



HARBINS 2 MIXED-USE DEVELOPMENT (DRI #3700)

DACULA, GWINNETT COUNTY, GEORGIA

Transportation Impact Analysis

SEPTEMBER 2022

Prepared For:

WWP Acquisition, LLC
1958 Monroe Drive NE
Atlanta, GA 30324

Prepared By:



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200 Cobb Parkway N
Building 400, Suite 413
Marietta, Georgia 30062

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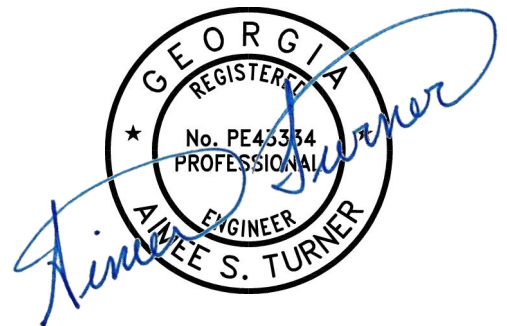
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10/05/2022

DATE

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EXECUTIVE SUMMARY

WWP Acquisition, LLC is in the rezoning and annexation process for 3 parcels totaling 53.96-acres on Harbins Road south of SR 316/University Parkway on the southwest corner of Harbins Road and W Drowning Creek Road in the City of Dacula, Georgia. The current zonings for the parcels are RA-200 and O&I. The rezoning request is to convert the parcels to Planned Mixed-Use District (PMUD). The project site has a future land use classification of Neighborhood Commercial and Suburban Density Residential per the City of Dacula's Future Land Use Map. The proposed mixed-use development will consist of residential townhomes and multifamily units, and 5 outparcels including a hotel, retail, restaurants, and a self-storage facility. The project will be constructed in one phase to be completed in 2026.

The Atlanta Regional Commission's (ARC) Unified Growth Policy Map (UGPM) identifies the area as "Developing Suburbs". Since the mixed-use project exceeds the 500,000 SF mixed-use threshold required to be designated as a Development of Regional Impact (DRI), the developer must follow a reviewing process outlined by the Georgia Regional Transportation Authority (GRTA). The ensuing transportation impact analysis report is presented as part of a DRI Review Package per GRTA's standards for review by all interested stakeholders to determine the regional impact of the development of Harbins 2 Mixed-Use Development (DRI #3700).

Following a Pre-Review and Methodology meeting, the transportation impact analysis was completed for the predetermined study network agreed upon by GRTA as detailed in GRTA's Letter of Understanding dated July 22, 2022. Traffic data was collected at the confirmed study intersections. The capacity analysis of the study network included the following traffic conditions:

- 2022 Existing
- 2026 No Build
- 2026 No Build with System Improvements
- 2026 Build with No Improvements
- 2026 Build with System Improvements

At the time of this study, estimated trips generated by the Summerwind subdivision currently under construction on Alcovy Road opposite Ewing Chapel Road and the Inland Pass Mixed-Use development (DRI #3207) on the eastside of W Drowning Creek Road at Harbins Road were included in the 2026 No Build traffic conditions.

SYSTEM IMPROVEMENTS

Based on the results of the 2026 No Build traffic operations analysis, the following are recommended as System Improvements within the study network, prior to the introduction of Harbins 2 new trips:

System Improvement Location	System Improvement Recommendation
Harbins Road at Alcovy Rd	Install traffic signal
Alcovy Rd at W Drowning Creek Road	Install roundabout

For the proposed traffic signal at Alcovy Road and Harbins Road, a traffic signal warrant did exceed volumes per FHWA MUTCD guidelines for the four hours of peak traffic data collected as part of this study; however, further evaluation may be needed beyond this study, including a 12-hour signal warrant analysis.

For the proposed roundabout at Alcovy Road and W Drowning Creek Road, the improvement would improve the delay during the morning peak hour significantly. Given that the LOS is only estimated as an issue during the morning peak hour, the installation of a roundabout may be cost prohibitive when completing a benefit-cost analysis. It is important to note that there are parcels along W Drowning Creek Road and Alcovy Road that may be developed or redeveloped in the future. With that in mind, it is recommended that a future traffic study be conducted at the intersection to determine if the delay and LOS during the morning peak hour exacerbates with the growth in the area to justify the installation of a roundabout.

With the proposed System Improvements, the traffic operations at the majority of the study intersections remain relatively the same as the 2026 No Build conditions, except for Harbins Road at SR 316/University Parkway Eastbound Ramps during the afternoon peak hour. Given that the delay increases at the eastbound ramps with the proposed signal at Alcovy Road and Harbins Road, it is recommended that signal coordination be updated at the SR 316/University ramps, Alcovy Road, and W Drowning Creek Road if and when the new signal is installed.

