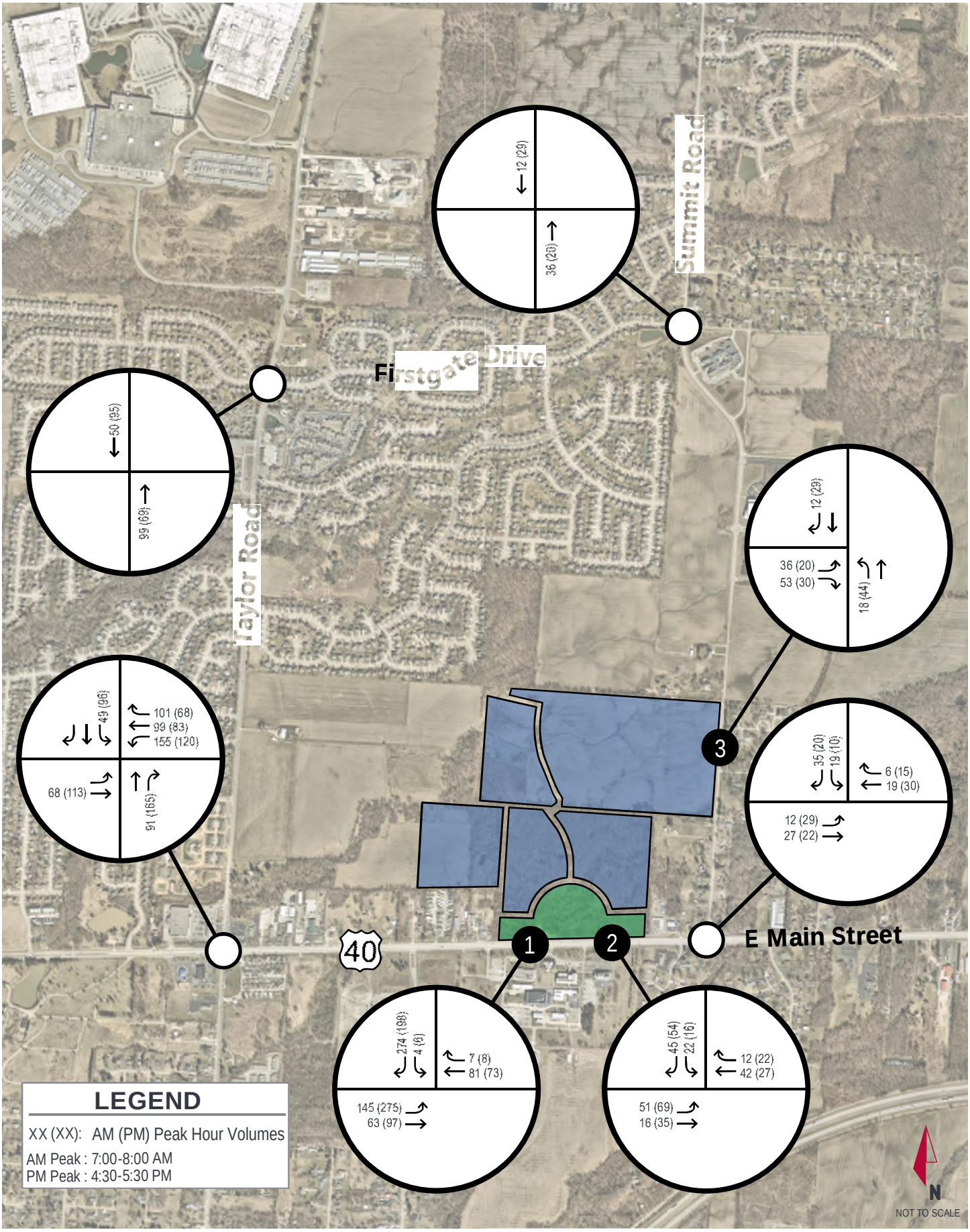

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EXHIBIT 15

2036 PROJECT TRAFFIC TRIP ASSIGNMENT

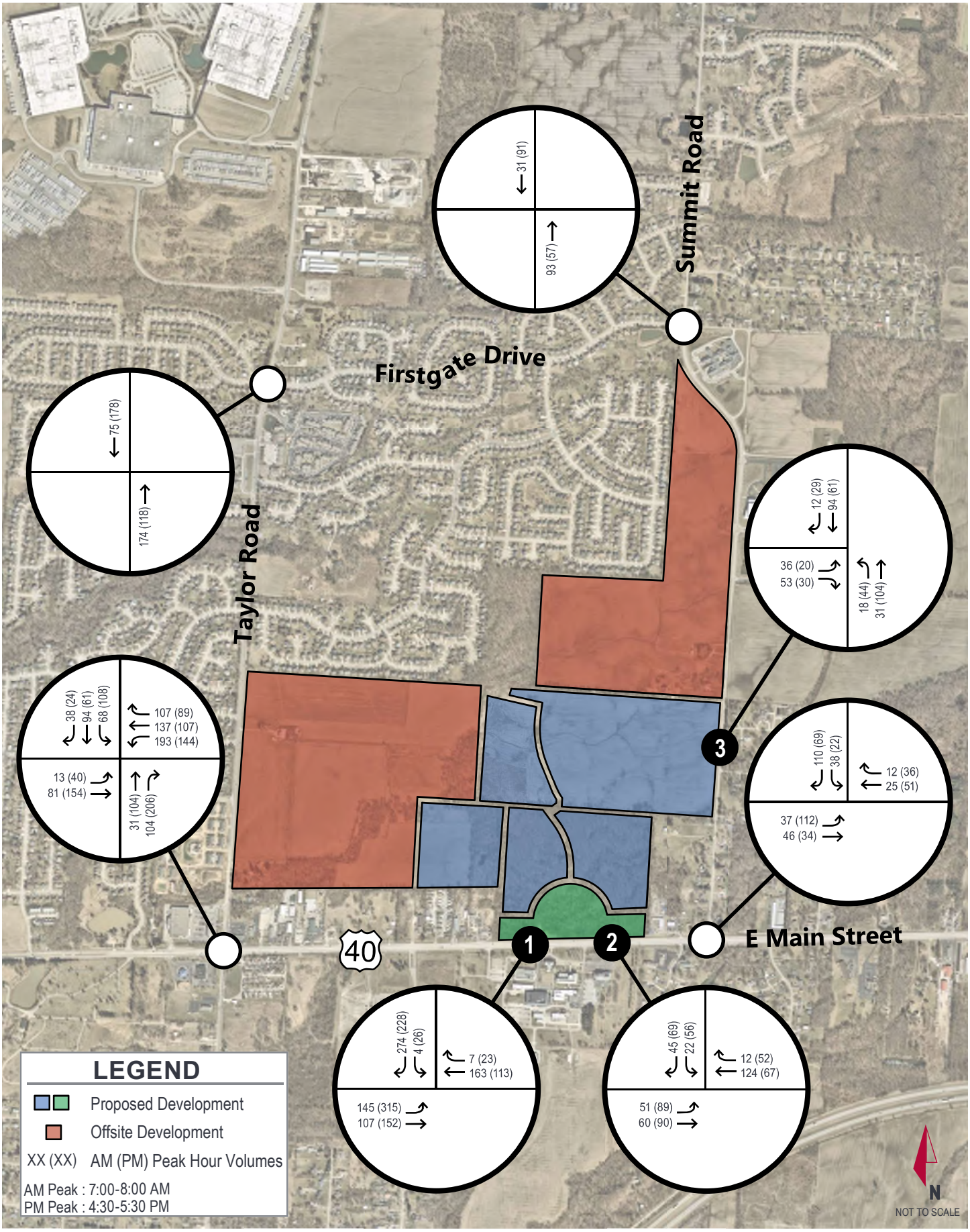

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EXHIBIT 16

2036 PROJECT TRAFFIC + OFFSITE TRIP ASSIGNMENT

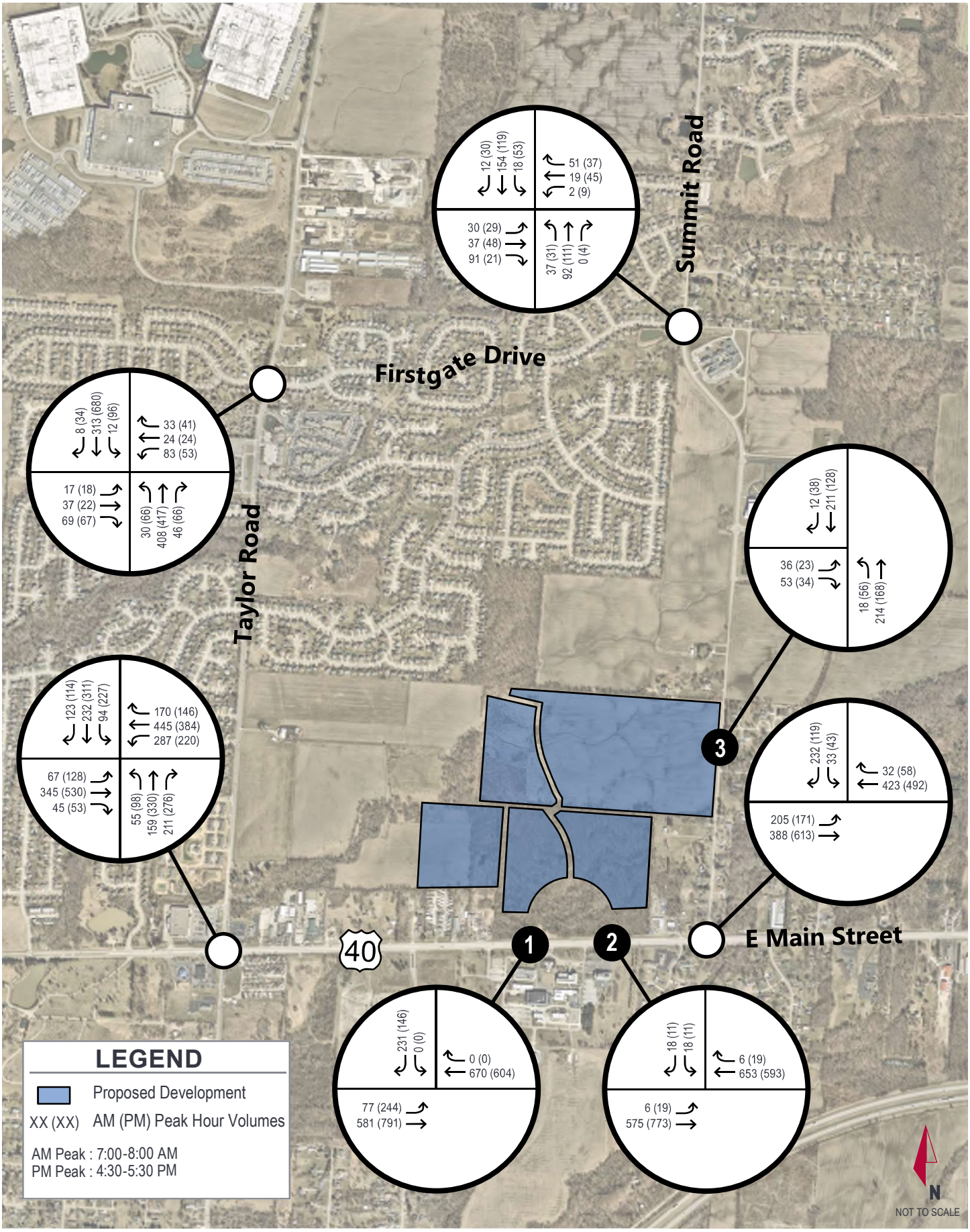

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EXHIBIT 17

OPENING YEAR (2026) BUILD PEAK HOUR TRAFFIC VOLUMES

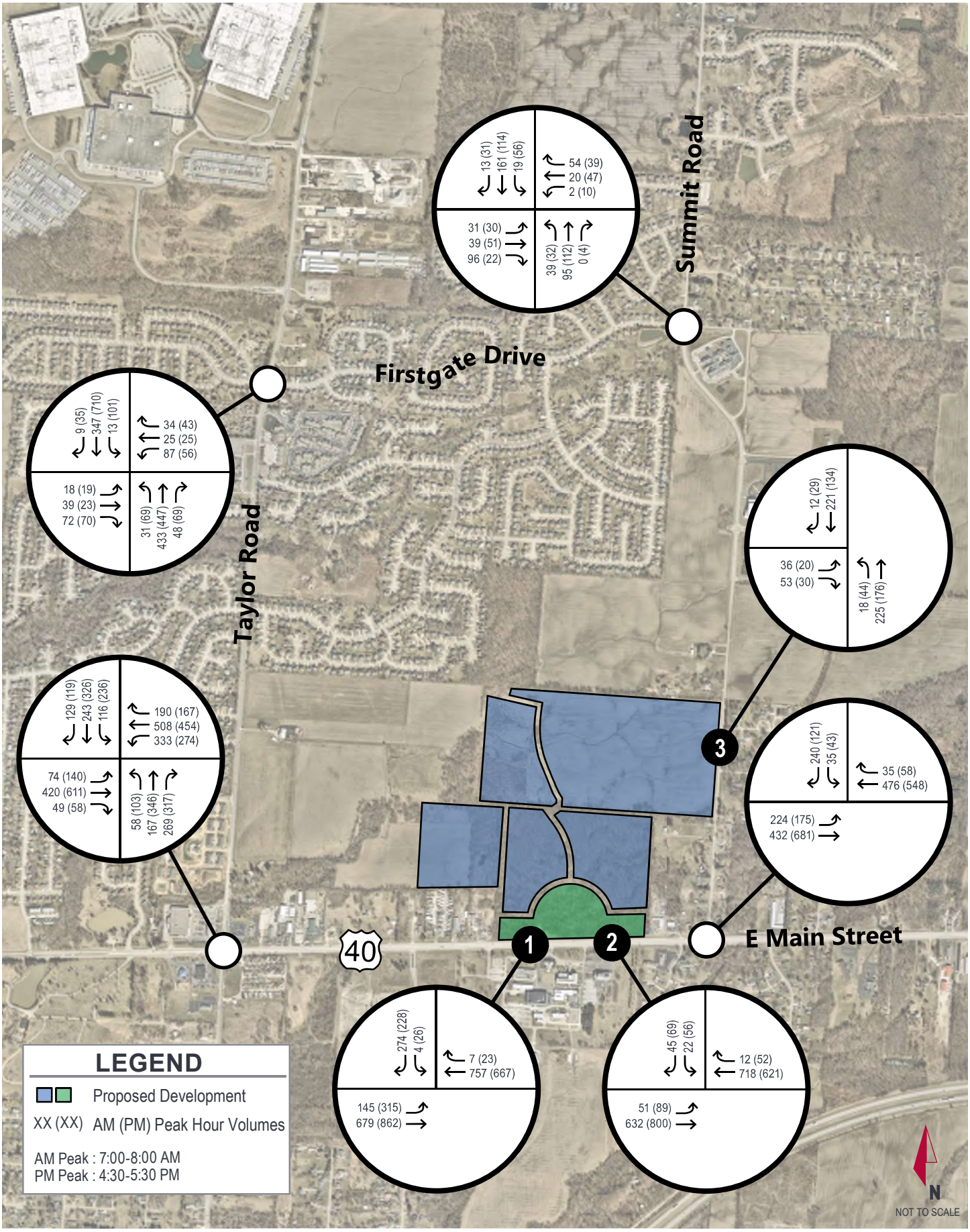

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EXHIBIT 18

HORIZON YEAR (2036) BUILD PEAK HOUR TRAFFIC VOLUMES

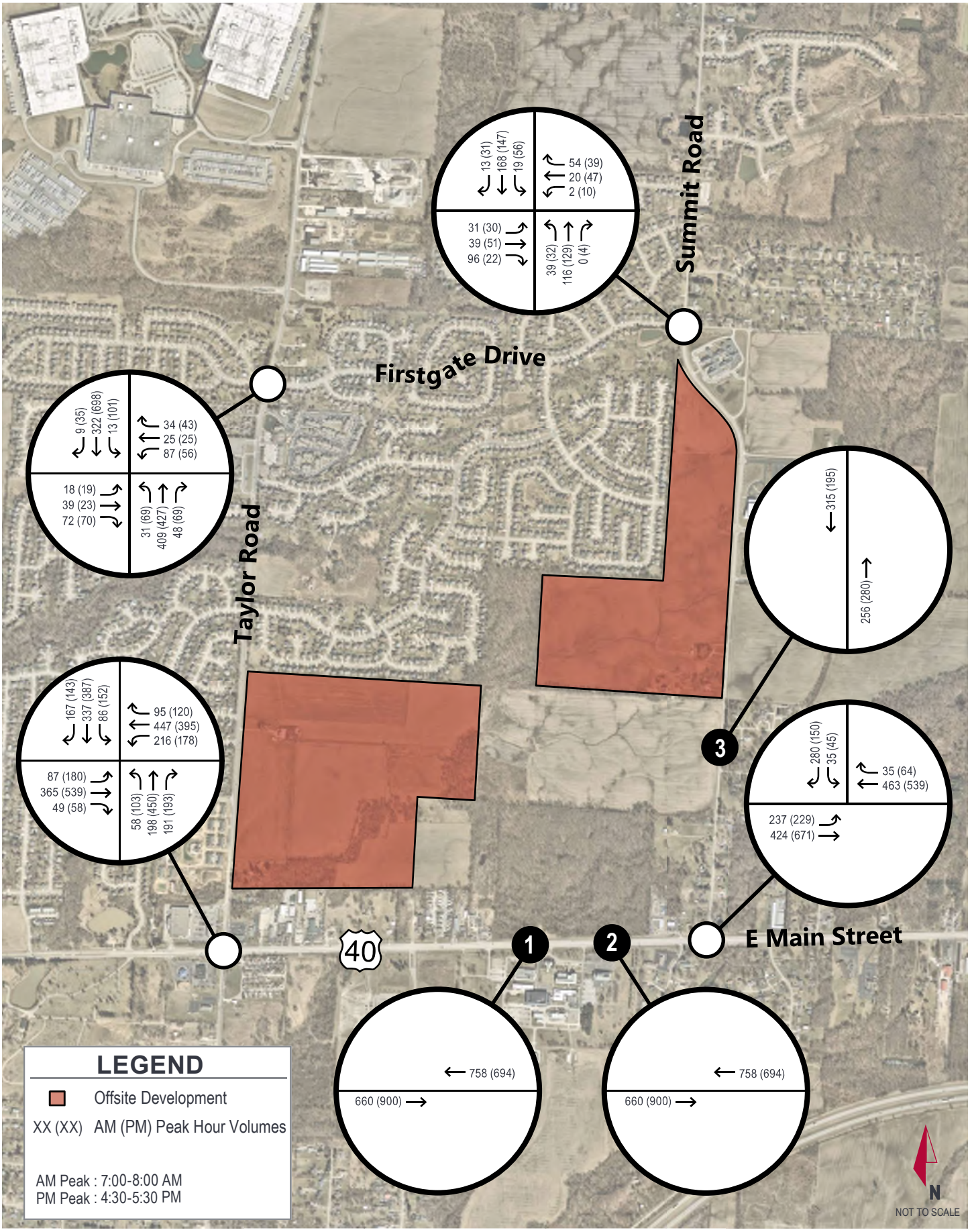

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EXHIBIT 19

HORIZON YEAR (2036) NO BUILD + OFFSITE PEAK HOUR TRAFFIC VOLUMES

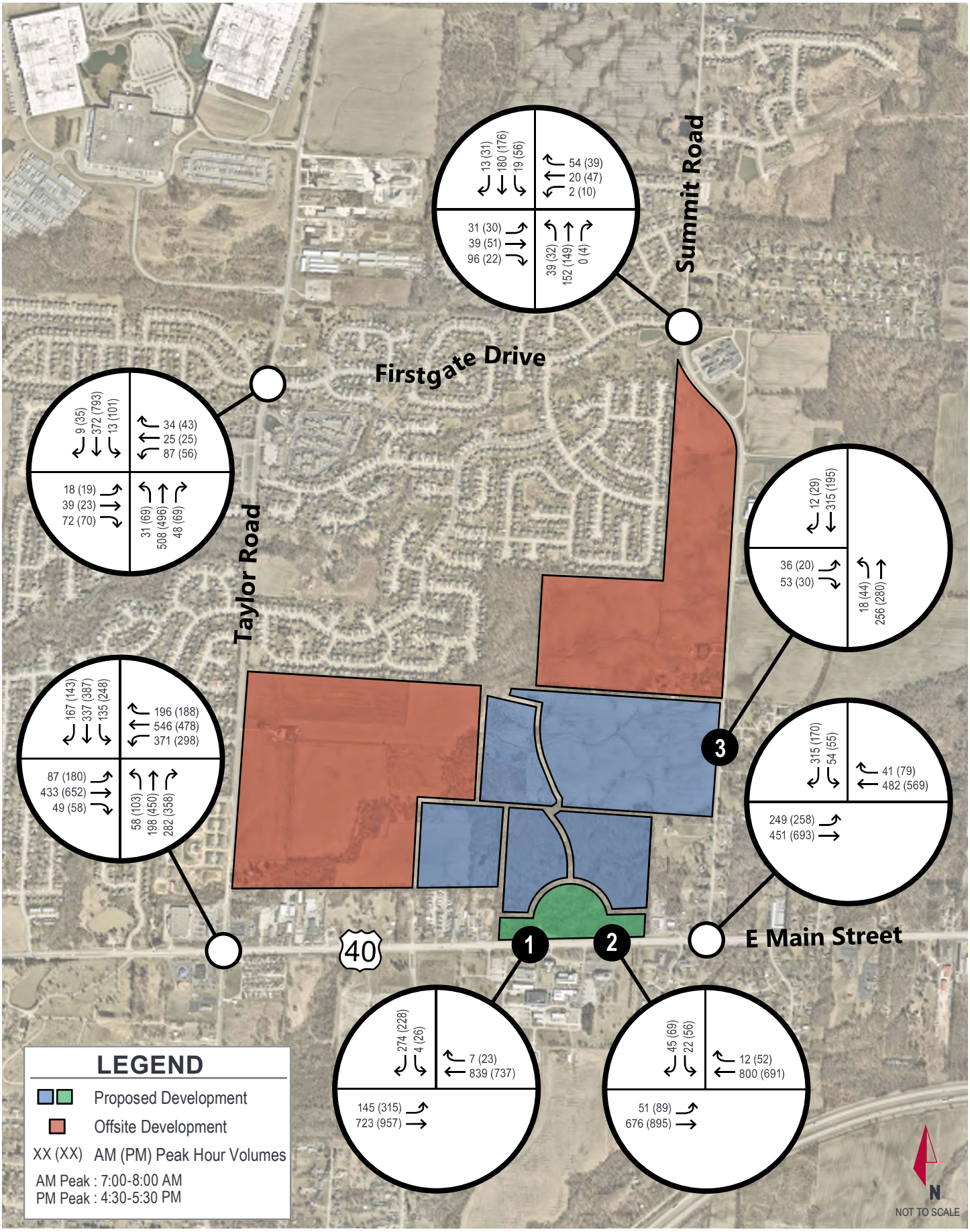

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EXHIBIT 20

HORIZON YEAR (2036) BUILD + OFFSITE PEAK HOUR TRAFFIC VOLUMES

ANALYSIS

This section of the report provides an overview of capacity analysis for the opening (2026) and horizon year (2036) traffic volumes, turn lane analysis for the study intersections, signal warrant analysis at the US-40 and Summit Road intersection, and identifies recommended transportation improvements to accommodate the proposed development. Traffic analysis was performed at the following study intersections:

- US-40 (E Main Street) and Taylor Road
- US-40 (E Main Street) and Summit Road
- US-40 (E Main Street) and Access Drive 1
- US-40 (E Main Street) and Access Drive 2

TURN LANE WARRANT ANALYSIS

The ODOT Location and Design Manual was used to determine if turn lanes were warranted at select study intersections. A turn lane warrant analysis was performed for the US-40 and Site Access Drive #1 and US-40 and Site Access Drive #2 intersections. **Table 6** provides a summary of the turn lane warrant analysis. A copy of the turn lane analysis and turn lane length calculations are provided in the **Appendix**.

Table 6: Turn Lane Warrant Analysis Summary

Intersection	Movement	Turn Lane Warranted (feet)		
		2026 Build	2036 Build	2036 Build + Offsites
US-40 and Site Access Drive #1	WBRT	No	No	No
	EBLT	345[1]	395[1]	395[1]
US-40 and Site Access Drive #2	WBRT	No	225	225
	EBLT	225[1]	245[1]	245[1]

[1]Left-Turn Lane Warranted Based on ODOT L&D Manual, Existing Geometry

The existing two-way left-turn lane along US-40 provides adequate storage space for eastbound vehicles turning left into the site access, per the length specified in **Table 6**. Further analysis should be conducted regarding westbound left-turn movements into the existing Ohio Department of Agriculture drives.

SIGNAL WARRANT ANALYSIS

The traffic volumes at the US-40 and Summit Road intersection was evaluated for traffic signal warrants using the guidance of the OMUTCD. The time-of-day distribution was estimated using the ITE Trip Generation Manual, Tip of Day Distribution workbook, and is provided in the **Appendix**. The Opening Year (2026) No Build volumes at the US-40 and Summit Road intersection are expected to meet warrant 2 (4-Hour) and 3 (Peak Hour), therefore it is recommended to install a new traffic signal at this location prior to the Opening Year of the study. For the Mitigated capacity analysis, the signal timing at the US-40 and Summit Road intersection was assumed to match the cycle length at the US-40 and Taylor Road intersection (150 seconds). The Ohio MUTCD Traffic Signal Warrant Analysis tables are provided in the **Appendix**.

CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the study intersections during the weekday AM and PM peak hours. The Highway Capacity Manual (HCM), 6th Edition was utilized for the analysis where it was applicable. Synchro 11TM software was utilized to evaluate capacity of the proposed study intersections (reported overall and by approach) for the peak hour of site generated traffic.

The capacity of an intersection quantifies its ability to accommodate traffic volumes and is measured in average delay per vehicle. It is expressed in terms of level of service (LOS) which ranges from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual, quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 7**. The range of control delay for each rating (as detailed in the HCM) is also shown in **Table 7**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red signals, higher delays are tolerated for the corresponding LOS ratings. For unsignalized stop intersections, the intersection LOS is reported as the worst side street movement.

Traffic models for each scenario were developed using Synchro 11TM and the delay and queueing were evaluated for each scenario. The scenarios that were analyzed are as follows:

- Opening Year (2026) No-Build
- Horizon Year (2036) No-Build
- Opening Year (2026) Build
- Horizon Year (2036) Build
- Horizon Year (2036) No-Build + Offsite
- Horizon Year (2036) Build + Offsite
- Opening Year (2026) Mitigated Build
- Horizon Year (2036) Mitigated Build
- Horizon Year (2036) Mitigated Build + Offsite

Table 7 - Level of Service Information

Level of Service	Average Control Delay (seconds/vehicle)	Description
A	0-10 (Unsignalized); 0-10 (Signalized)	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	>10-15 (Unsignalized); >10-20 (Signalized)	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	>15-25 (Unsignalized); >20-35 (Signalized)	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	>25-35 (Unsignalized); >35-55 (Signalized)	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	>35-50 (Unsignalized); >55-80 (Signalized)	High control delay; average travel speed no more than 33 percent of free flow speed.
F	>50 (Unsignalized); >80 (Signalized)	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

Table 8 is from section 5.9 of the OATS Manual, which outlines the LOS criteria for intersections. The study area is inside of the MORPC MPO boundary; therefore, LOS D is the acceptable intersection LOS threshold.

Table 8 - Operational Goals of Intersections (from Section 5.9 of the OATS Manual)

Result	Inside an MPO	Outside of an MPO
Intersection LOS	D or better	C of better
Approach LOS	E or better	
Control LOS	E or better	
v/c	All movements < 1.0 with < 0.93 preferred.	
QSR	All movements < 1.0 from HCS analysis, otherwise TransModeler may be needed to determine if queuing impacts upstream intersections.	

v/c = Volume-to-capacity ratio, QSR = Queue-Storage ratio

NO-BUILD CAPACITY ANALYSIS

The capacity analysis for the study intersections were completed for the No-Build Opening Year (2026) and Horizon Year (2036) and the results are summarized in **Tables 9-10**. The No-Build capacity analysis assumed the existing geometry at all study intersections. All approaches and intersections operated at an acceptable LOS, during No Build (2026 and 2036) peak hour conditions.

BUILD CONDITION CAPACITY ANALYSIS

The capacity analysis for the study intersections were completed for the Build Opening Year (2026) and Horizon Year (2036) are summarized in **Tables 9-10**. These scenarios assumed no geometric changes to the roadway network. With the following exceptions, all approaches and intersections operated at an acceptable LOS, during Build (2026 and 2036) peak hour conditions.

- US-40 and Taylor Road
  - Westbound approach during the 2036 (PM) Build Condition (V/C)
  - Northbound approach during the 2036 (PM) Build Condition

Table 9 – Weekday AM Peak Hour – Capacity Analysis

Intersection	2026 No Build			2026 Build			2036 No Build			2036 Build		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road												
Eastbound	*0.64*	*25.0*	*C*	*0.69*	*31.8*	*C*	*0.66*	*26.2*	*C*	*0.74*	*36.6*	*D*
Westbound	*0.62*	*21.7*	*C*	*0.71*	*25.2*	*C*	*0.63*	*22.5*	*C*	*0.88*	*35.0*	*D*
Northbound	*0.79*	*23.2*	*C*	*0.84*	*28.6*	*C*	*0.81*	*24.4*	*C*	*0.88*	*33.6*	*C*
Southbound	*0.50*	*20.8*	*C*	*0.50*	*25.2*	*C*	*0.51*	*21.8*	*C*	*0.63*	*28.2*	*C*
Intersection	*-*	*22.6*	*C*	*-*	*27.2*	*C*	*-*	*23.6*	*C*	*-*	*33.8*	*C*
▲ US-40 and Summit Road												
Eastbound	*0.19*	*9.1*	*A*	*0.20*	*9.2*	*A*	*0.21*	*9.4*	*A*	*0.23*	*9.6*	*A*
Westbound	*0*	*0*	*A*	*0*	*0*	*A*	*0*	*0*	*A*	*0*	*0*	*A*
Southbound	*0.33*	*12.9*	*B*	*0.45*	*15.4*	*C*	*0.36*	*13.6*	*B*	*0.49*	*17.1*	*C*
▲ US-40 and Site Access 1												
Eastbound	*-*	*-*	*-*	*0.09*	*9.4*	*A*	*-*	*-*	*-*	*0.18*	*10.4*	*B*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.37*	*13.8*	*B*	*-*	*-*	*-*	*0.49*	*17.0*	*C*
▲ US-40 and Site Access 2												
Eastbound	*-*	*-*	*-*	*0.007*	*9.0*	*A*	*-*	*-*	*-*	*0.06*	*9.5*	*A*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.08*	*13.5*	*B*	*-*	*-*	*-*	*0.15*	*14.4*	*B*

▲ – Minor-Leg Stop-Controlled Intersection ★ – Signalized Intersection

Table 10: Weekday PM Peak Hour – Capacity Analysis

Intersection	2026 No Build			2026 Build			2036 No Build			2036 Build		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road												
Eastbound	*0.72*	*30.0*	*C*	*0.81*	*47.0*	*D*	*0.75*	*32.4*	*C*	*0.84*	*49.9*	*D*
Westbound	*0.61*	*28.0*	*C*	*0.76*	*41.9*	*D*	*0.63*	*30.1*	*C*	*1.02*	*61.6*	*E*
Northbound	*0.85*	*26.3*	*C*	*0.97*	*58.0*	*E*	*0.87*	*29.8*	*C*	*1.08*	*89.2*	*F*
Southbound	*0.63*	*25.2*	*C*	*0.80*	*37.7*	*D*	*0.65*	*27.3*	*C*	*0.81*	*40.4*	*D*
Intersection	*-*	*27.4*	*C*	*-*	*46.3*	*D*	*-*	*30.0*	*C*	*-*	*60.7*	*E*
▲ US-40 and Summit Road												
Eastbound	*0.14*	*9.1*	*A*	*0.18*	*9.5*	*A*	*0.16*	*9.4*	*A*	*0.20*	*9.8*	*A*
Westbound	*0*	*0*	*A*	*0*	*0*	*A*	*0*	*0*	*A*	*0*	*0*	*A*
Southbound	*0.25*	*13.9*	*B*	*0.35*	*16.3*	*C*	*0.28*	*14.9*	*B*	*0.38*	*17.5*	*C*
▲ US-40 and Site Access 1												
Eastbound	*-*	*-*	*-*	*0.28*	*10.3*	*B*	*-*	*-*	*-*	*0.39*	*11.7*	*B*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.23*	*11.9*	*B*	*-*	*-*	*-*	*0.58*	*22.8*	*C*
▲ US-40 and Site Access 2												
Eastbound	*-*	*-*	*-*	*0.02*	*9.0*	*A*	*-*	*-*	*-*	*0.11*	*9.6*	*A*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.05*	*13.5*	*B*	*-*	*-*	*-*	*0.34*	*18.8*	*C*

▲ – Minor-Leg Stop-Controlled Intersection ★ – Signalized Intersection

HORIZON YEAR NO-BUILD + OFFSITES CAPACITY ANALYSIS

The capacity analysis for the study intersections were completed for the No-Build Horizon Year (2036) + Offsites and the results are summarized in **Tables 11-12**. The Horizon Year (2036) + Offsites No-Build traffic volumes include anticipated offsite trips. The No-Build capacity analysis assumed the existing geometry at all study intersections. All approaches and intersections operated at an acceptable LOS, during 2036 No Build + Offsites peak hour conditions.

HORIZON YEAR BUILD + OFFSITES CAPACITY ANALYSIS

The capacity analysis for the study intersections were completed for the Build Horizon Year (2036) + Offsites and the results are summarized in **Tables 11-12**. These scenarios assumed no geometric changes to the roadway network. The Horizon Year (2036) Build + Offsites traffic volumes include anticipated offsite trips. With the following exceptions, all approaches and intersections operated at an acceptable LOS, during peak hour conditions.

- US-40 and Taylor Road
  - Westbound approach during the 2036 (AM and PM) Build Condition (V/C)
  - Northbound approach during the 2036 (PM) Build Condition

It is recommended to monitor the intersection of US-40 and Taylor Road with respect to background volume growth and the realized traffic growth from the development expected to be completed by 2026. This analysis should be updated when details of the development to be completed 2036 are solidified and the 2036 development is imminent. Mitigation measures including a northbound left-turn lane and should be considered to mitigate the operational impact of the 2036 development traffic.

Table 11 – Weekday AM Peak Hour (w/ Offsite Trips)– Capacity Analysis

Intersection	2036 No Build + Offsite			2036 Build + Offsite		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road						
Eastbound	*0.69*	*29.6*	*C*	*0.72*	*38.6*	*D*
Westbound	*0.67*	*24.9*	*C*	*1.05*	*54.0*	*D*
Northbound	*0.84*	*26.8*	*C*	*0.90*	*39.7*	*D*
Southbound	*0.64*	*24.3*	*C*	*0.67*	*29.7*	*C*
Intersection	-	*26.1*	*C*	-	*42.8*	*D*
▲ US-40 and Summit Road						
Eastbound	*0.24*	*9.6*	*A*	*0.26*	*9.9*	*A*
Westbound	*0*	*0*	*A*	*0*	*0*	*A*
Southbound	*0.55*	*18.2*	*C*	*0.70*	*25.7*	*D*
▲ US-40 and Site Access 1						
Eastbound	-	-	-	*0.20*	*10.9*	*B*
Westbound	-	-	-	*0*	*0*	*A*
Southbound	-	-	-	*0.53*	*18.6*	*C*
▲ US-40 and Site Access 2						
Eastbound	-	-	-	*0.07*	*9.9*	*A*
Westbound	-	-	-	*0*	*0*	*A*
Southbound	-	-	-	*0.17*	*15.4*	*C*

Table 12 – Weekday PM Peak Hour (w/ Offsite Trips)– Capacity Analysis

Intersection	2036 No Build + Offsite			2036 Build + Offsite		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road						
Eastbound	*0.80*	*42.7*	*D*	*0.85*	*51.8*	*D*
Westbound	*0.72*	*41.1*	*D*	*1.14*	*77.1*	*E*
Northbound	*0.96*	*51.1*	*D*	*1.34*	*184.9*	*F*
Southbound	*0.72*	*31.6*	*C*	*0.83*	*41.8*	*D*
Intersection	-	*41.9*	*D*	-	*90.7*	*F*
▲ US-40 and Summit Road						
Eastbound	*0.26*	*10.2*	*B*	*0.31*	*10.7*	*B*
Westbound	*0*	*0*	*A*	*0*	*0*	*A*
Southbound	*0.46*	*19.6*	*C*	*0.59*	*25.6*	*D*
▲ US-40 and Site Access 1						
Eastbound	-	-	-	*0.41*	*12.5*	*B*
Westbound	-	-	-	*0*	*0*	*A*
Southbound	-	-	-	*0.62*	*26.1*	*D*
▲ US-40 and Site Access 2						
Eastbound	-	-	-	*0.12*	*9.9*	*A*
Westbound	-	-	-	*0*	*0*	*A*
Southbound	-	-	-	*0.37*	*20.7*	*C*

NO BUILD CONDITION MITIGATED CAPACITY ANALYSIS

Further analysis was performed on the Opening Year (2026) and Horizon Year (2036) No Build Mitigated condition. No Build Mitigated capacity analysis were used to determine the operational benefits of potential mitigation measures to offset background traffic growth. The 2026 No Build traffic volumes meet OMUTCD traffic signal warrants 2 and 3 at the US-40 and Summit Road intersection; therefore, a proposed traffic signal was included in the 2026 and 2036 No Build Mitigated capacity analysis. **Tables 13-14** summarize the operational results of the Mitigated No Build Opening Year (2026) and Horizon Year (2036) conditions. All approaches and intersection operated at an acceptable LOS, during peak hour conditions.

BUILD CONDITION MITIGATED CAPACITY ANALYSIS

Further analysis was performed on the Opening Year (2026) and Horizon Year (2036) Build Mitigated conditions. Build Mitigated analysis were used to determine the operational benefits of potential mitigation measures to offset the impact of the increased traffic attributed to the proposed development. Analysis consisted of testing additional turn lanes on multiple approaches to add capacity and optimizing traffic signal timing. For the US-40 and Taylor Road intersection to operate with an acceptable level of service in the Horizon Year (2036) Build, a northbound right-turn lane and updated traffic signal timing are warranted. A new traffic signal was included at the US-40 and Summit Road intersection and is warranted in the 2026 No-Build Condition. **Tables 13-14** summarize the operational results of the Mitigated Build Opening Year (2026) and Horizon Year (2036) condition. All approaches and intersection operated at an acceptable LOS, during peak hour conditions.

Table 13: Weekday AM Peak Hour – Mitigated Capacity Analysis

Intersection	2026 No Build Mitigated			2026 Build Mitigated			2036 No Build Mitigated			2036 Build Mitigated		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road												
Eastbound	*No Mitigation*			*No Mitigation*			*No Mitigation*			*0.73*	*30.1*	*C*
Westbound										*0.74*	*21.4*	*C*
Northbound										*0.81*	*28.6*	*C*
Southbound										*0.59*	*28.3*	*C*
Intersection										*-*	*26.0*	*C*
★ US-40 and Summit Road												
Eastbound	*0.47*	*12.3*	*B*	*0.38*	*6.5*	*A*	*0.38*	*5.9*	*A*	*0.43*	*6.7*	*A*
Westbound	*0.34*	*10.6*	*B*	*0.30*	*5.6*	*A*	*0.31*	*5.1*	*A*	*0.31*	*5.6*	*A*
Southbound	*0.41*	*14.4*	*B*	*0.71*	*13.3*	*B*	*0.67*	*13.5*	*B*	*0.73*	*15.1*	*B*
Intersection	*-*	*12.0*	*B*	*-*	*7.5*	*A*	*-*	*6.9*	*A*	*-*	*7.9*	*A*
▲ *US-40 and Site Access 1*												
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*			*-*	*-*	*-*	*No Additional Mitigation*		
Westbound	*-*	*-*	*-*				*-*	*-*	*-*			
Southbound	*-*	*-*	*-*				*-*	*-*	*-*			
▲ *US-40 and Site Access 2*												
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*			*-*	*-*	*-*	*0.06*	*9.5*	*A*
Westbound	*-*	*-*	*-*				*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*				*-*	*-*	*-*	*0.15*	*14.3*	*B*

▲ – Minor-Leg Stop-Controlled Intersection ★ – Signalized Intersection

Table 14: Weekday PM Peak Hour – Mitigated Capacity Analysis

Intersection	2026 No Build Mitigated			2026 Build Mitigated			2036 No Build Mitigated			2036 Build Mitigated		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road												
Eastbound	*No Mitigation*			*No Mitigation*			*No Mitigation*			*0.79*	*34.3*	*C*
Westbound										*0.77*	*27.9*	*C*
Northbound										*0.83*	*35.2*	*D*
Southbound										*0.76*	*35.1*	*D*
Intersection										*-*	*32.9*	*C*
★ US-40 and Summit Road												
Eastbound	*0.45*	*12.1*	*B*	*0.35*	*4.9*	*A*	*0.38*	*4.7*	*A*	*0.37*	*4.9*	*A*
Westbound	*0.38*	*11.0*	*B*	*0.32*	*4.4*	*A*	*0.32*	*4.3*	*A*	*0.33*	*4.3*	*A*
Southbound	*0.23*	*11.9*	*B*	*0.59*	*13.1*	*B*	*0.51*	*12.2*	*B*	*0.61*	*14.3*	*B*
Intersection	*-*	*11.7*	*B*	*-*	*5.6*	*A*	*-*	*5.2*	*A*	*-*	*5.6*	*A*
▲ *US-40 and Site Access 1*												
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*			*-*	*-*	*-*	*No Additional Mitigation*		
Westbound	*-*	*-*	*-*				*-*	*-*	*-*			
Southbound	*-*	*-*	*-*				*-*	*-*	*-*			
▲ *US-40 and Site Access 2*												
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*			*-*	*-*	*-*	*0.11*	*9.6*	*A*
Westbound	*-*	*-*	*-*				*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*				*-*	*-*	*-*	*0.33*	*18.2*	*C*

▲ – Minor-Leg Stop-Controlled Intersection ★ – Signalized Intersection

NO BUILD + OFFSITES CONDITION MITIGATED CAPACITY ANALYSIS

Further analysis was performed on the Horizon Year (2036) No Build + Offsite condition, with the addition of 2036 anticipated offsite traffic. No Build + Offsite analysis were used to determine the operational benefits of potential mitigation measures to offset background traffic growth and offsite generated traffic volumes. **Tables 15-16** summarize the operational results of the Mitigated No Build Horizon Year (2036) + Offsite Trips conditions. All approaches and intersection operated at an acceptable LOS, during peak hour conditions.

BUILD + OFFSITES CONDITION MITIGATED CAPACITY ANALYSIS

Further analysis was performed on the Horizon Year (2036) Build, with the addition of anticipated offsite traffic. Build + Offsite Mitigated analysis were used to determine the operational benefits of potential mitigation measures to offset the impact of the increased traffic attributed to the proposed development and offsite traffic. Analysis consisted of testing additional turn lanes on multiple approaches to add capacity and optimizing traffic signal timing. For the US-40 and Taylor Road intersection to operate with an acceptable level of service in the Horizon Year (2036) Build + Offsite conditions, a westbound left-turn lane, northbound right-turn lane, and updated traffic signal timing are warranted. A new traffic signal was included at the US-40 and Summit Road intersection. **Tables 15-16** summarize the operational results of the Mitigated Build Horizon Year (2036) + Offsite Trips condition. All approaches and intersection operated at an acceptable LOS, during peak hour conditions.

Table 15 – Weekday AM Peak Hour (w/ Offsite Trips)– Mitigated Capacity Analysis

Intersection	2036 No Build + Offsite Mitigated			2036 Build + Offsite Mitigated		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road						
Eastbound	*No Mitigation*			*0.76*	*33.2*	*C*
Westbound				*0.80*	*23.5*	*C*
Northbound				*0.82*	*30.9*	*C*
Southbound				*0.77*	*31.8*	*C*
Intersection				*-*	*28.7*	*C*
▲ US-40 and Summit Road						
Eastbound	*0.47*	*7.7*	*A*	*0.52*	*8.8*	*A*
Westbound	*0.31*	*6.2*	*A*	*0.32*	*7.1*	*A*
Southbound	*0.78*	*16.7*	*B*	*0.82*	*18.9*	*B*
Intersection	*-*	*9.1*	*A*	*-*	*10.6*	*B*
▲ *US-40 and Site Access 1*						
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*		
Westbound	*-*	*-*	*-*			
Southbound	*-*	*-*	*-*			
▲ *US-40 and Site Access 2*						
Eastbound	*-*	*-*	*-*	*0.07*	*9.9*	*A*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.17*	*15.3*	*C*

Table 16 – Weekday PM Peak Hour (w/ Offsite Trips)– Mitigated Capacity Analysis

Intersection	2036 No Build + Offsite Mitigated			2036 Build + Offsite Mitigated		
	V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
★ US-40 and Taylor Road						
Eastbound	*No Mitigation*			*0.84*	*44.7*	*D*
Westbound				*0.87*	*37.1*	*D*
Northbound				*0.87*	*43.9*	*D*
Southbound				*0.80*	*40.4*	*D*
Intersection				*-*	*41.5*	*D*
▲ US-40 and Summit Road						
Eastbound	*0.43*	*5.3*	*A*	*0.51*	*5.9*	*A*
Westbound	*0.31*	*4.4*	*A*	*0.32*	*4.6*	*A*
Southbound	*0.68*	*17.0*	*B*	*0.74*	*20.4*	*C*
Intersection	*-*	*6.3*	*A*	*-*	*7.3*	*A*
▲ *US-40 and Site Access 1*						
Eastbound	*-*	*-*	*-*	*No Additional Mitigation*		
Westbound	*-*	*-*	*-*			
Southbound	*-*	*-*	*-*			
▲ *US-40 and Site Access 2*						
Eastbound	*-*	*-*	*-*	*0.12*	*9.9*	*A*
Westbound	*-*	*-*	*-*	*0*	*0*	*A*
Southbound	*-*	*-*	*-*	*0.36*	*20.0*	*C*

CONCLUSIONS & RECOMMENDATIONS

Based on an evaluation of traffic conditions at the study intersections, the addition of site generated traffic from the development expected to be complete by the year 2026 is expected to moderately impact traffic operations compared to the No-Build condition**. However, all study area intersections operate with acceptable level of service, including all site accesses.**

The analysis of study intersections with the addition of site generated traffic expected to be completed by 2036 is expected to moderately impact traffic operation compared to the 2036 No Build condition. **All study area intersections operate with acceptable level of service, with exception to the US-40 and Taylor Road intersection.**

Overall, the installation of a westbound right-turn lane on US-40 at Site Access #2, northbound right-turn lane on Taylor Road at US-40, and updated signal timing at US-40 and Taylor Road is anticipated to mitigate the addition sight generated trips from the proposed development.

The following improvements are recommended based on the analysis of this study. Improvements recommended during "No Build Conditions" represent improvements which were warranted based on background traffic growth. Improvements recommended during "Build Conditions" represent items which were warranted based on the addition of site-generated trips. Improvements recommended during "Build + Offsite Conditions" represent items which were warranted based on the addition of site-generated and offsite trips.

<u>2026 No Build Conditions</u>

- Construct a new traffic signal at the US-40 and Summit Road intersection. Turning movement counts are anticipated to meet warrant 2 (4-Hour) and 3 (Peak Hour) Ohio MUTCD traffic signal warrants.

<u>2026 Build Conditions (These improvements are associated with the proposed residential development)</u>

- No additional improvements

<u>2036 Build Conditions (These improvements are associated with the proposed commercial development)</u>

- Construct a northbound right-turn lane on Taylor Road at US-40. The recommended length of this turn-lane is 250 feet including a 50-foot diverging taper.
- Update traffic signal timings at the US-40 and Taylor Road intersection.
- Construct a westbound right-turn lane on US-40 at Access Drive #2. The recommended length of this turn-lane is 255 feet including a 50-foot diverging taper.

<u>2036 Build + Offsite Conditions</u>

- Update traffic signal timings at the US-40 and Taylor Road intersection

APPENDIX

A - Conceptual Site Plan

B - Traffic MOU

C - Traffic Count Data

D – COVID Adjustment Factors

E – Incremental Traffic Growth Calculations

F – MORPC Growth Rate Data

G - Data from ITE Trip Generation, 10th Edition

H – Internal Trip Calculation

I – ODOT Traffic Count Data

J – ITE Time of Day Distribution Data

K – Turn Lane Warrant Analysis

L – Turn Lane Length Calculations

M – Signal Warrant Analysis

N – Synchro Capacity Analysis Reports

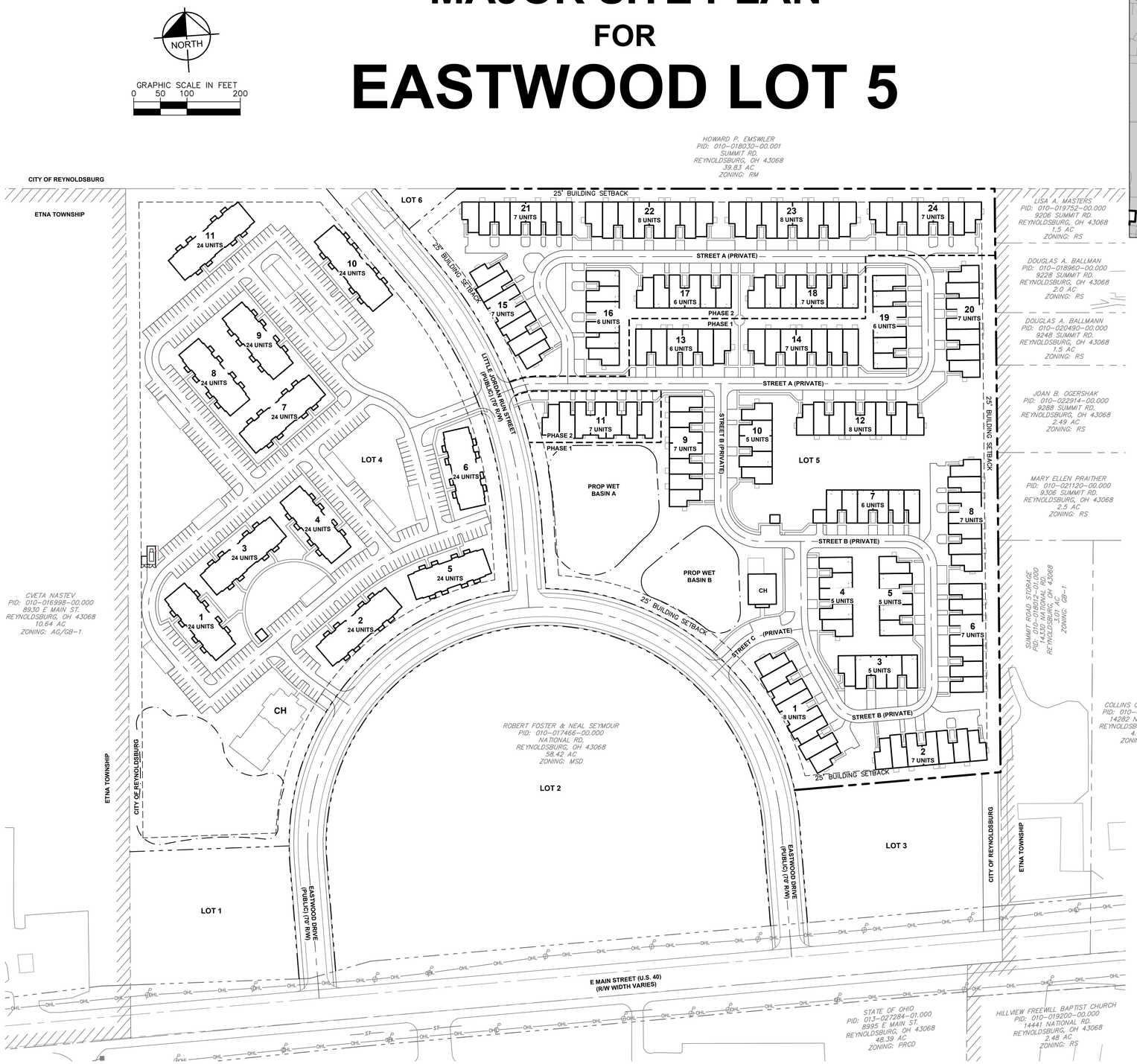
O – Mitigated Synchro Capacity Analysis Reports

APPENDIX

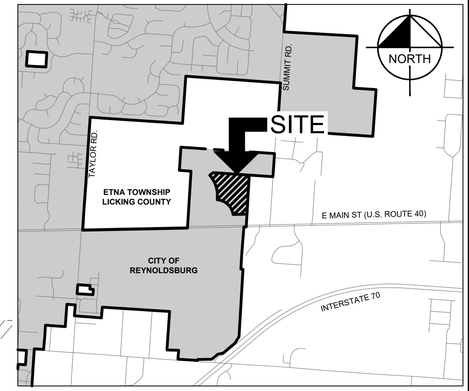
A. Conceptual Site Plan

MAJOR SITE PLAN
FOR
EASTWOOD LOT 5

SHEET INDEX	
Sheet Number	**Sheet Title**
1	COVER SHEET
2	EXISTING CONDITIONS
3	SITE PLAN
4	SITE PLAN
5	OVERALL UTILITY PLAN
6	UTILITY PLAN
7	UTILITY PLAN
8	TRANSPORTATION PLAN
9	TRANSPORTATION PLAN
10	LIGHTING DETAILS
11	LIGHTING PLAN
12	LIGHTING PLAN



INDEX MAP
SCALE: 1"=100'



VICINITY MAP
SCALE: 1"=2000'

FEMA FLOODPLAIN DATA

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE "X" (OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAPS, COMMUNITY PANEL NO. 39089C0409J, WHICH BEARS AN EFFECTIVE DATE OF 03/16/2015.

ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
7965 N HIGH ST, SUITE 200
COLUMBUS, OH 43235
(614) 472-8546
MIKE.REEVES@KIMLEY-HORN.COM
CONTACT: MIKE REEVES

DEVELOPER
JOE CIMINELLO
567 LAZELLE RD
WESTERVILLE, OH 43081
TEL: (614) 207-7607
EMAIL: CIMINELLOJ@AOL.COM

CURRENT OWNER
ROBERT FOSTER & NEAL SEYMOUR
NATIONAL RD.
REYNOLDSBURG, OH 43068

REGISTERED ENGINEER DATE

No.	REVISIONS	DATE	BY

Kimley»Horn

7965 NORTH HIGH STREET, SUITE 200
COLUMBUS, OH 43235
PHONE: 614-472-8546
WWW.KIMLEY-HORN.COM

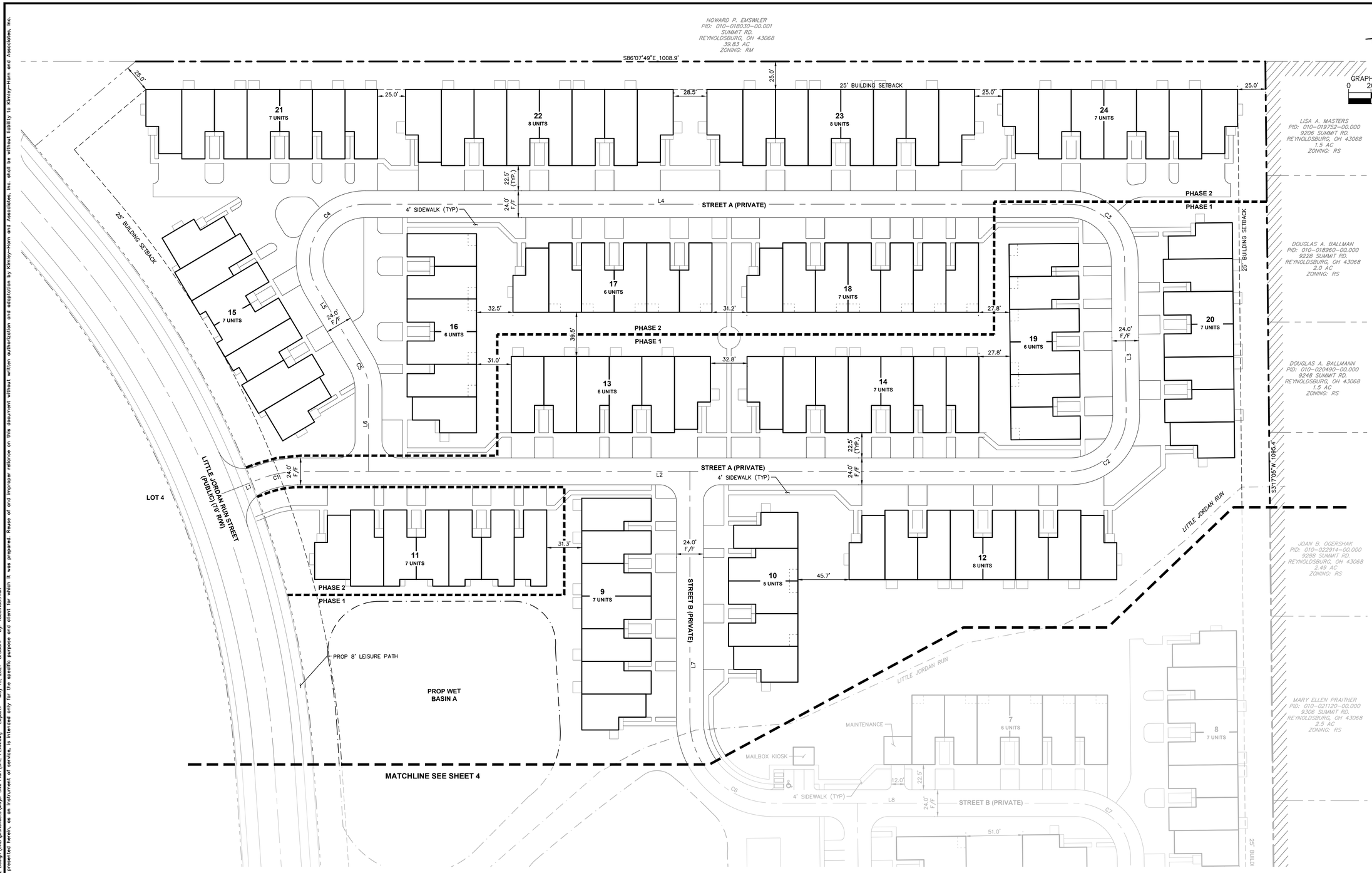
SCALE: AS NOTED
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

COVER SHEET

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE: 05/13/2021
KHA PROJECT NO. 190010007

SHEET NUMBER
1
OF 12



LINE TABLE		
LINE	LENGTH	BEARING
L1	42.84	S72°38'16.26"W
L2	687.31	N86°07'48.77"W
L3	138.51	S3°17'04.81"W
L4	627.95	S86°07'48.77"E
L5	75.48	N26°53'25.91"W
L6	72.50	N3°52'11.23"E
L7	221.22	S3°52'11.23"W

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	100.00'	37.06'	S83°15'14"W	36.85'	21°13'55"	18.74'
C2	50.00'	79.05'	S48°34'38"W	71.07'	90°35'06"	50.51'
C3	50.00'	78.03'	S41°25'22"E	70.35'	89°24'54"	49.49'
C4	50.00'	105.38'	N33°29'23"E	86.93'	120°45'37"	87.94'
C5	50.00'	26.84'	N11°30'37"W	26.52'	30°45'37"	13.75'

NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO SHEET 8 FOR PARKING COUNT & BUILDING LEGEND
4. CURRENT ZONING: MSD

LEGEND

- EXISTING SITE BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING STREAM
- PROPOSED BUILDING SETBACK
- PROPOSED DRIVEWAY
- PROPOSED BUILDING
- PROPOSED FACE OF CURB
- PROPOSED RIGHT OF WAY
- PROPOSED SIDEWALK
- PROPOSED CENTERLINE
- PROPOSED WET BASIN
- PROPOSED PHASE LINE
- MUNICIPALITY BOUNDARY

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 614-540-6559
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SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

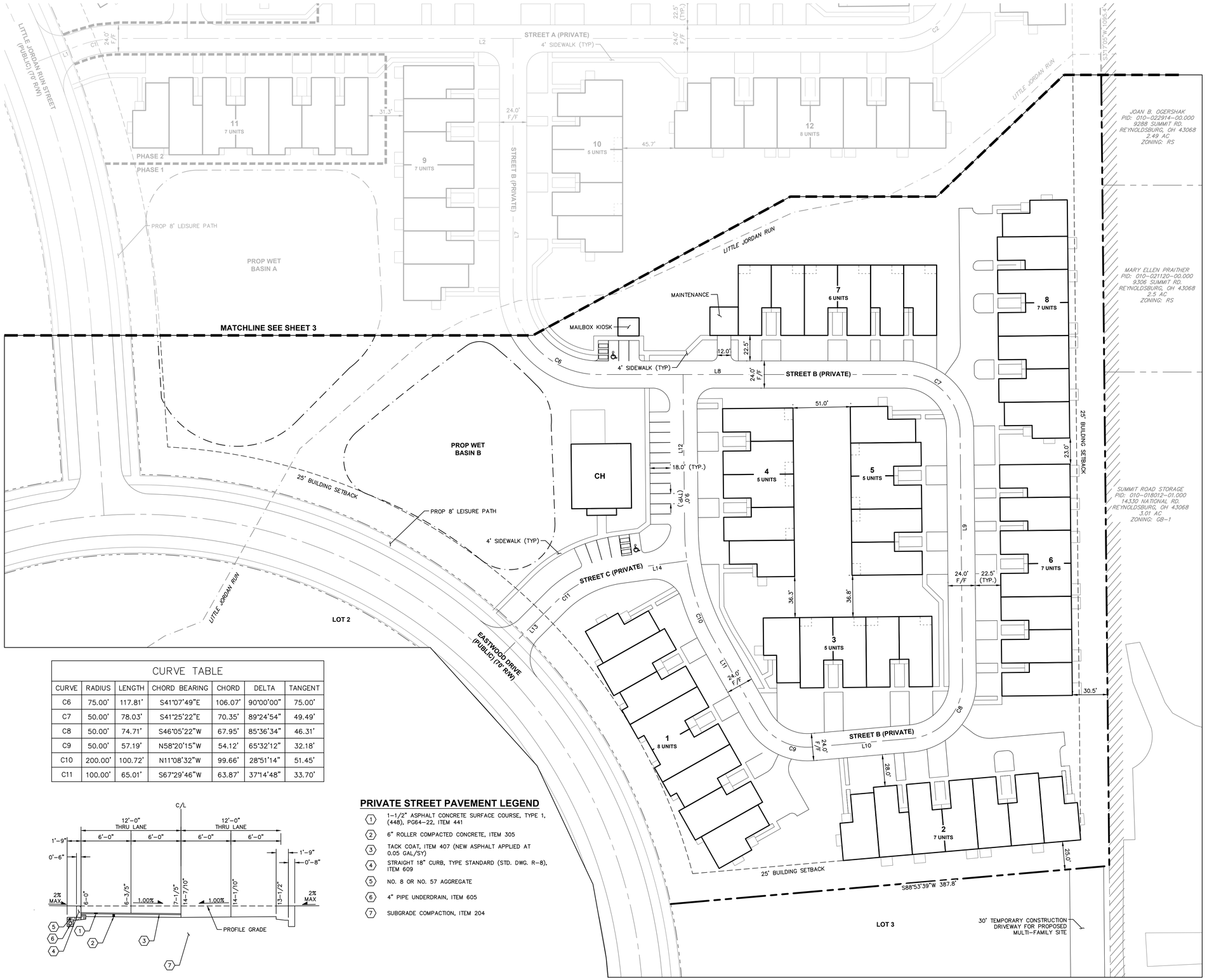
SITE PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE:
05/13/2021

KHA PROJECT NO.
190010007

SHEET NUMBER
3
OF 12



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- EXISTING SITE BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING STREAM
- PROPOSED BUILDING SETBACK
- PROPOSED DRIVEWAY
- PROPOSED BUILDING
- PROPOSED FACE OF CURB
- PROPOSED RIGHT OF WAY
- PROPOSED SIDEWALK
- PROPOSED CENTERLINE
- PROPOSED WET BASIN
- PROPOSED PHASE LINE
- MUNICIPALITY BOUNDARY

NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO SHEET 8 FOR PARKING COUNT & BUILDING LEGEND
4. CURRENT ZONING: MSD

LINE TABLE

LINE	LENGTH	BEARING
L8	268.73	S86°07'48.77"E
L9	221.03	S3°17'04.81"W
L10	86.90	S88°53'38.63"W
L11	79.22	N25°34'09.27"W
L12	137.89	N3°17'04.81"E
L13	70.08	S48°52'22.08"W
L14	58.96	S86°07'09.85"W

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C6	75.00'	117.81'	S41°07'49"E	106.07'	90°00'00"	75.00'
C7	50.00'	78.03'	S41°25'22"E	70.35'	89°24'54"	49.49'
C8	50.00'	74.71'	S46°05'22"W	67.95'	85°36'34"	46.31'
C9	50.00'	57.19'	N58°20'15"W	54.12'	65°32'12"	32.18'
C10	200.00'	100.72'	N11°08'32"W	99.66'	28°51'14"	51.45'
C11	100.00'	65.01'	S67°29'46"W	63.87'	37°14'48"	33.70'

PRIVATE STREET 24' FC/FC TYPICAL SECTION

NOT TO SCALE

PRIVATE STREET PAVEMENT LEGEND

1. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, ITEM 441
2. 6" ROLLER COMPACTED CONCRETE, ITEM 305
3. TACK COAT, ITEM 407 (NEW ASPHALT APPLIED AT 0.05 GAL/SY)
4. STRAIGHT 18" CURB, TYPE STANDARD (STD. DWG. R-8), ITEM 609
5. NO. 8 OR NO. 57 AGGREGATE
6. 4" PIPE UNDERDRAIN, ITEM 605
7. SUBGRADE COMPACTION, ITEM 204

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 614-459-0030
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SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

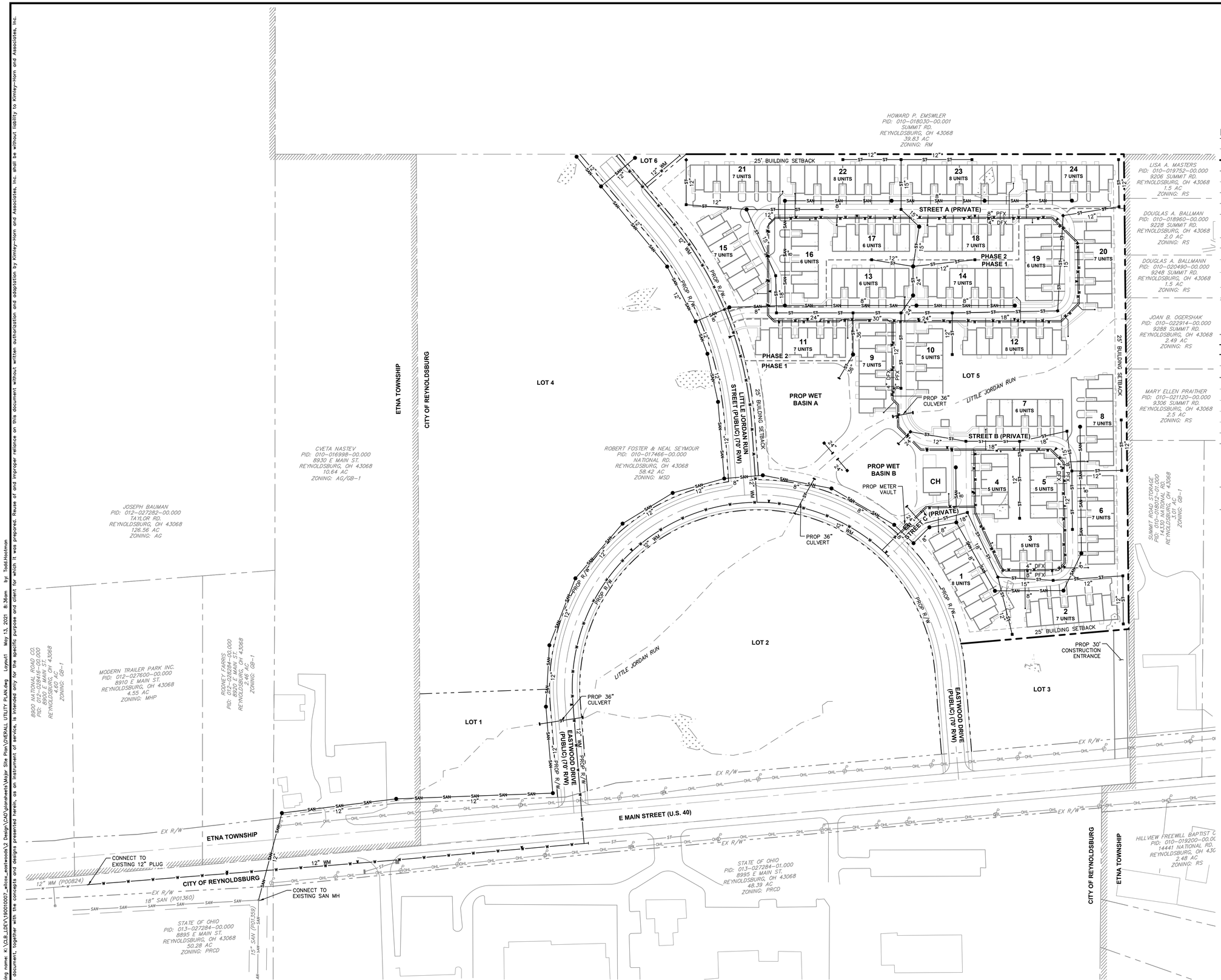
SITE PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE:
05/13/2021

KHA PROJECT NO.
190010007

SHEET NUMBER
4
OF 12



No.	REVISIONS	DATE	BY

Kimley»Horn

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WWW.KIMLEY-HORN.COM

SCALE: 1" = 100'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

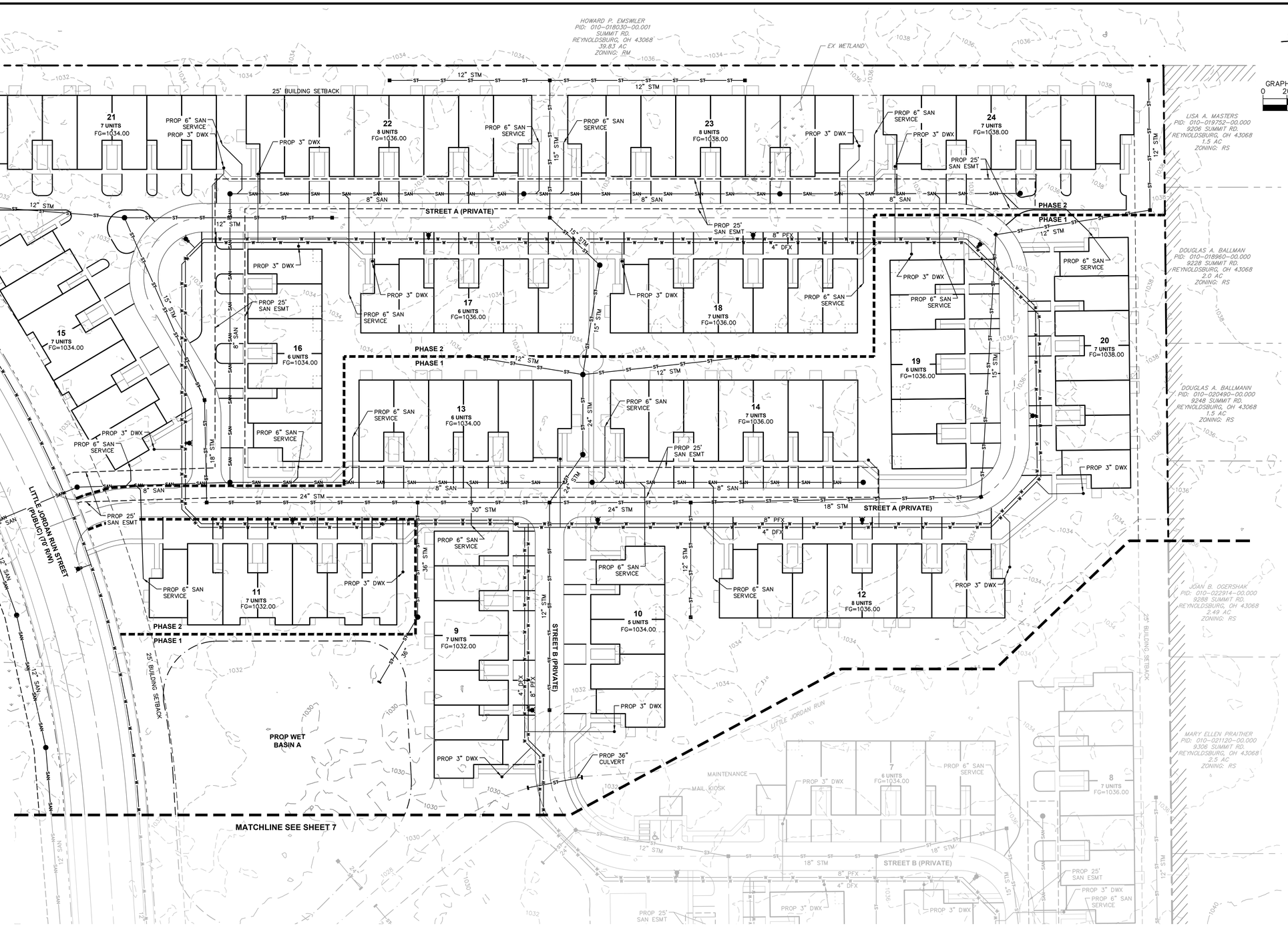
OVERALL UTILITY PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE:
05/13/2021

KHA PROJECT NO.
190010007

SHEET NUMBER
5
OF 12



LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY BOUNDARY
- EXISTING STREAM
- PROPOSED BUILDING SETBACK
- PROPOSED DRIVEWAY
- PROPOSED BUILDING
- PROPOSED SIDEWALK
- PROPOSED RIGHT-OF-WAY
- PROPOSED PROPERTY LINE
- PROPOSED PHASE LINE
- PROPOSED CENTERLINE
- PROPOSED FACE OF CURB
- PROPOSED WET BASIN
- PROPOSED STORM SEWER
- PROPOSED CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED HEADWALL
- PROPOSED WATERLINE
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- EXISTING EASEMENT
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- MUNICIPALITY BOUNDARY
- EXISTING WETLAND

No.	REVISIONS	DATE	BY

Kimley»Horn

7965 NORTH HIGH STREET, SUITE 200
COLUMBUS, OH 43235
PHONE: 614-540-6559
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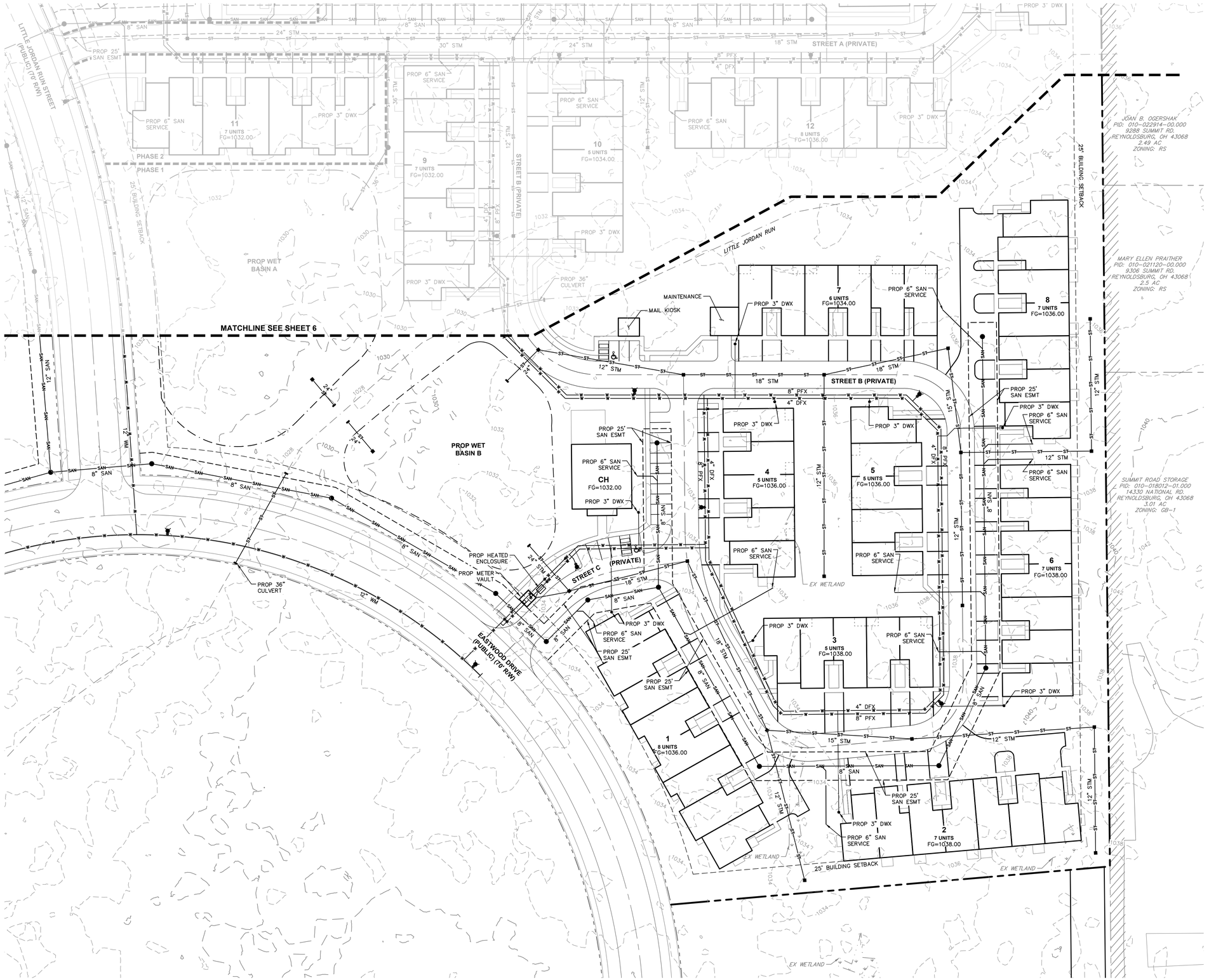
SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

UTILITY PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE: 05/13/2021
KHA PROJECT NO. 190010007
SHEET NUMBER **6** OF 12



No.	REVISIONS	DATE	BY

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
7965 NORTH HIGH STREET, SUITE 200
COLUMBUS, OH 43235
PHONE: 614-540-6098
WWW.KIMLEY-HORN.COM

SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

UTILITY PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE: 05/13/2021
KHA PROJECT NO. 190010007
SHEET NUMBER
7
OF 12

HOWARD P. EMSWILER
PID: 010-018030-00.001
SUMMIT RD.
REYNOLDSBURG, OH 43068
39.83 AC
ZONING: RM

S86°07'49"E 1008.9'

N53°48'05"E 83.5'

25' BUILDING SETBACK

PROP R/W

LITTLE JORDAN RUN STREET
(70' R/W) (PUBLIC)

21 7 UNITS
22 8 UNITS
23 8 UNITS
24 7 UNITS
15 7 UNITS
16 6 UNITS
17 6 UNITS
18 7 UNITS
19 6 UNITS
20 7 UNITS
13 6 UNITS
14 7 UNITS
11 7 UNITS
9 7 UNITS
10 5 UNITS
12 8 UNITS

STREET A (PRIVATE)
STREET B (PRIVATE)
4' SIDEWALK (TYP)
22.5' (TYP.)
24.0' F/F
29.1'
36.0' F/F

PHASE 1
PHASE 2

PROP 8' LEISURE PATH
PROP WET BASIN A

MATCHLINE SEE SHEET 9

S3°17'05"W 1095.4'
LITTLE JORDAN RUN

MAINTENANCE
MAILBOX KIOSK
18.0' (TYP.)
5.0' (TYP.)

LISA A. MASTERS
PID: 010-019752-00.000
9206 SUMMIT RD.
REYNOLDSBURG, OH 43068
1.5 AC
ZONING: RS

DOUGLAS A. BALLMAN
PID: 010-018960-00.000
9238 SUMMIT RD.
REYNOLDSBURG, OH 43068
2.0 AC
ZONING: RS

DOUGLAS A. BALLMANN
PID: 010-020490-00.000
9248 SUMMIT RD.
REYNOLDSBURG, OH 43068
1.5 AC
ZONING: RS

JOAN B. OGERSHAK
PID: 010-022914-00.000
9288 SUMMIT RD.
REYNOLDSBURG, OH 43068
2.49 AC
ZONING: RS

MARY ELLEN PRAITHER
PID: 010-021120-00.000
9306 SUMMIT RD.
REYNOLDSBURG, OH 43068
2.5 AC
ZONING: RS

GRAPHIC SCALE IN FEET
0 20 40 80

NOTES

1. ALL DIMENSIONS REFER TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.

LEGEND

- PROPOSED SITE BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING STREAM
- PROPOSED BUILDING SETBACK
- PROPOSED DRIVEWAY
- PROPOSED BUILDING
- PROPOSED BACK OF CURB
- PROPOSED RIGHT OF WAY
- PROPOSED SIDEWALK
- PROPOSED CENTERLINE
- PROPOSED WET BASIN
- PROPOSED PHASE LINE
- PROPOSED GARAGE PARKING SPACES
- PROPOSED SURFACE PARKING SPACES
- (1) PROPOSED ADA PARKING SPACE COUNT
- (2) PROPOSED PARKING SPACE COUNT
- MUNICIPALITY BOUNDARY

VEHICLE PARKING COUNT

ENCLOSED PARKING SPACES REQUIRED	159 SPACES
UNENCLOSED PARKING SPACES REQUIRED (1 ENCLOSED SPACE AND 1 UNENCLOSED SPACE PER DWELLING)	159 SPACES
TOTAL PARKING SPACES REQUIRED	318 SPACES
GARAGE SPACES PROVIDED	318 SPACES
DRIVEWAY SPACES PROVIDED	318 SPACES
SURFACE SPACES PROVIDED (9' X 18')	17 SPACES
SURFACE ADA SPACES PROVIDED	2 SPACES
TOTAL SPACES PROVIDED	655 SPACES

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 614-846-0588
WWW.KIMLEY-HORN.COM

SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

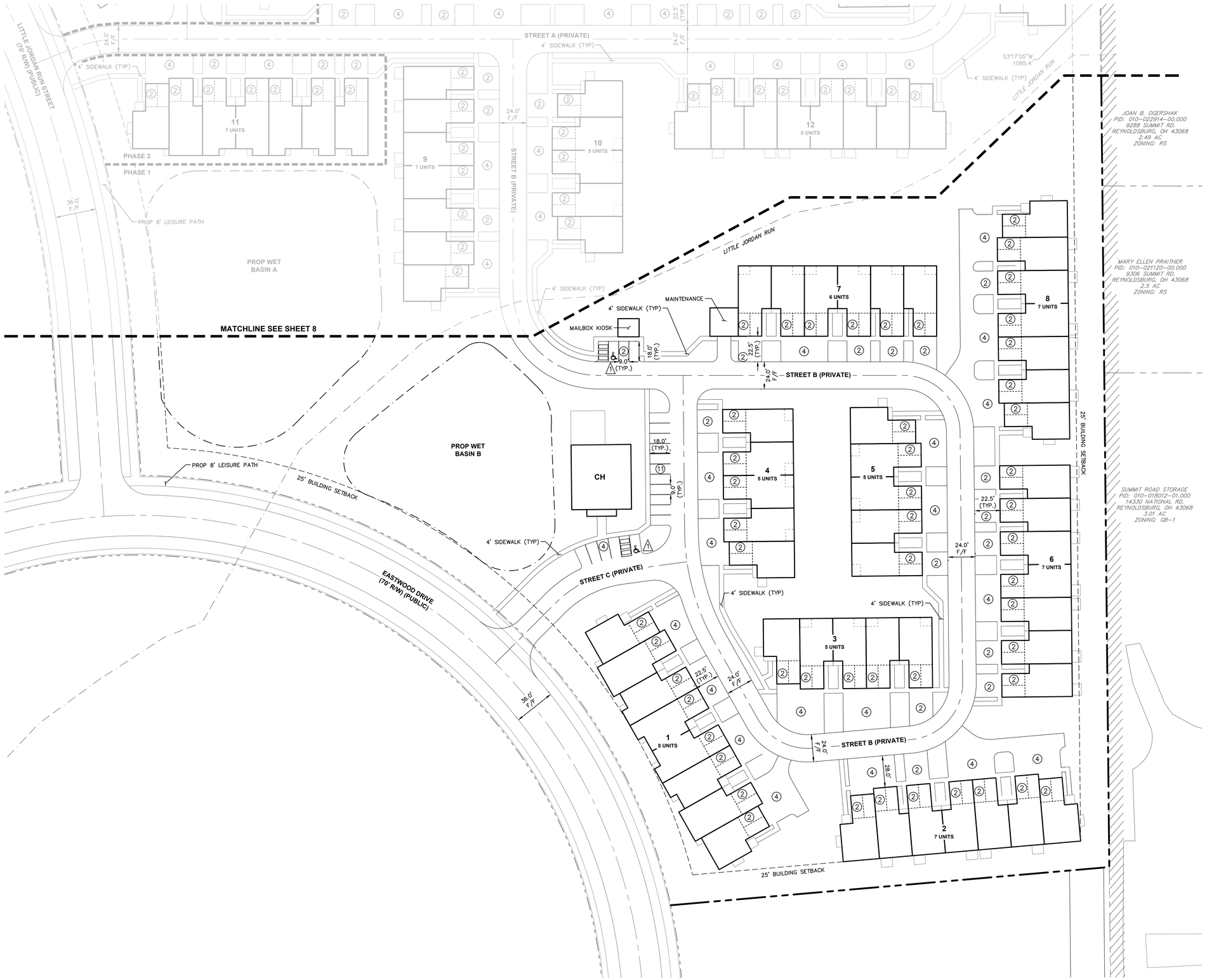
TRANSPORTATION PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE:
05/13/2021

KHA PROJECT NO.
190010007

SHEET NUMBER
8
OF 12



No.	REVISIONS	DATE	BY

Kimley»Horn

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SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

TRANSPORTATION PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE: 05/13/2021
KHA PROJECT NO. 190010007
SHEET NUMBER
9
OF 12

APPENDIX

B. Memorandum of Understanding (MOU)

MEMORANDUM

To:	Ryan Andrews, PE EMH&T
From:	Perry Morgan, PE, Kimley-Horn
Date:	May 4, 2021 (Revised May 12, 2021)
Subject:	Reynoldsburg Site Traffic Impact Study MOU

The purpose of this memo is to formalize the requirements for the Eastwoods Traffic Impact Study in the City of Reynoldsburg. The Foster-Seymore and Emswiler Properties are proposed to be developed as a mixed-use development on 138 acres on the north side of US-40 (Main Street) between Taylor Road and Summit Road. The location of the proposed development is shown in the Location Exhibit. The proposed development is planned to include 264 mid-rise apartments; 159 single story apartments; 80 condos; 276 single-family homes, and 12 acres for commercial uses. The site is to have three accesses to the existing public street network: two accesses with US-40 and one with Summit Road. A copy of the proposed site plan is attached.

The traffic study for this proposed development would include the following items.

Study Intersections

The study intersections are: Main Street and Taylor Road, Main Street and Street 1, Main Street and Street 2, Main Street and Summit Road, Summit Road and Street 3, Summit Road and Refugee Road, and Taylor Road and Firstgate Drive.

Traffic Volumes

Trip generation estimates will be based on the Institute of Transportation Engineers (ITE), Trip Generation – 10th Edition (2017). The trip estimates will be prepared for the AM and PM peak-hour. Trip assignment of project traffic will utilize existing traffic patterns and engineering judgment from experience within the project area.

Traffic counts will be conducted at the intersections of Main Street and Taylor Road, Main Street and Eastern Ohio Department of Agriculture, Main Street and Summit Road, Summit Road and Refugee Road, and Taylor Road and Firstgate Drive. This will include collection of vehicle classification data for consideration of heavy vehicle percentages and peak hour factors in the capacity analysis. Collected count data will be evaluated to determine whether or not adjustment factors need to be applied relative to the impact of COVID-19.

For this study, it will be assumed that the residential portion of the proposed site will be built out by 2026. A 10-year horizon (2036) will also be included that will include buildout of the commercial

portion of the proposed site, as well as the potential offsite residential development as shown in the Location Exhibit. Analysis will be completed for the following AM & PM peak hour volume scenarios: 2026 – No Build, 2026 – Build, 2036 – No Build, and 2036 – Build. No Build traffic volumes will be projected using historic count data and growth rates. MORPC will be contacted for growth rate information.

Analysis

The study intersections will be evaluated for level-of-service (LOS) and the need for turn lanes. Capacity analysis will be completed using Synchro software. The acceptable level of service for the capacity analysis is LOS D for the overall intersection; LOS D for the approaches; and LOS E for a movement. Exceptions to this will be noted in the study. Signalized intersections will be evaluated with existing signal timings as provided by the agencies.

Turn lane warrants will be completed per the guidance of section 400 of the ODOT Location & Design Manual, Volume 1. The analysis results and recommendations will be documented in a summary report.

If you have any questions, need additional information, or would like to modify these study requirements, please contact me (perry.morgan@kimley-horn.com).