SITE MITIGATION IMPROVEMENTS

Based on the 2026 Build traffic operations, no additional Site Mitigations improvements are recommended in addition to the proposed System Improvements for the 2026 No Build conditions, with the exception of signal timing coordination along Harbins Road with the introduction of the new signal recommended as a system improvement. Delay for some side street approaches would be experienced; however, additional improvements beyond the current programmed transportation project yield minimal benefit-cost ratio give traffic volumes entering the intersections.

With the requested rezoning of the assembled parcels to Planned Mixed-Use District (PMUD) for the Harbins 2 Mixed-Use Development, the proposed site is compatible with the City of Dacula's Future Land Use Plan. The proposed retail and residential land uses offer amenities to both the onsite residents as well as those in the surrounding community.

INTRODUCTION

WWP Acquisition is in the rezoning (2022-CD-RZ-01) and annexation (2022-CD-AA-01) process for 3 parcels totaling 53.96-acres on Harbins Road south of W Drowning Creek Road in the City of Dacula, Gwinnett County, Georgia. Figure 1 shows the site location relative to the adjacent roadway network.

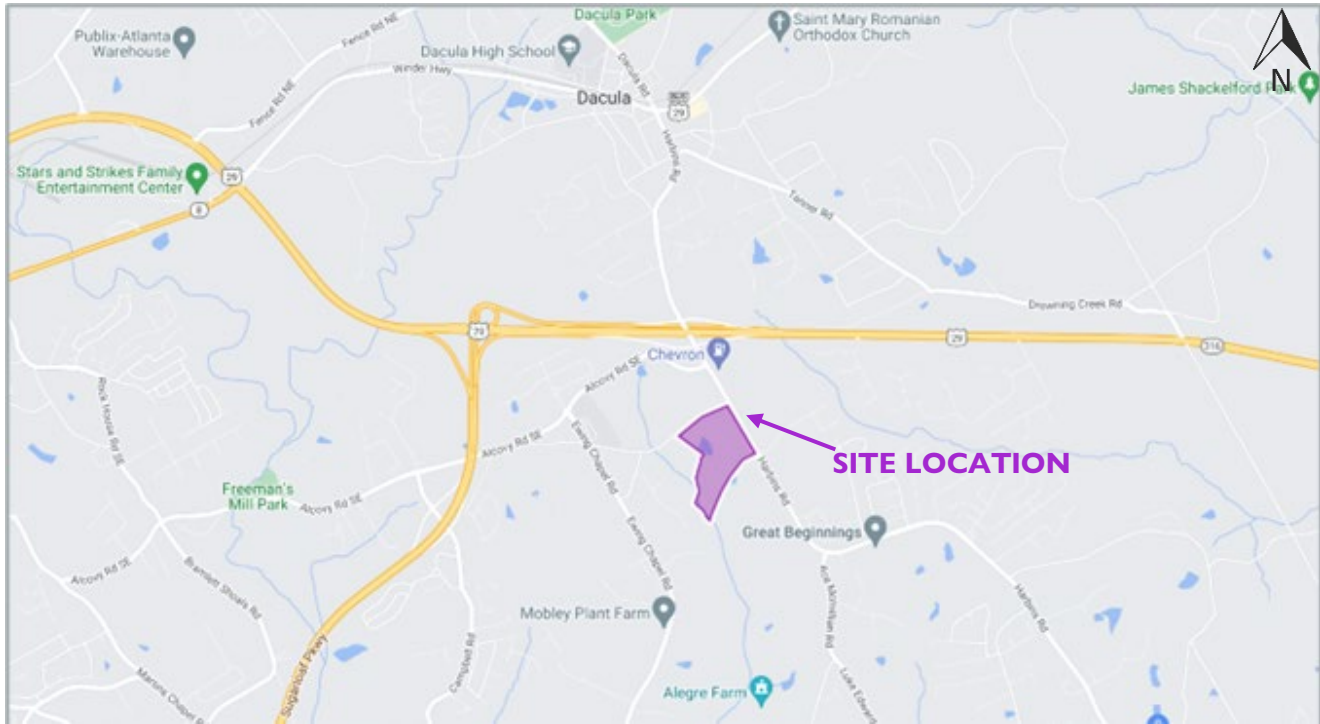


Figure 1: Site Location Relative to Adjacent Roadway Network

SITE PLAN

The proposed mixed-use development, to be known as Harbins 2, will consist of residential townhomes and multifamily units, and 5 outparcels including a hotel, retail, restaurants, and a self-storage facility. Included on the site are community green spaces and trails. The total provided open space is 17.85 acres. Table 1 shows the land uses and proposed size of each. The proposed conceptual site plan is shown in Figure 2 and included in Appendix A.