Cc: Mike Reeves, Kimley-Horn
Joe Ciminello

LOCATION EXHIBIT – REYNOLDSBURG SITE

APPENDIX

C. Traffic Count Data

Leg	Eastbound SR-40					Westbound SR-40					Northbound Taylor Rd					Southbound Taylor Rd						
Direction	Eastbound					Westbound					Northbound					Southbound						
Start Time	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	**Int Total**
2021-04-28 16:00:00	33	89	13	0	**135**	38	80	23	0	**141**	30	73	38	0	**141**	29	84	23	0	**136**	**553**
2021-04-28 16:15:00	35	89	19	0	**143**	35	89	17	0	**141**	28	81	36	0	**145**	44	90	23	0	**157**	**586**
2021-04-28 16:30:00	33	87	15	0	**135**	35	81	27	0	**143**	21	68	22	0	**111**	34	69	29	0	**132**	**521**
2021-04-28 16:45:00	26	87	9	0	**122**	34	85	21	0	**140**	28	75	44	0	**147**	33	70	29	1	**133**	**542**
2021-04-28 17:00:00	26	116	7	0	**149**	22	82	24	0	**128**	20	87	22	0	**129**	30	76	22	0	**128**	**534**
2021-04-28 17:15:00	26	102	14	0	**142**	48	87	17	0	**152**	18	63	40	0	**121**	21	60	21	0	**102**	**517**
2021-04-28 17:30:00	32	62	9	0	**103**	39	87	33	0	**159**	18	72	24	0	**114**	19	67	19	0	**105**	**481**
2021-04-28 17:45:00	19	48	7	0	**74**	21	36	11	0	**68**	21	53	17	0	**91**	15	43	18	0	**76**	**309**
Grand Total	230	680	93	0	**1003**	272	627	173	0	**1072**	184	572	243	0	**999**	225	559	184	1	**969**	**4043**
% Approach	22.9%	67.8%	9.3%	0.0%		25.4%	58.5%	16.1%	0.0%		18.4%	57.3%	24.3%	0.0%		23.2%	57.7%	19.0%	0.1%		
% Total	5.7%	16.8%	2.3%	0.0%	**24.8%**	6.7%	15.5%	4.3%	0.0%	**26.5%**	4.6%	14.1%	6.0%	0.0%	**24.7%**	5.6%	13.8%	4.6%	0.0%	**24.0%**	
Lights and Motorcycles	230	671	92	0	**993**	270	619	173	0	**1062**	183	565	241	0	**989**	219	553	184	1	**957**	**4001**
% Lights and Motorcycles	100.0%	98.7%	98.9%	0.0%	**99.0%**	99.3%	98.7%	100.0%	0.0%	**99.1%**	99.5%	98.8%	99.2%	0.0%	**99.0%**	97.3%	98.9%	100.0%	100.0%	**98.8%**	**99.0%**
Heavy	0	9	1	0	**10**	2	8	0	0	**10**	1	7	2	0	**10**	6	6	0	0	**12**	**42**
% Heavy	0.0%	1.3%	1.1%	0.0%	**1.0%**	0.7%	1.3%	0.0%	0.0%	**0.9%**	0.5%	1.2%	0.8%	0.0%	**1.0%**	2.7%	1.1%	0.0%	0.0%	**1.2%**	**1.0%**

Leg	Eastbound SR-40				Westbound SR-40				Northbound Private Drive				
Direction	Eastbound				Westbound				Northbound				
Start Time	Thru	Right	U-Turn	**App Total**	Left	Thru	U-Turn	**App Total**	Left	Right	U-Turn	**App Total**	**Int Total**
2021-04-28 16:00:00	151	0	0	**151**	0	155	0	**155**	4	13	0	**17**	**323**
2021-04-28 16:15:00	174	0	0	**174**	0	124	0	**124**	2	2	0	**4**	**302**
2021-04-28 16:30:00	163	0	0	**163**	0	103	0	**103**	4	6	0	**10**	**276**
2021-04-28 16:45:00	177	1	0	**178**	0	140	0	**140**	1	3	0	**4**	**322**
2021-04-28 17:00:00	173	0	0	**173**	0	145	0	**145**	1	0	0	**1**	**319**
2021-04-28 17:15:00	161	0	0	**161**	0	167	0	**167**	1	0	0	**1**	**329**
2021-04-28 17:30:00	99	0	0	**99**	0	104	0	**104**	0	0	0	**0**	**203**
2021-04-28 17:45:00	83	0	0	**83**	0	67	0	**67**	0	0	0	**0**	**150**
Grand Total	1181	1	0	**1182**	0	1005	0	**1005**	13	24	0	**37**	**2224**
% Approach	99.9%	0.1%	0.0%		0.0%	100.0%	0.0%		35.1%	64.9%	0.0%		
% Total	53.1%	0.0%	0.0%	**53.1%**	0.0%	45.2%	0.0%	**45.2%**	0.6%	1.1%	0.0%	**1.7%**	
Lights and Motorcycles	1167	0	0	**1167**	0	995	0	**995**	13	23	0	**36**	**2198**
% Lights and Motorcycles	98.8%	0.0%	0.0%	**98.7%**	0.0%	99.0%	0.0%	**99.0%**	100.0%	95.8%	0.0%	**97.3%**	**98.8%**
Heavy	14	1	0	**15**	0	10	0	**10**	0	1	0	**1**	**26**
% Heavy	1.2%	100.0%	0.0%	**1.3%**	0.0%	1.0%	0.0%	**1.0%**	0.0%	4.2%	0.0%	**2.7%**	**1.2%**

Leg	Eastbound SR-40				Westbound SR-40				Southbound Summit Rd				
Direction	Eastbound				Westbound				Southbound				
Start Time	Left	Thru	U-Turn	**App Total**	Thru	Right	U-Turn	**App Total**	Left	Right	U-Turn	**App Total**	**Int Total**
2021-04-28 16:00:00	21	122	0	**143**	103	6	0	**109**	2	24	0	**26**	**278**
2021-04-28 16:15:00	15	138	0	**153**	102	5	0	**107**	4	15	0	**19**	**279**
2021-04-28 16:30:00	22	135	1	**158**	90	9	1	**100**	4	19	0	**23**	**281**
2021-04-28 16:45:00	29	107	0	**136**	94	5	0	**99**	8	15	0	**23**	**258**
2021-04-28 17:00:00	37	137	0	**174**	123	10	0	**133**	10	26	0	**36**	**343**
2021-04-28 17:15:00	27	142	1	**170**	102	10	0	**112**	6	25	0	**31**	**313**
2021-04-28 17:30:00	27	144	0	**171**	93	8	0	**101**	9	6	0	**15**	**287**
2021-04-28 17:45:00	33	158	0	**191**	114	13	0	**127**	11	23	0	**34**	**352**
Grand Total	211	1083	2	**1296**	821	66	1	**888**	54	153	0	**207**	**2391**
% Approach	16.3%	83.6%	0.2%		92.5%	7.4%	0.1%		26.1%	73.9%	0.0%		
% Total	8.8%	45.3%	0.1%	**54.2%**	34.3%	2.8%	0.0%	**37.1%**	2.3%	6.4%	0.0%	**8.7%**	
Lights and Motorcycles	207	1049	1	**1257**	792	64	1	**857**	54	151	0	**205**	**2319**
% Lights and Motorcycles	98.1%	96.9%	50.0%	**97.0%**	96.5%	97.0%	100.0%	**96.5%**	100.0%	98.7%	0.0%	**99.0%**	**97.0%**
Heavy	4	34	1	**39**	29	2	0	**31**	0	2	0	**2**	**72**
% Heavy	1.9%	3.1%	50.0%	**3.0%**	3.5%	3.0%	0.0%	**3.5%**	0.0%	1.3%	0.0%	**1.0%**	**3.0%**

Leg	Eastbound SR-40					Westbound SR-40					Northbound Taylor Rd					Southbound Taylor Rd						
Direction	Eastbound					Westbound					Northbound					Southbound						
Start Time	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	**Int Total**
2021-04-29 07:00:00	18	60	15	0	**93**	30	80	14	0	**124**	15	51	28	0	**94**	13	60	30	0	**103**	**414**
2021-04-29 07:15:00	12	38	5	0	**55**	16	46	10	0	**72**	17	32	19	0	**68**	11	36	27	0	**74**	**269**
2021-04-29 07:30:00	14	41	7	0	**62**	25	42	13	0	**80**	8	30	17	0	**55**	7	65	22	0	**94**	**291**
2021-04-29 07:45:00	14	43	12	0	**69**	19	39	8	0	**66**	9	28	34	0	**71**	7	44	30	0	**81**	**287**
2021-04-29 08:00:00	13	39	9	0	**61**	21	41	5	0	**67**	4	45	22	0	**71**	6	35	12	0	**53**	**252**
2021-04-29 08:15:00	15	62	12	0	**89**	23	51	10	0	**84**	15	33	22	0	**70**	12	51	13	0	**76**	**319**
2021-04-29 08:30:00	5	52	11	0	**68**	19	69	6	0	**94**	11	48	20	0	**79**	13	47	18	0	**78**	**319**
2021-04-29 08:45:00	12	35	4	0	**51**	30	52	12	0	**94**	5	43	21	0	**69**	10	57	23	0	**90**	**304**
Grand Total	103	370	75	0	**548**	183	420	78	0	**681**	84	310	183	0	**577**	79	395	175	0	**649**	**2455**
% Approach	18.8%	67.5%	13.7%	0.0%		26.9%	61.7%	11.5%	0.0%		14.6%	53.7%	31.7%	0.0%		12.2%	60.9%	27.0%	0.0%		
% Total	4.2%	15.1%	3.1%	0.0%	**22.3%**	7.5%	17.1%	3.2%	0.0%	**27.7%**	3.4%	12.6%	7.5%	0.0%	**23.5%**	3.2%	16.1%	7.1%	0.0%	**26.4%**	
Lights and Motorcycles	92	354	74	0	**520**	158	390	74	0	**622**	79	281	169	0	**529**	75	373	168	0	**616**	**2287**
% Lights and Motorcycles	89.3%	95.7%	98.7%	0.0%	**94.9%**	86.3%	92.9%	94.9%	0.0%	**91.3%**	94.0%	90.6%	92.3%	0.0%	**91.7%**	94.9%	94.4%	96.0%	0.0%	**94.9%**	**93.2%**
Heavy	11	16	1	0	**28**	25	30	4	0	**59**	5	29	14	0	**48**	4	22	7	0	**33**	**168**
% Heavy	10.7%	4.3%	1.3%	0.0%	**5.1%**	13.7%	7.1%	5.1%	0.0%	**8.7%**	6.0%	9.4%	7.7%	0.0%	**8.3%**	5.1%	5.6%	4.0%	0.0%	**5.1%**	**6.8%**

Leg	Eastbound SR-40				Westbound SR-40				Northbound Private Drive				
Direction	Eastbound				Westbound				Northbound				
Start Time	Thru	Right	U-Turn	**App Total**	Left	Thru	U-Turn	**App Total**	Left	Right	U-Turn	**App Total**	**Int Total**
2021-04-29 07:00:00	86	4	0	**90**	5	120	0	**125**	1	2	0	**3**	**218**
2021-04-29 07:15:00	56	3	0	**59**	3	65	0	**68**	0	0	0	**0**	**127**
2021-04-29 07:30:00	49	3	0	**52**	0	88	0	**88**	1	0	0	**1**	**141**
2021-04-29 07:45:00	62	4	0	**66**	1	67	0	**68**	0	0	0	**0**	**134**
2021-04-29 08:00:00	61	1	0	**62**	2	66	0	**68**	1	0	0	**1**	**131**
2021-04-29 08:15:00	95	2	0	**97**	0	81	0	**81**	1	1	0	**2**	**180**
2021-04-29 08:30:00	74	0	0	**74**	0	91	0	**91**	1	1	0	**2**	**167**
2021-04-29 08:45:00	58	2	0	**60**	0	78	0	**78**	2	0	0	**2**	**140**
Grand Total	541	19	0	**560**	11	656	0	**667**	7	4	0	**11**	**1238**
% Approach	96.6%	3.4%	0.0%		1.6%	98.4%	0.0%		63.6%	36.4%	0.0%		
% Total	43.7%	1.5%	0.0%	**45.2%**	0.9%	53.0%	0.0%	**53.9%**	0.6%	0.3%	0.0%	**0.9%**	
Lights and Motorcycles	511	19	0	**530**	11	603	0	**614**	6	3	0	**9**	**1153**
% Lights and Motorcycles	94.5%	100.0%	0.0%	**94.6%**	100.0%	91.9%	0.0%	**92.1%**	85.7%	75.0%	0.0%	**81.8%**	**93.1%**
Heavy	30	0	0	**30**	0	53	0	**53**	1	1	0	**2**	**85**
% Heavy	5.5%	0.0%	0.0%	**5.4%**	0.0%	8.1%	0.0%	**7.9%**	14.3%	25.0%	0.0%	**18.2%**	**6.9%**

Leg	Eastbound SR-40				Westbound SR-40				Southbound Summit Rd				
Direction	Eastbound				Westbound				Southbound				
Start Time	Left	Thru	U-Turn	**App Total**	Thru	Right	U-Turn	**App Total**	Left	Right	U-Turn	**App Total**	**Int Total**
2021-04-29 07:00:00	53	79	0	**132**	61	10	0	**71**	3	55	0	**58**	**261**
2021-04-29 07:15:00	49	109	0	**158**	77	6	0	**83**	5	54	0	**59**	**300**
2021-04-29 07:30:00	20	73	0	**93**	103	5	0	**108**	3	34	0	**37**	**238**
2021-04-29 07:45:00	45	59	0	**104**	120	2	0	**122**	3	31	0	**34**	**260**
2021-04-29 08:00:00	33	57	0	**90**	54	3	0	**57**	2	68	0	**70**	**217**
2021-04-29 08:15:00	13	43	0	**56**	51	2	0	**53**	4	15	0	**19**	**128**
2021-04-29 08:30:00	9	39	0	**48**	71	4	0	**75**	2	19	0	**21**	**144**
2021-04-29 08:45:00	10	52	0	**62**	56	3	0	**59**	2	13	0	**15**	**136**
Grand Total	232	511	0	**743**	593	35	0	**628**	24	289	0	**313**	**1684**
% Approach	31.2%	68.8%	0.0%		94.4%	5.6%	0.0%		7.7%	92.3%	0.0%		
% Total	13.8%	30.3%	0.0%	**44.1%**	35.2%	2.1%	0.0%	**37.3%**	1.4%	17.2%	0.0%	**18.6%**	
Lights and Motorcycles	219	482	0	**701**	540	33	0	**573**	23	259	0	**282**	**1556**
% Lights and Motorcycles	94.4%	94.3%	0.0%	**94.3%**	91.1%	94.3%	0.0%	**91.2%**	95.8%	89.6%	0.0%	**90.1%**	**92.4%**
Heavy	13	29	0	**42**	53	2	0	**55**	1	30	0	**31**	**128**
% Heavy	5.6%	5.7%	0.0%	**5.7%**	8.9%	5.7%	0.0%	**8.8%**	4.2%	10.4%	0.0%	**9.9%**	**7.6%**

Leg	Southbound Taylor Rd					Westbound Firstgate Dr					Northbound Taylor Rd					Eastbound Firstgate Dr					
Direction	Southbound					Westbound					Northbound					Eastbound					
Start Time	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	**Int Total**
2021-05-25 07:00:00	1	71	4	0	**76**	8	4	15	0	**27**	9	50	3	0	**62**	8	7	3	0	**18**	**183**
2021-05-25 07:15:00	3	62	1	0	**66**	6	1	13	0	**20**	5	80	3	0	**88**	10	7	6	0	**23**	**197**
2021-05-25 07:30:00	1	45	3	0	**49**	7	11	23	0	**41**	7	80	6	0	**93**	19	4	5	0	**28**	**211**
2021-05-25 07:45:00	2	73	3	0	**78**	8	5	23	0	**36**	20	73	14	0	**107**	24	15	1	0	**40**	**261**
2021-05-25 08:00:00	2	51	4	0	**57**	16	10	12	0	**38**	21	77	15	0	**113**	11	9	5	0	**25**	**233**
2021-05-25 08:15:00	0	52	1	0	**53**	24	6	12	0	**42**	6	71	5	0	**82**	4	3	8	0	**15**	**192**
2021-05-25 08:30:00	3	55	2	0	**60**	13	3	6	0	**22**	6	76	3	0	**85**	4	3	5	0	**12**	**179**
2021-05-25 08:45:00	4	59	4	0	**67**	9	7	11	0	**27**	8	64	11	0	**83**	10	3	3	0	**16**	**193**
2021-05-25 16:00:00	7	107	15	0	**129**	10	6	12	0	**28**	12	81	11	0	**104**	12	6	4	0	**22**	**283**
2021-05-25 16:15:00	8	121	11	0	**140**	9	7	14	0	**30**	20	82	8	0	**110**	14	12	4	0	**30**	**310**
2021-05-25 16:30:00	6	126	19	0	**151**	6	6	13	0	**25**	13	71	15	0	**99**	16	3	4	0	**23**	**298**
2021-05-25 16:45:00	9	141	17	0	**167**	8	5	11	0	**24**	17	63	12	0	**92**	13	8	7	0	**28**	**311**
2021-05-25 17:00:00	5	127	22	0	**154**	11	4	7	0	**22**	13	97	19	0	**129**	15	4	2	0	**21**	**326**
2021-05-25 17:15:00	10	126	27	0	**163**	11	6	16	0	**33**	15	89	12	0	**116**	15	4	3	0	**22**	**334**
2021-05-25 17:30:00	6	117	18	0	**141**	8	5	13	0	**26**	16	87	11	0	**114**	11	7	4	0	**22**	**303**
2021-05-25 17:45:00	7	109	17	0	**133**	6	4	13	0	**23**	15	94	12	0	**121**	14	6	7	0	**27**	**304**
Grand Total	74	1442	168	0	**1684**	160	90	214	0	**464**	203	1235	160	0	**1598**	200	101	71	0	**372**	**4118**
% Approach	4.4%	85.6%	10.0%	0.0%		34.5%	19.4%	46.1%	0.0%		12.7%	77.3%	10.0%	0.0%		53.8%	27.2%	19.1%	0.0%		
% Total	1.8%	35.0%	4.1%	0.0%	**40.9%**	3.9%	2.2%	5.2%	0.0%	**11.3%**	4.9%	30.0%	3.9%	0.0%	**38.8%**	4.9%	2.5%	1.7%	0.0%	**9.0%**	
Lights and Motorcycles	73	1327	165	0	**1565**	157	83	203	0	**443**	193	1126	149	0	**1468**	195	97	68	0	**360**	**3836**
% Lights and Motorcycles	98.6%	92.0%	98.2%	0.0%	**92.9%**	98.1%	92.2%	94.9%	0.0%	**95.5%**	95.1%	91.2%	93.1%	0.0%	**91.9%**	97.5%	96.0%	95.8%	0.0%	**96.8%**	**93.2%**
Heavy	1	115	3	0	**119**	3	7	11	0	**21**	10	109	11	0	**130**	5	4	3	0	**12**	**282**
% Heavy	1.4%	8.0%	1.8%	0.0%	**7.1%**	1.9%	7.8%	5.1%	0.0%	**4.5%**	4.9%	8.8%	6.9%	0.0%	**8.1%**	2.5%	4.0%	4.2%	0.0%	**3.2%**	**6.8%**

Leg	Southbound Summit Rd					Westbound Firstgate Dr					Northbound Summit Rd					Eastbound Firstgate Dr					
Direction	Southbound					Westbound					Northbound					Eastbound					
Start Time	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	Right	Thru	Left	U-Turn	**App Total**	**Int Total**
2021-05-25 07:00:00	1	29	2	0	**32**	9	4	0	0	**13**	0	8	9	0	**17**	16	15	4	0	**35**	**97**
2021-05-25 07:15:00	4	33	9	0	**46**	8	5	2	0	**15**	0	22	10	0	**32**	24	4	7	0	**35**	**128**
2021-05-25 07:30:00	2	26	1	0	**29**	19	5	0	0	**24**	0	8	5	0	**13**	8	8	6	0	**22**	**88**
2021-05-25 07:45:00	4	38	4	0	**46**	9	3	0	0	**12**	0	12	9	0	**21**	33	6	9	0	**48**	**127**
2021-05-25 08:00:00	2	15	7	0	**24**	12	4	0	0	**16**	2	19	31	0	**52**	26	11	8	0	**45**	**137**
2021-05-25 08:15:00	2	14	3	0	**19**	19	11	2	0	**32**	0	13	7	0	**20**	20	7	4	0	**31**	**102**
2021-05-25 08:30:00	1	13	5	0	**19**	14	3	1	0	**18**	0	14	11	0	**25**	10	4	7	0	**21**	**83**
2021-05-25 08:45:00	4	11	6	0	**21**	15	2	2	0	**19**	0	13	1	0	**14**	5	10	7	0	**22**	**76**
2021-05-25 16:00:00	10	9	19	0	**38**	5	6	0	0	**11**	1	14	4	0	**19**	4	10	4	0	**18**	**86**
2021-05-25 16:15:00	6	18	11	0	**35**	7	6	1	0	**14**	0	23	4	0	**27**	2	10	6	0	**18**	**94**
2021-05-25 16:30:00	5	13	11	0	**29**	11	14	3	0	**28**	1	15	6	0	**22**	9	8	6	0	**23**	**102**
2021-05-25 16:45:00	8	11	11	0	**30**	6	11	1	0	**18**	1	22	3	0	**26**	0	11	7	0	**18**	**92**
2021-05-25 17:00:00	5	20	13	0	**38**	11	10	2	0	**23**	1	22	9	0	**32**	5	10	8	0	**23**	**116**
2021-05-25 17:15:00	8	28	12	0	**48**	5	5	2	0	**12**	1	19	9	0	**29**	4	14	4	0	**22**	**111**
2021-05-25 17:30:00	7	32	16	0	**55**	5	14	1	0	**20**	0	14	7	0	**21**	5	9	7	0	**21**	**117**
2021-05-25 17:45:00	5	29	18	0	**52**	6	7	0	0	**13**	0	12	5	0	**17**	4	8	5	0	**17**	**99**
Grand Total	74	339	148	0	**561**	161	110	17	0	**288**	7	250	130	0	**387**	175	145	99	0	**419**	**1655**
% Approach	13.2%	60.4%	26.4%	0.0%		55.9%	38.2%	5.9%	0.0%		1.8%	64.6%	33.6%	0.0%		41.8%	34.6%	23.6%	0.0%		
% Total	4.5%	20.5%	8.9%	0.0%	**33.9%**	9.7%	6.6%	1.0%	0.0%	**17.4%**	0.4%	15.1%	7.9%	0.0%	**23.4%**	10.6%	8.8%	6.0%	0.0%	**25.3%**	
Lights and Motorcycles	72	327	144	0	**543**	159	110	17	0	**286**	6	241	119	0	**366**	170	143	94	0	**407**	**1602**
% Lights and Motorcycles	97.3%	96.5%	97.3%	0.0%	**96.8%**	98.8%	100.0%	100.0%	0.0%	**99.3%**	85.7%	96.4%	91.5%	0.0%	**94.6%**	97.1%	98.6%	94.9%	0.0%	**97.1%**	**96.8%**
Heavy	2	12	4	0	**18**	2	0	0	0	**2**	1	9	11	0	**21**	5	2	5	0	**12**	**53**
% Heavy	2.7%	3.5%	2.7%	0.0%	**3.2%**	1.2%	0.0%	0.0%	0.0%	**0.7%**	14.3%	3.6%	8.5%	0.0%	**5.4%**	2.9%	1.4%	5.1%	0.0%	**2.9%**	**3.2%**

APPENDIX

D. COVID Adjustment Factors

Statewide Traffic Analysis

The analysis in this report is from permanent traffic counters at ODOT and compares average day of the week by month in 2019 to specific days in 2020

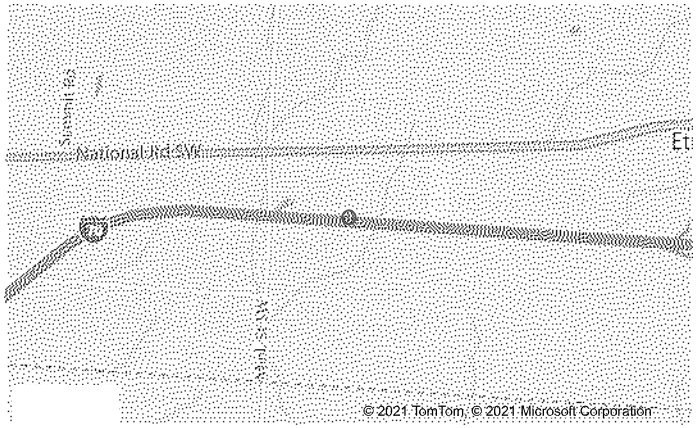
Data refreshes daily at 5:00 AM

Total Percent Change

-6%
Total

-10%
Passenger

7%
Truck



District
- Select all
- 5

Date
4/28/2021 4/28/2021

Functional Class
- Select all
- 1
- 2

County
- Select all
- Guernsey
- Licking
- MUSKINGUM

MS2 ID	Station Alias	County	ODOT District	Month	Day	DAY_OF_THE_WEEK	2020 Total	2019 Total Average	Total % Change	2020 Passenger	2019 Passenger Average	PA % Change	2020 Truck	2019 Truck Average	Truck % Change
30645	707	Licking	5	April	28	Wednesday	61280	65005	-6%	44336	49160	-10%	16944	15846	7%

Statewide Traffic Analysis

The analysis in this report is from permanent traffic counters at ODOT and compares average day of the week by month in 2019 to specific days in 2020

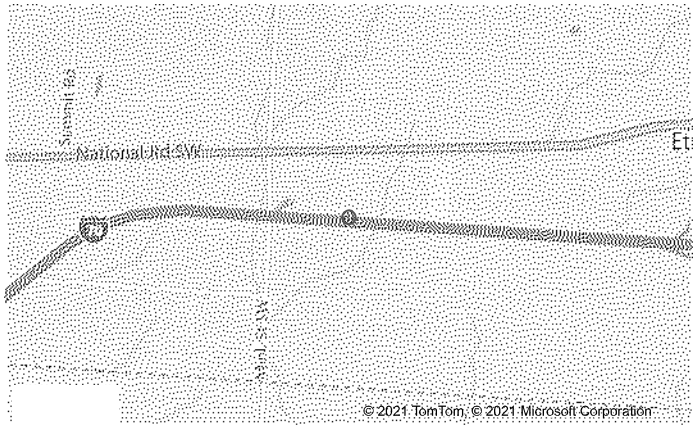
Data refreshes daily at 5:00 AM

Total Percent Change

-3%
Total

-6%
Passenger

10%
Truck



District
- [ ] Select all
- [x] 5

Date
5/25/2021 5/25/2021

Functional Class
- [ ] Select all
- [x] 1
- [ ] 2

County
- [ ] Select all
- [ ] Guernsey
- [ ] Licking
- [ ] MUSKINGUM

MS2 ID	Station Alias	County	ODOT District	Month	Day	DAY_OF_THE_WEEK	2020 Total	2019 Total Average	Total % Change	2020 Passenger	2019 Passenger Average	PA % Change	2020 Truck	2019 Truck Average	Truck % Change
30645	707	Licking	5	May	25	Tuesday	63368	65035	-3%	46604	49812	-6%	16764	15223	10%

APPENDIX

E. Incremental Traffic Growth Calculations

INCREMENTAL TRAFFIC GROWTH CALCULATIONS

				2021 Counted Volumes		Balancing Adjustments		2021 Balanced Counts		Covid Adjusted Existing Year (2021)		Growth Parameters		Opening Year (2026) Background		Opening Year (2026) Trip Generation				Opening Year (2026) Build		Long-Term (2036) Background		Horizon Year (2036) Trip Generation No Offsite Trips								Pass-By Trips		Commercial Total (Primary + Pass-By)		Total Site Traffic Less Pass-By		Horizon Year (2036) SITE Build	
																2026 Residential Trips		Total Site Traffic				2026 Residential Trips		2036 Commercial Trips		2036 Commercial Primary		Total Site Traffic									
				AM	PM	AM	PM	AM	PM	AM	PM	Count Year	Growth Rate	AM	PM	% IN	% OUT	AM	PM	AM	PM	AM	PM	% IN	% OUT	% IN	% OUT	% IN	% OUT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	US-40 (Main Street) & Taylor Road	US-40 (Main Street)	EBL	58	111			58	111	64	122	2021	1.0%	67	128			0	0	67	128	74	140					0	0	0	0			0	0	0	0	74	140
			EBT	182	392	96	2	278	394	306	433	2021	1.0%	321	455	20%		24	75	345	530	352	498	20%		35%		46	54	68	113			46	54	68	113	420	611
			EBR	39	45			39	45	43	50	2021	1.0%	45	53			0	0	45	53	49	58					0	0	0	0			0	0	0	0	49	58
			WBL	90	139	51	-17	141	122	155	134	2021	1.0%	163	141		35%	124	79	287	220	178	154		35%		40%	32	51	155	120			32	51	155	120	333	274
			WBT	207	335	117	-41	324	294	356	323	2021	1.0%	374	339		20%	71	45	445	384	409	371		20%		35%	28	44	99	83			28	44	99	83	508	454
			WBR	45	89	25	-11	70	78	77	86	2021	1.0%	81	90		25%	89	56	170	146	89	99		25%		15%	12	19	101	68			12	19	101	68	190	167
		Taylor Road	NBL	49	87			49	87	54	96	2021	0.5%	55	98			0	0	55	98	58	103					0	0	0	0			0	0	0	0	58	103
			NBT	141	293			141	293	155	322	2021	0.5%	159	330			0	0	159	330	167	346					0	0	0	0			0	0	0	0	167	346
			NBR	98	128	53		151	128	166	141	2021	0.5%	170	145	35%		41	131	211	276	178	152	35%		40%		52	62	91	165			52	62	91	165	269	317
			SBL	38	118	18		56	118	62	130	2021	0.5%	64	133	25%		30	94	94	227	67	140	25%		15%		20	23	49	96			20	23	49	96	116	236
			SBT	205	275			205	275	226	303	2021	0.5%	232	311			0	0	232	311	243	326					0	0	0	0			0	0	0	0	243	326
			SBR	109	101			109	101	120	111	2021	0.5%	123	114			0	0	123	114	129	119					0	0	0	0			0	0	0	0	129	119
2	US-40 (Main Street) & Summit Road	US-40 (Main Street)	EBL	167	115			167	115	184	127	2021	1.0%	193	133	10%		12	38	205	171	212	146	10%				0	0	12	29			0	0	12	29	224	175
			EBT	320	521			320	521	352	573	2021	1.0%	370	602		5%	18	11	388	613	405	659		5%		10%	8	13	27	22			8	13	27	22	432	681
			EBR	0	0			0	0	0	0	2021	1.0%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBL	0	0			0	0	0	0	2021	1.0%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBT	361	409			361	409	397	450	2021	1.0%	417	473	5%		6	19	423	492	457	518	5%		10%		13	16	19	30			13	16	19	30	476	548
			WBR	23	34			23	34	25	37	2021	1.0%	26	39	5%		6	19	32	58	29	43	5%				0	0	6	15			0	0	6	15	35	58
		Summit Road	NBL	0	0			0	0	0	0	2021	0.5%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBT	0	0			0	0	0	0	2021	0.5%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBR	0	0			0	0	0	0	2021	0.5%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBL	14	28			14	28	15	31	2021	0.5%	15	32		5%	18	11	33	43	16	33		5%			0	0	19	10			0	0	19	10	35	43
			SBT	0	0			0	0	0	0	2021	0.5%	0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBR	174	85			174	85	191	94	2021	0.5%	196	96		10%	36	23	232	119	205	101		10%			0	0	35	20			0	0	35	20	240	121
3	Summit Road & Refugee Road/Firstgate Drive	Firstgate Drive	EBL	26	25			26	25	29	28	2021	0.5%	30	29			0	0	30	29	31	30					0	0	0	0			0	0	0	0	31	30
			EBT	33	43			33	43	36	47	2021	0.5%	37	48			0	0	37	48	39	51					0	0	0	0			0	0	0	0	39	51
			EBR	81	18			81	18	89	20	2021	0.5%	91	21			0	0	91	21	96	22					0	0	0	0			0	0	0	0	96	22
		Refugee Road	WBL	2	8			2	8	2	9	2021	0.5%	2	9			0	0	2	9	2	10					0	0	0	0			0	0	0	0	2	10
			WBT	17	40			17	40	19	44	2021	0.5%	19	45			0	0	19	45	20	47					0	0	0	0			0	0	0	0	20	47
			WBR	45	33			45	33	50	36	2021	0.5%	51	37			0	0	51	37	54	39					0	0	0	0			0	0	0	0	54	39
		Summit Road	NBL	33	27			33	27	36	30	2021	0.5%	37	31			0	0	37	31	39	32					0	0	0	0			0	0	0	0	39	32
			NBT	50	78			50	78	55	86	2021	0.5%	56	88		10%	36	23	92	111	59	92		10%			0	0	36	20			0	0	36	20	95	112
			NBR	0	4			0	4	0	4	2021	0.5%	0	4			0	0	0	4	0	4					0	0	0	0			0	0	0	0	0	4
			SBL	16	47			16	47	18	52	2021	0.5%	18	53			0	0	18	53	19	56					0	0	0	0			0	0	0	0	19	56
			SBT	126	72			126	72	139	79	2021	0.5%	142	81	10%		12	38	154	119	149	85	10%				0	0	12	29			0	0	12	29	161	114
			SBR	11	26			11	26	12	29	2021	0.5%	12	30			0	0	12	30	13	31					0	0	0	0			0	0	0	0	13	31
4	Taylor Road & Firstgate Drive	Firstgate Drive	EBL	15	16			15	16	17	18	2021	0.5%	17	18			0	0	17	18	18	19					0	0	0	0			0	0	0	0	18	19
			EBT	33	19			33	19	36	21	2021	0.5%	37	22			0	0	37	22	39	23					0	0	0	0			0	0	0	0	39	23
			EBR	61	59			61	59	67	65	2021	0.5%	69	67			0	0	69	67	72	70					0	0	0	0			0	0	0	0	72	70
			WBL	74	47			74	47	81	52	2021	0.5%	83	53			0	0	83	53	87	56					0	0	0	0			0	0	0	0	87	56
			WBT	21	21			21	21	23	23	2021	0.5%	24	24			0	0	24	24	25	25					0	0	0	0			0	0	0	0	25	25
			WBR	29	36			29	36	32	40	2021	0.5%	33	41			0	0	33	41	34	43					0	0	0	0			0	0	0	0	34	43
		Taylor Road	NBL	26	58			26	58	29	64	2021	0.5%	30	66			0	0	30	66	31	69					0	0	0	0			0	0	0	0	31	69
			NBT	283	320			283	320	311	352	2021	0.5%	319	361		25%	89	56	408	417	334	378		25%		15%	12	19	99	69			12	19	99	69	433	447
			NBR	41	58			41	58	45	64	2021	0.5%	46	66			0	0	46	66	48	69					0	0	0	0			0	0	0	0	48	69
			SBL	11	85			11	85	12	94	2021	0.5%	12	96			0	0	12	96	13	101					0	0	0	0			0	0	0	0	13	101
			SBT	251	520			251	520	276	572	2021	0.5%	283	586	25%		30	94	313	680	297	615	25%		15%		20	23	50	95			20	23	50	95	347	710
			SBR	7	30			7	30	8	33	2021	0.5%	8	34			0	0	8	34	9	35					0	0	0	0			0	0	0	0	9	35
5	US-40 (Main Street) & Site Access #1	US-40 (Main Street)	EBL	0	0			0	0	0	0	2021		0	0	65%		77	244	77	244	0	0	65%		55%		72	85	145	275	40		72	125	145	315	145	315
			EBT	0	0			0	0	536	700	2021	1.0%	563	735	15%		18	56	581	791	616	805	15%		35%		46	54	63	97	-40		46	14	63	57	679	862
			EBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBT	0	0			0	0	588	543	2021	1.0%	617	570		15%	53	34	670	604	676	624		15%		35%	28	44	81	73	-30		28	14	81	43	757	667
			WBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0			5%		7	8	7	8	15		7	23	7	23	7	23
		Site Access #1	NBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0				5%	4	6	4	6	20		4	26	4	26	4	26
			SBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBR	0	0			0	0	0	0	2021		0	0		65%	231	146	231	146	0	0		65%		55%	43	70	274	198	30		43	100	274	228	274	228
6	US-40 (Main Street) & Site Access #2	US-40 (Main Street)	EBL	0	0			0	0	0	0	2021		0	0	5%		6	19	6	19	0	0	5%		35%		46	54	51	69	20		46	74	51	89	51	89
			EBT	0	0			0	0	536	700	2021	1.0%	563	735	10%		12	38	575	773	616	805	10%			5%	4	6	16	35	-40		4	-34	16	-5	632	800
			EBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBT	0	0			0	0	588	543	2021	1.0%	617	570		10%	36	23	653	593	676	624		10%	5%		7	8	42	27	-30		7	-22	42	-3	718	621
			WBR	0	0			0	0	0	0	2021		0	0	5%		6	19	6	19	0	0	5%		5%		7	8	12	22	30		7	38	12	52	12	52
		Site Access #2	NBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			NBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBL	0	0			0	0	0	0	2021		0	0		5%	18	11	18	11	0	0		5%		5%	4	6	22	16	40		4	46	22	56	22	56
			SBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBR	0	0			0	0	0	0	2021		0	0		5%	18	11	18	11	0	0		5%		35%	28	44	45	54	15		28	59	45	69	45	69
7	Summit Road & Site Access #3	Site Access #3	EBL	0	0			0	0	0	0	2021		0	0		10%	36	23	36	23	0	0		10%			0	0	36	20			0	0	36	20	36	20
			EBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			EBR	0	0			0	0	0	0	2021		0	0		15%	53	34	53	34	0	0		15%			0	0	53	30			0	0	53	30	53	30
			WBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBT	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			WBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
		Summit Road	NBL	0	0			0	0	0	0	2021		0	0	15%		18	56	18	56	0	0	15%				0	0	18	44			0	0	18	44	18	44
			NBT	0	0			0	0	209	164	2021	0.5%	214	168			0	0	214	168	225	176					0	0	0	0			0	0	0	0	225	176
			NBR	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBL	0	0			0	0	0	0	2021		0	0			0	0	0	0	0	0					0	0	0	0			0	0	0	0	0	0
			SBT	0	0			0	0	206	125	2021	0.5%	211	128			0	0	211	128	221	134					0	0	0	0			0	0	0	0	221	134
			SBR	0	0			0	0	0	0	2021		0	0	10%		12	38	12	38	0	0	10%				0	0	12	29			0	0	12	29	12	29

INCREMENTAL TRAFFIC GROWTH CALCULATIONS

				Offsite Only				Total (Site + Offsite) Traffic Less Pass-By		Horizon Year (2036) No Build + Offsite		Horizon Year (2036) Build + Offsite	
				2036 Residential Trips		Total Offsite Traffic							
				% IN	% OUT	AM	PM	AM	PM	AM	PM	AM	PM
1	US-40 (Main Street) & Taylor Road	US-40 (Main Street)	EBL	10%		13	40	13	40	87	180	87	180
			EBT	10%		13	41	81	154	365	539	433	652
			EBR			0	0	0	0	49	58	49	58
			WBL		10%	38	24	193	144	216	178	371	298
			WBT		10%	38	24	137	107	447	395	546	478
			WBR	5%		6	21	107	89	95	120	196	188
		Taylor Road	NBL			0	0	0	0	58	103	58	103
			NBT	25%		31	104	31	104	198	450	198	450
			NBR	10%		13	41	104	206	191	193	282	358
			SBL		5%	19	12	68	108	86	152	135	248
			SBT		25%	94	61	94	61	337	387	337	387
			SBR		10%	38	24	38	24	167	143	167	143
2	US-40 (Main Street) & Summit Road	US-40 (Main Street)	EBL	20%		25	83	37	112	237	229	249	258
			EBT		5%	19	12	46	34	424	671	451	693
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%		6	21	25	51	463	539	482	569
			WBR	5%		6	21	12	36	35	64	41	79
		Summit Road	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL		5%	19	12	38	22	35	45	54	55
			SBT			0	0	0	0	0	0	0	0
			SBR		20%	75	49	110	69	280	150	315	170
3	Summit Road & Refugee Road/Firstgate Drive	Firstgate Drive	EBL			0	0	0	0	31	30	31	30
			EBT			0	0	0	0	39	51	39	51
			EBR			0	0	0	0	96	22	96	22
		Refugee Road	WBL			0	0	0	0	2	10	2	10
			WBT			0	0	0	0	20	47	20	47
			WBR			0	0	0	0	54	39	54	39
		Summit Road	NBL			0	0	0	0	39	32	39	32
			NBT		15%	57	37	93	57	116	129	152	149
			NBR			0	0	0	0	0	4	0	4
			SBL			0	0	0	0	19	56	19	56
			SBT	15%		19	62	31	91	168	147	180	176
			SBR			0	0	0	0	13	31	13	31
4	Taylor Road & Firstgate Drive	Firstgate Drive	EBL			0	0	0	0	18	19	18	19
			EBT			0	0	0	0	39	23	39	23
			EBR			0	0	0	0	72	70	72	70
			WBL			0	0	0	0	87	56	87	56
			WBT			0	0	0	0	25	25	25	25
			WBR			0	0	0	0	34	43	34	43
		Taylor Road	NBL			0	0	0	0	31	69	31	69
			NBT		20%	75	49	174	118	409	427	508	496
			NBR			0	0	0	0	48	69	48	69
			SBL			0	0	0	0	13	101	13	101
			SBT	20%		25	83	75	178	322	698	372	793
			SBR			0	0	0	0	9	35	9	35
5	US-40 (Main Street) & Site Access #1	US-40 (Main Street)	EBL			0	0	145	315	0	0	145	315
			EBT	20%	5%	44	95	107	152	660	900	723	957
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%	20%	82	70	163	113	758	694	839	737
			WBR			0	0	7	23	0	0	7	23
		Site Access #1	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	4	26	0	0	4	26
			SBT			0	0	0	0	0	0	0	0
			SBR			0	0	274	228	0	0	274	228
6	US-40 (Main Street) & Site Access #2	US-40 (Main Street)	EBL			0	0	51	89	0	0	51	89
			EBT	20%	5%	44	95	60	90	660	900	676	895
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%	20%	82	70	124	67	758	694	800	691
			WBR			0	0	12	52	0	0	12	52
		Site Access #2	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	22	56	0	0	22	56
			SBT			0	0	0	0	0	0	0	0
			SBR			0	0	45	69	0	0	45	69
7	Summit Road & Site Access #3	Site Access #3	EBL			0	0	36	20	0	0	36	20
			EBT			0	0	0	0	0	0	0	0
			EBR			0	0	53	30	0	0	53	30
			WBL			0	0	0	0	0	0	0	0
			WBT			0	0	0	0	0	0	0	0
			WBR			0	0	0	0	0	0	0	0
		Summit Road	NBL			0	0	18	44	0	0	18	44
			NBT	25%		31	104	31	104	256	280	256	280
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	0	0	0	0	0	0
			SBT		25%	94	61	94	61	315	195	315	195
			SBR			0	0	12	29	0	0	12	29

APPENDIX

F. MORPC Growth Rate Data

Campbell, Jacob

From: Hwashik Jang <hjang@morpc.org>
Sent: Friday, July 2, 2021 2:25 PM
To: Campbell, Jacob
Cc: Morgan, Perry; Nick Gill; Zhuojun Jiang
Subject: RE: Reynoldsburg OH Growth Rate

Follow Up Flag: Follow up
Flag Status: Completed

Categories: External

Jacob,

We have completed processing growth rates for your traffic study intersections.
Please use linear annual growth rates as summarized below.

Location	Linear Annual Growth Rate
US 40 e/o Taylor Rd	1.00%
Taylor Rd n/o US 40	0.50%
US 40 w/o Taylor Rd	1.00%
Taylor Rd s/o US 40	0.50%
US 40 e/o Private Dr	1.00%
US 40 w/o Private Dr	1.00%
Private Dr s/o US 40	0.50%
US 40 e/o Summit Rd	1.00%
Summit Rd n/o US 40	0.50%
US 40 w/o Summit Rd	1.00%

Note: *The above rate was derived based on planning level analysis by using MORPC's regional travel demand model.*

If you have any questions, please let me know.

Thanks,

HWASHIK JANG
Senior Planner, Transportation & Infrastructure Development | **Mid-Ohio Regional Planning Commission**
T: 614.233.4145 | hjang@morpc.org
111 Liberty Street, Suite 100 | Columbus, OH 43215

Given increasing concerns and rapid changing conditions due to COVID-19, MORPC offices are currently closed to the public. In taking such steps, we are protecting the health and safety of our staff, members and the general public. During

APPENDIX

G. Data from ITE Trip Generation,10th Edition

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents had a high correlation with average weekday vehicle trip ends. The use of these variables was limited, however, because the number of vehicles and residents was often difficult to obtain or predict. The number of dwelling units was generally used as the independent variable of choice because it was usually readily available, easy to project, and had a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas, and other trip attractors than other residential land uses; and they generally had fewer alternative modes of transportation available because they were typically not as concentrated as other residential land uses.

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:00 and 5:00 p.m., respectively. For the two sites with Saturday data, the overall highest vehicle volume was counted between 3:00 and 4:00 p.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 10:15 and 11:15 a.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, and Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 903, 925, 936

Single-Family Detached Housing
(210)

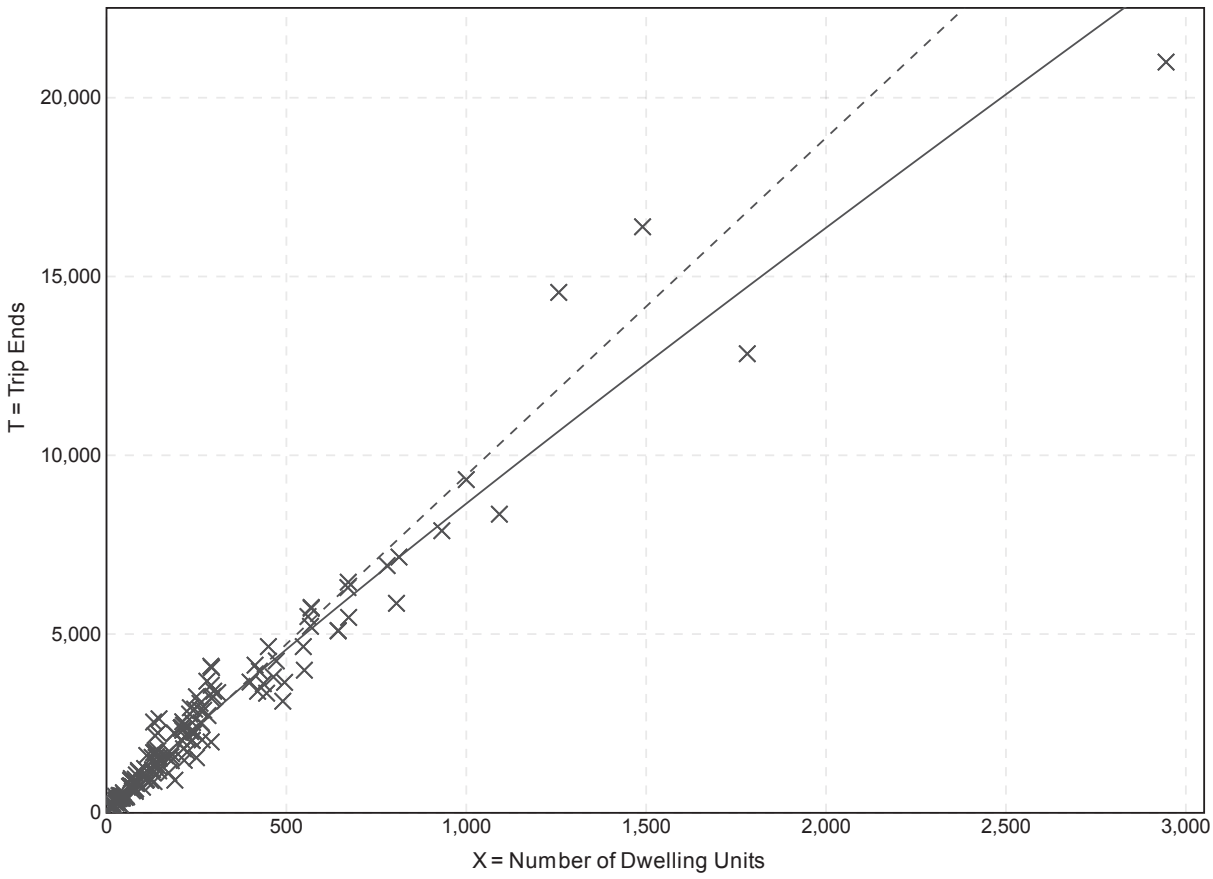
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.71

R^2= 0.95

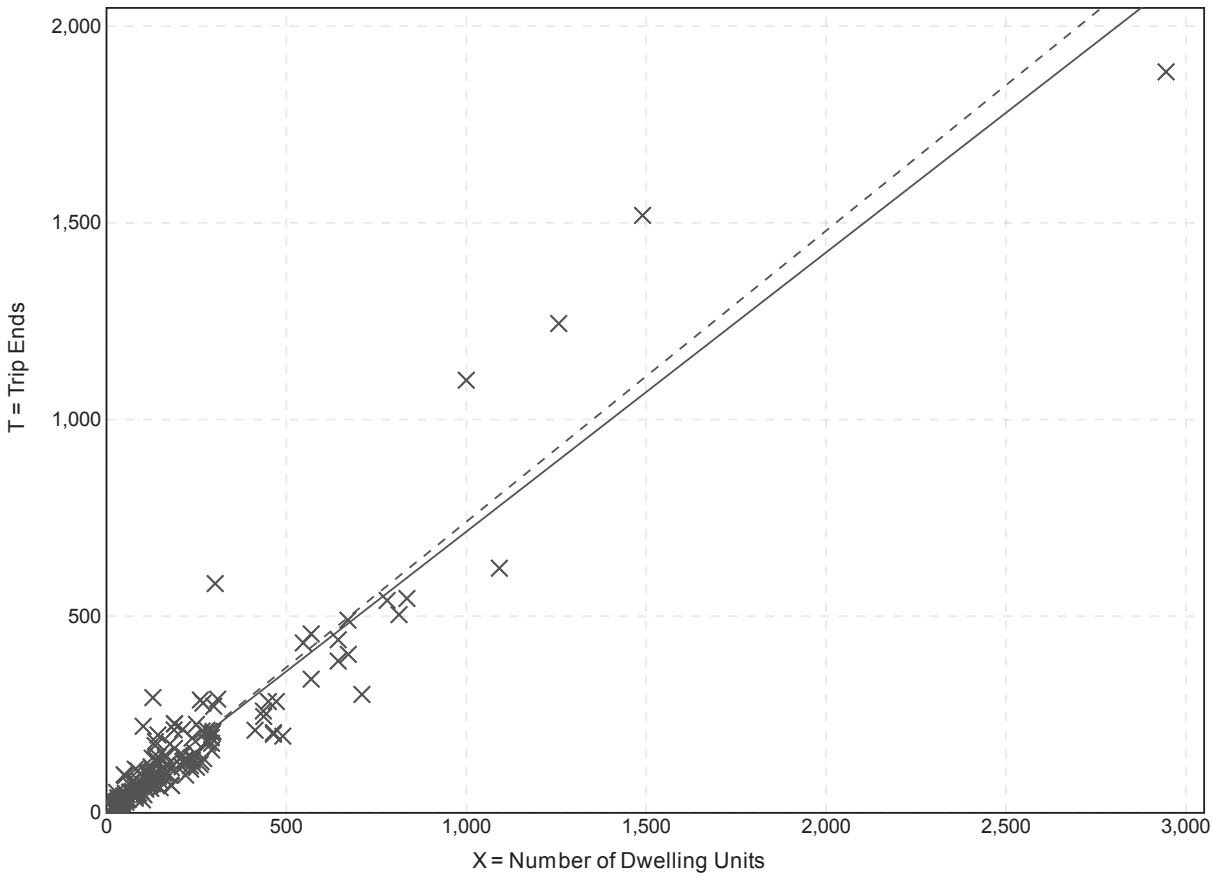
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	173
Avg. Num. of Dwelling Units:	219
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Fitted Curve Equation: T = 0.71(X) + 4.80

R^2= 0.89

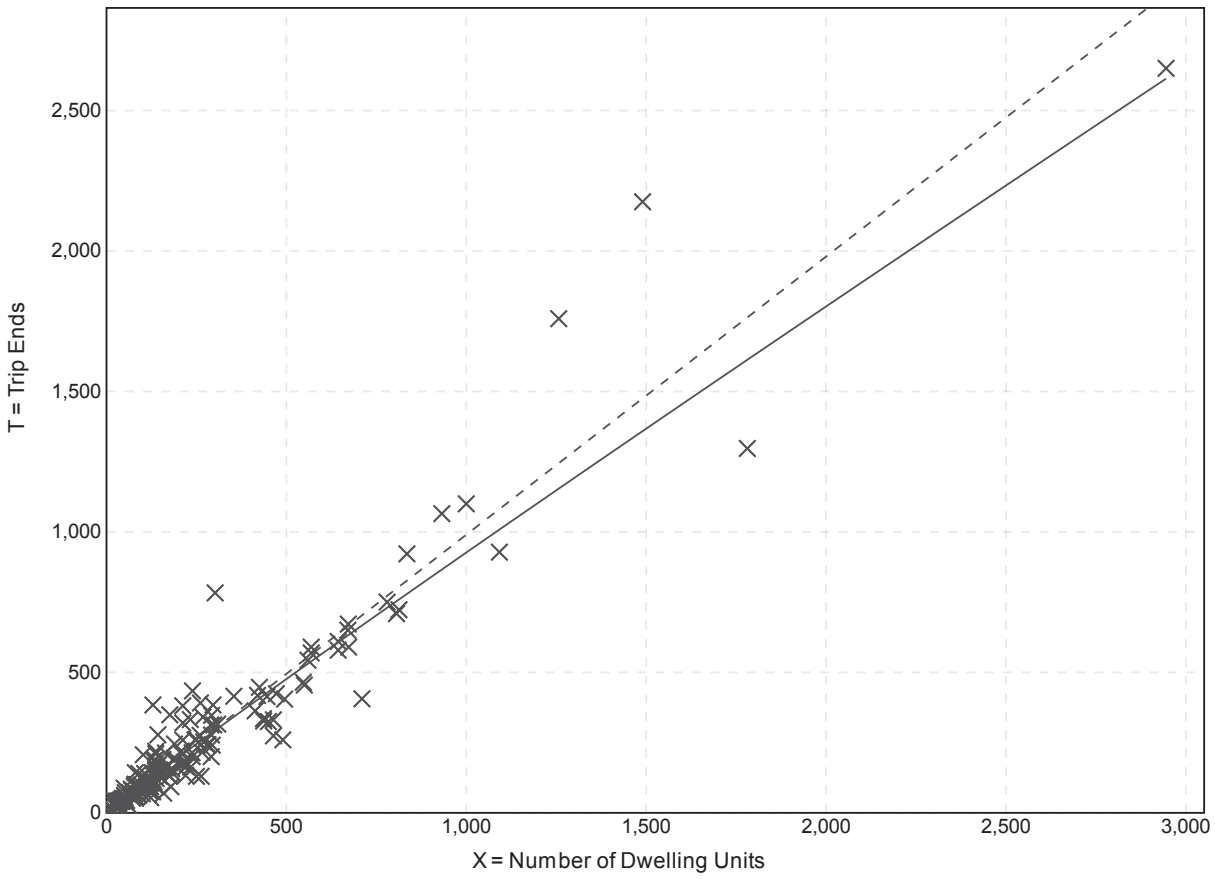
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	190
Avg. Num. of Dwelling Units:	242
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.96 Ln(X) + 0.20

R^2= 0.92

Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors). Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and off-campus student apartment (Land Use 225) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:45 and 5:45 p.m., respectively. For the one site with Saturday data, the overall highest vehicle volume was counted between 9:45 and 10:45 a.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 11:45 a.m. and 12:45 p.m.

For the one dense multi-use urban site with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 6:15 and 7:15 p.m., respectively.

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.13 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.21 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, District of Columbia, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Minnesota, New Jersey, New York, Ontario, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington.

It is expected that the number of bedrooms and number of residents are likely correlated to the number of trips generated by a residential site. Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.

Source Numbers

168, 187, 188, 204, 211, 300, 305, 306, 319, 320, 321, 357, 390, 412, 418, 525, 530, 571, 579, 583, 864, 868, 869, 870, 896, 903, 918, 946, 947, 948, 951

Multifamily Housing (Low-Rise)
(220)

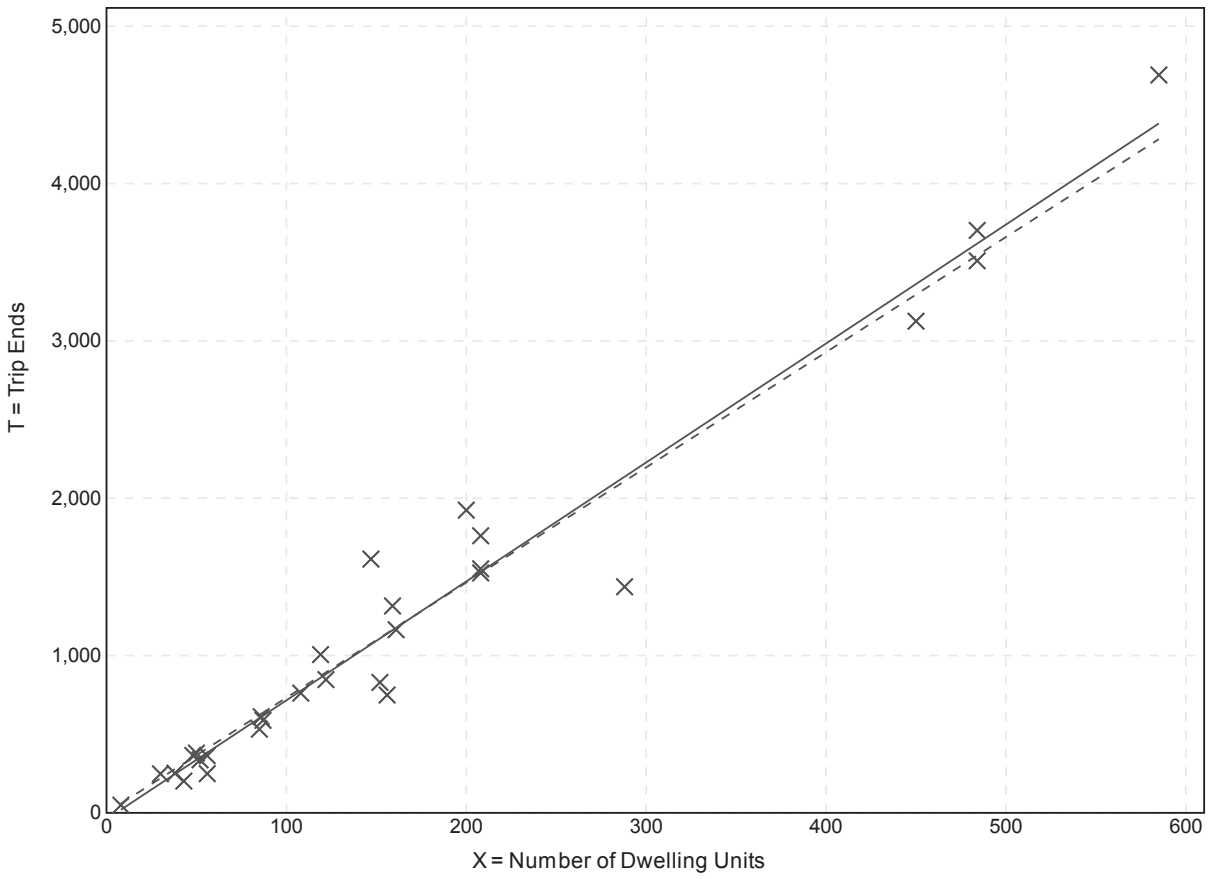
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Fitted Curve Equation: T = 7.56(X) - 40.86

R^2= 0.96

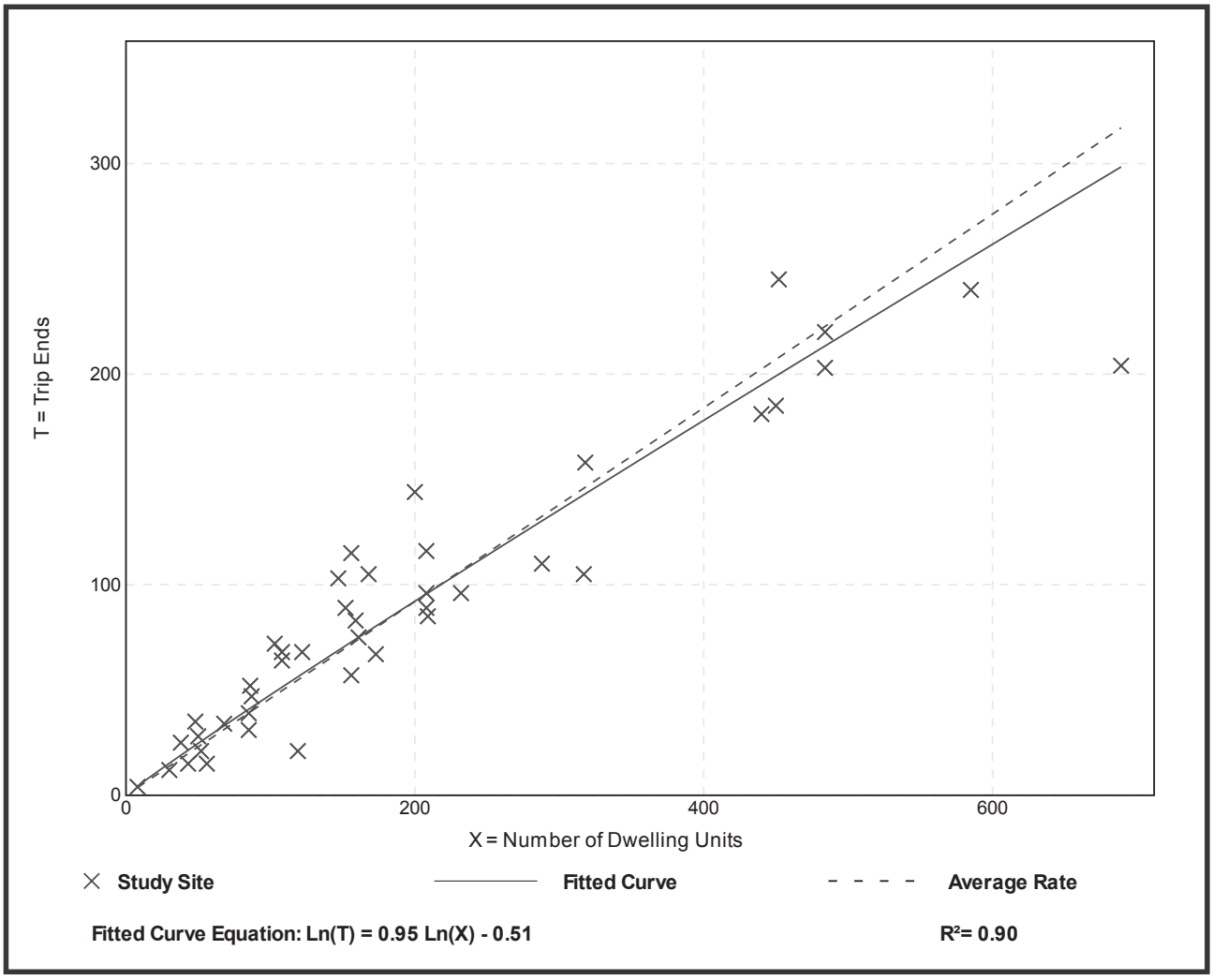
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 42
Avg. Num. of Dwelling Units: 199
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



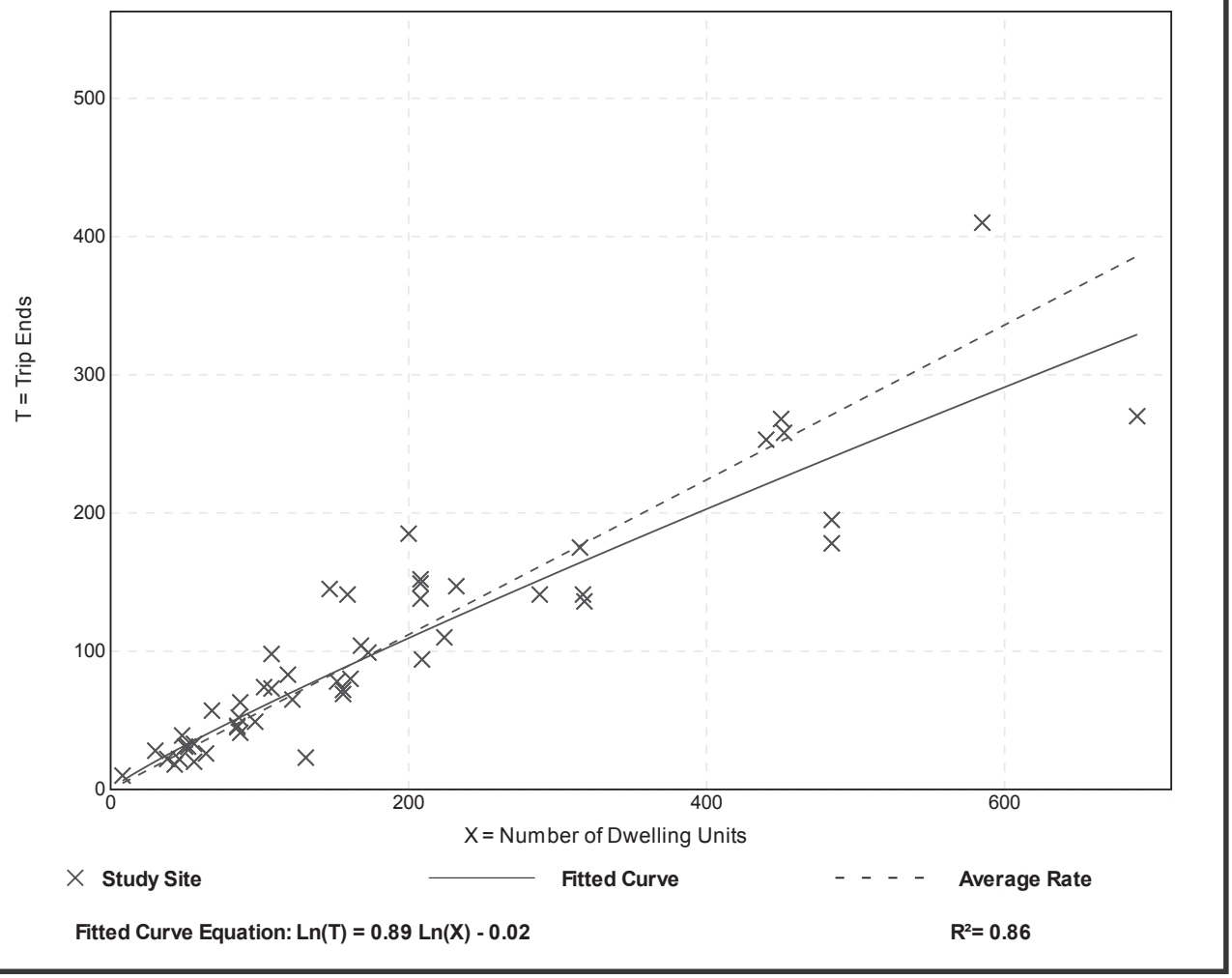
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	50
Avg. Num. of Dwelling Units:	187
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.59 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970

Multifamily Housing (Mid-Rise)
(221)

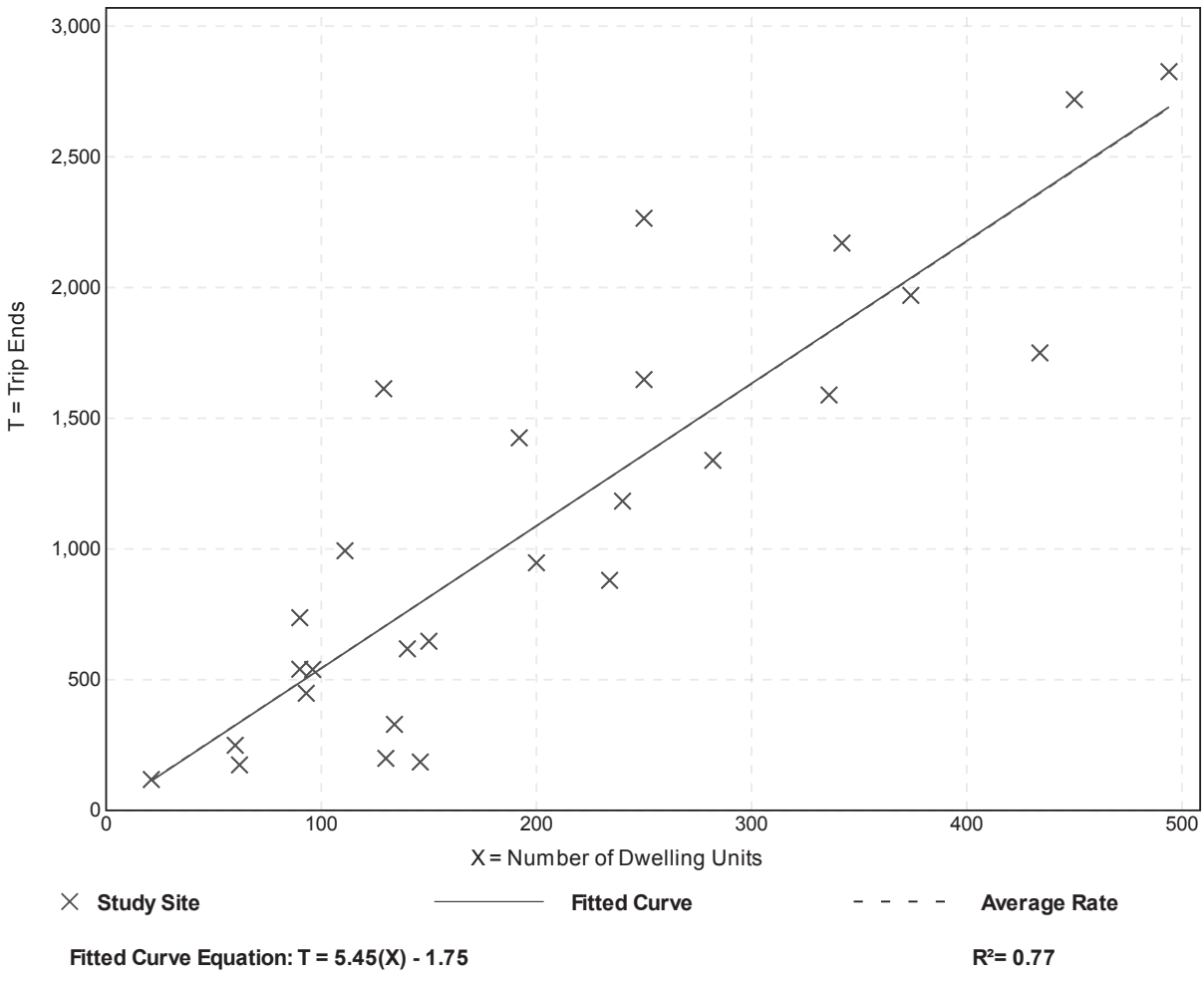
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



Fitted Curve Equation: T = 5.45(X) - 1.75

R^2= 0.77

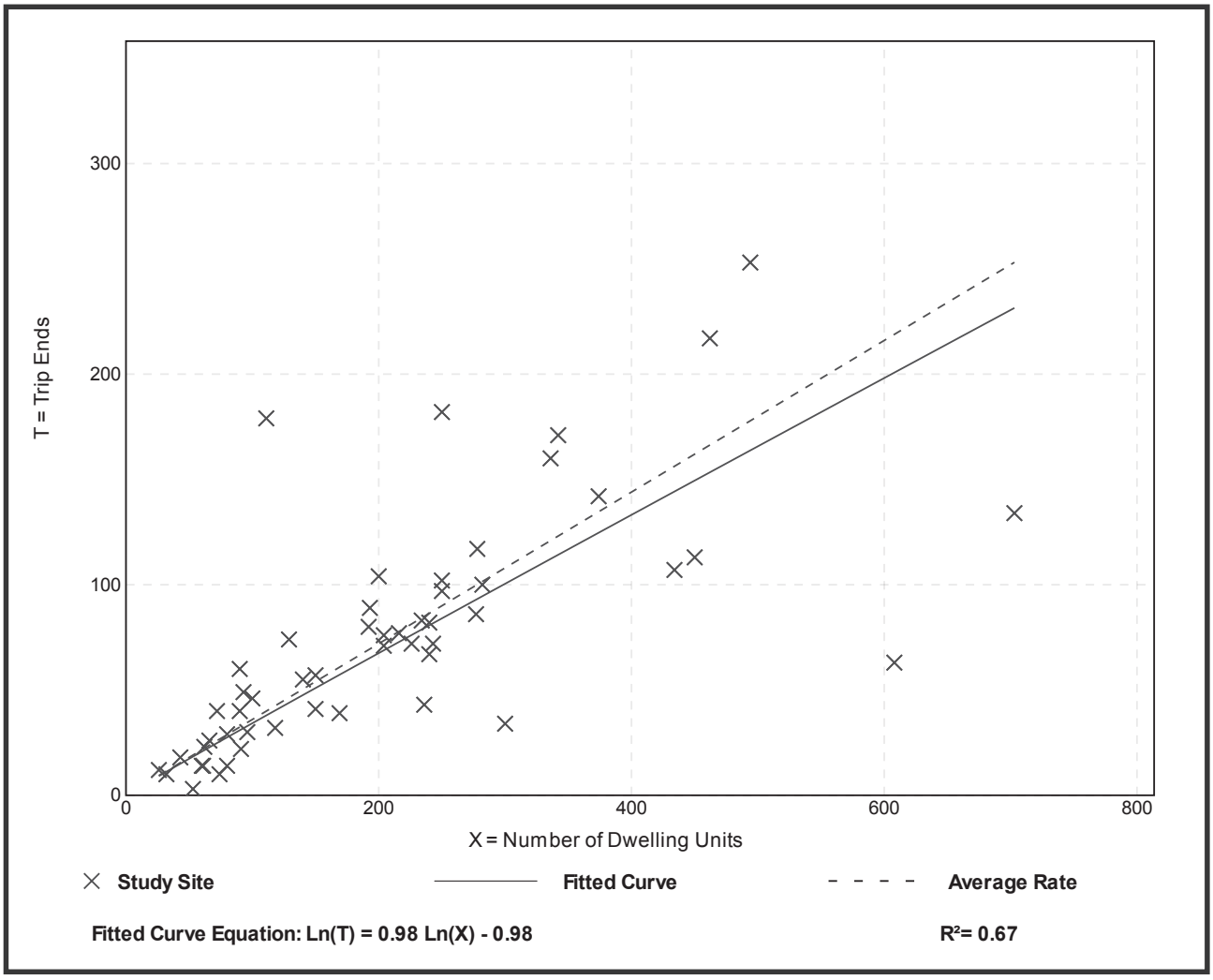
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. Num. of Dwelling Units: 207
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



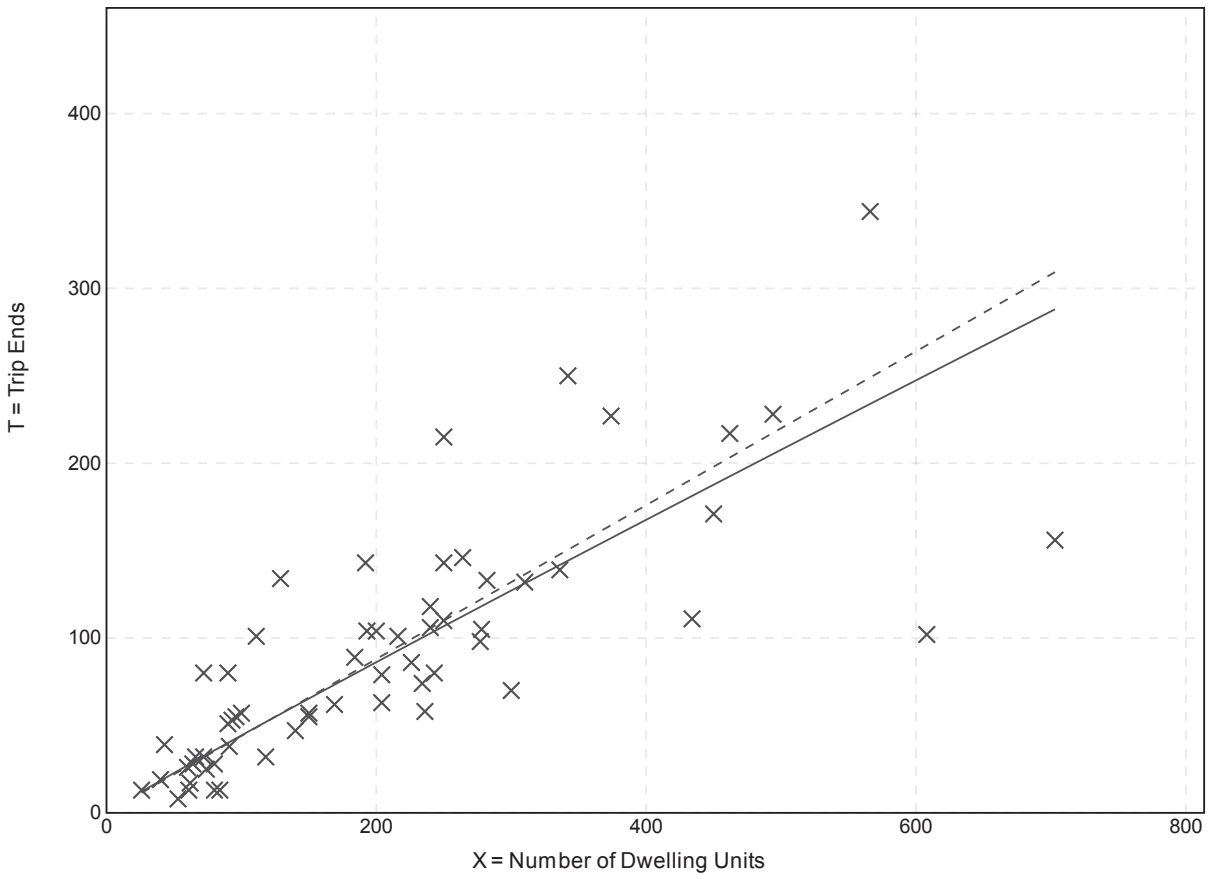
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	60
Avg. Num. of Dwelling Units:	208
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.96 Ln(X) - 0.63

R^2= 0.72

Land Use: 820
Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

Shopping Center
(820)

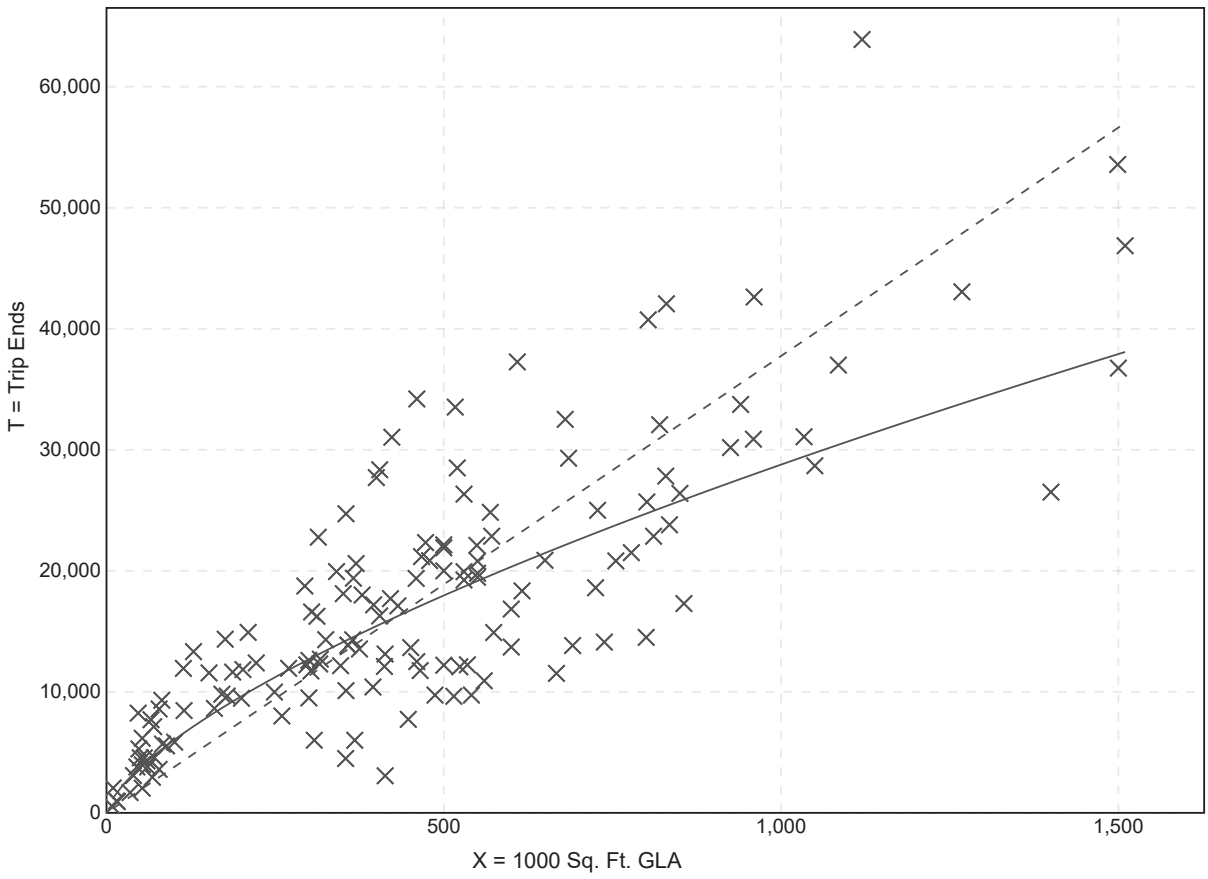
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.68 Ln(X) + 5.57

R^2= 0.76

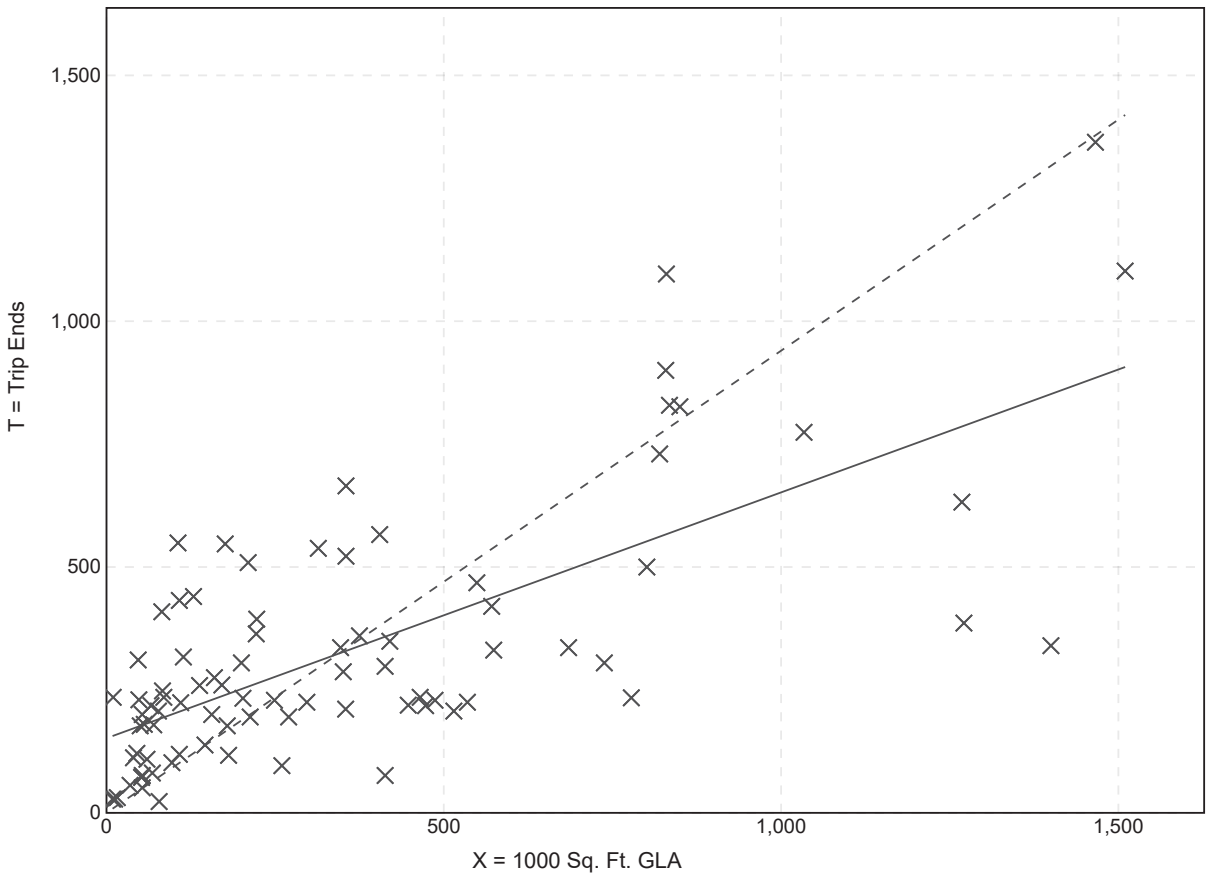
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 84
1000 Sq. Ft. GLA: 351
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Fitted Curve Equation: T = 0.50(X) + 151.78

R^2= 0.50

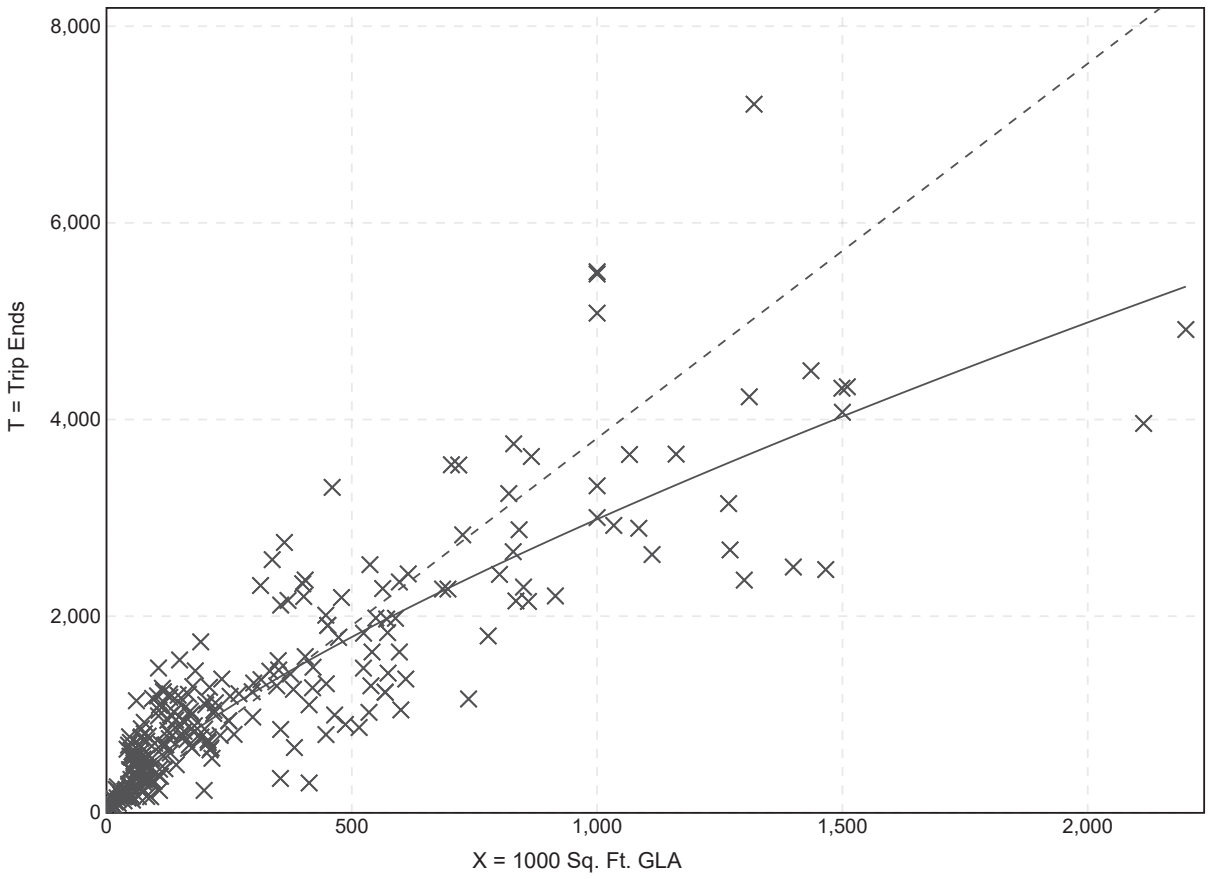
Shopping Center
(820)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 261
1000 Sq. Ft. GLA: 327
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



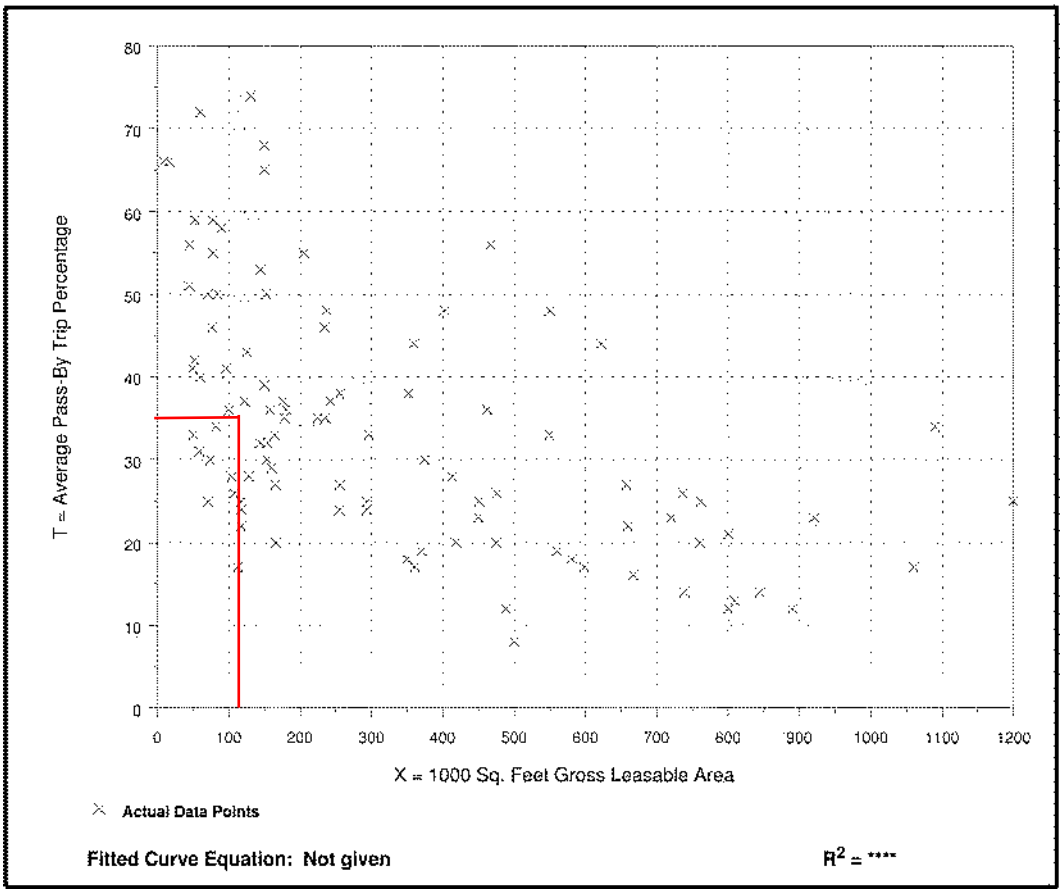
Fitted Curve Equation: Ln(T) = 0.74 Ln(X) + 2.89

R^2= 0.82

Figure E.7 Shopping Center (820)

Average Pass-By Trip Percentage vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, P.M. Peak Period
Number of Studies: 100
Average 1000 Sq. Feet GLA: 329

Data Plot



APPENDIX

H. Internal Trip Calculation

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook* , 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY

GROSS TRIP GENERATION

INPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office						
Retail					289	314
Restaurant						
Cinema/Entertainment						
Residential					374	226
Hotel						
	0	0	0	0	663	540

INTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	0	0	0	0	0	0
Retail	0	0	0	0	29	82
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	82	29
Hotel	0	0	0	0	0	0
	0	0	0	0	111	111
% Reduction	0.0%		0.0%		18.5%	

EXTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	0	0	0	0	0	0
Retail	0	0	0	0	260	232
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	292	197
Hotel	0	0	0	0	0	0
	0	0	0	0	552	429

APPENDIX

I. ODOT Traffic Count Data

Location Info	
Location ID	345_EB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	EB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3453200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins

Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	6	7	7	8	28
01:00 - 02:00	10	10	4	3	27
02:00 - 03:00	5	9	13	5	32
03:00 - 04:00	2	8	4	4	18
04:00 - 05:00	23	13	33	23	92
05:00 - 06:00	36	69	132	130	367
06:00 - 07:00	147	148	122	170	587
07:00 - 08:00	113	104	93	129	439
08:00 - 09:00	126	95	86	72	379
09:00 - 10:00	85	80	78	84	327
10:00 - 11:00	68	72	72	80	292
11:00 - 12:00	76	80	99	104	359
12:00 - 13:00	105	116	112	110	443
13:00 - 14:00	109	130	136	129	504
14:00 - 15:00	128	116	105	127	476
15:00 - 16:00	124	137	168	148	577
16:00 - 17:00	151	169	174	175	669
17:00 - 18:00	203	195	215	209	822
18:00 - 19:00	198	206	136	140	680
19:00 - 20:00	127	109	66	74	376
20:00 - 21:00	69	46	51	41	207
21:00 - 22:00	41	25	29	35	130
22:00 - 23:00	27	26	15	8	76
23:00 - 24:00	17	7	10	12	46
TOTAL					7953

Location Info	
Location ID	345_WB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	WB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3457200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins

Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	12	6	2	6	26
01:00 - 02:00	8	8	12	9	37
02:00 - 03:00	16	13	13	7	49
03:00 - 04:00	20	29	13	11	73
04:00 - 05:00	38	17	32	28	115
05:00 - 06:00	34	59	163	107	363
06:00 - 07:00	165	147	141	113	566
07:00 - 08:00	139	133	140	142	554
08:00 - 09:00	138	139	104	112	493
09:00 - 10:00	105	97	83	106	391
10:00 - 11:00	121	122	108	106	457
11:00 - 12:00	102	109	114	131	456
12:00 - 13:00	116	113	91	107	427
13:00 - 14:00	120	119	100	120	459
14:00 - 15:00	180	111	179	145	615
15:00 - 16:00	111	128	133	150	522
16:00 - 17:00	161	143	167	136	607
17:00 - 18:00	140	139	253	227	759
18:00 - 19:00	204	197	121	85	607
19:00 - 20:00	60	55	47	55	217
20:00 - 21:00	45	44	41	52	182
21:00 - 22:00	91	55	35	26	207
22:00 - 23:00	42	32	21	17	112
23:00 - 24:00	19	15	13	9	56
TOTAL					8350

APPENDIX

J. ITE Time of Day Distribution Data

Source: ITE *Trip Generation Manual* , 10th Edition

Land Use Code	210
Land Use	Single-Family Detached Housing
Setting	General Urban/Suburban
Time Period	Weekday
Trip Type	Vehicle
# Data Sites	6

	% of 24-Hour Traffic	
Time	Entering	Exiting
12-1 AM	0.5	0.2
1-2 AM	0.2	0.2
2-3 AM	0.2	0
3-4 AM	0.2	0.2
4-5 AM	0.3	0.8
5-6 AM	0.5	2.0
6-7 AM	1.6	5.9
7-8 AM	3.2	10.2
8-9 AM	3.7	8.6
9-10 AM	3.2	5.4
10-11 AM	4.2	5.4
11-12 PM	5.4	5.1
12-1 PM	5.5	5.6
1-2 PM	6.0	5.9
2-3 PM	7.0	6.2
3-4 PM	8.5	6.0
4-5 PM	10.5	7.5
5-6 PM	10.3	7.4
6-7 PM	8.6	5.9
7-8 PM	6.2	4.3
8-9 PM	6.3	3.1
9-10 PM	4.5	2.4
10-11 PM	2.2	1.1
11-12 AM	1.3	0.7

2026 SITE TRIPS					
EXITING					
SBRT	SBLT	WBR	WBT	EBL	EBT
1	0	1	1	1	2
1	0	1	1	0	0
0	0	1	1	0	0
1	0	1	1	0	0
3	1	1	1	0	0
6	3	1	1	1	2
20	8	4	4	3	6
36	18	6	6	12	18
28	12	9	9	8	16
18	7	8	8	7	14
18	7	10	10	9	18
17	7	13	13	12	24
18	8	13	13	12	24
20	8	14	14	13	26
20	9	16	16	16	32
20	8	20	20	19	38
23	11	19	19	38	11
25	10	24	24	23	46
20	8	20	20	19	38
14	6	14	14	14	28
10	4	15	15	14	28
8	3	11	11	10	20
4	1	5	5	5	10
2	1	3	3	3	6

2026 No Build

Leg	Eastbound SR-40		Westbound SR-40		Southbound Summit Rd	
Direction	Eastbound		Westbound		Southbound	
Start Time	Left	Thru	Thru	Right	Left	Right
7:00	61	91	70	12	3	62
7:15	56	125	89	7	6	61
7:30	23	84	118	6	3	38
7:45	52	68	138	2	3	35
8:00	38	66	62	3	2	77
8:15	15	49	59	2	5	17
8:30	10	45	82	5	2	21
8:45	12	60	64	3	2	15
16:00	24	140	118	7	2	27
16:15	17	159	117	6	5	17
16:30	25	155	104	10	5	21
16:45	33	123	108	6	9	17
17:00	43	158	141	12	11	29
17:15	31	163	117	12	7	28
17:30	31	166	107	9	10	7
17:45	38	182	131	15	12	26

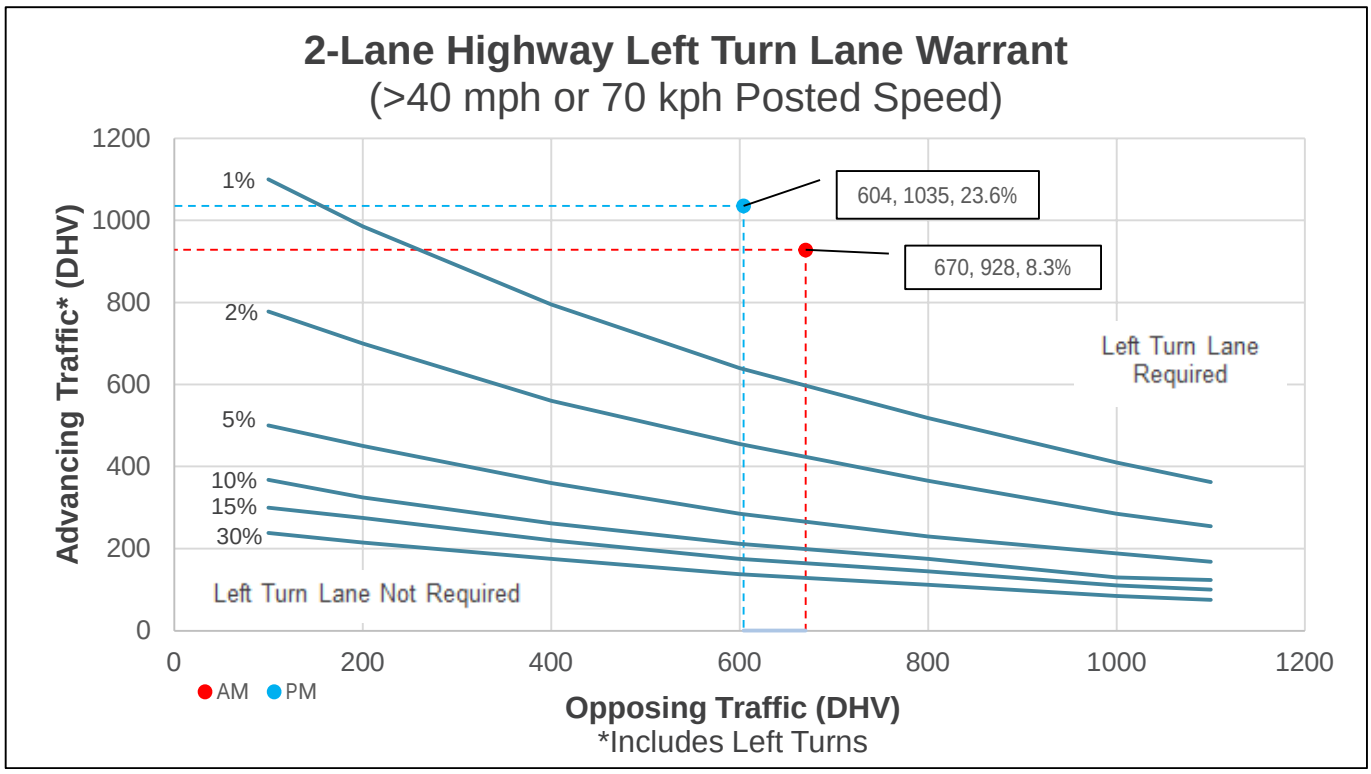
2026 Build

Leg	Eastbound SR-40		Westbound SR-40		Southbound Summit Rd	
Direction	Eastbound		Westbound		Southbound	
Start Time	Left	Thru	Thru	Right	Left	Right
7:00	62	96	79	13	8	67
7:15	58	130	98	9	11	66
7:30	24	89	126	7	8	43
7:45	53	73	147	3	8	40
8:00	39	71	71	4	7	82
8:15	17	54	68	4	10	22
8:30	11	50	90	6	7	26
8:45	13	65	73	4	7	20
16:15	21	169	127	17	8	20
16:30	28	165	114	22	7	23
16:45	36	133	118	17	12	20
17:00	46	168	151	23	13	31
17:15	35	173	127	23	10	31
17:30	34	176	117	21	12	9
17:45	41	192	141	26	15	29