Table 1: Harbins 2 Proposed Land Uses

Land Use	Size
Townhomes	53 Units
Multi-Family Units	304 Units
Outparcel #1 – Restaurant	7,000 SF
Outparcel #2 – Retail	10,300 SF
Outparcel #3 – Hotel	110 Rooms
Outparcel #4 – Retail & Restaurant	15,000 SF
Outparcel #5 – Self-Storage Facility	105K SF



SITE ACCESS

For Harbins 2 site access, five access points are proposed. On W Drowning Creek Road, two full access driveways are shown: Driveway 2 being a main entrance into the mixed-use site with ingress right and left turn lanes into the site. Driveway 1 on W Drowning Creek Road provides access to the self-storage facility only. On Harbins Road, Driveway 3 is right-in only with a right-turn deceleration lane. Driveway 4 is proposed as a full access main entrance with ingress right and left turn lanes. Driveway 5, the southernmost driveway is shown as right-in/right-out.

As part of the Inland Pass mixed-use development (DRI #3207) currently under construction on the east side of Harbins Road, a traffic signal is being installed at W Drowning Creek Road and Harbins Road.

PEDESTRIAN CIRCULATION AND ACCESS

For pedestrian access, sidewalks are provided along the full extent of the site on Harbins Road and along W Drowning Creek Road just beyond Driveway 2, except approaching Driveway 1, which provides access to the storage facility. For internal circulation, each of the shown land uses has sidewalks around the buildings. It is intended to have crosswalks striped at intersections within the site where foot traffic is expected to provide an interconnected network for pedestrian circulation.

PARKING

All parking will be located on-site in proposed lots throughout the site. Refer to site plan included as Attachment A for a detailed visual of parking locations and configurations for the site.

PROJECT TIMELINE AND PHASING

The project is to be completed in one phase by 2026. Therefore, for the purposes of the traffic impact study, the analysis year will be 2026.

ZONING AND LAND USE

The current zoning for two of the parcels to be adjoined for this development is Single Family Residential (RA-200). These two parcels are within Gwinnet County and are to be annexed into the City of Dacula as part of this application process. The third parcel is currently zoned as Office Institutional (OI). Figure 3 shows the site's parcels current zoning per the City of Dacula's Zoning Map. The rezoning request is to convert the three parcels to Planned Mixed-Use District (PMUD). The project site has a future land use classification of Neighborhood Commercial per the City of Dacula's Future Land Use Map as shown in Figure 4.

The ARC's Unified Growth Policy Map (UGPM) identifies the area as a "Developing Suburbs" as shown in Figure 5. The DRI trigger for this development was the rezoning and annexation applications (2022-CD-RZ-01 & 2022-CD-AA-01) with the City of Dacula filed May 2022 for the site and subsequently the establishment that the proposed development will exceed the threshold for mixed-use of 500,000 SF for an ARC Developing Suburb.