APPENDIX

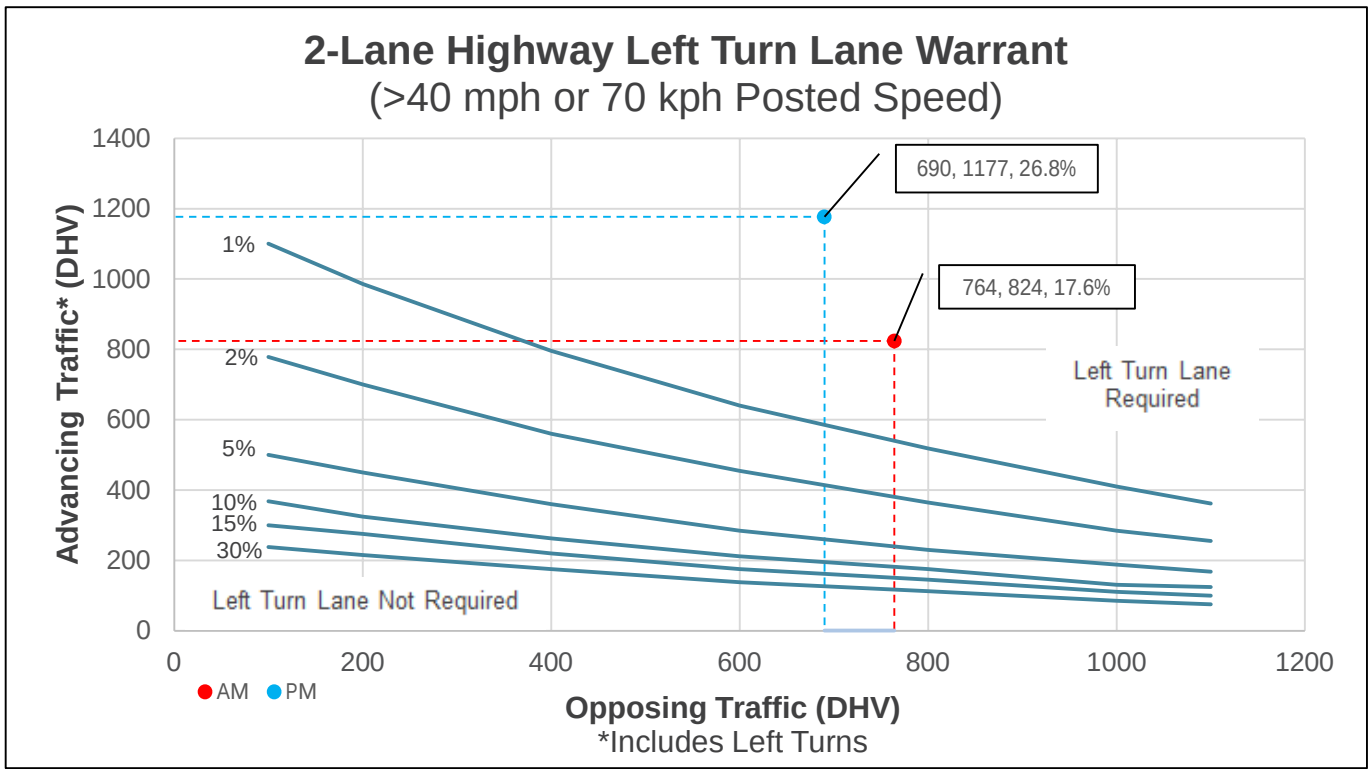
K. Turn Lane Warrant Analysis

US-40 and Site Access Drive #1
2026 Build



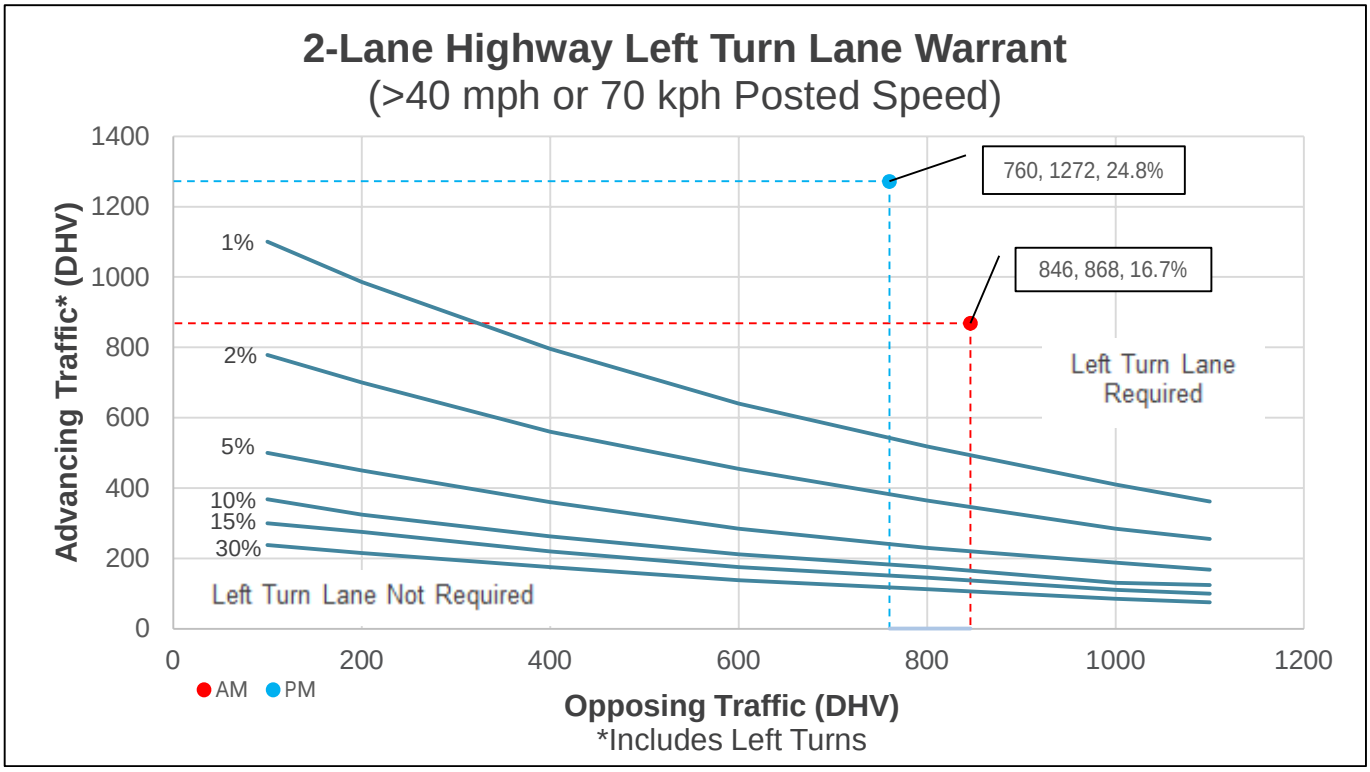
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	928	1035
Opposing Volume (VPH)	670	604
Left Turn Percentage	8.3%	23.6%
Is Left Turn Warrant Met?	Yes	Yes

US-40 and Site Access Drive #1
2036 Build



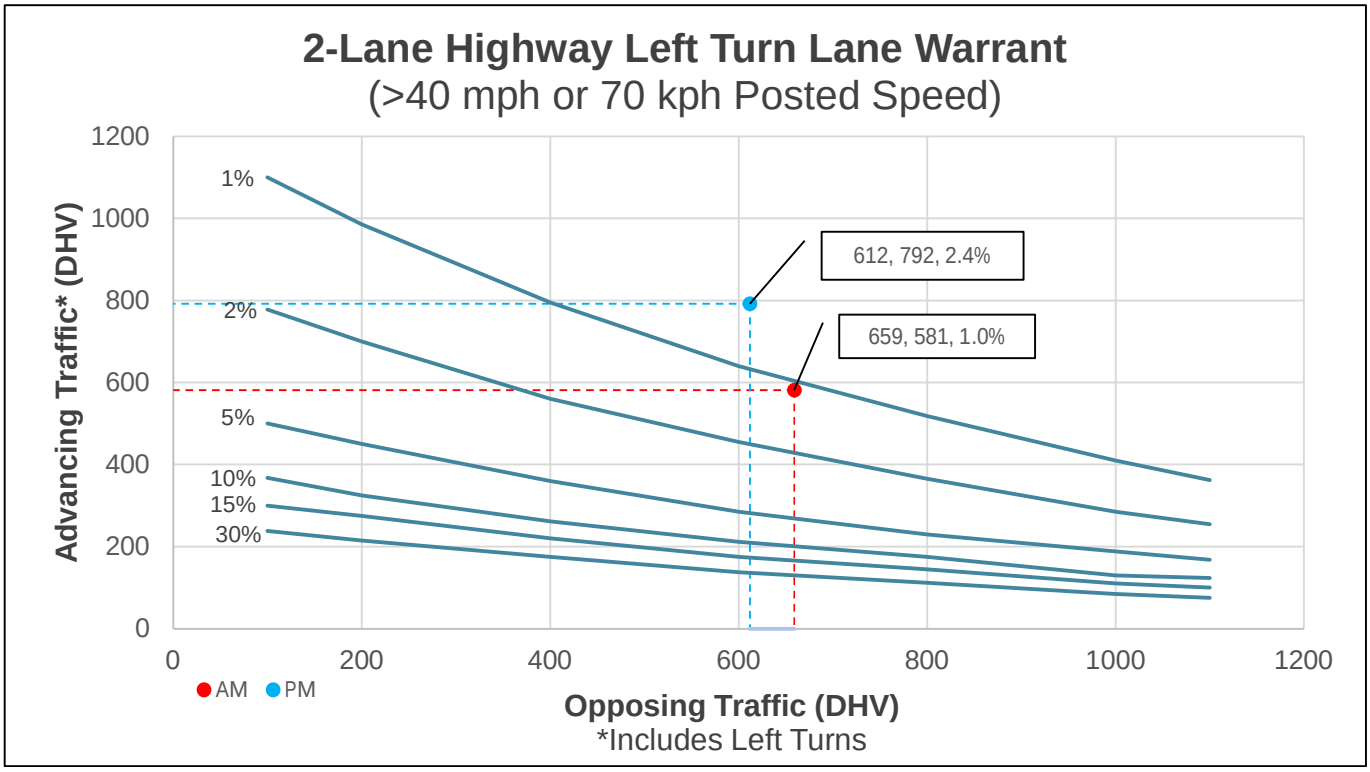
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	824	1177
Opposing Volume (VPH)	764	690
Left Turn Percentage	17.6%	26.8%
Is Left Turn Warrant Met?	Yes	Yes

US-40 and Site Access Drive #1
2036 Build + Offsite



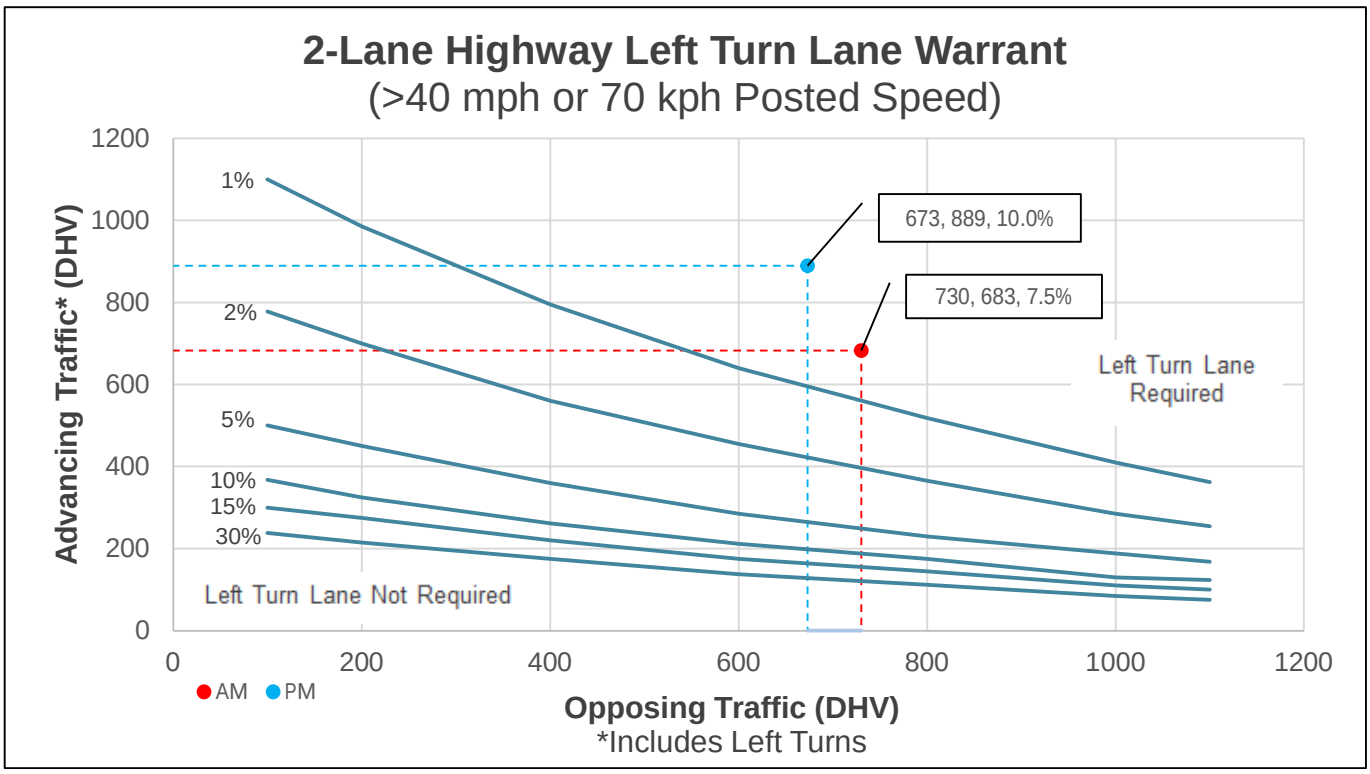
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	868	1272
Opposing Volume (VPH)	846	760
Left Turn Percentage	16.7%	24.8%
Is Left Turn Warrant Met?	Yes	Yes

US-40 and Site Access Drive #2
2026 Build



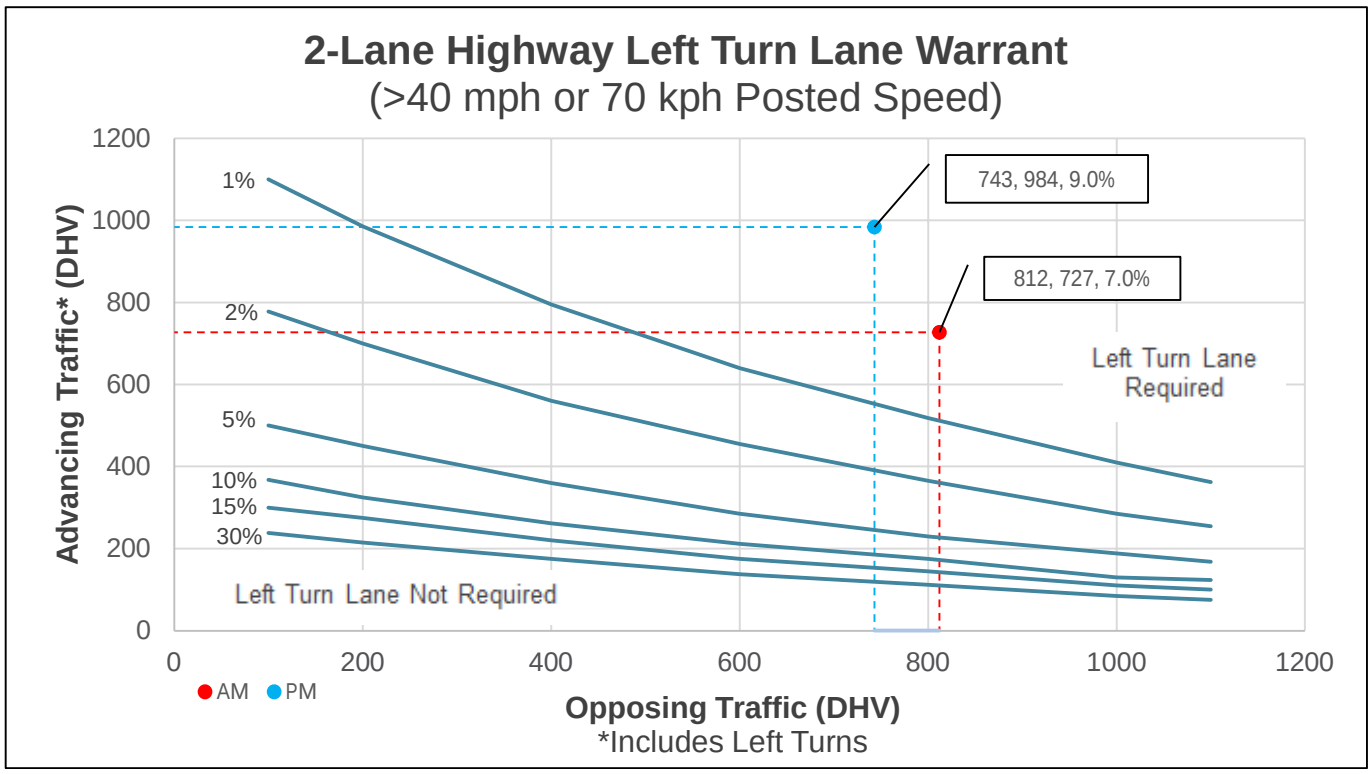
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	581	792
Opposing Volume (VPH)	659	612
Left Turn Percentage	1.0%	2.4%
Is Left Turn Warrant Met?	No	Yes

US-40 and Site Access Drive #2
2036 Build



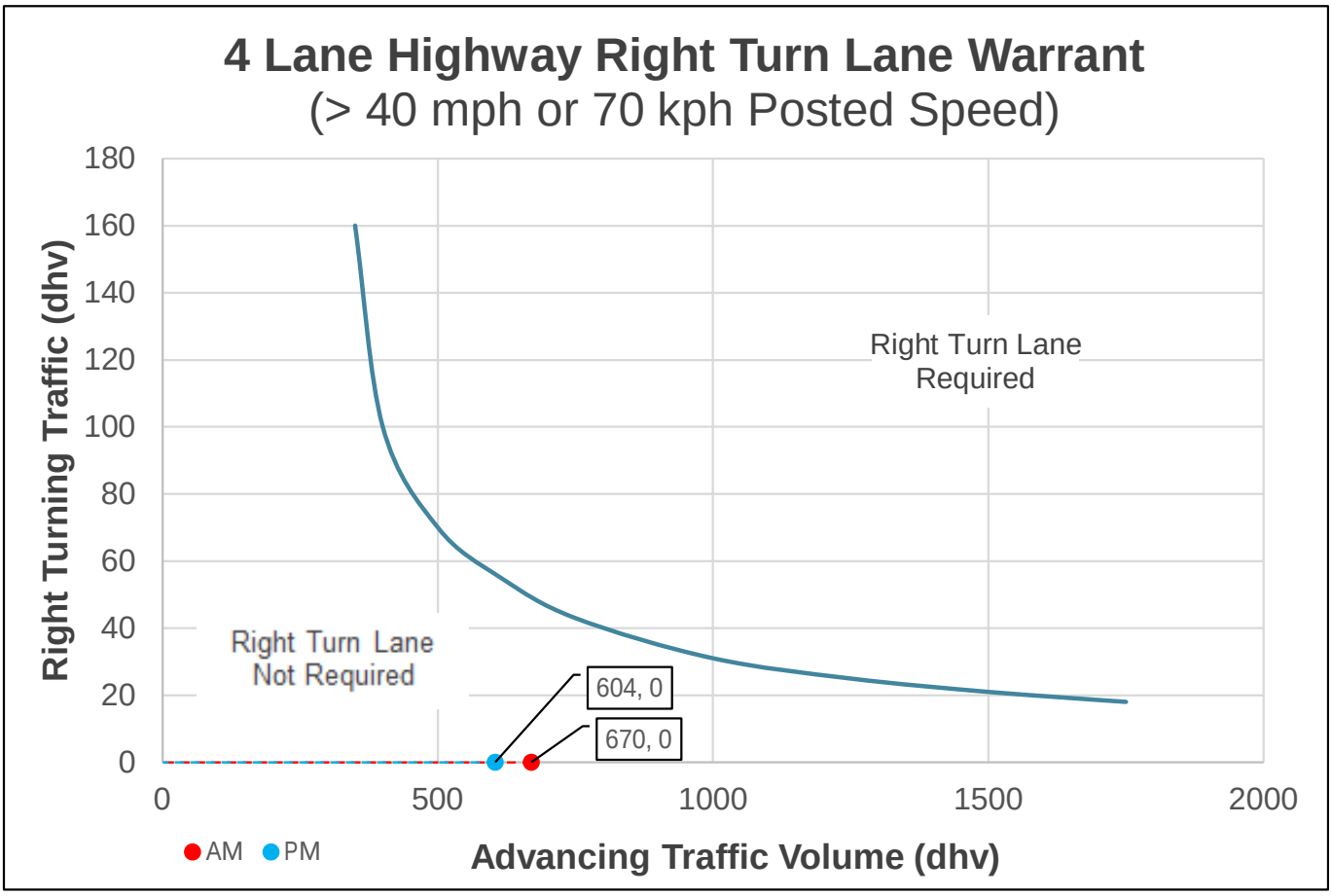
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	683	889
Opposing Volume (VPH)	730	673
Left Turn Percentage	7.5%	10.0%
Is Left Turn Warrant Met?	Yes	Yes

US-40 and Site Access Drive #2
2036 Build + Offsite



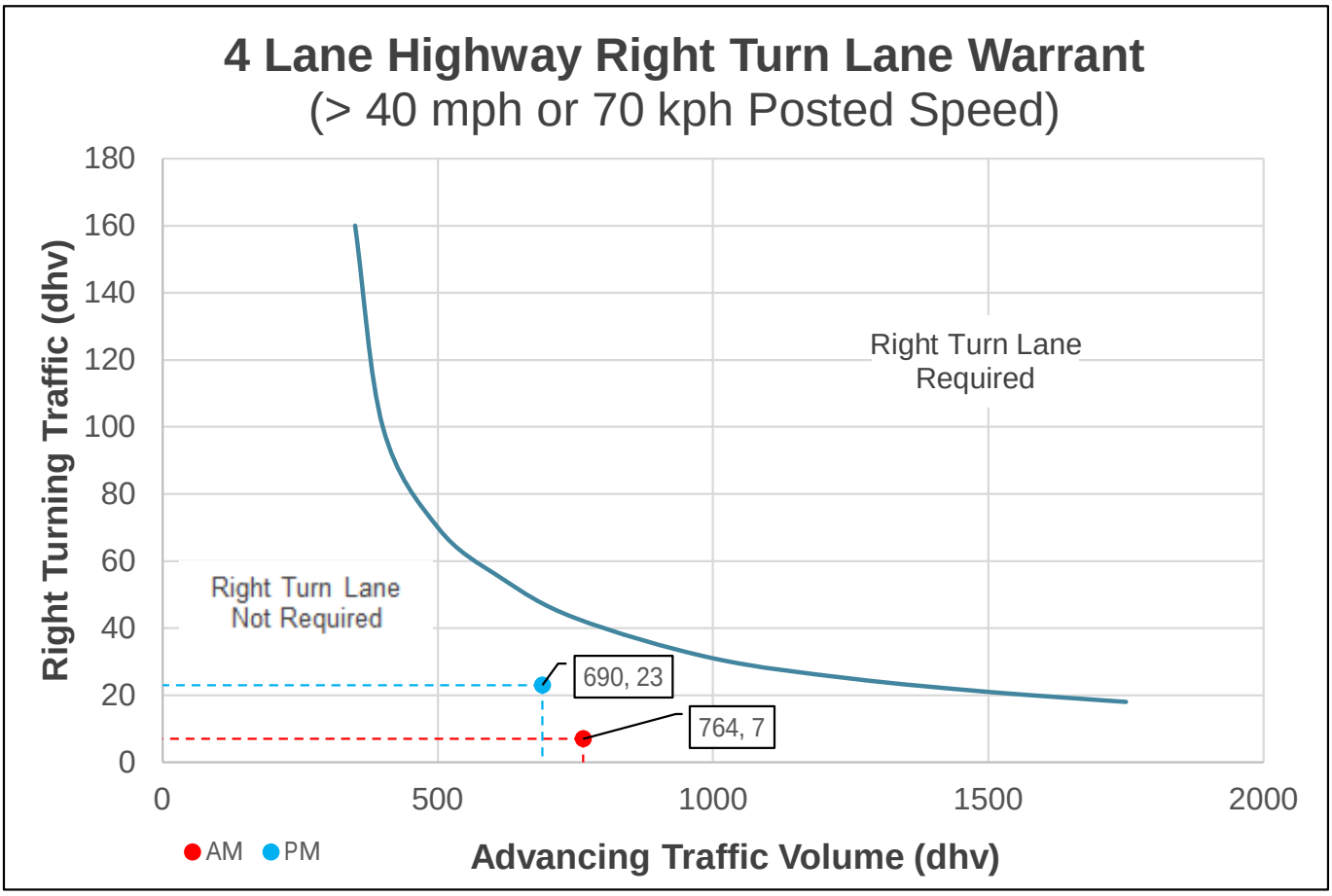
	AM Peak	PM Peak
Design Speed (mph)	45	45
Advancing Traffic (VPH)	727	984
Opposing Volume (VPH)	812	743
Left Turn Percentage	7.0%	9.0%
Is Left Turn Warrant Met?	Yes	Yes

US-40 and Site Access Drive #1
2026 Build



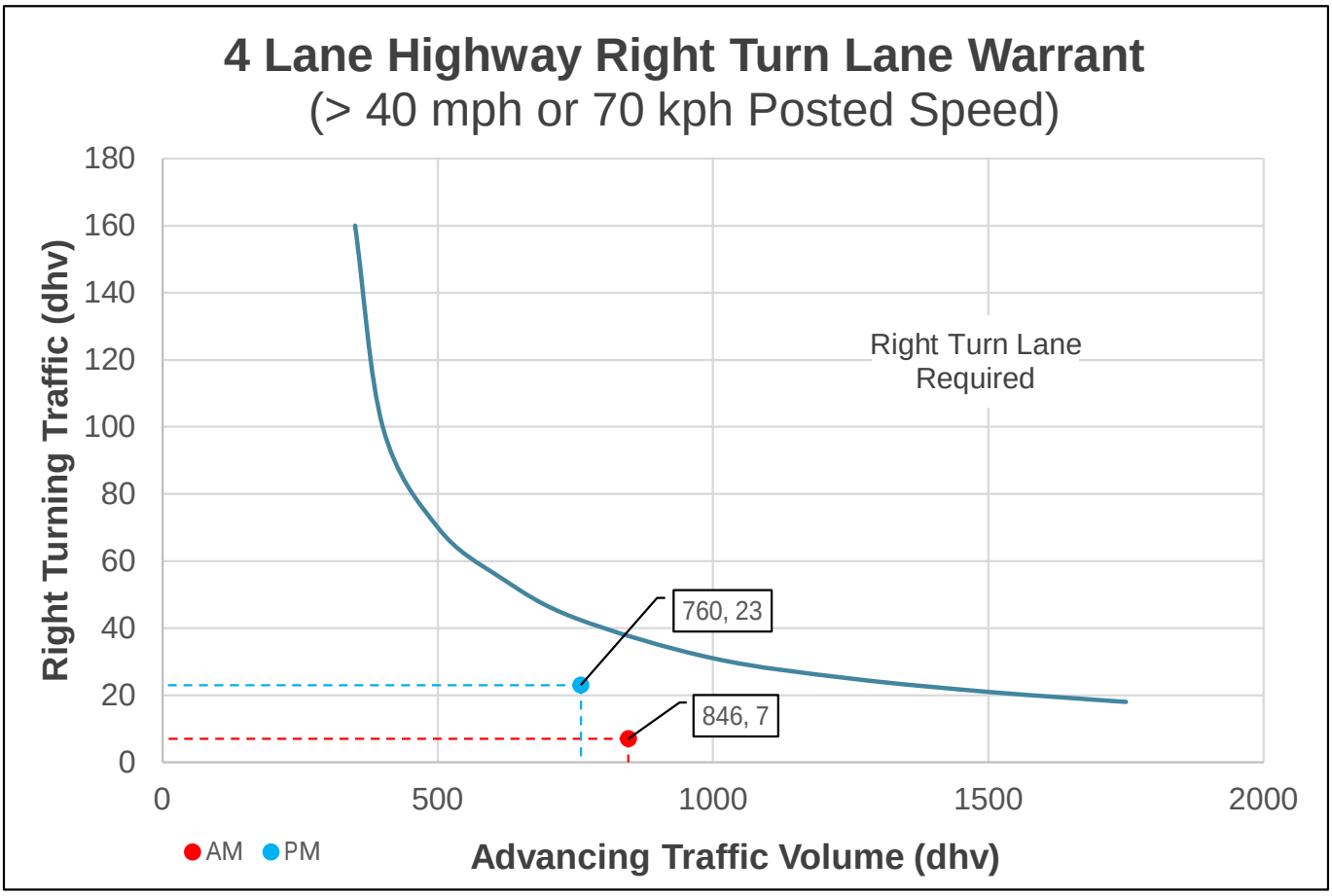
	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	0	0
Advancing Traffic Volume (dhv)	670	604
Is Right Turn Warrant Met?	No	No

US-40 and Site Access Drive #1
2036 Build



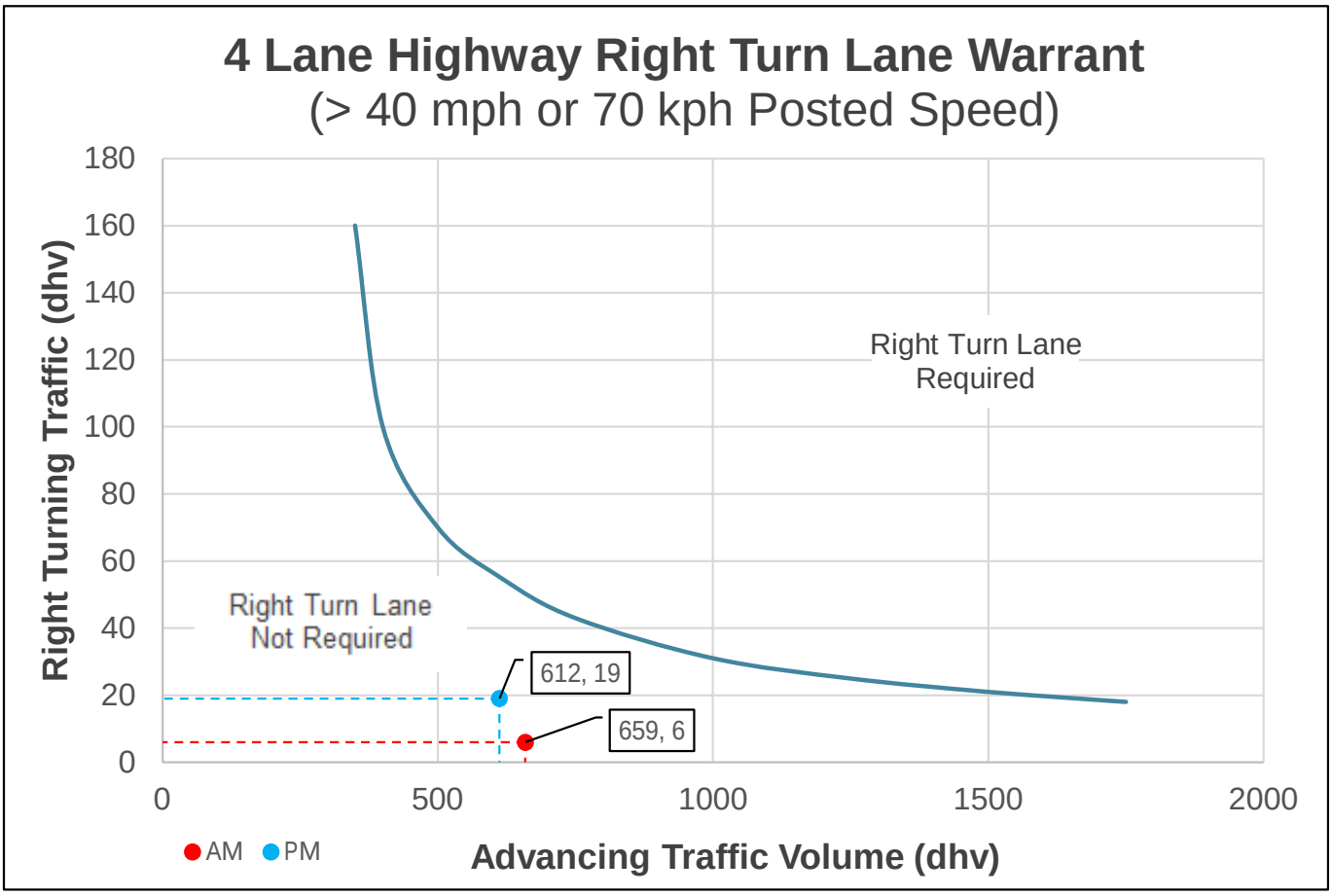
	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	7	23
Advancing Traffic Volume (dhv)	764	690
Is Right Turn Warrant Met?	No	No

US-40 and Site Access Drive #1
2036 Build + Offsite



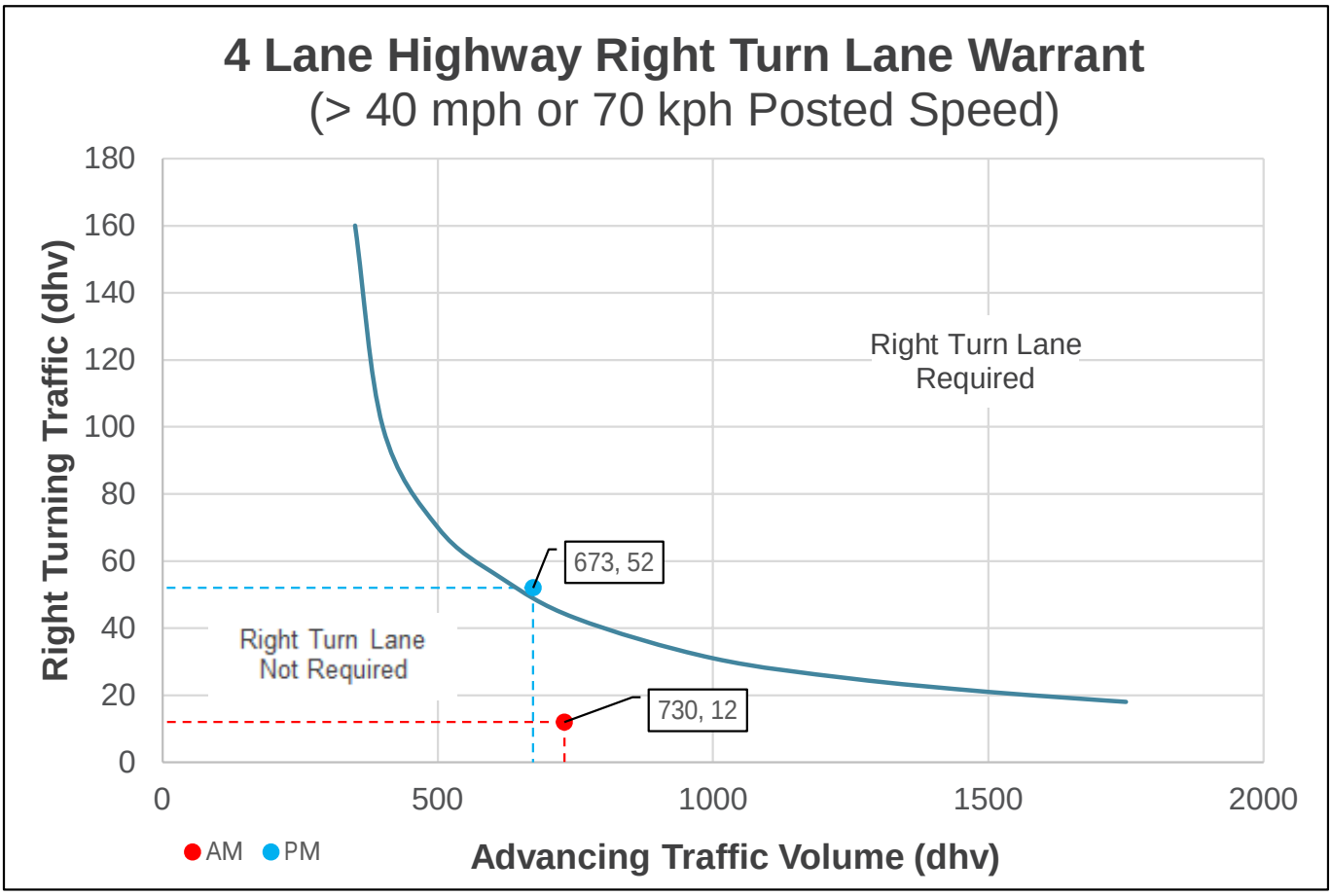
	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	7	23
Advancing Traffic Volume (dhv)	846	760
Is Right Turn Warrant Met?	No	No

US-40 and Site Access Drive #2
2026 Build



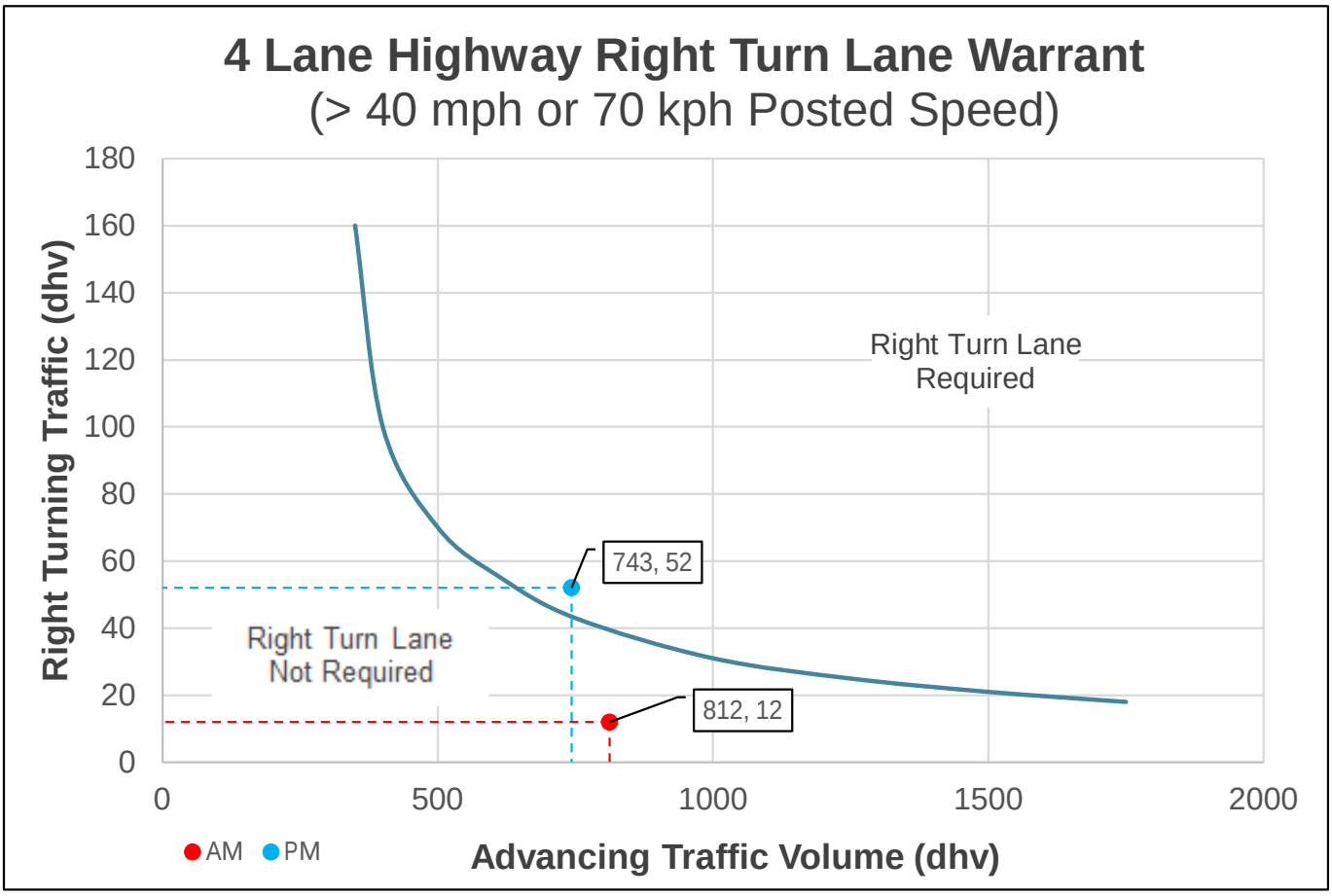
	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	6	19
Advancing Traffic Volume (dhv)	659	612
Is Right Turn Warrant Met?	No	No

US-40 and Site Access Drive #2
2036 Build



	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	12	52
Advancing Traffic Volume (dhv)	730	673
Is Right Turn Warrant Met?	No	Yes

US-40 and Site Access Drive #2
2036 Build + Offsite



	AM Peak	PM Peak
Design Speed (mph)	45	45
Right Turning Traffic (dhv)	12	52
Advancing Traffic Volume (dhv)	812	743
Is Right Turn Warrant Met?	No	Yes

APPENDIX

L. Turn Lane Length Calculations

INTERSECTION - US-40 & Access Drive 1 Opening Year 2026 Build

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
60	EBL	50	2	1	AM	851	77	225	313	N/A	345
					PM	791	244	345	300	N/A	
	EBR		2	0	AM	851	0	N/A	N/A	N/A	N/A
					PM	791	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	670	0	N/A	N/A	N/A	N/A
					PM	604	0	N/A	N/A	N/A	
	WBR		2	0	AM	670	0	N/A	N/A	N/A	N/A
					PM	604	0	N/A	N/A	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	321	0	N/A	N/A	N/A	N/A
					PM	146	0	N/A	N/A	N/A	
	SBR		1	0	AM	0	321	N/A	N/A	N/A	N/A
					PM	0	146	N/A	N/A	N/A	

INTERSECTION - US-40 & Access Drive 1 Horizon Year 2036 Build

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
60	EBL	50	2	1	AM	679	145	295	275	N/A	395
					PM	862	315	395	313	N/A	
	EBR		2	0	AM	679	0	N/A	N/A	N/A	N/A
					PM	862	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	764	0	N/A	N/A	N/A	N/A
					PM	690	0	N/A	N/A	N/A	
	WBR		2	0	AM	757	7	N/A	N/A	N/A	N/A
					PM	667	23	N/A	N/A	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	274	4	N/A	N/A	N/A	N/A
					PM	228	26	N/A	N/A	N/A	
	SBR		1	0	AM	4	274	N/A	N/A	N/A	N/A
					PM	26	228	N/A	N/A	N/A	

INTERSECTION - US-40 & Access Drive 1 Horizon Year 2036 Build+ Offsites

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
60	EBL	50	2	1	AM	723	145	295	288	N/A	395
					PM	957	315	395	325	N/A	
	EBR		2	0	AM	723	0	N/A	N/A	N/A	N/A
					PM	957	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	846	0	N/A	N/A	N/A	N/A
					PM	760	0	N/A	N/A	N/A	
	WBR		2	0	AM	839	7	N/A	N/A	N/A	N/A
					PM	737	23	N/A	N/A	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	274	4	N/A	N/A	N/A	N/A
					PM	228	26	N/A	N/A	N/A	
	SBR		1	0	AM	4	274	N/A	N/A	N/A	N/A
					PM	26	228	N/A	N/A	N/A	

INTERSECTION - US-40 & Access Drive 2 Opening Year 2026 Build

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
60	EBL	50	2	1	AM	575	6	225	238	N/A	225
					PM	773	19	225	288	N/A	
	EBR		2	0	AM	575	0	N/A	N/A	N/A	N/A
					PM	773	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	659	0	N/A	N/A	N/A	N/A
					PM	612	0	N/A	N/A	N/A	
	WBR		2	0	AM	653	6	N/A	N/A	N/A	N/A
					PM	593	19	N/A	N/A	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	18	18	N/A	N/A	N/A	N/A
					PM	11	11	N/A	N/A	N/A	
	SBR		1	0	AM	18	18	N/A	N/A	N/A	N/A
					PM	11	11	N/A	N/A	N/A	

INTERSECTION - US-40 & Access Drive 2 Horizon Year 2036 Build

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
60	EBL	50	2	1	AM	632	51	225	250	N/A	245
					PM	800	89	245	300	N/A	
	EBR		2	0	AM	632	0	N/A	N/A	N/A	N/A
					PM	800	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	718	0	N/A	N/A	N/A	N/A
					PM	621	0	N/A	N/A	N/A	
	WBR		2	1	AM	718	12	225	275	N/A	225
					PM	621	52	225	250	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	45	22	N/A	N/A	N/A	N/A
					PM	69	56	N/A	N/A	N/A	
	SBR		1	0	AM	22	45	N/A	N/A	N/A	N/A
					PM	56	69	N/A	N/A	N/A	

INTERSECTION - US-40 & Access Drive 2 Horizon Year 2036 Build + Offsites

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
150	EBL	50	2	1	AM	676	51	225	513	N/A	225
					PM	895	89	225	650	N/A	
	EBR		2	0	AM	676	0	N/A	N/A	N/A	N/A
					PM	895	0	N/A	N/A	N/A	
	WBL	50	2	0	AM	812	0	N/A	N/A	N/A	N/A
					PM	743	0	N/A	N/A	N/A	
	WBR		2	0	AM	800	12	N/A	N/A	N/A	N/A
					PM	691	52	N/A	N/A	N/A	
	NBL	0	0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	NBR		0	0	AM	0	0	N/A	N/A	N/A	N/A
					PM	0	0	N/A	N/A	N/A	
	SBL	25	1	0	AM	45	22	N/A	N/A	N/A	N/A
					PM	69	56	N/A	N/A	N/A	
	SBR		1	0	AM	22	45	N/A	N/A	N/A	N/A
					PM	56	69	N/A	N/A	N/A	

INTERSECTION - US-40 & Taylor Road Horizon Year 2036 Build + Offsites

Cycle Length (Secs.)	Movement	Design Speed (mph)	# of Lanes		Analysis Peak Period	Thru Lane DHV	Turn Lane DHV	Calculated Turn Lane (FT)	Thru Movement Backup (FT)	Blocked	Required Turn Lane (FT)
			Thru	Turn							
150	EBL	50	2	1	AM	482	87	320	413	YES	538
					PM	710	180	470	538	YES	
	EBR		2	0	AM	433	49	N/A	N/A	N/A	N/A
					PM	652	58	N/A	N/A	N/A	
	WBL	50	2	1	AM	742	371	695	550	NO	650
					PM	666	298	620	500	NO	
	WBR		2	0	AM	546	196	N/A	N/A	N/A	N/A
					PM	478	188	N/A	N/A	N/A	
	NBL	35	1	1	AM	198	58	200	400	YES	650
					PM	450	103	250	700	YES	
	NBR		1	1	AM	198	282	500	400	NO	650
					PM	450	358	575	700	YES	
	SBL	35	1	2	AM	337	135	225	575	YES	650
					PM	387	248	300	650	YES	
	SBR		1	1	AM	337	167	325	575	YES	650
					PM	387	143	300	650	YES	

APPENDIX

M. Signal Warrant Analysis

STUDY AND ANALYSIS INFORMATION

Municipality:	Reynoldsburg	**Traffic Volumes Obtained By:**	Kimley-Horn
County:	Licking	**Analysis Date:**	9/9/2021
ODOT Engineering District:	5	**Agency/ Company Name Performing Warrant Analysis:**	Kimley-Horn

Analysis Information

Data Collection Date: 4/28/2021
Day of the Week: Tuesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 3

Major Street Information

Major Street Name and Route Number: US-40

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

Speed Limit or 85th Percentile Speed on the Major Street*: 50 **MPH**
*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Summit Rd

Minor Street Approach Configuration: N-Bound / 1 S-Bound

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: No

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	Condition A (70%) was met. Condition B (70%) was met. Combination of A/B (80%) was met.*Combination of A/B (56%) was met.*	
Warrant 2, Four-Hour Vehicular Volume	Yes	**Yes**	Figure 4C-1 (100%)	
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour**: 5:15 PM, 6:15 PM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour**: 5:15 PM, 6:15 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes:

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM	82		14			96	20	265				285						0		300	84			384	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	82	0	14	0	0	96	20	265	0	0	0	285	0	0	0	0	0	0	0	300	84	0	0	384	
1:00 AM	82		14			96	20	265				285						0		298	83			381	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	82	0	14	0	0	96	20	265	0	0	0	285	0	0	0	0	0	0	0	298	83	0	0	381	
2:00 AM	81		14			95	20	265				285						0		298	83			381	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	20	265	0	0	0	285	0	0	0	0	0	0	0	298	83	0	0	381	
3:00 AM	82		14			96	20	265				285						0		298	83			381	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	82	0	14	0	0	96	20	265	0	0	0	285	0	0	0	0	0	0	0	298	83	0	0	381	
4:00 AM	84		15			99	20	265				285						0		298	83			381	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	84	0	15	0	0	99	20	265	0	0	0	285	0	0	0	0	0	0	0	298	83	0	0	381	
5:00 AM	87		17			104	20	265				285						0		300	84			384	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	87	0	17	0	0	104	20	265	0	0	0	285	0	0	0	0	0	0	0	300	84	0	0	384	
6:00 AM	101		22			123	23	268				291						0		304	86			390	
6:15 AM						0						0						0						0	
6:30 AM						0						0						0						0	
6:45 AM						0						0						0						0	
Hourly Total	101	0	22	0	0	123	23	268	0	0	0	291	0	0	0	0	0	0	0	304	86	0	0	390	
7:00 AM	67		8			75	13	79				92						0		96	62			158	
7:15 AM	66		11			77	9	98				107						0		130	58			188	
7:30 AM	43		8			51	7	126				133						0		89	24			113	
7:45 AM	40		8			48	3	147				150						0		73	53			126	
Hourly Total	216	0	35	0	0	251	32	450	0	0	0	482	0	0	0	0	0	0	0	388	197	0	0	585	
8:00 AM	82		7			89	4	71				75						0		71	39			110	
8:15 AM	22		10			32	4	68				72						0		54	17			71	
8:30 AM	26		7			33	6	90				96						0		50	11			61	
8:45 AM	20		7			27	4	73				77						0		65	13			78	
Hourly Total	150	0	31	0	0	181	18	302	0	0	0	320	0	0	0	0	0	0	0	240	80	0	0	320	
9:00 AM	99		21			120	27	272				299						0		312	90			402	
9:15 AM						0						0						0						0	
9:30 AM						0						0						0						0	
9:45 AM						0						0						0						0	
Hourly Total	99	0	21	0	0	120	27	272	0	0	0	299	0	0	0	0	0	0	0	312	90	0	0	402	
10:00 AM	99		21			120	29	274				303						0		316	92			408	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	99	0	21	0	0	120	29	274	0	0	0	303	0	0	0	0	0	0	0	316	92	0	0	408	
11:00 AM	98		21			119	32	277				309						0		322	95			417	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	98	0	21	0	0	119	32	277	0	0	0	309	0	0	0	0	0	0	0	322	95	0	0	417	
12:00 PM	99		22			121	32	277				309						0		322	95			417	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	99	0	22	0	0	121	32	277	0	0	0	309	0	0	0	0	0	0	0	322	95	0	0	417	
1:00 PM	101		22			123	33	278				311						0		324	96			420	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	101	0	22	0	0	123	33	278	0	0	0	311	0	0	0	0	0	0	0	324	96	0	0	420	
2:00 PM	101		23			124	35	280				315						0		330	99			429	
2:15 PM						0						0						0						0	
2:30 PM						0						0						0						0	
2:45 PM						0						0						0						0	
Hourly Total	101	0	23	0	0	124	35	280	0	0	0	315	0	0	0	0	0	0	0	330	99	0	0	429	
3:00 PM	101		22			123	39	284				323						0		336	102			438	
3:15 PM						0						0						0						0	
3:30 PM						0						0						0						0	
3:45 PM						0						0						0						0	
Hourly Total	101	0	22	0	0	123	39	284	0	0	0	323	0	0	0	0	0	0	0	336	102	0	0	438	
4:00 PM	29		4			33	18	128				146						0		150	137			287	
4:15 PM	20		8			28	17	127				144						0		169				169	
4:30 PM	23		7			30	22	114				136						0		165				165	
4:45 PM	20		12			32	17	118				135						0		133				133	
Hourly Total	92	0	31	0	0	123	74	487	0	0	0	561	0	0	0	0	0	0	0	617	137	0	0	754	
5:00 PM	31		13			44	23	151				174						0		168	166			334	
5:15 PM	31		10			41	23	127				150						0		173				173	
5:30 PM	9		12			21	21	117				138						0		176				176	
5:45 PM	29		15			44	26	141				167						0		192				192	
Hourly Total	100	0	50	0	0	150	93	536	0	0	0	629	0	0	0	0	0	0	0	709	166	0	0	875	
6:00 PM	101		22			123	39	284				323						0		336	102			438	
6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	101	0	22	0	0	123	39	284	0	0	0	323	0	0	0	0	0	0	0	336	102	0	0	438	
7:00 PM	95		20			115	33	278				311						0		326	97			423	
7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	95	0	20	0	0	115	33	278	0	0	0	311	0	0	0	0	0	0	0	326	97	0	0	423	
8:00 PM	91		18			109	34	279				313						0		326	97			423	
8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	91	0	18	0	0	109	34	279	0	0	0	313	0	0	0	0	0	0	0	326	97	0	0	423	
9:00 PM	89		17			106	30	275				305						0		318	93			411	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	89	0	17	0	0	106	30	275	0	0	0	305	0	0	0	0	0	0	0	318	93	0	0	411	
10:00 PM	85		15			100	24	269				293						0		308	88			396	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	85	0	15	0	0	100	24	269	0	0	0	293	0	0	0	0	0	0	0	308	88	0	0	396	
11:00 PM	83		15			98	22	267				289						0		304	86			390	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	83	0	15	0	0	98	22	267	0	0	0	289	0	0	0	0	0	0	0	304	86	0	0	390	

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	669	96	1		1				1	1	1				1	1	1	1
12:15 AM	666	96																
12:30 AM	666	96																
12:45 AM	666	96																
1:00 AM	666	96	1		1				1	1	1				1	1	1	1
1:15 AM	666	95																
1:30 AM	666	95																
1:45 AM	666	95																
2:00 AM	666	95	1		1				1	1	1				1	1	1	1
2:15 AM	666	96																
2:30 AM	666	96																
2:45 AM	666	96																
3:00 AM	666	96	1		1				1	1	1				1	1	1	1
3:15 AM	666	99																
3:30 AM	666	99																
3:45 AM	666	99																
4:00 AM	666	99	1		1				1	1	1				1	1	1	1
4:15 AM	669	104																
4:30 AM	669	104																
4:45 AM	669	104																
5:00 AM	669	104	1		1				1	1	1				1	1	1	1
5:15 AM	681	123																
5:30 AM	681	123																
5:45 AM	681	123																
6:00 AM	681	123	1		1	1			1	1	1	1			1	1	1	1
6:15 AM	250	75																
6:30 AM	545	152																
6:45 AM	791	203											1	1				
7:00 AM	1067	251	1	1	1	1	1	1	1	1	1	1			1	1	1	1
7:15 AM	1002	265																
7:30 AM	850	220																
7:45 AM	761	202											1	1				
8:00 AM	640	181	1	1	1	1			1	1	1	1			1	1	1	1
8:15 AM	1156	212					1	1										
8:30 AM	1013	180																
8:45 AM	856	147											1	1				
9:00 AM	701	120	1		1	1			1	1	1	1			1	1	1	1
9:15 AM	711	120																
9:30 AM	711	120																
9:45 AM	711	120																
10:00 AM	711	120	1		1	1			1	1	1	1			1	1	1	1
10:15 AM	726	119											1	1				
10:30 AM	726	119																
10:45 AM	726	119																
11:00 AM	726	119	1		1	1			1	1	1				1	1	1	1
11:15 AM	726	121											1	1				
11:30 AM	726	121																
11:45 AM	726	121																
12:00 PM	726	121	1		1	1			1	1	1	1			1	1	1	1
12:15 PM	731	123											1	1				
12:30 PM	731	123																
12:45 PM	731	123																
1:00 PM	731	123	1		1	1			1	1	1	1			1	1	1	1
1:15 PM	744	124											1	1				
1:30 PM	744	124																
1:45 PM	744	124																
2:00 PM	744	124	1		1	1			1	1	1	1			1	1	1	1
2:15 PM	761	123											1	1				
2:30 PM	761	123																
2:45 PM	761	123																
3:00 PM	761	123	1		1	1			1	1	1	1			1	1	1	1
3:15 PM	433	33																
3:30 PM	746	61											1	1				
3:45 PM	1047	91					1	1										
4:00 PM	1315	123	1		1	1			1	1	1	1			1	1	1	1
4:15 PM	1390	134																
4:30 PM	1400	147											1	1				
4:45 PM	1413	138					1	1										
5:00 PM	1504	150	1	1	1	1			1	1	1	1			1	1	1	1
5:15 PM	1757	229																
5:30 PM	1434	188											1	1				
5:45 PM	1120	167					1	1										
6:00 PM	761	123	1		1	1			1	1	1	1			1	1	1	1
6:15 PM	734	115																
6:30 PM	734	115											1	1				
6:45 PM	734	115																
7:00 PM	734	115	1		1	1			1	1	1				1	1	1	1
7:15 PM	736	109																
7:30 PM	736	109											1	1				
7:45 PM	736	109																
8:00 PM	736	109	1		1	1			1	1	1				1	1	1	1
8:15 PM	716	106																
8:30 PM	716	106																
8:45 PM	716	106																
9:00 PM	716	106	1		1	1			1	1	1				1	1	1	1
9:15 PM	689	100																
9:30 PM	689	100																
9:45 PM	689	100																
HOURS MET			**24**	**3**	**24**	**16**	**5**	**5**	**24**	**24**	**24**	**12**	**13**	**13**	**24**	**24**	**24**	**24**
WARRANT SATISFIED?			**NO**		**YES**		**NO**		**YES**		**YES**				**YES**			

Warrant Met: No

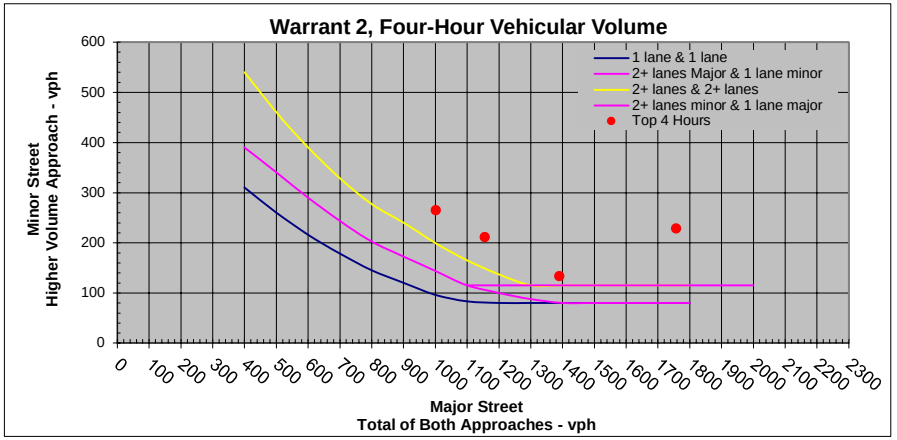
Notes: Condition A (70%) was met. Condition B (70%) was met. Combination of A/B (80%) was met.*Combination of A/B (56%) was met.*

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		**Total Number of Unique Hours Met on Figure 4C-1**	5
Major street:	2 or More Lanes	**Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)**	24
Minor Street:	1 Lane		

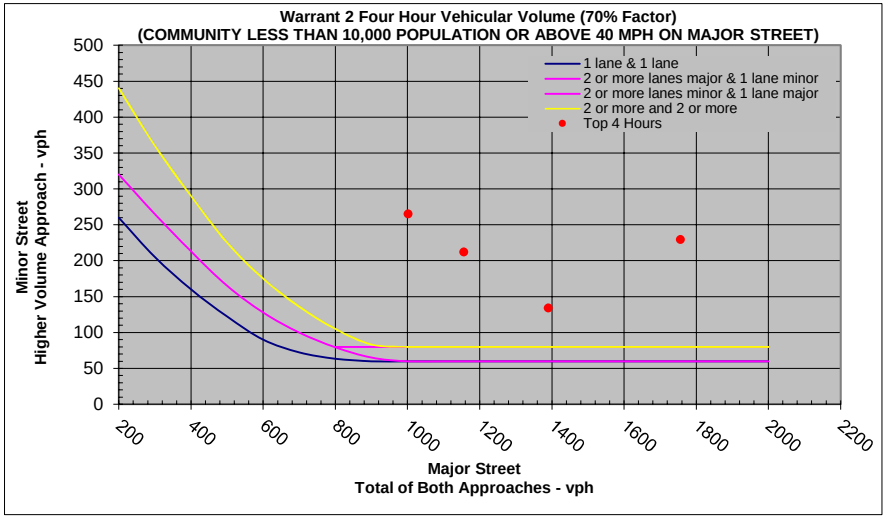
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Summit Rd		Major - US-40					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	0	123	291	390	681	123		Met
6:15 AM	0	75	92	158	250	75		
6:30 AM	0	152	199	346	545	152		
6:45 AM	0	203	332	459	791	203	Met	
7:00 AM	0	251	482	585	1067	251		Met
7:15 AM	0	265	465	537	1002	265		
7:30 AM	0	220	430	420	850	220		
7:45 AM	0	202	393	368	761	202	Met	
8:00 AM	0	181	320	320	640	181		Met
8:15 AM	0	212	544	612	1156	212		
8:30 AM	0	180	472	541	1013	180		
8:45 AM	0	147	376	480	856	147		
9:00 AM	0	120	299	402	701	120		Met
9:15 AM	0	120	303	408	711	120		
9:30 AM	0	120	303	408	711	120		
9:45 AM	0	120	303	408	711	120		
10:00 AM	0	120	303	408	711	120		Met
10:15 AM	0	119	309	417	726	119		
10:30 AM	0	119	309	417	726	119		
10:45 AM	0	119	309	417	726	119		
11:00 AM	0	119	309	417	726	119		Met
11:15 AM	0	121	309	417	726	121		
11:30 AM	0	121	309	417	726	121		
11:45 AM	0	121	309	417	726	121		
12:00 PM	0	121	309	417	726	121		Met
12:15 PM	0	123	311	420	731	123		
12:30 PM	0	123	311	420	731	123		
12:45 PM	0	123	311	420	731	123		
1:00 PM	0	123	311	420	731	123		Met
1:15 PM	0	124	315	429	744	124		
1:30 PM	0	124	315	429	744	124		
1:45 PM	0	124	315	429	744	124		
2:00 PM	0	124	315	429	744	124		Met
2:15 PM	0	123	323	438	761	123		
2:30 PM	0	123	323	438	761	123		
2:45 PM	0	123	323	438	761	123		
3:00 PM	0	123	323	438	761	123		Met
3:15 PM	0	33	146	287	433	33		
3:30 PM	0	61	290	456	746	61		
3:45 PM	0	91	426	621	1047	91	Met	
4:00 PM	0	123	561	754	1315	123		Met
4:15 PM	0	134	589	801	1390	134		
4:30 PM	0	147	595	805	1400	147		
4:45 PM	0	138	597	816	1413	138	Met	
5:00 PM	0	150	629	875	1504	150		Met
5:15 PM	0	229	778	979	1757	229		
5:30 PM	0	188	628	806	1434	188		
5:45 PM	0	167	490	630	1120	167	Met	
6:00 PM	0	123	323	438	761	123		Met
6:15 PM	0	115	311	423	734	115		
6:30 PM	0	115	311	423	734	115		
6:45 PM	0	115	311	423	734	115		
7:00 PM	0	115	311	423	734	115		Met
7:15 PM	0	109	313	423	736	109		
7:30 PM	0	109	313	423	736	109		
7:45 PM	0	109	313	423	736	109		
8:00 PM	0	109	313	423	736	109		Met



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	7:15 AM	8:15 AM	1002	265
2nd Highest Hour	5:15 PM	6:15 PM	1757	229
3rd Highest Hour	8:15 AM	9:15 AM	1156	212
4th Highest Hour	4:15 PM	5:15 PM	1390	134

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	7:15 AM	8:15 AM	1002	265
2nd Highest Hour	5:15 PM	6:15 PM	1757	229
3rd Highest Hour	8:15 AM	9:15 AM	1156	212
4th Highest Hour	4:15 PM	5:15 PM	1390	134



Are the requirements for Warrant 2 met?: Yes

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	5:15 PM
Major Street:	2 or More Lanes	Peak Hour End Time	6:15 PM
Minor Street:	1 Lane		

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

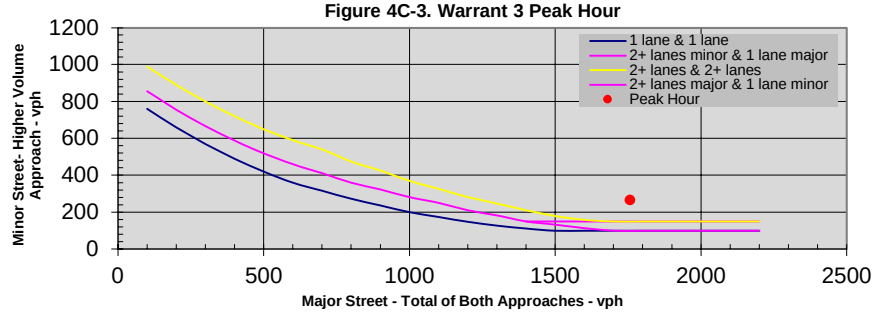
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

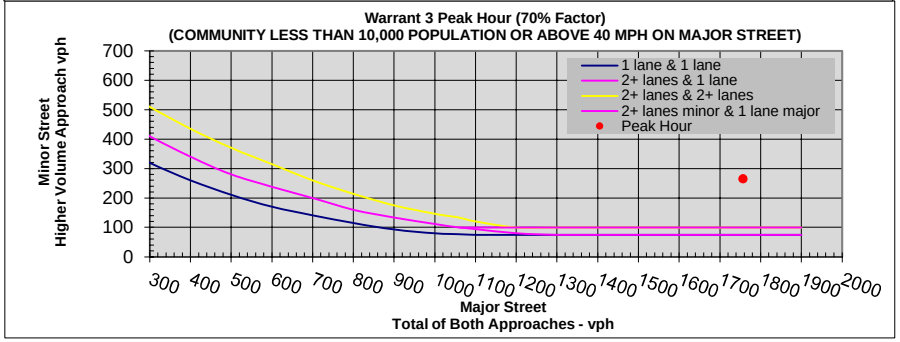
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour





Hour Vehicular Volume				
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
6:00 AM	681	123	804	804
6:15 AM	250	75	325	325
6:30 AM	545	152	697	697
6:45 AM	791	203	994	994
7:00 AM	1067	251	1318	1318
7:15 AM	1002	265	1267	1267
7:30 AM	850	220	1070	1070
7:45 AM	761	202	963	963
8:00 AM	640	181	821	821
8:15 AM	1156	212	1368	1368
8:30 AM	1013	180	1193	1193
8:45 AM	856	147	1003	1003
9:00 AM	701	120	821	821
9:15 AM	711	120	831	831
9:30 AM	711	120	831	831
9:45 AM	711	120	831	831
10:00 AM	711	120	831	831
10:15 AM	726	119	845	845
10:30 AM	726	119	845	845
10:45 AM	726	119	845	845
11:00 AM	726	119	845	845
11:15 AM	726	121	847	847
11:30 AM	726	121	847	847
11:45 AM	726	121	847	847
12:00 PM	726	121	847	847
12:15 PM	731	123	854	854
12:30 PM	731	123	854	854
12:45 PM	731	123	854	854
1:00 PM	731	123	854	854
1:15 PM	744	124	868	868
1:30 PM	744	124	868	868
1:45 PM	744	124	868	868
2:00 PM	744	124	868	868
2:15 PM	761	123	884	884
2:30 PM	761	123	884	884
2:45 PM	761	123	884	884
3:00 PM	761	123	884	884
3:15 PM	433	33	466	466
3:30 PM	746	61	807	807
3:45 PM	1047	91	1138	1138
4:00 PM	1315	123	1438	1438
4:15 PM	1390	134	1524	1524
4:30 PM	1400	147	1547	1547
4:45 PM	1413	138	1551	1551
5:00 PM	1504	150	1654	1654
5:15 PM	1757	229	1986	1986
5:30 PM	1434	188	1622	1622
5:45 PM	1120	167	1287	1287
6:00 PM	761	123	884	884
6:15 PM	734	115	849	849
6:30 PM	734	115	849	849
6:45 PM	734	115	849	849
7:00 PM	734	115	849	849
7:15 PM	736	109	845	845
7:30 PM	736	109	845	845
7:45 PM	736	109	845	845
8:00 PM	736	109	845	845

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
1757	265	100	75

STUDY AND ANALYSIS INFORMATION

Municipality:	Reynoldsburg	**Traffic Volumes Obtained By:**	Kimley-Horn
County:	Licking	**Analysis Date:**	9/9/2021
ODOT Engineering District:	5	**Agency/ Company Name Performing Warrant Analysis:**	Kimley-Horn

Analysis Information

Data Collection Date: 4/28/2021
Day of the Week: Tuesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 3

Major Street Information

Major Street Name and Route Number: US-40

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

Speed Limit or 85th Percentile Speed on the Major Street*: 50 **MPH**
*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Summit Rd

Minor Street Approach Configuration: N-Bound / 1 S-Bound

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: No

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	Condition B (70%) was met. Combination of A/B (56%) was met.*	
Warrant 2, Four-Hour Vehicular Volume	Yes	**Yes**	Figure 4C-1 (100%)	
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour**: 5:15 PM, 6:15 PM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour**: 5:15 PM, 6:15 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion: Install New Traffic Signal

Notes:

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM	81		14			95	19	264				283						0		298	83			381	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
1:00 AM	81		14			95	19	264				283						0		298	83			381	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
2:00 AM	81		14			95	19	264				283						0		298	83			381	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
3:00 AM	81		14			95	19	264				283						0		298	83			381	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
4:00 AM	81		14			95	19	264				283						0		298	83			381	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
5:00 AM	81		14			95	19	264				283						0		298	83			381	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
6:00 AM	81		14			95	19	264				283						0		298	83			381	
6:15 AM						0						0						0						0	
6:30 AM						0						0						0						0	
6:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
7:00 AM	62		3			65	12	70				82						0		91	61			152	
7:15 AM	61		6			67	7	89				96						0		125	56			181	
7:30 AM	38		3			41	6	118				124						0		84	23			107	
7:45 AM	35		3			38	2	138				140						0		68	52			120	
Hourly Total	196	0	15	0	0	211	27	415	0	0	0	442	0	0	0	0	0	0	0	368	192	0	0	560	
8:00 AM	77		2			79	3	62				65						0		66	38			104	
8:15 AM	17		5			22	2	59				61						0		49	15			64	
8:30 AM	21		2			23	5	82				87						0		45	10			55	
8:45 AM	15		2			17	3	64				67						0		60	12			72	
Hourly Total	130	0	11	0	0	141	13	267	0	0	0	280	0	0	0	0	0	0	0	220	75	0	0	295	
9:00 AM	81		14			95	19	264				283						0		298	83			381	
9:15 AM						0						0						0						0	
9:30 AM						0						0						0						0	
9:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
10:00 AM	81		14			95	19	264				283						0		298	83			381	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
11:00 AM	81		14			95	19	264				283						0		298	83			381	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
12:00 PM	81		14			95	19	264				283						0		298	83			381	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
1:00 PM	81		14			95	19	264				283						0		298	83			381	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
2:00 PM	81		14			95	19	264				283						0		298	83			381	
2:15 PM						0						0						0						0	
2:30 PM						0						0						0						0	
2:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
3:00 PM	81		14			95	19	264				283						0		298	83			381	
3:15 PM						0						0						0						0	
3:30 PM						0						0						0						0	
3:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
4:00 PM	27		2			29	7	118				125						0		140	24			164	
4:15 PM	17		5			22	6	117				123						0		159	17			176	
4:30 PM	21		5			26	10	104				114						0		155	25			180	
4:45 PM	17		9			26	6	108				114						0		123	33			156	
Hourly Total	82	0	21	0	0	103	29	447	0	0	0	476	0	0	0	0	0	0	0	577	99	0	0	676	
5:00 PM	29		11			40	12	141				153						0		158	43			201	
5:15 PM	28		7			35	12	117				129						0		163	31			194	
5:30 PM	7		10			17	9	107				116						0		166	31			197	
5:45 PM	26		12			38	15	131				146						0		182	38			220	
Hourly Total	90	0	40	0	0	130	48	496	0	0	0	544	0	0	0	0	0	0	0	669	143	0	0	812	
6:00 PM	81		14			95	19	264				283						0		298	83			381	
6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
7:00 PM	81		14			95	19	264				283						0		298	83			381	
7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
8:00 PM	81		14			95	19	264				283						0		298	83			381	
8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
9:00 PM	81		14			95	19	264				283						0		298	83			381	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
10:00 PM	81		14			95	19	264				283						0		298	83			381	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	
11:00 PM	81		14			95	19	264				283						0		298	83			381	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	81	0	14	0	0	95	19	264	0	0	0	283	0	0	0	0	0	0	0	298	83	0	0	381	

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	664	95	1		1				1	1	1				1	1	1	1
12:15 AM	664	95																
12:30 AM	664	95																
12:45 AM	664	95																
1:00 AM	664	95	1		1				1	1	1				1	1	1	1
1:15 AM	664	95																
1:30 AM	664	95																
1:45 AM	664	95																
2:00 AM	664	95	1		1				1	1	1				1	1	1	1
2:15 AM	664	95																
2:30 AM	664	95																
2:45 AM	664	95																
3:00 AM	664	95	1		1				1	1	1				1	1	1	1
3:15 AM	664	95																
3:30 AM	664	95																
3:45 AM	664	95																
4:00 AM	664	95	1		1				1	1	1				1	1	1	1
4:15 AM	664	95																
4:30 AM	664	95																
4:45 AM	664	95																
5:00 AM	664	95	1		1				1	1	1				1	1	1	1
5:15 AM	664	95																
5:30 AM	664	95																
5:45 AM	664	95																
6:00 AM	664	95	1		1				1	1	1				1	1	1	1
6:15 AM	234	65																
6:30 AM	511	132																
6:45 AM	742	173											1	1				
7:00 AM	1002	211	1	1	1	1	1	1	1	1	1	1			1	1	1	1
7:15 AM	937	225																
7:30 AM	785	180																
7:45 AM	696	162																
8:00 AM	575	141			1	1					1	1			1	1	1	1
8:15 AM	1070	157	1	1			1	1	1	1			1	1				
8:30 AM	945	135																
8:45 AM	803	112																
9:00 AM	664	95			1						1				1	1	1	1
9:15 AM	664	95	1						1	1								
9:30 AM	664	95																
9:45 AM	664	95																
10:00 AM	664	95			1						1				1	1	1	1
10:15 AM	664	95	1						1	1								
10:30 AM	664	95																
10:45 AM	664	95																
11:00 AM	664	95			1						1				1	1	1	1
11:15 AM	664	95	1						1	1								
11:30 AM	664	95																
11:45 AM	664	95																
12:00 PM	664	95			1						1				1	1	1	1
12:15 PM	664	95	1						1	1								
12:30 PM	664	95																
12:45 PM	664	95																
1:00 PM	664	95			1						1				1	1	1	1
1:15 PM	664	95	1						1	1								
1:30 PM	664	95																
1:45 PM	664	95																
2:00 PM	664	95			1						1				1	1	1	1
2:15 PM	664	95	1						1	1								
2:30 PM	664	95																
2:45 PM	664	95																
3:00 PM	664	95			1						1				1	1	1	1
3:15 PM	289	29																
3:30 PM	588	51																
3:45 PM	882	77	1						1	1			1	1				
4:00 PM	1152	103			1		1	1			1				1	1	1	1
4:15 PM	1217	114																
4:30 PM	1241	127																
4:45 PM	1260	118	1						1	1			1	1				
5:00 PM	1356	130			1	1	1	1			1	1			1	1	1	1
5:15 PM	1666	185																
5:30 PM	1343	150																
5:45 PM	1030	133	1						1	1			1	1				
6:00 PM	664	95			1						1				1	1	1	1
6:15 PM	664	95																
6:30 PM	664	95																
6:45 PM	664	95	1						1	1								
7:00 PM	664	95			1						1				1	1	1	1
7:15 PM	664	95																
7:30 PM	664	95																
7:45 PM	664	95	1						1	1								
8:00 PM	664	95			1						1				1	1	1	1
8:15 PM	664	95																
8:30 PM	664	95																
8:45 PM	664	95	1						1	1								
9:00 PM	664	95			1						1				1	1	1	1
9:15 PM	664	95																
9:30 PM	664	95																
9:45 PM	664	95	1						1	1								
HOURS MET			**23**	**2**	**24**	**3**	**4**	**4**	**23**	**23**	**24**	**3**	**5**	**5**	**24**	**24**	**24**	**24**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**YES**		**NO**				**YES**			

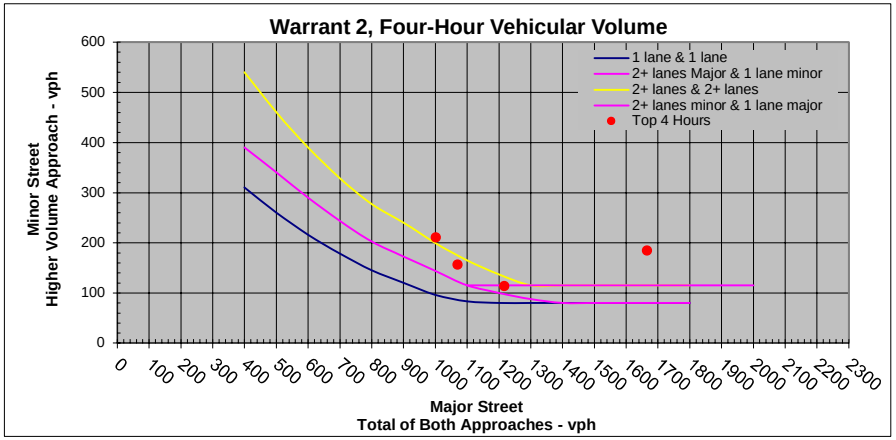
Warrant Met: No

Notes: Condition B (70%) was met. Combination of A/B (56%) was met.*

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

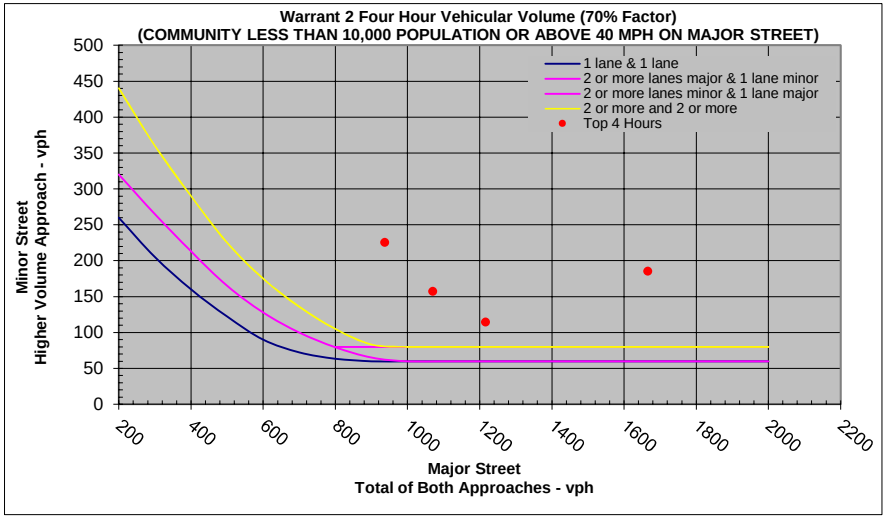
Number of Lanes for Moving Traffic on Each Approach		**Total Number of Unique Hours Met on Figure 4C-1**	4
Major street:	2 or More Lanes	**Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)**	24
Minor Street:	1 Lane		
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?			Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Summit Rd		Major - US-40					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	0	95	283	381	664	95		Met
6:15 AM	0	65	82	152	234	65		
6:30 AM	0	132	178	333	511	132		
6:45 AM	0	173	302	440	742	173		
7:00 AM	0	211	442	560	1002	211	Met	Met
7:15 AM	0	225	425	512	937	225		
7:30 AM	0	180	390	395	785	180		
7:45 AM	0	162	353	343	696	162		
8:00 AM	0	141	280	295	575	141		Met
8:15 AM	0	157	498	572	1070	157	Met	
8:30 AM	0	135	437	508	945	135		
8:45 AM	0	112	350	453	803	112		
9:00 AM	0	95	283	381	664	95		Met
9:15 AM	0	95	283	381	664	95		
9:30 AM	0	95	283	381	664	95		
9:45 AM	0	95	283	381	664	95		
10:00 AM	0	95	283	381	664	95		Met
10:15 AM	0	95	283	381	664	95		
10:30 AM	0	95	283	381	664	95		
10:45 AM	0	95	283	381	664	95		
11:00 AM	0	95	283	381	664	95		Met
11:15 AM	0	95	283	381	664	95		
11:30 AM	0	95	283	381	664	95		
11:45 AM	0	95	283	381	664	95		
12:00 PM	0	95	283	381	664	95		Met
12:15 PM	0	95	283	381	664	95		
12:30 PM	0	95	283	381	664	95		
12:45 PM	0	95	283	381	664	95		
1:00 PM	0	95	283	381	664	95		Met
1:15 PM	0	95	283	381	664	95		
1:30 PM	0	95	283	381	664	95		
1:45 PM	0	95	283	381	664	95		
2:00 PM	0	95	283	381	664	95		Met
2:15 PM	0	95	283	381	664	95		
2:30 PM	0	95	283	381	664	95		
2:45 PM	0	95	283	381	664	95		
3:00 PM	0	95	283	381	664	95		Met
3:15 PM	0	29	125	164	289	29		
3:30 PM	0	51	248	340	588	51		
3:45 PM	0	77	362	520	882	77		
4:00 PM	0	103	476	676	1152	103	Met	Met
4:15 PM	0	114	504	713	1217	114		
4:30 PM	0	127	510	731	1241	127		
4:45 PM	0	118	512	748	1260	118		
5:00 PM	0	130	544	812	1356	130	Met	Met
5:15 PM	0	185	674	992	1666	185		
5:30 PM	0	150	545	798	1343	150		
5:45 PM	0	133	429	601	1030	133		
6:00 PM	0	95	283	381	664	95		Met
6:15 PM	0	95	283	381	664	95		
6:30 PM	0	95	283	381	664	95		
6:45 PM	0	95	283	381	664	95		
7:00 PM	0	95	283	381	664	95		Met
7:15 PM	0	95	283	381	664	95		
7:30 PM	0	95	283	381	664	95		
7:45 PM	0	95	283	381	664	95		
8:00 PM	0	95	283	381	664	95		Met



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	7:00 AM	8:00 AM	1002	211
2nd Highest Hour	5:15 PM	6:15 PM	1666	185
3rd Highest Hour	8:15 AM	9:15 AM	1070	157
4th Highest Hour	4:15 PM	5:15 PM	1217	114

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	7:15 AM	8:15 AM	937	225
2nd Highest Hour	5:15 PM	6:15 PM	1666	185
3rd Highest Hour	8:15 AM	9:15 AM	1070	157
4th Highest Hour	4:15 PM	5:15 PM	1217	114



Are the requirements for Warrant 2 met?: Yes

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach	Peak Hour Start time	5:15 PM
Major Street: 2 or More Lanes	Peak Hour End Time	6:15 PM
Minor Street: 1 Lane		

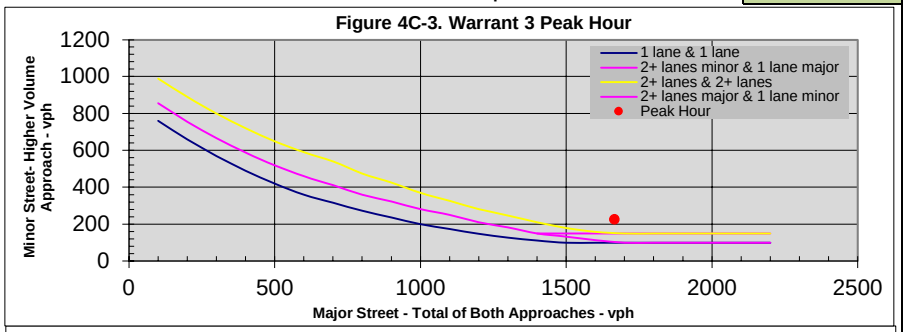
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

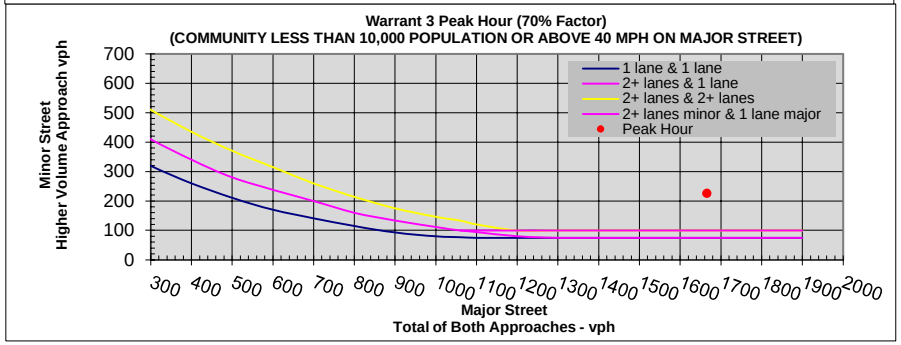
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	Yes
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes





Hour Vehicular Volume

Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
6:00 AM	664	95	759	759
6:15 AM	234	65	299	299
6:30 AM	511	132	643	643
6:45 AM	742	173	915	915
7:00 AM	1002	211	1213	1213
7:15 AM	937	225	1162	1162
7:30 AM	785	180	965	965
7:45 AM	696	162	858	858
8:00 AM	575	141	716	716
8:15 AM	1070	157	1227	1227
8:30 AM	945	135	1080	1080
8:45 AM	803	112	915	915
9:00 AM	664	95	759	759
9:15 AM	664	95	759	759
9:30 AM	664	95	759	759
9:45 AM	664	95	759	759
10:00 AM	664	95	759	759
10:15 AM	664	95	759	759
10:30 AM	664	95	759	759
10:45 AM	664	95	759	759
11:00 AM	664	95	759	759
11:15 AM	664	95	759	759
11:30 AM	664	95	759	759
11:45 AM	664	95	759	759
12:00 PM	664	95	759	759
12:15 PM	664	95	759	759
12:30 PM	664	95	759	759
12:45 PM	664	95	759	759
1:00 PM	664	95	759	759
1:15 PM	664	95	759	759
1:30 PM	664	95	759	759
1:45 PM	664	95	759	759
2:00 PM	664	95	759	759
2:15 PM	664	95	759	759
2:30 PM	664	95	759	759
2:45 PM	664	95	759	759
3:00 PM	664	95	759	759
3:15 PM	289	29	318	318
3:30 PM	588	51	639	639
3:45 PM	882	77	959	959
4:00 PM	1152	103	1255	1255
4:15 PM	1217	114	1331	1331
4:30 PM	1241	127	1368	1368
4:45 PM	1260	118	1378	1378
5:00 PM	1356	130	1486	1486
5:15 PM	1666	185	1851	1851
5:30 PM	1343	150	1493	1493
5:45 PM	1030	133	1163	1163
6:00 PM	664	95	759	759
6:15 PM	664	95	759	759
6:30 PM	664	95	759	759
6:45 PM	664	95	759	759
7:00 PM	664	95	759	759
7:15 PM	664	95	759	759
7:30 PM	664	95	759	759
7:45 PM	664	95	759	759
8:00 PM	664	95	759	759

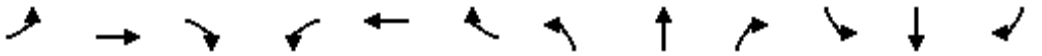
Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
1666	225	141.43611	75

APPENDIX

N. Synchro Capacity Analysis Reports

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	12.2	24.7	15.0	27.5	10.3	34.0	9.5	33.2	33.2
90th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
70th %ile Green (s)	9.8	18.2	13.4	21.8	8.6	25.9	8.1	25.4	25.4
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	8.4	15.1	11.2	17.9	7.6	21.1	7.2	20.7	20.7
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	7.3	12.8	9.5	15.0	6.8	17.3	6.5	17.0	17.0
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	0.0	9.2	6.8	22.0	0.0	11.1	0.0	11.1	11.1
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Skip	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 78.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 107.2
70th %ile Actuated Cycle: 89.6
50th %ile Actuated Cycle: 78.6
30th %ile Actuated Cycle: 70.1
10th %ile Actuated Cycle: 45.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	321	45	163	374	81	55	159	170	64	232	123
Future Volume (veh/h)	67	321	45	163	374	81	55	159	170	64	232	123
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	1633	1826	1856	1648	1767	1752	1737	1767	1796	1856	1781	1826
Adj Flow Rate, veh/h	70	334	47	170	390	84	57	166	177	67	242	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	18	5	3	17	9	10	11	9	7	3	8	5
Cap, veh/h	288	528	74	361	640	136	348	209	223	190	484	421
Arrive On Green	0.06	0.17	0.17	0.12	0.23	0.23	0.05	0.27	0.27	0.06	0.27	0.27
Sat Flow, veh/h	1555	3057	426	1570	2752	587	1654	782	834	3428	1781	1547
Grp Volume(v), veh/h	70	188	193	170	236	238	57	0	343	67	242	128
Grp Sat Flow(s),veh/h/ln	1555	1735	1749	1570	1678	1661	1654	0	1616	1714	1781	1547
Q Serve(g_s), s	2.2	6.2	6.3	5.3	7.8	7.9	1.5	0.0	12.2	1.2	7.1	4.1
Cycle Q Clear(g_c), s	2.2	6.2	6.3	5.3	7.8	7.9	1.5	0.0	12.2	1.2	7.1	4.1
Prop In Lane	1.00		0.24	1.00		0.35	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	288	300	302	361	390	386	348	0	432	190	484	421
V/C Ratio(X)	0.24	0.63	0.64	0.47	0.61	0.62	0.16	0.00	0.79	0.35	0.50	0.30
Avail Cap(c_a), veh/h	578	1376	1388	560	1332	1318	666	0	1230	833	1356	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	23.7	23.7	17.9	21.2	21.2	15.3	0.0	21.1	28.1	18.9	17.9
Incr Delay (d2), s/veh	0.4	2.2	2.2	1.0	1.5	1.6	0.2	0.0	3.4	1.1	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	4.5	4.7	3.3	5.3	5.3	1.0	0.0	8.0	0.9	4.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	25.9	26.0	18.9	22.7	22.8	15.5	0.0	24.4	29.2	19.7	18.3
LnGrp LOS	B	C	C	B	C	C	B	A	C	C	B	B
Approach Vol, veh/h		451			644			400			437	
Approach Delay, s/veh		25.0			21.7			23.2			20.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	22.5	13.2	16.7	9.1	22.8	9.5	20.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	3.2	14.2	7.3	8.3	3.5	9.1	4.2	9.9
Green Ext Time (p_c), s	0.1	2.3	0.3	2.3	0.1	1.9	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	193	370	417	26	15	196
Future Vol, veh/h	193	370	417	26	15	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	10	5	8	10
Mvmt Flow	201	385	434	27	16	204

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	461	0	-	0	1043	231
Stage 1	-	-	-	-	448	-
Stage 2	-	-	-	-	595	-
Critical Hdwy	4.2	-	-	-	6.96	7.1
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	2.25	-	-	-	3.58	3.4
Pot Cap-1 Maneuver	1075	-	-	-	215	747
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1075	-	-	-	175	747
Mov Cap-2 Maneuver	-	-	-	-	303	-
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1075	-	-	-	677
HCM Lane V/C Ratio	0.187	-	-	-	0.325
HCM Control Delay (s)	9.1	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	22.0	55.0	22.0	55.0	20.0	53.0	20.0	53.0	53.0
Total Split (%)	14.7%	36.7%	14.7%	36.7%	13.3%	35.3%	13.3%	35.3%	35.3%
Maximum Green (s)	16.0	49.0	16.0	49.0	14.0	47.0	14.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	16.0	31.5	16.0	31.5	12.4	47.0	13.6	48.2	48.2
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold
70th %ile Green (s)	13.6	27.1	14.0	27.5	10.4	45.6	11.5	46.7	46.7
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	12.0	24.0	11.5	23.5	9.6	37.5	10.2	38.1	38.1
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	10.1	19.5	9.6	19.0	8.4	30.6	8.8	31.0	31.0
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	7.8	15.0	7.5	14.7	6.8	23.2	7.2	23.6	23.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 106.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 132.1
70th %ile Actuated Cycle: 122.2
50th %ile Actuated Cycle: 107.2
30th %ile Actuated Cycle: 92.5
10th %ile Actuated Cycle: 76.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	455	53	141	339	90	98	330	145	133	311	114
Future Volume (veh/h)	128	455	53	141	339	90	98	330	145	133	311	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	484	56	150	361	96	104	351	154	141	331	121
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	673	78	309	603	158	381	411	180	225	636	539
Arrive On Green	0.08	0.21	0.21	0.09	0.22	0.22	0.06	0.33	0.33	0.07	0.34	0.34
Sat Flow, veh/h	1781	3211	370	1781	2784	731	1781	1232	541	3456	1870	1585
Grp Volume(v), veh/h	136	267	273	150	229	228	104	0	505	141	331	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1739	1781	0	1773	1728	1870	1585
Q Serve(g_s), s	4.6	11.1	11.2	5.1	9.2	9.4	3.0	0.0	21.0	3.2	11.2	4.3
Cycle Q Clear(g_c), s	4.6	11.1	11.2	5.1	9.2	9.4	3.0	0.0	21.0	3.2	11.2	4.3
Prop In Lane	1.00		0.21	1.00		0.42	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	329	372	378	309	385	377	381	0	591	225	636	539
V/C Ratio(X)	0.41	0.72	0.72	0.49	0.59	0.61	0.27	0.00	0.85	0.63	0.52	0.22
Avail Cap(c_a), veh/h	542	1099	1116	510	1099	1076	592	0	1052	611	1110	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	29.1	29.2	22.2	27.9	28.0	16.4	0.0	24.6	36.1	21.0	18.7
Incr Delay (d2), s/veh	0.8	2.6	2.6	1.2	1.5	1.6	0.4	0.0	3.7	2.9	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	8.3	8.5	3.8	7.0	7.0	2.1	0.0	13.6	2.5	8.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	31.7	31.8	23.4	29.4	29.6	16.8	0.0	28.3	38.9	21.6	18.9
LnGrp LOS	C	C	C	C	C	C	B	A	C	D	C	B
Approach Vol, veh/h		676			607			609			593	
Approach Delay, s/veh		30.0			28.0			26.3			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	32.4	13.1	22.6	10.6	32.9	12.5	23.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	5.2	23.0	7.1	13.2	5.0	13.2	6.6	11.4
Green Ext Time (p_c), s	0.3	3.3	0.2	3.4	0.1	2.4	0.2	2.9

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	133	602	473	39	32	96
Future Vol, veh/h	133	602	473	39	32	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	141	640	503	41	34	102

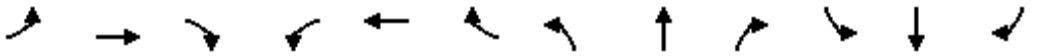
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	544	0	-	0	1126	272
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1021	-	-	-	199	726
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	510	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1021	-	-	-	172	726
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	510	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1021	-	-	-	540
HCM Lane V/C Ratio	0.139	-	-	-	0.252
HCM Control Delay (s)	9.1	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	13.0	28.5	15.0	30.5	10.7	37.0	9.9	36.2	36.2
90th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
70th %ile Green (s)	10.3	19.9	14.5	24.1	8.9	28.1	8.3	27.5	27.5
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	8.9	17.4	12.0	20.5	7.8	23.0	7.4	22.6	22.6
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	7.6	14.0	10.1	16.5	6.9	18.6	6.6	18.3	18.3
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	0.0	9.9	7.1	23.0	0.0	12.0	0.0	12.0	12.0
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Skip	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 82.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 114.4
70th %ile Actuated Cycle: 94.8
50th %ile Actuated Cycle: 83.8
30th %ile Actuated Cycle: 73.3
10th %ile Actuated Cycle: 47



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	352	49	178	409	89	58	167	178	67	243	129
Future Volume (veh/h)	74	352	49	178	409	89	58	167	178	67	243	129
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	1633	1826	1856	1648	1767	1752	1737	1767	1796	1856	1781	1826
Adj Flow Rate, veh/h	77	367	51	185	426	93	60	174	185	70	253	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	18	5	3	17	9	10	11	9	7	3	8	5
Cap, veh/h	282	558	77	362	679	147	341	215	229	188	496	431
Arrive On Green	0.06	0.18	0.18	0.12	0.25	0.25	0.05	0.27	0.27	0.05	0.28	0.28
Sat Flow, veh/h	1555	3062	422	1570	2744	594	1654	784	833	3428	1781	1547
Grp Volume(v), veh/h	77	207	211	185	259	260	60	0	359	70	253	134
Grp Sat Flow(s),veh/h/ln	1555	1735	1750	1570	1678	1660	1654	0	1617	1714	1781	1547
Q Serve(g_s), s	2.6	7.3	7.4	6.1	9.0	9.2	1.7	0.0	13.6	1.3	7.8	4.5
Cycle Q Clear(g_c), s	2.6	7.3	7.4	6.1	9.0	9.2	1.7	0.0	13.6	1.3	7.8	4.5
Prop In Lane	1.00		0.24	1.00		0.36	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	282	316	319	362	415	411	341	0	444	188	496	431
V/C Ratio(X)	0.27	0.65	0.66	0.51	0.62	0.63	0.18	0.00	0.81	0.37	0.51	0.31
Avail Cap(c_a), veh/h	548	1295	1307	528	1253	1239	635	0	1158	784	1276	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	24.9	24.9	18.3	22.0	22.0	16.0	0.0	22.2	29.9	19.9	18.7
Incr Delay (d2), s/veh	0.5	2.3	2.4	1.1	1.5	1.6	0.2	0.0	3.6	1.2	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	5.3	5.5	3.8	6.2	6.2	1.1	0.0	8.8	1.0	5.5	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	27.2	27.3	19.4	23.5	23.6	16.2	0.0	25.8	31.1	20.7	19.1
LnGrp LOS	C	C	C	B	C	C	B	A	C	C	C	B
Approach Vol, veh/h		495			704			419			457	
Approach Delay, s/veh		26.2			22.5			24.4			21.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	24.0	14.0	18.0	9.3	24.3	9.8	22.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	3.3	15.6	8.1	9.4	3.7	9.8	4.6	11.2
Green Ext Time (p_c), s	0.1	2.4	0.3	2.6	0.1	2.0	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	212	405	457	29	16	205
Future Vol, veh/h	212	405	457	29	16	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	10	5	8	9
Mvmt Flow	221	422	476	30	17	214

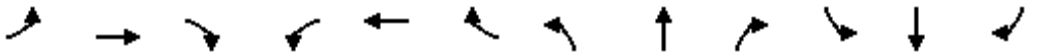
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	506	0	-	0	1144	253
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	653	-
Critical Hdwy	4.2	-	-	-	6.96	7.08
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	2.25	-	-	-	3.58	3.39
Pot Cap-1 Maneuver	1034	-	-	-	184	726
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1034	-	-	-	145	726
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	464	-

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1034	-	-	-	648
HCM Lane V/C Ratio	0.214	-	-	-	0.355
HCM Control Delay (s)	9.4	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	1.6

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	22.0	55.0	22.0	55.0	20.0	53.0	20.0	53.0	53.0
Total Split (%)	14.7%	36.7%	14.7%	36.7%	13.3%	35.3%	13.3%	35.3%	35.3%
Maximum Green (s)	16.0	49.0	16.0	49.0	14.0	47.0	14.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	16.0	35.3	16.0	35.3	13.1	47.0	14.0	47.9	47.9
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
70th %ile Green (s)	14.3	29.7	15.1	30.5	10.9	47.0	12.0	48.1	48.1
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold
50th %ile Green (s)	12.6	26.3	12.9	26.6	9.6	44.2	10.6	45.2	45.2
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	11.0	23.2	10.5	22.7	8.7	36.3	9.4	37.0	37.0
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	8.4	17.0	8.1	16.7	6.9	27.4	7.5	28.0	28.0
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 113.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 136.3
70th %ile Actuated Cycle: 127.8
50th %ile Actuated Cycle: 118
30th %ile Actuated Cycle: 103.4
10th %ile Actuated Cycle: 84



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	498	58	154	371	99	103	346	152	140	326	119
Future Volume (veh/h)	140	498	58	154	371	99	103	346	152	140	326	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	530	62	164	395	105	110	368	162	149	347	127
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	710	83	304	636	167	374	422	186	229	653	554
Arrive On Green	0.09	0.22	0.22	0.09	0.23	0.23	0.06	0.34	0.34	0.07	0.35	0.35
Sat Flow, veh/h	1781	3206	374	1781	2783	732	1781	1231	542	3456	1870	1585
Grp Volume(v), veh/h	149	293	299	164	251	249	110	0	530	149	347	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1739	1781	0	1773	1728	1870	1585
Q Serve(g_s), s	5.5	13.4	13.4	6.0	11.0	11.2	3.4	0.0	24.4	3.7	12.9	4.9
Cycle Q Clear(g_c), s	5.5	13.4	13.4	6.0	11.0	11.2	3.4	0.0	24.4	3.7	12.9	4.9
Prop In Lane	1.00		0.21	1.00		0.42	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	326	394	399	304	406	397	374	0	607	229	653	554
V/C Ratio(X)	0.46	0.74	0.75	0.54	0.62	0.63	0.29	0.00	0.87	0.65	0.53	0.23
Avail Cap(c_a), veh/h	500	1002	1017	466	1002	980	555	0	959	557	1012	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	31.5	31.6	23.8	30.1	30.2	17.5	0.0	26.8	39.6	22.6	20.0
Incr Delay (d2), s/veh	1.0	2.8	2.8	1.5	1.5	1.6	0.4	0.0	5.5	3.1	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	9.8	9.9	4.6	8.3	8.3	2.5	0.0	15.9	2.9	9.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	34.3	34.4	25.2	31.6	31.8	18.0	0.0	32.3	42.7	23.3	20.2
LnGrp LOS	C	C	C	C	C	C	B	A	C	D	C	C
Approach Vol, veh/h		741			664			640			623	
Approach Delay, s/veh		32.4			30.1			29.8			27.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	35.8	14.1	25.2	11.2	36.4	13.5	25.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	5.7	26.4	8.0	15.4	5.4	14.9	7.5	13.2
Green Ext Time (p_c), s	0.3	3.4	0.2	3.8	0.1	2.6	0.2	3.2

Intersection Summary	
HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	146	659	518	43	33	101
Future Vol, veh/h	146	659	518	43	33	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	155	701	551	46	35	107

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	597	0	-	0	1235	299
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	976	-	-	-	169	697
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	475	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	976	-	-	-	142	697
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	475	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	976	-	-	-	505
HCM Lane V/C Ratio	0.159	-	-	-	0.282
HCM Control Delay (s)	9.4	-	-	-	14.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	1.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	13.3	37.2	15.0	38.9	10.5	44.9	11.7	46.1	46.1
90th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
70th %ile Green (s)	10.6	26.8	15.0	31.2	9.0	32.9	9.7	33.6	33.6
70th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	8.8	19.1	15.0	25.3	7.9	26.4	8.4	26.9	26.9
50th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	7.4	14.4	15.0	22.0	6.9	21.3	7.4	21.8	21.8
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	0.0	11.4	11.7	29.1	0.0	15.2	6.3	27.5	27.5
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 97
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 132.8
70th %ile Actuated Cycle: 108.4
50th %ile Actuated Cycle: 92.9
30th %ile Actuated Cycle: 82.1
10th %ile Actuated Cycle: 68.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	345	45	287	445	170	55	159	211	94	232	123
Future Volume (veh/h)	67	345	45	287	445	170	55	159	211	94	232	123
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	1633	1826	1856	1648	1767	1752	1737	1767	1796	1856	1796	1826
Adj Flow Rate, veh/h	70	359	47	299	464	177	57	166	220	98	242	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	18	5	3	17	9	10	11	9	7	3	7	5
Cap, veh/h	256	521	68	420	701	265	346	197	261	195	534	460
Arrive On Green	0.05	0.17	0.17	0.18	0.29	0.29	0.05	0.29	0.29	0.06	0.30	0.30
Sat Flow, veh/h	1555	3087	401	1570	2381	901	1654	689	913	3428	1796	1547
Grp Volume(v), veh/h	70	201	205	299	326	315	57	0	386	98	242	128
Grp Sat Flow(s),veh/h/ln	1555	1735	1754	1570	1678	1604	1654	0	1602	1714	1796	1547
Q Serve(g_s), s	2.8	8.4	8.5	11.4	13.1	13.3	1.8	0.0	17.4	2.1	8.4	4.9
Cycle Q Clear(g_c), s	2.8	8.4	8.5	11.4	13.1	13.3	1.8	0.0	17.4	2.1	8.4	4.9
Prop In Lane	1.00		0.23	1.00		0.56	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	256	293	296	420	494	472	346	0	459	195	534	460
V/C Ratio(X)	0.27	0.68	0.69	0.71	0.66	0.67	0.16	0.00	0.84	0.50	0.45	0.28
Avail Cap(c_a), veh/h	481	1105	1117	450	1069	1022	593	0	979	669	1098	946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	30.0	30.1	19.9	23.8	23.8	18.2	0.0	25.8	35.2	21.9	20.7
Incr Delay (d2), s/veh	0.6	2.8	2.9	4.8	1.5	1.6	0.2	0.0	4.3	2.0	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	6.4	6.6	7.8	8.7	8.5	1.2	0.0	11.0	1.6	6.2	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	32.9	33.0	24.7	25.3	25.5	18.4	0.0	30.1	37.2	22.5	21.0
LnGrp LOS	C	C	C	C	C	C	B	A	C	D	C	C
Approach Vol, veh/h		476			940			443			468	
Approach Delay, s/veh		31.8			25.2			28.6			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	28.0	19.5	19.0	9.5	28.9	9.9	28.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	4.1	19.4	13.4	10.5	3.8	10.4	4.8	15.3
Green Ext Time (p_c), s	0.2	2.6	0.2	2.5	0.1	1.9	0.1	4.3

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	205	388	423	32	33	232
Future Vol, veh/h	205	388	423	32	33	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	10	5	8	10
Mvmt Flow	214	404	441	33	34	242

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	474	0	-	0	1088	237
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	630	-
Critical Hdwy	4.2	-	-	-	6.96	7.1
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	2.25	-	-	-	3.58	3.4
Pot Cap-1 Maneuver	1063	-	-	-	201	741
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	161	741
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	477	-

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	620
HCM Lane V/C Ratio	0.201	-	-	-	0.445
HCM Control Delay (s)	9.2	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	2.3

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	77	581	670	0	0	231
Future Vol, veh/h	77	581	670	0	0	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	605	698	0	0	241

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	698	0	-	0	1161	349
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	894	-	-	-	188	647
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	894	-	-	-	171	647
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	600	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	894	-	-	-	647
HCM Lane V/C Ratio	0.09	-	-	-	0.372
HCM Control Delay (s)	9.4	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.7

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	575	653	6	18	18
Future Vol, veh/h	6	575	653	6	18	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	599	680	6	19	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	686	0	-	0	995	343
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	904	-	-	-	242	653
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	904	-	-	-	240	653
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	904	-	-	-	461
HCM Lane V/C Ratio	0.007	-	-	-	0.081
HCM Control Delay (s)	9	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	22.0	55.0	22.0	55.0	20.0	53.0	20.0	53.0	53.0
Total Split (%)	14.7%	36.7%	14.7%	36.7%	13.3%	35.3%	13.3%	35.3%	35.3%
Maximum Green (s)	16.0	49.0	16.0	49.0	14.0	47.0	14.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	16.0	36.8	16.0	36.8	12.9	47.0	14.0	48.1	48.1
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
70th %ile Green (s)	13.6	31.4	16.0	33.8	10.6	47.0	14.0	50.4	50.4
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
50th %ile Green (s)	12.0	28.6	16.0	32.6	9.4	47.0	14.0	51.6	51.6
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
30th %ile Green (s)	10.5	25.7	15.1	30.3	8.2	47.0	12.8	51.6	51.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold
10th %ile Green (s)	8.3	20.1	11.8	23.6	6.7	47.0	10.3	50.6	50.6
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 127.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 137.8
70th %ile Actuated Cycle: 132.4
50th %ile Actuated Cycle: 129.6
30th %ile Actuated Cycle: 124.6
10th %ile Actuated Cycle: 113.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	530	53	220	384	146	98	330	276	227	311	114
Future Volume (veh/h)	128	530	53	220	384	146	98	330	276	227	311	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	564	56	234	409	155	104	351	294	241	331	121
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	696	69	307	644	241	428	362	303	301	787	667
Arrive On Green	0.08	0.21	0.21	0.12	0.25	0.25	0.05	0.38	0.38	0.09	0.42	0.42
Sat Flow, veh/h	1781	3265	324	1781	2529	948	1781	941	788	3456	1870	1585
Grp Volume(v), veh/h	136	306	314	234	286	278	104	0	645	241	331	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1812	1781	1777	1700	1781	0	1729	1728	1870	1585
Q Serve(g_s), s	7.1	19.9	20.0	12.1	17.4	17.7	4.2	0.0	44.5	8.3	15.1	5.8
Cycle Q Clear(g_c), s	7.1	19.9	20.0	12.1	17.4	17.7	4.2	0.0	44.5	8.3	15.1	5.8
Prop In Lane	1.00		0.18	1.00		0.56	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	287	379	386	307	452	433	428	0	665	301	787	667
V/C Ratio(X)	0.47	0.81	0.81	0.76	0.63	0.64	0.24	0.00	0.97	0.80	0.42	0.18
Avail Cap(c_a), veh/h	386	717	731	333	717	686	543	0	669	398	787	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	45.4	45.5	33.0	40.2	40.3	21.1	0.0	36.7	54.4	24.7	22.0
Incr Delay (d2), s/veh	1.2	4.2	4.2	9.2	1.5	1.6	0.3	0.0	27.3	8.3	0.4	0.1
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(95%),veh/ln	5.7	14.1	14.3	9.9	12.2	12.0	3.2	0.0	31.1	7.1	10.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	49.6	49.6	42.2	41.7	41.9	21.4	0.0	64.0	62.7	25.1	22.2
LnGrp LOS	D	D	D	D	D	D	C	A	E	E	C	C
Approach Vol, veh/h		756			798			749			693	
Approach Delay, s/veh		47.0			41.9			58.0			37.7	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	52.7	20.3	31.9	12.2	57.1	15.2	36.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	10.3	46.5	14.1	22.0	6.2	17.1	9.1	19.7
Green Ext Time (p_c), s	0.3	0.2	0.1	3.9	0.1	2.4	0.2	3.6

Intersection Summary	
HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	171	613	492	58	43	119
Future Vol, veh/h	171	613	492	58	43	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	182	652	523	62	46	127

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	585	0	-	0	1244	293
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	986	-	-	-	166	703
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	459	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	986	-	-	-	135	703
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	459	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	986	-	-	-	490
HCM Lane V/C Ratio	0.184	-	-	-	0.352
HCM Control Delay (s)	9.5	-	-	-	16.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	1.6

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	244	791	604	0	0	146
Future Vol, veh/h	244	791	604	0	0	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	260	841	643	0	0	155

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	643	0	-	0	1584	322
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	941	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	938	-	-	-	99	674
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	340	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	938	-	-	-	72	674
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	340	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	938	-	-	-	674
HCM Lane V/C Ratio	0.277	-	-	-	0.23
HCM Control Delay (s)	10.3	-	-	-	11.9
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	1.1	-	-	-	0.9

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	773	593	19	11	11
Future Vol, veh/h	19	773	593	19	11	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	822	631	20	12	12

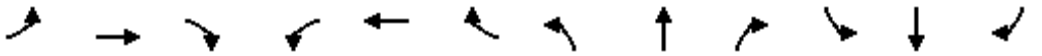
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	651	0	-	0	1092	326
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	931	-	-	-	209	670
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	205	670
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	448
HCM Lane V/C Ratio	0.022	-	-	-	0.052
HCM Control Delay (s)	9	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	14.2	44.9	15.0	45.7	11.0	47.0	13.3	49.3	49.3
90th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Gap	Hold	Hold
70th %ile Green (s)	11.5	34.3	15.0	37.8	9.1	44.7	11.1	46.7	46.7
70th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	9.7	27.1	15.0	32.4	8.2	35.4	9.7	36.9	36.9
50th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	8.0	19.1	15.0	26.1	7.1	28.2	8.3	29.4	29.4
30th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	0.0	14.1	15.0	35.1	0.0	20.5	6.8	33.3	33.3
10th %ile Term Code	Skip	Gap	Max	Hold	Skip	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 111.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 144.2
70th %ile Actuated Cycle: 129.1
50th %ile Actuated Cycle: 111.2
30th %ile Actuated Cycle: 94.6
10th %ile Actuated Cycle: 80.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	420	49	333	508	190	58	167	269	116	243	129
Future Volume (veh/h)	74	420	49	333	508	190	58	167	269	116	243	129
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	1663	1841	1856	1693	1781	1767	1752	1767	1811	1856	1796	1826
Adj Flow Rate, veh/h	77	438	51	347	529	198	60	174	280	121	253	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	4	3	14	8	9	10	9	6	3	7	5
Cap, veh/h	230	592	69	393	725	270	365	198	318	193	607	523
Arrive On Green	0.05	0.19	0.19	0.17	0.30	0.30	0.04	0.32	0.32	0.06	0.34	0.34
Sat Flow, veh/h	1584	3158	366	1612	2413	899	1668	609	981	3428	1796	1547
Grp Volume(v), veh/h	77	242	247	347	370	357	60	0	454	121	253	134
Grp Sat Flow(s),veh/h/ln	1584	1749	1775	1612	1692	1620	1668	0	1590	1714	1796	1547
Q Serve(g_s), s	3.5	11.8	11.9	15.0	17.7	17.8	2.1	0.0	24.4	3.1	9.8	5.7
Cycle Q Clear(g_c), s	3.5	11.8	11.9	15.0	17.7	17.8	2.1	0.0	24.4	3.1	9.8	5.7
Prop In Lane	1.00		0.21	1.00		0.56	1.00		0.62	1.00		1.00
Lane Grp Cap(c), veh/h	230	328	333	393	509	487	365	0	516	193	607	523
V/C Ratio(X)	0.33	0.74	0.74	0.88	0.73	0.73	0.16	0.00	0.88	0.63	0.42	0.26
Avail Cap(c_a), veh/h	409	948	962	393	918	878	571	0	827	569	934	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	34.6	34.7	24.5	28.3	28.3	19.2	0.0	28.8	41.7	23.1	21.7
Incr Delay (d2), s/veh	0.8	3.2	3.3	20.3	2.0	2.2	0.2	0.0	6.6	3.3	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	8.9	9.0	12.3	11.5	11.2	1.5	0.0	14.9	2.5	7.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	37.8	37.9	44.7	30.3	30.5	19.4	0.0	35.5	45.0	23.5	21.9
LnGrp LOS	C	D	D	D	C	C	B	A	D	D	C	C
Approach Vol, veh/h		566			1074			514			508	
Approach Delay, s/veh		36.6			35.0			33.6			28.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	35.3	21.0	22.9	9.9	36.5	10.8	33.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	5.1	26.4	17.0	13.9	4.1	11.8	5.5	19.8
Green Ext Time (p_c), s	0.2	2.9	0.0	3.1	0.1	2.0	0.1	4.9

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	224	432	476	35	35	240
Future Vol, veh/h	224	432	476	35	35	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	9	4	7	9
Mvmt Flow	233	450	496	36	36	250

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	532	0	-	0	1205	266
Stage 1	-	-	-	-	514	-
Stage 2	-	-	-	-	691	-
Critical Hdwy	4.2	-	-	-	6.94	7.08
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.25	-	-	-	3.57	3.39
Pot Cap-1 Maneuver	1011	-	-	-	169	711
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	445	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1011	-	-	-	130	711
Mov Cap-2 Maneuver	-	-	-	-	257	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1011	-	-	-	580
HCM Lane V/C Ratio	0.231	-	-	-	0.494
HCM Control Delay (s)	9.6	-	-	-	17.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	2.7

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	145	679	757	7	4	274
Future Vol, veh/h	145	679	757	7	4	274
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	707	789	7	4	285

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	796	0	-	0	1449	398
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	656	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	822	-	-	-	122	601
Stage 1	-	-	-	-	406	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	822	-	-	-	100	601
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	822	-	-	-	587
HCM Lane V/C Ratio	0.184	-	-	-	0.493
HCM Control Delay (s)	10.4	-	-	-	17
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	2.7

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	632	718	12	22	45
Future Vol, veh/h	51	632	718	12	22	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	658	748	13	23	47

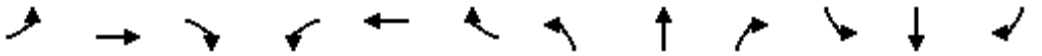
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	761	0	-	0	1190	381
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	847	-	-	-	180	617
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	847	-	-	-	169	617
Mov Cap-2 Maneuver	-	-	-	-	293	-
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	620	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	453
HCM Lane V/C Ratio	0.063	-	-	-	0.154
HCM Control Delay (s)	9.5	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6	3	8	7	4	
Permitted Phases	2		6		8				4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	20.0	53.0	20.0	53.0	22.0	55.0	22.0	55.0	55.0
Total Split (%)	13.3%	35.3%	13.3%	35.3%	14.7%	36.7%	14.7%	36.7%	36.7%
Maximum Green (s)	14.0	47.0	14.0	47.0	16.0	49.0	16.0	49.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	14.0	43.7	14.0	43.7	13.8	49.0	16.0	51.2	51.2
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
70th %ile Green (s)	14.0	37.6	14.0	37.6	11.3	49.0	16.0	53.7	53.7
70th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
50th %ile Green (s)	13.1	34.2	14.0	35.1	9.8	49.0	15.4	54.6	54.6
50th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold
30th %ile Green (s)	11.3	29.7	14.0	32.4	8.5	49.0	13.4	53.9	53.9
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold
10th %ile Green (s)	8.8	24.9	14.0	30.1	6.9	49.0	10.9	53.0	53.0
10th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 135.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 146.7
70th %ile Actuated Cycle: 140.6
50th %ile Actuated Cycle: 136.6
30th %ile Actuated Cycle: 130.1
10th %ile Actuated Cycle: 122.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	611	58	274	454	167	103	346	317	236	326	119
Future Volume (veh/h)	140	611	58	274	454	167	103	346	317	236	326	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	149	650	62	291	483	178	110	368	337	251	347	127
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	2	2
Cap, veh/h	268	778	74	284	680	249	411	340	312	308	778	660
Arrive On Green	0.08	0.24	0.24	0.11	0.27	0.27	0.05	0.38	0.38	0.09	0.42	0.42
Sat Flow, veh/h	1781	3279	312	1781	2547	933	1781	899	823	3401	1870	1585
Grp Volume(v), veh/h	149	352	360	291	336	325	110	0	705	251	347	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1781	1777	1703	1781	0	1722	1700	1870	1585
Q Serve(g_s), s	8.1	24.4	24.4	14.0	22.1	22.4	4.8	0.0	49.0	9.4	17.2	6.6
Cycle Q Clear(g_c), s	8.1	24.4	24.4	14.0	22.1	22.4	4.8	0.0	49.0	9.4	17.2	6.6
Prop In Lane	1.00		0.17	1.00		0.55	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	268	422	430	284	474	454	411	0	652	308	778	660
V/C Ratio(X)	0.56	0.83	0.84	1.02	0.71	0.72	0.27	0.00	1.08	0.81	0.45	0.19
Avail Cap(c_a), veh/h	321	645	659	284	645	618	536	0	652	420	778	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	46.9	47.0	38.7	42.9	43.0	23.0	0.0	40.2	57.8	27.1	24.0
Incr Delay (d2), s/veh	1.8	5.8	5.7	59.9	2.3	2.5	0.3	0.0	59.3	8.6	0.4	0.1
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(95%),veh/ln	6.5	16.9	17.2	17.4	15.1	14.7	3.7	0.0	42.3	7.8	12.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	52.7	52.7	98.6	45.1	45.5	23.3	0.0	99.5	66.4	27.5	24.1
LnGrp LOS	D	D	D	F	D	D	C	A	F	E	C	C
Approach Vol, veh/h		861			952			815			725	
Approach Delay, s/veh		49.9			61.6			89.2			40.4	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	36.7	12.9	59.9	16.2	40.5	17.7	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	16.0	26.4	6.8	19.2	10.1	24.4	11.4	51.0
Green Ext Time (p_c), s	0.0	4.3	0.2	2.5	0.1	4.1	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.7
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	175	681	548	58	43	121
Future Vol, veh/h	175	681	548	58	43	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	186	724	583	62	46	129

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	645	0	-	0	1348	323
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	734	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	936	-	-	-	142	673
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	436	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	936	-	-	-	114	673
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	436	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	936	-	-	-	460
HCM Lane V/C Ratio	0.199	-	-	-	0.379
HCM Control Delay (s)	9.8	-	-	-	17.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	1.7

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	862	667	23	26	228
Future Vol, veh/h	315	862	667	23	26	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	335	917	710	24	28	243

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	734	0	-	0	1851	367
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	1129	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	867	-	-	-	66	630
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	271	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	867	-	-	-	41	630
Mov Cap-2 Maneuver	-	-	-	-	142	-
Stage 1	-	-	-	-	271	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	22.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	867	-	-	-	466
HCM Lane V/C Ratio	0.387	-	-	-	0.58
HCM Control Delay (s)	11.7	-	-	-	22.8
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1.8	-	-	-	3.6

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	800	621	52	56	69
Future Vol, veh/h	89	800	621	52	56	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	851	661	55	60	73

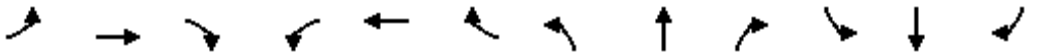
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	716	0	-	0	1305	358
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	616	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	880	-	-	-	152	638
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	880	-	-	-	136	638
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	501	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	880	-	-	-	393
HCM Lane V/C Ratio	0.108	-	-	-	0.338
HCM Control Delay (s)	9.6	-	-	-	18.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.5

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	14.9	34.9	15.0	35.0	10.4	46.5	11.2	47.3	47.3
90th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
70th %ile Green (s)	11.8	24.7	15.0	27.9	9.1	33.9	9.3	34.1	34.1
70th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	9.8	18.7	14.6	23.5	8.0	27.6	8.2	27.8	27.8
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	8.3	15.2	11.9	18.8	7.0	22.2	7.2	22.4	22.4
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	0.0	11.8	8.1	25.9	0.0	16.3	0.0	16.3	16.3
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Skip	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 93.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 131.6
70th %ile Actuated Cycle: 106.9
50th %ile Actuated Cycle: 93.1
30th %ile Actuated Cycle: 80.5
10th %ile Actuated Cycle: 54.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	365	49	216	447	95	58	198	191	86	337	167
Future Volume (veh/h)	87	365	49	216	447	95	58	198	191	86	337	167
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	1633	1826	1856	1648	1767	1752	1737	1767	1796	1856	1781	1826
Adj Flow Rate, veh/h	91	380	51	225	466	99	60	206	199	90	351	174
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	18	5	3	17	9	10	11	9	7	3	8	5
Cap, veh/h	273	554	74	371	705	149	288	246	237	196	546	475
Arrive On Green	0.06	0.18	0.18	0.14	0.26	0.26	0.05	0.30	0.30	0.06	0.31	0.31
Sat Flow, veh/h	1555	3077	410	1570	2758	582	1654	826	798	3428	1781	1547
Grp Volume(v), veh/h	91	213	218	225	282	283	60	0	405	90	351	174
Grp Sat Flow(s),veh/h/ln	1555	1735	1752	1570	1678	1662	1654	0	1623	1714	1781	1547
Q Serve(g_s), s	3.5	8.5	8.6	8.1	11.1	11.2	1.8	0.0	17.2	1.9	12.5	6.5
Cycle Q Clear(g_c), s	3.5	8.5	8.6	8.1	11.1	11.2	1.8	0.0	17.2	1.9	12.5	6.5
Prop In Lane	1.00		0.23	1.00		0.35	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	273	312	315	371	429	425	288	0	483	196	546	475
V/C Ratio(X)	0.33	0.68	0.69	0.61	0.66	0.67	0.21	0.00	0.84	0.46	0.64	0.37
Avail Cap(c_a), veh/h	490	1153	1165	471	1116	1105	546	0	1035	698	1136	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	28.3	28.3	19.6	24.5	24.6	17.4	0.0	24.2	33.6	22.1	20.0
Incr Delay (d2), s/veh	0.7	2.6	2.7	1.6	1.7	1.8	0.4	0.0	4.0	1.7	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	6.4	6.6	5.2	7.7	7.8	1.2	0.0	10.8	1.4	8.7	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	30.9	31.0	21.2	26.3	26.4	17.8	0.0	28.2	35.3	23.3	20.4
LnGrp LOS	C	C	C	C	C	C	B	A	C	D	C	C
Approach Vol, veh/h		522			790			465			615	
Approach Delay, s/veh		29.6			24.9			26.8			24.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	27.9	16.3	19.3	9.5	28.6	10.7	24.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	3.9	19.2	10.1	10.6	3.8	14.5	5.5	13.2
Green Ext Time (p_c), s	0.2	2.7	0.3	2.7	0.1	2.8	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	237	424	463	35	35	280
Future Vol, veh/h	237	424	463	35	35	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	10	5	8	9
Mvmt Flow	247	442	482	36	36	292

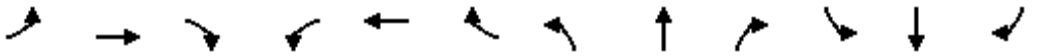
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	518	0	-	0	1215	259
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	715	-
Critical Hdwy	4.2	-	-	-	6.96	7.08
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	2.25	-	-	-	3.58	3.39
Pot Cap-1 Maneuver	1023	-	-	-	165	719
Stage 1	-	-	-	-	558	-
Stage 2	-	-	-	-	430	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1023	-	-	-	125	719
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	18.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1023	-	-	-	596
HCM Lane V/C Ratio	0.241	-	-	-	0.551
HCM Control Delay (s)	9.6	-	-	-	18.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	3.3

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	22.0	55.0	22.0	55.0	20.0	53.0	20.0	53.0	53.0
Total Split (%)	14.7%	36.7%	14.7%	36.7%	13.3%	35.3%	13.3%	35.3%	35.3%
Maximum Green (s)	16.0	49.0	16.0	49.0	14.0	47.0	14.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	16.0	37.6	16.0	37.6	13.4	47.0	14.0	47.6	47.6
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
70th %ile Green (s)	16.0	33.1	16.0	33.1	11.2	47.0	12.8	48.6	48.6
70th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold
50th %ile Green (s)	14.9	28.6	14.6	28.3	9.6	47.0	11.3	48.7	48.7
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold
30th %ile Green (s)	12.9	25.2	12.6	24.9	8.3	47.0	9.8	48.5	48.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold
10th %ile Green (s)	10.2	19.8	10.0	19.6	6.7	47.0	8.0	48.3	48.3
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Max	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 124.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 138.6
70th %ile Actuated Cycle: 132.9
50th %ile Actuated Cycle: 125.5
30th %ile Actuated Cycle: 118.6
10th %ile Actuated Cycle: 108.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	539	58	178	395	120	103	450	193	152	387	143
Future Volume (veh/h)	180	539	58	178	395	120	103	450	193	152	387	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	191	573	62	189	420	128	110	479	205	162	412	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	715	77	283	592	179	369	500	214	226	776	657
Arrive On Green	0.10	0.22	0.22	0.10	0.22	0.22	0.05	0.40	0.40	0.07	0.41	0.41
Sat Flow, veh/h	1781	3235	349	1781	2690	812	1781	1243	532	3456	1870	1585
Grp Volume(v), veh/h	191	314	321	189	276	272	110	0	684	162	412	152
Grp Sat Flow(s),veh/h/ln	1781	1777	1807	1781	1777	1724	1781	0	1775	1728	1870	1585
Q Serve(g_s), s	9.3	19.0	19.1	9.2	16.3	16.6	4.1	0.0	42.6	5.2	18.8	7.0
Cycle Q Clear(g_c), s	9.3	19.0	19.1	9.2	16.3	16.6	4.1	0.0	42.6	5.2	18.8	7.0
Prop In Lane	1.00		0.19	1.00		0.47	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	307	393	400	283	391	380	369	0	714	226	776	657
V/C Ratio(X)	0.62	0.80	0.80	0.67	0.71	0.72	0.30	0.00	0.96	0.72	0.53	0.23
Avail Cap(c_a), veh/h	378	767	780	356	767	744	494	0	735	426	776	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	41.8	41.9	31.4	40.9	41.0	19.5	0.0	33.0	52.0	24.9	21.5
Incr Delay (d2), s/veh	2.1	3.8	3.8	3.3	2.3	2.5	0.4	0.0	23.1	4.2	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	13.4	13.7	7.4	11.7	11.6	3.0	0.0	29.8	4.3	13.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	45.6	45.7	34.7	43.2	43.5	19.9	0.0	56.1	56.2	25.6	21.7
LnGrp LOS	C	D	D	C	D	D	B	A	E	E	C	C
Approach Vol, veh/h		826			737			794			726	
Approach Delay, s/veh		42.7			41.1			51.1			31.6	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	51.7	17.3	31.1	12.0	53.1	17.4	31.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	7.2	44.6	11.2	21.1	6.1	20.8	11.3	18.6
Green Ext Time (p_c), s	0.3	1.1	0.2	4.0	0.1	3.1	0.2	3.5

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	229	671	539	64	45	150
Future Vol, veh/h	229	671	539	64	45	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	244	714	573	68	48	160

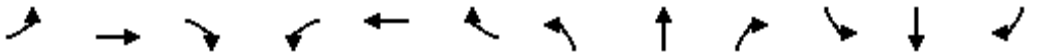
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	641	0	-	0	1452	321
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	845	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	939	-	-	-	121	675
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	382	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	939	-	-	-	90	675
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	382	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	939	-	-	-	451
HCM Lane V/C Ratio	0.259	-	-	-	0.46
HCM Control Delay (s)	10.2	-	-	-	19.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1	-	-	-	2.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases	4		8		2				6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	21.0	24.0	24.0
Total Split (s)	21.0	55.0	21.0	55.0	21.0	53.0	21.0	53.0	53.0
Total Split (%)	14.0%	36.7%	14.0%	36.7%	14.0%	35.3%	14.0%	35.3%	35.3%
Maximum Green (s)	15.0	49.0	15.0	49.0	15.0	47.0	15.0	47.0	47.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	15.0	49.0	15.0	49.0	11.2	47.0	14.7	50.5	50.5
90th %ile Term Code	Max	Hold	Max	Max	Gap	Max	Gap	Hold	Hold
70th %ile Green (s)	12.9	40.0	15.0	42.1	9.3	47.0	12.3	50.0	50.0
70th %ile Term Code	Gap	Hold	Max	Gap	Gap	Max	Gap	Hold	Hold
50th %ile Green (s)	10.9	32.2	15.0	36.3	8.1	45.8	10.8	48.5	48.5
50th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	9.1	25.7	15.0	31.6	7.2	37.3	9.3	39.4	39.4
30th %ile Term Code	Gap	Hold	Max	Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	6.8	15.3	15.0	23.5	0.0	27.5	7.4	40.9	40.9
10th %ile Term Code	Gap	Gap	Max	Hold	Skip	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 123.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 149.7
70th %ile Actuated Cycle: 138.3
50th %ile Actuated Cycle: 127.8
30th %ile Actuated Cycle: 111.3
10th %ile Actuated Cycle: 89.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	433	49	371	546	196	58	198	282	135	337	167
Future Volume (veh/h)	87	433	49	371	546	196	58	198	282	135	337	167
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	1663	1841	1856	1693	1781	1767	1752	1767	1811	1856	1796	1826
Adj Flow Rate, veh/h	91	451	51	386	569	204	60	206	294	141	351	174
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	4	3	14	8	9	10	9	6	3	7	5
Cap, veh/h	214	630	71	369	706	252	317	229	326	211	661	570
Arrive On Green	0.06	0.20	0.20	0.15	0.29	0.29	0.04	0.35	0.35	0.06	0.37	0.37
Sat Flow, veh/h	1584	3169	357	1612	2443	874	1668	658	939	3428	1796	1547
Grp Volume(v), veh/h	91	248	254	386	394	379	60	0	500	141	351	174
Grp Sat Flow(s),veh/h/ln	1584	1749	1777	1612	1692	1624	1668	0	1598	1714	1796	1547
Q Serve(g_s), s	4.5	13.2	13.3	15.0	21.4	21.5	2.3	0.0	29.6	4.0	15.3	8.0
Cycle Q Clear(g_c), s	4.5	13.2	13.3	15.0	21.4	21.5	2.3	0.0	29.6	4.0	15.3	8.0
Prop In Lane	1.00		0.20	1.00		0.54	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	214	348	353	369	489	469	317	0	555	211	661	570
V/C Ratio(X)	0.43	0.71	0.72	1.05	0.81	0.81	0.19	0.00	0.90	0.67	0.53	0.31
Avail Cap(c_a), veh/h	356	862	875	369	834	800	501	0	755	517	849	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	37.2	37.2	29.9	32.8	32.8	20.3	0.0	30.8	45.7	24.7	22.4
Incr Delay (d2), s/veh	1.3	2.7	2.8	59.8	3.2	3.4	0.3	0.0	11.1	3.6	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	9.7	9.9	13.5	13.8	13.4	1.6	0.0	18.4	3.2	10.5	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	39.9	40.0	89.8	36.0	36.2	20.6	0.0	42.0	49.3	25.3	22.7
LnGrp LOS	C	D	D	F	D	D	C	A	D	D	C	C
Approach Vol, veh/h		593			1159			560			666	
Approach Delay, s/veh		38.6			54.0			39.7			29.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	40.5	21.0	25.8	10.0	42.6	12.1	34.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	47.0	15.0	49.0	15.0	47.0	15.0	49.0
Max Q Clear Time (g_c+I1), s	6.0	31.6	17.0	15.3	4.3	17.3	6.5	23.5
Green Ext Time (p_c), s	0.3	3.0	0.0	3.1	0.1	2.8	0.1	5.2

Intersection Summary	
HCM 6th Ctrl Delay	42.8
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	249	451	482	41	54	315
Future Vol, veh/h	249	451	482	41	54	315
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	6	9	4	7	9
Mvmt Flow	259	470	502	43	56	328

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	545	0	-	0	1277	273
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	4.2	-	-	-	6.94	7.08
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.25	-	-	-	3.57	3.39
Pot Cap-1 Maneuver	1000	-	-	-	152	704
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	413	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1000	-	-	-	113	704
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	413	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	25.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1000	-	-	-	547
HCM Lane V/C Ratio	0.259	-	-	-	0.703
HCM Control Delay (s)	9.9	-	-	-	25.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	1	-	-	-	5.6

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	145	723	839	7	4	274
Future Vol, veh/h	145	723	839	7	4	274
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	753	874	7	4	285

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	881	0	-	0	1557	441
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	679	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	763	-	-	-	103	564
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	465	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	763	-	-	-	83	564
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	465	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	763	-	-	-	550
HCM Lane V/C Ratio	0.198	-	-	-	0.527
HCM Control Delay (s)	10.9	-	-	-	18.6
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	3

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	676	800	12	22	45
Future Vol, veh/h	51	676	800	12	22	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	704	833	13	23	47

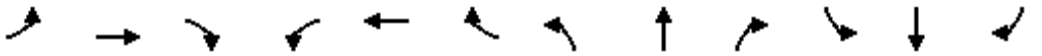
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	846	0	-	0	1298	423
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	787	-	-	-	153	579
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	143	579
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	604	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	787	-	-	-	416
HCM Lane V/C Ratio	0.068	-	-	-	0.168
HCM Control Delay (s)	9.9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	5	2	1	6	3	8	7	4	
Permitted Phases	2		6		8				4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0	24.0
Total Split (s)	20.0	53.0	20.0	53.0	22.0	55.0	22.0	55.0	55.0
Total Split (%)	13.3%	35.3%	13.3%	35.3%	14.7%	36.7%	14.7%	36.7%	36.7%
Maximum Green (s)	14.0	47.0	14.0	47.0	16.0	49.0	16.0	49.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0		0	0
90th %ile Green (s)	14.0	46.4	14.0	46.4	14.1	49.0	16.0	50.9	50.9
90th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
70th %ile Green (s)	14.0	39.9	14.0	39.9	11.5	49.0	16.0	53.5	53.5
70th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
50th %ile Green (s)	14.0	36.3	14.0	36.3	10.0	49.0	16.0	55.0	55.0
50th %ile Term Code	Max	Gap	Max	Hold	Gap	Max	Max	Hold	Hold
30th %ile Green (s)	13.4	31.7	14.0	32.3	8.6	49.0	14.1	54.5	54.5
30th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold
10th %ile Green (s)	10.5	26.6	14.0	30.1	6.9	49.0	11.4	53.5	53.5
10th %ile Term Code	Gap	Gap	Max	Hold	Gap	Max	Gap	Hold	Hold

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 137.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 149.4
70th %ile Actuated Cycle: 142.9
50th %ile Actuated Cycle: 139.3
30th %ile Actuated Cycle: 132.8
10th %ile Actuated Cycle: 125



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	652	58	298	478	188	103	450	358	248	387	143
Future Volume (veh/h)	180	652	58	298	478	188	103	450	358	248	387	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	191	694	62	317	509	200	110	479	381	264	412	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	2	2
Cap, veh/h	274	821	73	277	649	254	356	357	284	319	768	651
Arrive On Green	0.09	0.25	0.25	0.11	0.26	0.26	0.05	0.37	0.37	0.09	0.41	0.41
Sat Flow, veh/h	1781	3300	295	1781	2496	976	1781	965	767	3401	1870	1585
Grp Volume(v), veh/h	191	373	383	317	362	347	110	0	860	264	412	152
Grp Sat Flow(s),veh/h/ln	1781	1777	1817	1781	1777	1695	1781	0	1732	1700	1870	1585
Q Serve(g_s), s	10.4	26.5	26.5	14.0	25.0	25.2	5.0	0.0	49.0	10.1	22.0	8.3
Cycle Q Clear(g_c), s	10.4	26.5	26.5	14.0	25.0	25.2	5.0	0.0	49.0	10.1	22.0	8.3
Prop In Lane	1.00		0.16	1.00		0.58	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	274	442	452	277	462	441	356	0	641	319	768	651
V/C Ratio(X)	0.70	0.84	0.85	1.14	0.78	0.79	0.31	0.00	1.34	0.83	0.54	0.23
Avail Cap(c_a), veh/h	294	631	645	277	631	602	477	0	641	411	768	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	47.3	47.3	38.6	45.5	45.6	24.6	0.0	41.7	58.9	29.5	25.4
Incr Delay (d2), s/veh	6.5	7.2	7.2	98.6	4.4	4.9	0.5	0.0	163.7	10.5	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	18.3	18.6	21.7	17.1	16.6	3.9	0.0	73.1	8.4	15.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	54.5	54.5	137.2	49.9	50.4	25.1	0.0	205.4	69.4	30.2	25.6
LnGrp LOS	D	D	D	F	D	D	C	A	F	E	C	C
Approach Vol, veh/h		947			1026			970			828	
Approach Delay, s/veh		51.8			77.1			184.9			41.8	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	38.9	13.0	60.4	18.5	40.4	18.4	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	47.0	16.0	49.0	14.0	47.0	16.0	49.0
Max Q Clear Time (g_c+I1), s	16.0	28.5	7.0	24.0	12.4	27.2	12.1	51.0
Green Ext Time (p_c), s	0.0	4.4	0.2	3.0	0.1	4.3	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	90.7
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	258	693	569	79	55	170
Future Vol, veh/h	258	693	569	79	55	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	274	737	605	84	59	181

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	689	0	-	0	1564	345
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	917	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	901	-	-	-	102	651
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	350	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	901	-	-	-	71	651
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	350	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	25.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	901	-	-	-	408
HCM Lane V/C Ratio	0.305	-	-	-	0.587
HCM Control Delay (s)	10.7	-	-	-	25.6
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	1.3	-	-	-	3.6

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	957	737	23	26	228
Future Vol, veh/h	315	957	737	23	26	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	335	1018	784	24	28	243

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	808	0	-	0	1975	404
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	1179	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	813	-	-	-	54	596
Stage 1	-	-	-	-	405	-
Stage 2	-	-	-	-	254	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	813	-	-	-	32	596
Mov Cap-2 Maneuver	-	-	-	-	127	-
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	254	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	26.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	813	-	-	-	433
HCM Lane V/C Ratio	0.412	-	-	-	0.624
HCM Control Delay (s)	12.5	-	-	-	26.1
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	2	-	-	-	4.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	895	691	52	56	69
Future Vol, veh/h	89	895	691	52	56	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	952	735	55	60	73

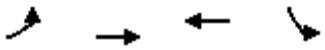
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	790	0	-	0	1429	395
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	666	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	826	-	-	-	126	604
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	112	604
Mov Cap-2 Maneuver	-	-	-	-	240	-
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	826	-	-	-	360
HCM Lane V/C Ratio	0.115	-	-	-	0.369
HCM Control Delay (s)	9.9	-	-	-	20.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.7

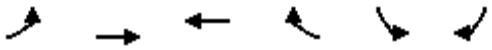
APPENDIX

O. Mitigated Synchro Capacity Analysis Reports



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0
Total Split (s)	127.0	127.0	127.0	24.0
Total Split (%)	84.1%	84.1%	84.1%	15.9%
Maximum Green (s)	121.0	121.0	121.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	23.4	23.4	23.4	18.0
90th %ile Term Code	Gap	Gap	Hold	MaxR
70th %ile Green (s)	18.4	18.4	18.4	18.0
70th %ile Term Code	Gap	Gap	Hold	MaxR
50th %ile Green (s)	16.1	16.1	16.1	18.0
50th %ile Term Code	Gap	Gap	Hold	MaxR
30th %ile Green (s)	12.9	12.9	12.9	18.0
30th %ile Term Code	Gap	Gap	Hold	MaxR
10th %ile Green (s)	10.2	10.2	10.2	18.0
10th %ile Term Code	Gap	Gap	Hold	MaxR

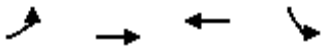
Intersection Summary
Cycle Length: 151
Actuated Cycle Length: 46.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 53.4
70th %ile Actuated Cycle: 48.4
50th %ile Actuated Cycle: 46.1
30th %ile Actuated Cycle: 42.9
10th %ile Actuated Cycle: 40.2



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	370	417	26	15	196
Future Volume (veh/h)	193	370	417	26	15	196
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	1811	1752	1826	1781	1752
Adj Flow Rate, veh/h	201	385	434	27	16	204
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	10	5	8	10
Cap, veh/h	424	1390	1285	80	39	503
Arrive On Green	0.40	0.40	0.40	0.40	0.36	0.36
Sat Flow, veh/h	909	3532	3271	197	110	1406
Grp Volume(v), veh/h	201	385	226	235	221	0
Grp Sat Flow(s),veh/h/ln	909	1721	1664	1716	1523	0
Q Serve(g_s), s	9.9	3.8	4.7	4.8	5.5	0.0
Cycle Q Clear(g_c), s	14.6	3.8	4.7	4.8	5.5	0.0
Prop In Lane	1.00			0.12	0.07	0.92
Lane Grp Cap(c), veh/h	424	1390	672	693	545	0
V/C Ratio(X)	0.47	0.28	0.34	0.34	0.41	0.00
Avail Cap(c_a), veh/h	2243	8274	4002	4127	545	0
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	0.00
Uniform Delay (d), s/veh	15.4	10.1	10.3	10.4	12.1	0.0
Incr Delay (d2), s/veh	0.8	0.1	0.3	0.3	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	1.8	2.2	2.3	3.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.2	10.2	10.6	10.6	14.4	0.0
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h		586	461		221	
Approach Delay, s/veh		12.3	10.6		14.4	
Approach LOS		B	B		B	

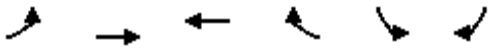
Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			26.3		24.0	26.3
Change Period (Y+Rc), s			6.0		6.0	6.0
Max Green Setting (Gmax), s			121.0		18.0	121.0
Max Q Clear Time (g_c+I1), s			16.6		7.5	6.8
Green Ext Time (p_c), s			3.7		0.5	2.6

Intersection Summary		
HCM 6th Ctrl Delay		12.0
HCM 6th LOS		B



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0
Total Split (s)	126.0	126.0	126.0	24.0
Total Split (%)	84.0%	84.0%	84.0%	16.0%
Maximum Green (s)	120.0	120.0	120.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	19.8	19.8	19.8	18.0
90th %ile Term Code	Gap	Gap	Hold	MaxR
70th %ile Green (s)	15.9	15.9	15.9	18.0
70th %ile Term Code	Gap	Gap	Hold	MaxR
50th %ile Green (s)	14.6	14.6	14.6	18.0
50th %ile Term Code	Gap	Gap	Hold	MaxR
30th %ile Green (s)	12.8	12.8	12.8	18.0
30th %ile Term Code	Gap	Gap	Hold	MaxR
10th %ile Green (s)	10.6	10.6	10.6	18.0
10th %ile Term Code	Gap	Gap	Hold	MaxR

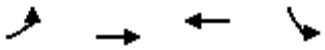
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 44.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 49.8
70th %ile Actuated Cycle: 45.9
50th %ile Actuated Cycle: 44.6
30th %ile Actuated Cycle: 42.8
10th %ile Actuated Cycle: 40.6



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	133	602	473	39	32	96
Future Volume (veh/h)	133	602	473	39	32	96
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	640	503	41	34	102
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	393	1407	1318	107	147	440
Arrive On Green	0.40	0.40	0.40	0.40	0.36	0.36
Sat Flow, veh/h	862	3647	3421	271	405	1215
Grp Volume(v), veh/h	141	640	268	276	137	0
Grp Sat Flow(s),veh/h/ln	862	1777	1777	1822	1631	0
Q Serve(g_s), s	6.9	6.6	5.3	5.4	2.9	0.0
Cycle Q Clear(g_c), s	12.3	6.6	5.3	5.4	2.9	0.0
Prop In Lane	1.00			0.15	0.25	0.74
Lane Grp Cap(c), veh/h	393	1407	704	721	591	0
V/C Ratio(X)	0.36	0.45	0.38	0.38	0.23	0.00
Avail Cap(c_a), veh/h	2135	8587	4293	4402	591	0
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	0.00
Uniform Delay (d), s/veh	15.0	11.1	10.7	10.7	11.0	0.0
Incr Delay (d2), s/veh	0.6	0.2	0.3	0.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	3.3	2.7	2.8	1.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.6	11.3	11.0	11.0	11.9	0.0
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h		781	544		137	
Approach Delay, s/veh		12.1	11.0		11.9	
Approach LOS		B	B		B	

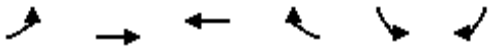
Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		25.7		24.0	25.7
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		120.0		18.0	120.0
Max Q Clear Time (g_c+I1), s		14.3		4.9	7.4
Green Ext Time (p_c), s		5.4		0.3	3.1

Intersection Summary		
HCM 6th Ctrl Delay	11.7	
HCM 6th LOS	B	



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	101.0	101.0	101.0	49.0
Total Split (%)	67.3%	67.3%	67.3%	32.7%
Maximum Green (s)	96.5	96.5	96.5	44.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	24.9	24.9	24.9	10.6
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	16.8	16.8	16.8	7.5
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	13.4	13.4	13.4	6.0
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	10.5	10.5	10.5	5.5
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	8.7	8.7	8.7	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

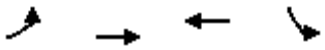
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 30.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 44.5
70th %ile Actuated Cycle: 33.3
50th %ile Actuated Cycle: 28.4
30th %ile Actuated Cycle: 25
10th %ile Actuated Cycle: 23.2



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	212	405	457	29	16	205
Future Volume (veh/h)	212	405	457	29	16	205
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	1811	1752	1826	1781	1767
Adj Flow Rate, veh/h	221	422	476	30	17	214
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	10	5	8	9
Cap, veh/h	575	1686	1558	98	25	319
Arrive On Green	0.49	0.49	0.49	0.49	0.23	0.23
Sat Flow, veh/h	872	3532	3268	200	112	1405
Grp Volume(v), veh/h	221	422	249	257	232	0
Grp Sat Flow(s),veh/h/ln	872	1721	1664	1716	1523	0
Q Serve(g_s), s	6.5	2.3	2.8	2.9	4.4	0.0
Cycle Q Clear(g_c), s	9.3	2.3	2.8	2.9	4.4	0.0
Prop In Lane	1.00			0.12	0.07	0.92
Lane Grp Cap(c), veh/h	575	1686	816	841	345	0
V/C Ratio(X)	0.38	0.25	0.30	0.31	0.67	0.00
Avail Cap(c_a), veh/h	2795	10448	5053	5210	2132	0
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	0.00
Uniform Delay (d), s/veh	7.7	4.7	4.9	4.9	11.2	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.2	0.2	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.3	0.5	0.5	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.1	4.8	5.1	5.1	13.5	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		643	506		232	
Approach Delay, s/veh		5.9	5.1		13.5	
Approach LOS		A	A		B	

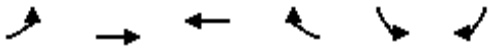
Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			20.1		11.7	20.1
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			96.5		44.5	96.5
Max Q Clear Time (g_c+I1), s			11.3		6.4	4.9
Green Ext Time (p_c), s			4.2		0.8	2.8

Intersection Summary		
HCM 6th Ctrl Delay	6.9	
HCM 6th LOS	A	



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	104.0	104.0	104.0	46.0
Total Split (%)	69.3%	69.3%	69.3%	30.7%
Maximum Green (s)	99.5	99.5	99.5	41.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	21.2	21.2	21.2	9.1
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	16.0	16.0	16.0	7.3
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	12.7	12.7	12.7	6.3
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	10.3	10.3	10.3	5.6
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	9.5	9.5	9.5	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

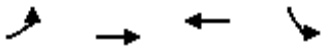
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 29.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 39.3
70th %ile Actuated Cycle: 32.3
50th %ile Actuated Cycle: 28
30th %ile Actuated Cycle: 24.9
10th %ile Actuated Cycle: 24



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	659	518	43	33	101
Future Volume (veh/h)	146	659	518	43	33	101
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	155	701	551	46	35	107
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	593	1831	1711	143	69	211
Arrive On Green	0.52	0.52	0.52	0.52	0.17	0.17
Sat Flow, veh/h	821	3647	3414	277	399	1220
Grp Volume(v), veh/h	155	701	294	303	143	0
Grp Sat Flow(s),veh/h/ln	821	1777	1777	1821	1631	0
Q Serve(g_s), s	3.9	3.4	2.8	2.8	2.3	0.0
Cycle Q Clear(g_c), s	6.7	3.4	2.8	2.8	2.3	0.0
Prop In Lane	1.00			0.15	0.24	0.75
Lane Grp Cap(c), veh/h	593	1831	916	938	282	0
V/C Ratio(X)	0.26	0.38	0.32	0.32	0.51	0.00
Avail Cap(c_a), veh/h	2998	12242	6121	6271	2343	0
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	0.00
Uniform Delay (d), s/veh	6.0	4.2	4.1	4.1	10.8	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.2	1.4	0.0
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	0.1	0.1	0.2	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.2	4.4	4.3	4.3	12.2	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		856	597		143	
Approach Delay, s/veh		4.7	4.3		12.2	
Approach LOS		A	A		B	

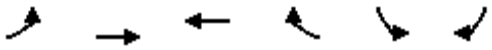
Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			19.4		9.5	19.4
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			99.5		41.5	99.5
Max Q Clear Time (g_c+I1), s			8.7		4.3	4.8
Green Ext Time (p_c), s			6.2		0.4	3.4

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	95.0	95.0	95.0	55.0
Total Split (%)	63.3%	63.3%	63.3%	36.7%
Maximum Green (s)	90.5	90.5	90.5	50.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	24.8	24.8	24.8	12.2
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	16.8	16.8	16.8	8.4
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	13.4	13.4	13.4	6.5
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	10.1	10.1	10.1	5.5
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	8.4	8.4	8.4	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

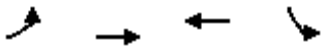
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 31.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 46
70th %ile Actuated Cycle: 34.2
50th %ile Actuated Cycle: 28.9
30th %ile Actuated Cycle: 24.6
10th %ile Actuated Cycle: 22.9



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	205	388	423	32	33	232
Future Volume (veh/h)	205	388	423	32	33	232
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	1811	1752	1826	1781	1752
Adj Flow Rate, veh/h	214	404	441	33	34	242
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	10	5	8	10
Cap, veh/h	562	1604	1464	109	48	342
Arrive On Green	0.47	0.47	0.47	0.47	0.26	0.26
Sat Flow, veh/h	898	3532	3227	234	188	1338
Grp Volume(v), veh/h	214	404	233	241	277	0
Grp Sat Flow(s),veh/h/ln	898	1721	1664	1710	1531	0
Q Serve(g_s), s	6.3	2.3	2.8	2.8	5.3	0.0
Cycle Q Clear(g_c), s	9.1	2.3	2.8	2.8	5.3	0.0
Prop In Lane	1.00			0.14	0.12	0.87
Lane Grp Cap(c), veh/h	562	1604	776	797	392	0
V/C Ratio(X)	0.38	0.25	0.30	0.30	0.71	0.00
Avail Cap(c_a), veh/h	2653	9616	4651	4778	2388	0
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	0.00
Uniform Delay (d), s/veh	8.2	5.2	5.4	5.4	10.9	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.2	0.2	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.4	0.6	0.6	2.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	5.3	5.6	5.6	13.3	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		618	474		277	
Approach Delay, s/veh		6.5	5.6		13.3	
Approach LOS		A	A		B	

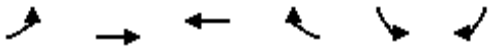
Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			19.6		12.8	19.6
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			90.5		50.5	90.5
Max Q Clear Time (g_c+I1), s			11.1		7.3	4.8
Green Ext Time (p_c), s			4.0		1.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	104.0	104.0	104.0	46.0
Total Split (%)	69.3%	69.3%	69.3%	30.7%
Maximum Green (s)	99.5	99.5	99.5	41.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	24.8	24.8	24.8	11.2
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	17.8	17.8	17.8	8.6
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	14.7	14.7	14.7	7.4
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	11.4	11.4	11.4	6.4
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	9.2	9.2	9.2	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

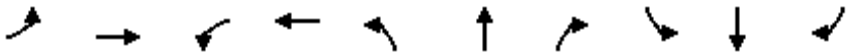
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 32.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 45
70th %ile Actuated Cycle: 35.4
50th %ile Actuated Cycle: 31.1
30th %ile Actuated Cycle: 26.8
10th %ile Actuated Cycle: 23.7



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	171	613	492	58	43	119
Future Volume (veh/h)	171	613	492	58	43	119
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	652	523	62	46	127
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	592	1846	1663	196	79	217
Arrive On Green	0.52	0.52	0.52	0.52	0.18	0.18
Sat Flow, veh/h	830	3647	3294	378	432	1193
Grp Volume(v), veh/h	182	652	290	295	174	0
Grp Sat Flow(s),veh/h/ln	830	1777	1777	1802	1634	0
Q Serve(g_s), s	4.9	3.3	2.8	2.8	2.9	0.0
Cycle Q Clear(g_c), s	7.7	3.3	2.8	2.8	2.9	0.0
Prop In Lane	1.00			0.21	0.26	0.73
Lane Grp Cap(c), veh/h	592	1846	923	936	297	0
V/C Ratio(X)	0.31	0.35	0.31	0.32	0.59	0.00
Avail Cap(c_a), veh/h	2901	11729	5865	5948	2249	0
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	0.00
Uniform Delay (d), s/veh	6.4	4.3	4.2	4.2	11.3	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.2	0.2	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.2	0.2	0.2	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.7	4.4	4.4	4.4	13.1	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		834	585		174	
Approach Delay, s/veh		4.9	4.4		13.1	
Approach LOS		A	A		B	

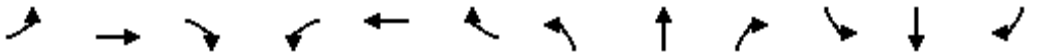
Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			20.2		10.0	20.2
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			99.5		41.5	99.5
Max Q Clear Time (g_c+I1), s			9.7		4.9	4.8
Green Ext Time (p_c), s			6.0		0.5	3.4

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	43.0	21.0	24.0	24.0
Total Split (s)	15.0	35.0	47.0	67.0	21.0	47.0	47.0	21.0	47.0	47.0
Total Split (%)	10.0%	23.3%	31.3%	44.7%	14.0%	31.3%	31.3%	14.0%	31.3%	31.3%
Maximum Green (s)	9.0	29.0	41.0	61.0	15.0	41.0	41.0	15.0	41.0	41.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0	0		0	0
90th %ile Green (s)	9.0	29.0	35.9	55.9	12.0	31.5	31.5	12.9	32.4	32.4
90th %ile Term Code	Max	Max	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
70th %ile Green (s)	9.0	23.5	24.7	39.2	9.6	23.0	23.0	10.4	23.8	23.8
70th %ile Term Code	Max	Gap	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	8.5	18.6	19.1	29.2	8.2	18.2	18.2	9.0	19.0	19.0
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	7.4	15.5	15.2	23.3	7.1	14.7	14.7	7.8	15.4	15.4
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	0.0	11.9	11.1	29.0	0.0	9.0	9.0	6.5	21.5	21.5
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Gap	Gap	Hold	Hold

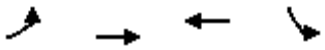
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 93.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 133.3
70th %ile Actuated Cycle: 105.6
50th %ile Actuated Cycle: 88.9
30th %ile Actuated Cycle: 77.2
10th %ile Actuated Cycle: 62.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	420	49	333	508	190	58	167	269	116	243	129
Future Volume (veh/h)	74	420	49	333	508	190	58	167	269	116	243	129
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	1663	1841	1856	1693	1781	1767	1752	1767	1811	1856	1796	1826
Adj Flow Rate, veh/h	77	438	51	347	529	198	60	174	280	121	253	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	4	3	14	8	9	10	9	6	3	7	5
Cap, veh/h	279	607	70	469	818	305	283	399	346	210	430	370
Arrive On Green	0.05	0.19	0.19	0.20	0.34	0.34	0.05	0.23	0.23	0.06	0.24	0.24
Sat Flow, veh/h	1584	3158	366	1612	2413	899	1668	1767	1535	3428	1796	1547
Grp Volume(v), veh/h	77	242	247	347	370	357	60	174	280	121	253	134
Grp Sat Flow(s),veh/h/ln	1584	1749	1775	1612	1692	1620	1668	1767	1535	1714	1796	1547
Q Serve(g_s), s	2.9	9.7	9.8	11.9	13.9	14.0	2.0	6.3	12.9	2.6	9.3	5.4
Cycle Q Clear(g_c), s	2.9	9.7	9.8	11.9	13.9	14.0	2.0	6.3	12.9	2.6	9.3	5.4
Prop In Lane	1.00		0.21	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	336	341	469	574	549	283	399	346	210	430	370
V/C Ratio(X)	0.28	0.72	0.73	0.74	0.65	0.65	0.21	0.44	0.81	0.57	0.59	0.36
Avail Cap(c_a), veh/h	385	677	688	1029	1379	1320	537	968	841	687	984	847
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	22.5	28.3	28.4	17.6	20.9	21.0	21.0	24.9	27.5	34.2	25.2	23.7
Incr Delay (d2), s/veh	0.5	2.9	2.9	2.3	1.2	1.3	0.4	0.8	4.5	2.5	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	7.4	7.6	7.6	9.0	8.8	1.4	4.7	8.5	2.0	7.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	31.2	31.3	19.9	22.2	22.3	21.4	25.7	32.0	36.6	26.5	24.3
LnGrp LOS	C	C	C	B	C	C	C	C	C	D	C	C
Approach Vol, veh/h		566			1074			514			508	
Approach Delay, s/veh		30.1			21.4			28.6			28.3	
Approach LOS		C			C			C			C	

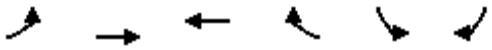
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	22.9	21.0	20.4	9.6	23.9	10.0	31.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	41.0	41.0	29.0	15.0	41.0	9.0	61.0
Max Q Clear Time (g_c+I1), s	4.6	14.9	13.9	11.8	4.0	11.3	4.9	16.0
Green Ext Time (p_c), s	0.2	2.0	1.1	2.6	0.1	1.9	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	100.0	100.0	100.0	50.0
Total Split (%)	66.7%	66.7%	66.7%	33.3%
Maximum Green (s)	95.5	95.5	95.5	45.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	30.6	30.6	30.6	13.7
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	21.0	21.0	21.0	9.2
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	15.5	15.5	15.5	7.1
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	12.2	12.2	12.2	5.6
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	9.1	9.1	9.1	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 34.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 53.3
70th %ile Actuated Cycle: 39.2
50th %ile Actuated Cycle: 31.6
30th %ile Actuated Cycle: 26.8
10th %ile Actuated Cycle: 23.6



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	224	432	476	35	35	240
Future Volume (veh/h)	224	432	476	35	35	240
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	1811	1767	1841	1796	1767
Adj Flow Rate, veh/h	233	450	496	36	36	250
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	9	4	7	9
Cap, veh/h	544	1718	1585	115	49	340
Arrive On Green	0.50	0.50	0.50	0.50	0.25	0.25
Sat Flow, veh/h	851	3532	3262	230	194	1345
Grp Volume(v), veh/h	233	450	262	270	287	0
Grp Sat Flow(s),veh/h/ln	851	1721	1678	1725	1544	0
Q Serve(g_s), s	8.1	2.7	3.4	3.4	6.2	0.0
Cycle Q Clear(g_c), s	11.5	2.7	3.4	3.4	6.2	0.0
Prop In Lane	1.00			0.13	0.13	0.87
Lane Grp Cap(c), veh/h	544	1718	838	861	391	0
V/C Ratio(X)	0.43	0.26	0.31	0.31	0.73	0.00
Avail Cap(c_a), veh/h	2357	9047	4412	4536	1935	0
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	0.00
Uniform Delay (d), s/veh	8.8	5.2	5.4	5.4	12.5	0.0
Incr Delay (d2), s/veh	0.5	0.1	0.2	0.2	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.6	0.8	0.8	3.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.3	5.3	5.6	5.6	15.1	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		683	532		287	
Approach Delay, s/veh		6.7	5.6		15.1	
Approach LOS		A	A		B	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	22.6	13.7	22.6
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	95.5	45.5	95.5
Max Q Clear Time (g_c+I1), s	13.5	8.2	5.4
Green Ext Time (p_c), s	4.6	1.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

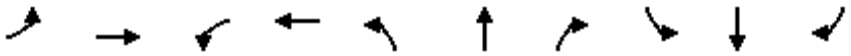
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	632	718	12	22	45
Future Vol, veh/h	51	632	718	12	22	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	250	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	658	748	13	23	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	761	0	-	0	1183	374
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	847	-	-	-	182	623
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	847	-	-	-	171	623
Mov Cap-2 Maneuver	-	-	-	-	295	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	620	-

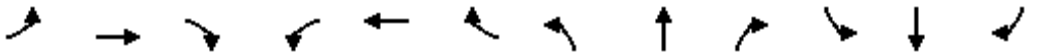
Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	456
HCM Lane V/C Ratio	0.063	-	-	-	0.153
HCM Control Delay (s)	9.5	-	-	-	14.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8			4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	18.0	48.0	35.0	65.0	12.0	46.0	46.0	21.0	55.0	55.0
Total Split (%)	12.0%	32.0%	23.3%	43.3%	8.0%	30.7%	30.7%	14.0%	36.7%	36.7%
Maximum Green (s)	12.0	42.0	29.0	59.0	6.0	40.0	40.0	15.0	49.0	49.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0	0		0	0
90th %ile Green (s)	12.0	42.0	29.0	59.0	6.0	40.0	40.0	15.0	49.0	49.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max	Max	Max	Hold	Hold
70th %ile Green (s)	12.0	37.5	23.9	49.4	6.0	37.6	37.6	15.0	46.6	46.6
70th %ile Term Code	Max	Gap	Gap	Hold	Max	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	12.0	31.9	19.0	38.9	6.0	31.3	31.3	15.0	40.3	40.3
50th %ile Term Code	Max	Gap	Gap	Hold	Max	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	10.4	26.2	15.6	31.4	6.0	25.0	25.0	12.6	31.6	31.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Max	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	8.1	20.1	11.6	23.6	6.0	17.6	17.6	9.8	21.4	21.4
10th %ile Term Code	Gap	Gap	Gap	Hold	Max	Gap	Gap	Gap	Hold	Hold

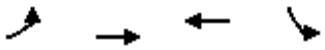
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 119.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 138
50th %ile Actuated Cycle: 121.2
30th %ile Actuated Cycle: 103.4
10th %ile Actuated Cycle: 83.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	611	58	274	454	167	103	346	317	236	326	119
Future Volume (veh/h)	140	611	58	274	454	167	103	346	317	236	326	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	149	650	62	291	483	178	110	368	337	251	347	127
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	2	2
Cap, veh/h	338	826	79	380	799	292	305	479	406	331	544	461
Arrive On Green	0.08	0.25	0.25	0.14	0.31	0.31	0.06	0.26	0.26	0.10	0.29	0.29
Sat Flow, veh/h	1781	3279	312	1781	2547	933	1781	1870	1585	3401	1870	1585
Grp Volume(v), veh/h	149	352	360	291	336	325	110	368	337	251	347	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1781	1777	1703	1781	1870	1585	1700	1870	1585
Q Serve(g_s), s	5.8	17.6	17.7	10.9	15.3	15.4	4.3	17.4	19.2	6.9	15.4	5.9
Cycle Q Clear(g_c), s	5.8	17.6	17.7	10.9	15.3	15.4	4.3	17.4	19.2	6.9	15.4	5.9
Prop In Lane	1.00		0.17	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	448	457	380	557	534	305	479	406	331	544	461
V/C Ratio(X)	0.44	0.79	0.79	0.77	0.60	0.61	0.36	0.77	0.83	0.76	0.64	0.28
Avail Cap(c_a), veh/h	417	783	799	666	1099	1053	307	785	665	535	961	814
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	23.7	33.3	33.3	22.5	27.7	27.8	24.5	32.9	33.5	42.0	29.4	26.1
Incr Delay (d2), s/veh	0.9	3.1	3.1	3.3	1.1	1.1	0.7	2.6	4.7	3.6	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	12.3	12.5	8.2	10.6	10.3	3.3	12.6	12.2	5.4	11.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	36.4	36.3	25.8	28.8	28.9	25.2	35.5	38.2	45.5	30.7	26.4
LnGrp LOS	C	D	D	C	C	C	C	D	D	D	C	C
Approach Vol, veh/h		861			952			815			725	
Approach Delay, s/veh		34.3			27.9			35.2			35.1	
Approach LOS		C			C			D			D	

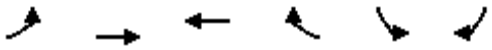
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	30.0	11.9	33.7	13.8	35.9	15.3	30.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.0	42.0	6.0	49.0	12.0	59.0	15.0	40.0
Max Q Clear Time (g_c+I1), s	12.9	19.7	6.3	17.4	7.8	17.4	8.9	21.2
Green Ext Time (p_c), s	0.8	4.4	0.0	2.6	0.1	4.5	0.4	3.2

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	44.0
Total Split (%)	70.7%	70.7%	70.7%	29.3%
Maximum Green (s)	101.5	101.5	101.5	39.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	28.5	28.5	28.5	11.8
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	20.3	20.3	20.3	9.0
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	15.8	15.8	15.8	7.6
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	13.1	13.1	13.1	6.5
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	9.6	9.6	9.6	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 34.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 49.3
70th %ile Actuated Cycle: 38.3
50th %ile Actuated Cycle: 32.4
30th %ile Actuated Cycle: 28.6
10th %ile Actuated Cycle: 24.1



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	681	548	58	43	121
Future Volume (veh/h)	175	681	548	58	43	121
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	186	724	583	62	46	129
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	571	1937	1766	187	76	213
Arrive On Green	0.54	0.54	0.54	0.54	0.18	0.18
Sat Flow, veh/h	785	3647	3335	344	427	1197
Grp Volume(v), veh/h	186	724	319	326	176	0
Grp Sat Flow(s),veh/h/ln	785	1777	1777	1808	1634	0
Q Serve(g_s), s	5.6	3.8	3.2	3.2	3.2	0.0
Cycle Q Clear(g_c), s	8.8	3.8	3.2	3.2	3.2	0.0
Prop In Lane	1.00			0.19	0.26	0.73
Lane Grp Cap(c), veh/h	571	1937	968	985	291	0
V/C Ratio(X)	0.33	0.37	0.33	0.33	0.61	0.00
Avail Cap(c_a), veh/h	2598	11110	5555	5654	1987	0
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	0.00
Uniform Delay (d), s/veh	6.6	4.2	4.1	4.1	12.3	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.2	0.2	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.3	0.3	0.3	1.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.9	4.3	4.3	4.3	14.3	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		910	645		176	
Approach Delay, s/veh		4.9	4.3		14.3	
Approach LOS		A	A		B	

Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			22.2		10.3	22.2
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			101.5		39.5	101.5
Max Q Clear Time (g_c+I1), s			10.8		5.2	5.2
Green Ext Time (p_c), s			6.9		0.6	3.8

Intersection Summary		
HCM 6th Ctrl Delay	5.6	
HCM 6th LOS	A	

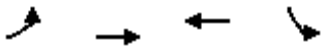
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	800	621	52	56	69
Future Vol, veh/h	89	800	621	52	56	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	250	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	851	661	55	60	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	716	0	-	0	1277	331
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	616	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	880	-	-	-	158	665
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	880	-	-	-	141	665
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	501	-

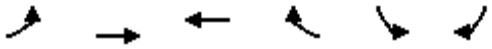
Approach	EB	WB	SB
HCM Control Delay, s	1	0	18.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	880	-	-	-	405
HCM Lane V/C Ratio	0.108	-	-	-	0.328
HCM Control Delay (s)	9.6	-	-	-	18.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.4



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	44.0
Total Split (%)	70.7%	70.7%	70.7%	29.3%
Maximum Green (s)	101.5	101.5	101.5	39.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	34.5	34.5	34.5	14.9
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	23.0	23.0	23.0	10.0
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	16.7	16.7	16.7	7.6
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	12.9	12.9	12.9	5.9
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	9.3	9.3	9.3	5.5
10th %ile Term Code	Gap	Gap	Hold	Gap

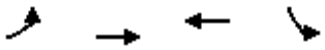
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 37.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 58.4
70th %ile Actuated Cycle: 42
50th %ile Actuated Cycle: 33.3
30th %ile Actuated Cycle: 27.8
10th %ile Actuated Cycle: 23.8



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	237	424	463	35	35	280
Future Volume (veh/h)	237	424	463	35	35	280
Number	7	4	8	18	1	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	1792	1733	1900	1745	1900
Adj Flow Rate, veh/h	247	442	482	36	36	292
Adj No. of Lanes	1	2	2	0	0	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	10	5	8	9
Cap, veh/h	525	1698	1549	115	46	373
Arrive On Green	0.50	0.50	0.50	0.50	0.28	0.28
Sat Flow, veh/h	855	3495	3193	231	164	1333
Grp Volume(v), veh/h	247	442	255	263	329	0
Grp Sat Flow(s),veh/h/ln	855	1703	1646	1692	1501	0
Q Serve(g_s), s	9.8	3.0	3.7	3.7	8.2	0.0
Cycle Q Clear(g_c), s	13.5	3.0	3.7	3.7	8.2	0.0
Prop In Lane	1.00			0.14	0.11	0.89
Lane Grp Cap(c), veh/h	525	1698	821	843	420	0
V/C Ratio(X)	0.47	0.26	0.31	0.31	0.78	0.00
Avail Cap(c_a), veh/h	2238	8525	4120	4235	1463	0
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	0.00
Uniform Delay (d), s/veh	10.1	5.9	6.0	6.0	13.5	0.0
Incr Delay (d2), s/veh	0.7	0.1	0.2	0.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.2	2.6	3.0	3.1	6.8	0.0
LnGrp Delay(d),s/veh	10.7	5.9	6.2	6.2	16.7	0.0
LnGrp LOS	B	A	A	A	B	
Approach Vol, veh/h		689	518		329	
Approach Delay, s/veh		7.7	6.2		16.7	
Approach LOS		A	A		B	

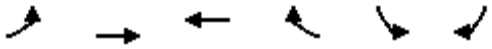
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.7		15.8		24.7
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				101.5		39.5		101.5
Max Q Clear Time (g_c+I1), s				15.5		10.2		5.7
Green Ext Time (p_c), s				4.7		1.1		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	109.0	109.0	109.0	41.0
Total Split (%)	72.7%	72.7%	72.7%	27.3%
Maximum Green (s)	104.5	104.5	104.5	36.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	41.0	41.0	41.0	14.8
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	27.1	27.1	27.1	10.5
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	21.4	21.4	21.4	8.6
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	16.2	16.2	16.2	7.1
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	11.0	11.0	11.0	5.7
10th %ile Term Code	Gap	Gap	Hold	Gap

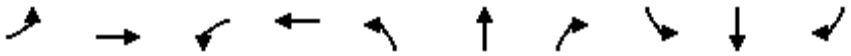
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 41.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 64.8
70th %ile Actuated Cycle: 46.6
50th %ile Actuated Cycle: 39
30th %ile Actuated Cycle: 32.3
10th %ile Actuated Cycle: 25.7



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	229	671	539	64	45	150
Future Volume (veh/h)	229	671	539	64	45	150
Number	7	4	8	18	1	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	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	244	714	573	68	48	160
Adj No. of Lanes	1	2	2	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	566	2033	1832	217	71	236
Arrive On Green	0.57	0.57	0.57	0.57	0.19	0.19
Sat Flow, veh/h	785	3632	3281	377	373	1244
Grp Volume(v), veh/h	244	714	317	324	209	0
Grp Sat Flow(s),veh/h/ln	785	1770	1770	1796	1625	0
Q Serve(g_s), s	8.9	4.1	3.5	3.6	4.6	0.0
Cycle Q Clear(g_c), s	12.5	4.1	3.5	3.6	4.6	0.0
Prop In Lane	1.00			0.21	0.23	0.77
Lane Grp Cap(c), veh/h	566	2033	1017	1032	308	0
V/C Ratio(X)	0.43	0.35	0.31	0.31	0.68	0.00
Avail Cap(c_a), veh/h	2268	9703	4851	4924	1556	0
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	0.00
Uniform Delay (d), s/veh	7.4	4.3	4.2	4.2	14.4	0.0
Incr Delay (d2), s/veh	0.5	0.1	0.2	0.2	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	3.6	3.1	3.2	4.1	0.0
LnGrp Delay(d),s/veh	8.0	4.4	4.4	4.4	17.0	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		958	641		209	
Approach Delay, s/veh		5.3	4.4		17.0	
Approach LOS		A	A		B	

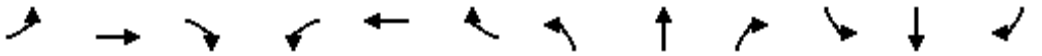
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				26.4		11.7		26.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				104.5		36.5		104.5
Max Q Clear Time (g_c+I1), s				14.5		6.6		5.6
Green Ext Time (p_c), s				7.4		0.7		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	21.0	43.0	43.0	21.0	24.0	24.0
Total Split (s)	16.0	32.0	48.0	64.0	21.0	49.0	49.0	21.0	49.0	49.0
Total Split (%)	10.7%	21.3%	32.0%	42.7%	14.0%	32.7%	32.7%	14.0%	32.7%	32.7%
Maximum Green (s)	10.0	26.0	42.0	58.0	15.0	43.0	43.0	15.0	43.0	43.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0	0		0	0
90th %ile Green (s)	10.0	26.0	42.0	58.0	12.3	40.7	40.7	14.6	43.0	43.0
90th %ile Term Code	Max	Max	Max	Hold	Gap	Hold	Hold	Gap	Max	Max
70th %ile Green (s)	10.0	26.0	35.8	51.8	10.3	33.7	33.7	12.1	35.5	35.5
70th %ile Term Code	Max	Max	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	9.5	22.8	27.9	41.2	8.8	27.4	27.4	10.4	29.0	29.0
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	8.2	18.6	20.9	31.3	7.4	21.0	21.0	8.8	22.4	22.4
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	0.0	13.4	13.4	32.8	0.0	10.6	10.6	7.0	23.6	23.6
10th %ile Term Code	Skip	Gap	Gap	Hold	Skip	Gap	Gap	Gap	Hold	Hold

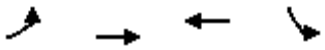
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 110.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 147.3
70th %ile Actuated Cycle: 131.6
50th %ile Actuated Cycle: 112.5
30th %ile Actuated Cycle: 93.3
10th %ile Actuated Cycle: 68.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	433	49	371	546	196	58	198	282	135	337	167
Future Volume (veh/h)	87	433	49	371	546	196	58	198	282	135	337	167
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	1663	1841	1856	1693	1781	1767	1752	1767	1811	1856	1796	1826
Adj Flow Rate, veh/h	91	451	51	386	569	204	60	206	294	141	351	174
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	16	4	3	14	8	9	10	9	6	3	7	5
Cap, veh/h	277	599	67	484	843	302	223	412	358	223	454	391
Arrive On Green	0.06	0.19	0.19	0.22	0.35	0.35	0.05	0.23	0.23	0.07	0.25	0.25
Sat Flow, veh/h	1584	3169	357	1612	2443	874	1668	1767	1535	3428	1796	1547
Grp Volume(v), veh/h	91	248	254	386	394	379	60	206	294	141	351	174
Grp Sat Flow(s),veh/h/ln	1584	1749	1777	1612	1692	1624	1668	1767	1535	1714	1796	1547
Q Serve(g_s), s	3.7	10.9	11.0	14.6	16.2	16.3	2.2	8.3	14.8	3.3	14.8	7.7
Cycle Q Clear(g_c), s	3.7	10.9	11.0	14.6	16.2	16.3	2.2	8.3	14.8	3.3	14.8	7.7
Prop In Lane	1.00		0.20	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	330	336	484	584	561	223	412	358	223	454	391
V/C Ratio(X)	0.33	0.75	0.76	0.80	0.67	0.68	0.27	0.50	0.82	0.63	0.77	0.44
Avail Cap(c_a), veh/h	373	558	567	962	1204	1155	454	932	810	631	947	816
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	24.4	31.2	31.3	18.9	22.8	22.8	23.1	27.1	29.6	37.2	28.3	25.6
Incr Delay (d2), s/veh	0.7	3.4	3.5	3.1	1.4	1.4	0.6	0.9	4.7	2.9	2.8	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(95%),veh/ln	2.5	8.3	8.5	9.1	10.3	10.0	1.5	6.2	9.5	2.6	10.5	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	34.7	34.8	22.0	24.1	24.2	23.8	28.1	34.3	40.1	31.1	26.4
LnGrp LOS	C	C	C	C	C	C	C	C	C	D	C	C
Approach Vol, veh/h		593			1159			560			666	
Approach Delay, s/veh		33.2			23.5			30.9			31.8	
Approach LOS		C			C			C			C	

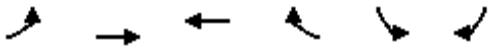
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	25.0	23.8	21.4	9.7	26.6	11.1	34.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	43.0	42.0	26.0	15.0	43.0	10.0	58.0
Max Q Clear Time (g_c+I1), s	5.3	16.8	16.6	13.0	4.2	16.8	5.7	18.3
Green Ext Time (p_c), s	0.3	2.2	1.2	2.4	0.1	2.7	0.1	5.6

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	94.0	94.0	94.0	56.0
Total Split (%)	62.7%	62.7%	62.7%	37.3%
Maximum Green (s)	89.5	89.5	89.5	51.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	50.7	50.7	50.7	27.7
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	32.2	32.2	32.2	17.6
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	23.3	23.3	23.3	13.0
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	17.5	17.5	17.5	9.8
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	11.0	11.0	11.0	6.7
10th %ile Term Code	Gap	Gap	Hold	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 50.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87.4
70th %ile Actuated Cycle: 58.8
50th %ile Actuated Cycle: 45.3
30th %ile Actuated Cycle: 36.3
10th %ile Actuated Cycle: 26.7



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	249	451	482	41	54	315
Future Volume (veh/h)	249	451	482	41	54	315
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	1811	1767	1841	1796	1767
Adj Flow Rate, veh/h	259	470	502	43	56	328
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	6	9	4	7	9
Cap, veh/h	499	1742	1584	135	68	399
Arrive On Green	0.51	0.51	0.51	0.51	0.30	0.30
Sat Flow, veh/h	841	3532	3218	267	225	1319
Grp Volume(v), veh/h	259	470	269	276	385	0
Grp Sat Flow(s),veh/h/ln	841	1721	1678	1719	1548	0
Q Serve(g_s), s	12.3	3.7	4.4	4.5	10.9	0.0
Cycle Q Clear(g_c), s	16.8	3.7	4.4	4.5	10.9	0.0
Prop In Lane	1.00			0.16	0.15	0.85
Lane Grp Cap(c), veh/h	499	1742	850	870	469	0
V/C Ratio(X)	0.52	0.27	0.32	0.32	0.82	0.00
Avail Cap(c_a), veh/h	1670	6533	3186	3263	1691	0
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	0.00
Uniform Delay (d), s/veh	11.8	6.7	6.8	6.8	15.3	0.0
Incr Delay (d2), s/veh	0.8	0.1	0.2	0.2	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	1.3	1.6	1.7	6.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.6	6.7	7.1	7.1	18.9	0.0
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h		729	545		385	
Approach Delay, s/veh		8.8	7.1		18.9	
Approach LOS		A	A		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		28.4		18.8	28.4
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		89.5		51.5	89.5
Max Q Clear Time (g_c+I1), s		18.8		12.9	6.5
Green Ext Time (p_c), s		5.1		1.4	3.1

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

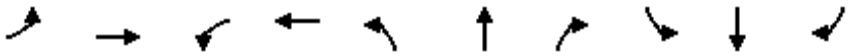
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	676	800	12	22	45
Future Vol, veh/h	51	676	800	12	22	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	250	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	704	833	13	23	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	846	0	-	0	1291	417
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	787	-	-	-	155	585
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	145	585
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	604	-

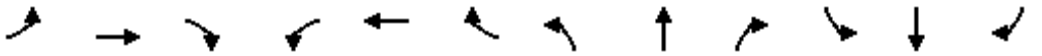
Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	787	-	-	-	420
HCM Lane V/C Ratio	0.068	-	-	-	0.166
HCM Control Delay (s)	9.9	-	-	-	15.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6	3	8		7	4	
Permitted Phases	2		6		8		8			4
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	45.0	33.0	54.0	12.0	51.0	51.0	21.0	60.0	60.0
Total Split (%)	16.0%	30.0%	22.0%	36.0%	8.0%	34.0%	34.0%	14.0%	40.0%	40.0%
Maximum Green (s)	18.0	39.0	27.0	48.0	6.0	45.0	45.0	15.0	54.0	54.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0		7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0		0	0		0	0
90th %ile Green (s)	18.0	39.0	27.0	48.0	6.0	45.0	45.0	15.0	54.0	54.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Max	Max	Max	Hold	Hold
70th %ile Green (s)	16.9	39.0	27.0	49.1	6.0	45.0	45.0	15.0	54.0	54.0
70th %ile Term Code	Gap	Max	Max	Hold	Max	Max	Max	Max	Hold	Hold
50th %ile Green (s)	14.9	38.7	27.0	50.8	6.0	45.0	45.0	15.0	54.0	54.0
50th %ile Term Code	Gap	Gap	Max	Hold	Max	Max	Max	Max	Hold	Hold
30th %ile Green (s)	12.8	32.0	21.9	41.1	6.0	37.9	37.9	14.6	46.5	46.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Max	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	9.8	24.1	15.2	29.5	6.0	27.1	27.1	11.1	32.2	32.2
10th %ile Term Code	Gap	Gap	Gap	Hold	Max	Gap	Gap	Gap	Hold	Hold

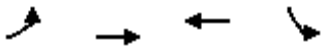
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 136.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 150
70th %ile Actuated Cycle: 150
50th %ile Actuated Cycle: 149.7
30th %ile Actuated Cycle: 130.4
10th %ile Actuated Cycle: 101.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	652	58	298	478	188	103	450	358	248	387	143
Future Volume (veh/h)	180	652	58	298	478	188	103	450	358	248	387	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	191	694	62	317	509	200	110	479	381	264	412	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	2	2
Cap, veh/h	328	829	74	365	756	296	284	550	466	328	633	537
Arrive On Green	0.10	0.25	0.25	0.15	0.30	0.30	0.05	0.29	0.29	0.10	0.34	0.34
Sat Flow, veh/h	1781	3300	295	1781	2496	976	1781	1870	1585	3401	1870	1585
Grp Volume(v), veh/h	191	373	383	317	362	347	110	479	381	264	412	152
Grp Sat Flow(s),veh/h/ln	1781	1777	1817	1781	1777	1695	1781	1870	1585	1700	1870	1585
Q Serve(g_s), s	9.0	22.9	23.0	14.5	20.5	20.7	4.9	27.9	25.7	8.7	21.5	8.1
Cycle Q Clear(g_c), s	9.0	22.9	23.0	14.5	20.5	20.7	4.9	27.9	25.7	8.7	21.5	8.1
Prop In Lane	1.00		0.16	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	446	456	365	538	513	284	550	466	328	633	537
V/C Ratio(X)	0.58	0.84	0.84	0.87	0.67	0.68	0.39	0.87	0.82	0.80	0.65	0.28
Avail Cap(c_a), veh/h	433	602	616	517	741	707	284	732	620	444	878	744
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	28.6	40.8	40.8	27.5	35.1	35.2	27.5	38.5	37.7	50.9	32.3	27.8
Incr Delay (d2), s/veh	1.6	7.6	7.5	10.7	1.5	1.6	0.9	8.8	6.3	7.6	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	16.2	16.5	11.4	13.8	13.4	3.9	19.9	15.9	7.3	14.8	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	48.4	48.4	38.3	36.6	36.7	28.4	47.3	44.0	58.5	33.4	28.1
LnGrp LOS	C	D	D	D	D	D	C	D	D	E	C	C
Approach Vol, veh/h		947			1026			970			828	
Approach Delay, s/veh		44.7			37.1			43.9			40.4	
Approach LOS		D			D			D			D	

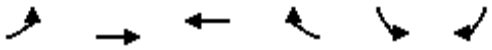
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	34.9	12.0	44.9	17.2	40.8	17.1	39.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	27.0	39.0	6.0	54.0	18.0	48.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	16.5	25.0	6.9	23.5	11.0	22.7	10.7	29.9
Green Ext Time (p_c), s	0.7	3.9	0.0	3.1	0.3	4.6	0.3	3.9

Intersection Summary	
HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D



Lane Group	EBL	EBT	WBT	SBL
Protected Phases		4	8	6
Permitted Phases	4			
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5
Total Split (s)	110.0	110.0	110.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	26.7%
Maximum Green (s)	105.5	105.5	105.5	35.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	58.5	58.5	58.5	20.2
90th %ile Term Code	Gap	Gap	Hold	Gap
70th %ile Green (s)	37.9	37.9	37.9	13.8
70th %ile Term Code	Gap	Gap	Hold	Gap
50th %ile Green (s)	28.0	28.0	28.0	10.7
50th %ile Term Code	Gap	Gap	Hold	Gap
30th %ile Green (s)	20.5	20.5	20.5	8.5
30th %ile Term Code	Gap	Gap	Hold	Gap
10th %ile Green (s)	13.3	13.3	13.3	6.5
10th %ile Term Code	Gap	Gap	Hold	Gap

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 52.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87.7
70th %ile Actuated Cycle: 60.7
50th %ile Actuated Cycle: 47.7
30th %ile Actuated Cycle: 38
10th %ile Actuated Cycle: 28.8



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	258	693	569	79	55	170
Future Volume (veh/h)	258	693	569	79	55	170
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	737	605	84	59	181
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	541	2140	1888	262	80	244
Arrive On Green	0.60	0.60	0.60	0.60	0.20	0.20
Sat Flow, veh/h	754	3647	3228	434	399	1224
Grp Volume(v), veh/h	274	737	342	347	241	0
Grp Sat Flow(s),veh/h/ln	754	1777	1777	1792	1630	0
Q Serve(g_s), s	12.8	4.7	4.3	4.3	6.3	0.0
Cycle Q Clear(g_c), s	17.1	4.7	4.3	4.3	6.3	0.0
Prop In Lane	1.00			0.24	0.24	0.75
Lane Grp Cap(c), veh/h	541	2140	1070	1079	325	0
V/C Ratio(X)	0.51	0.34	0.32	0.32	0.74	0.00
Avail Cap(c_a), veh/h	1837	8254	4127	4162	1274	0
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	0.00
Uniform Delay (d), s/veh	8.7	4.5	4.5	4.5	17.1	0.0
Incr Delay (d2), s/veh	0.7	0.1	0.2	0.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	1.1	1.0	1.0	4.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.4	4.6	4.6	4.6	20.4	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h		1011	689		241	
Approach Delay, s/veh		5.9	4.6		20.4	
Approach LOS		A	A		C	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	31.9	13.6	31.9
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	105.5	35.5	105.5
Max Q Clear Time (g_c+I1), s	19.1	8.3	6.3
Green Ext Time (p_c), s	8.2	0.8	4.1

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	895	691	52	56	69
Future Vol, veh/h	89	895	691	52	56	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	250	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	952	735	55	60	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	790	0	-	0	1401	368
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	666	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	826	-	-	-	131	629
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	116	629
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	826	-	-	-	371
HCM Lane V/C Ratio	0.115	-	-	-	0.358
HCM Control Delay (s)	9.9	-	-	-	20
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.6

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