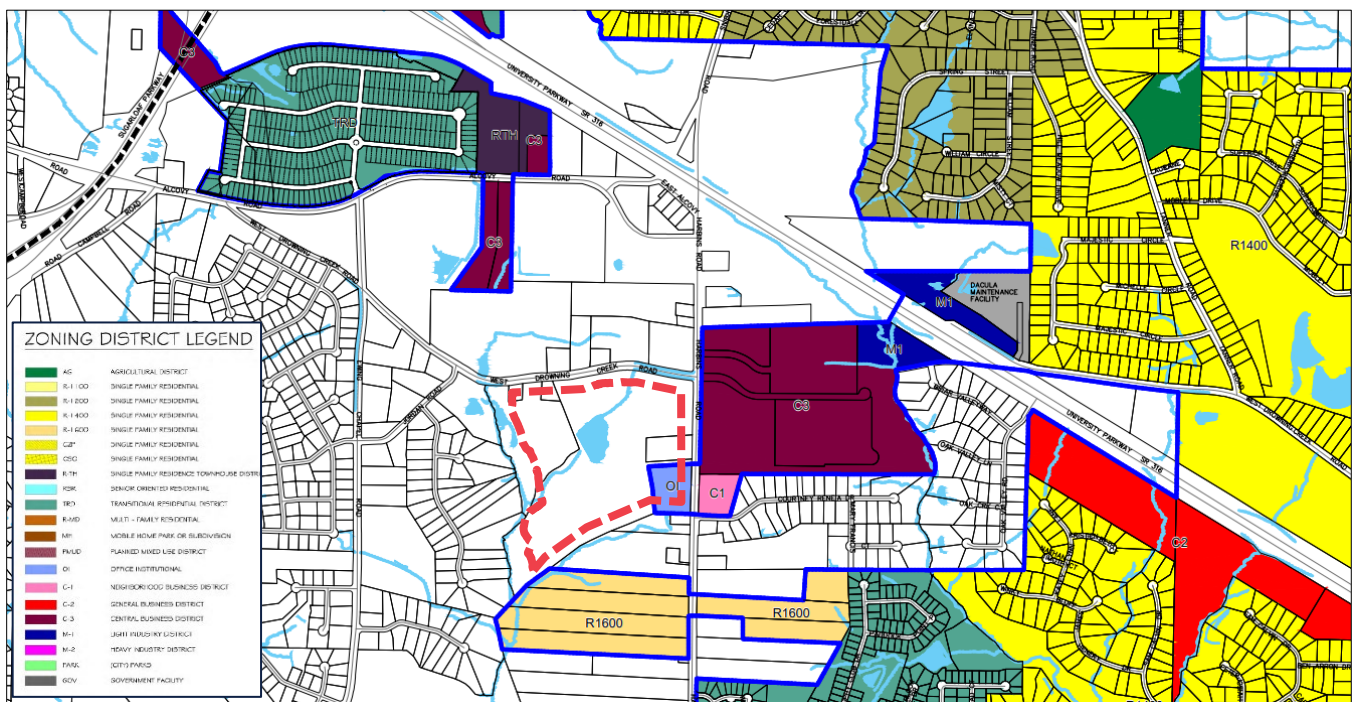


Figure 3: Site's Location per the City of Dacula's Zoning Map

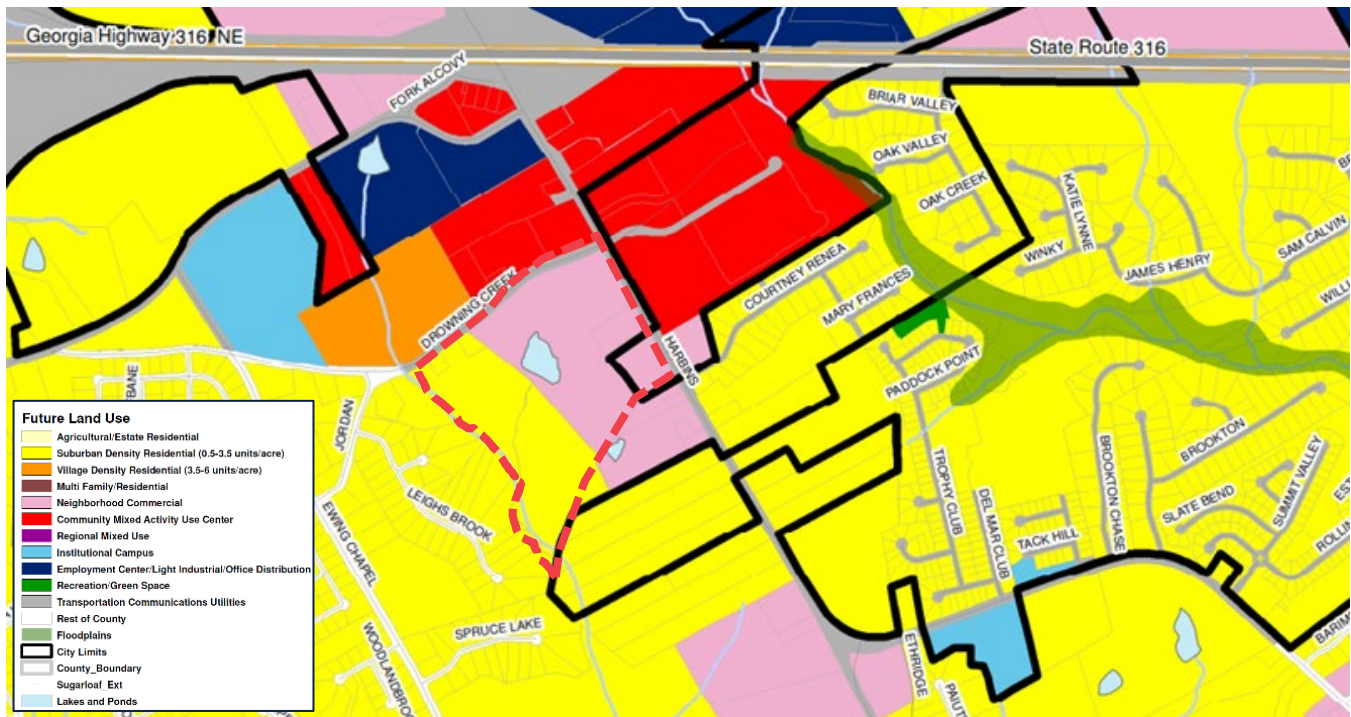


Figure 4: Site's Location per the City of Dacula's Future Land Use Map

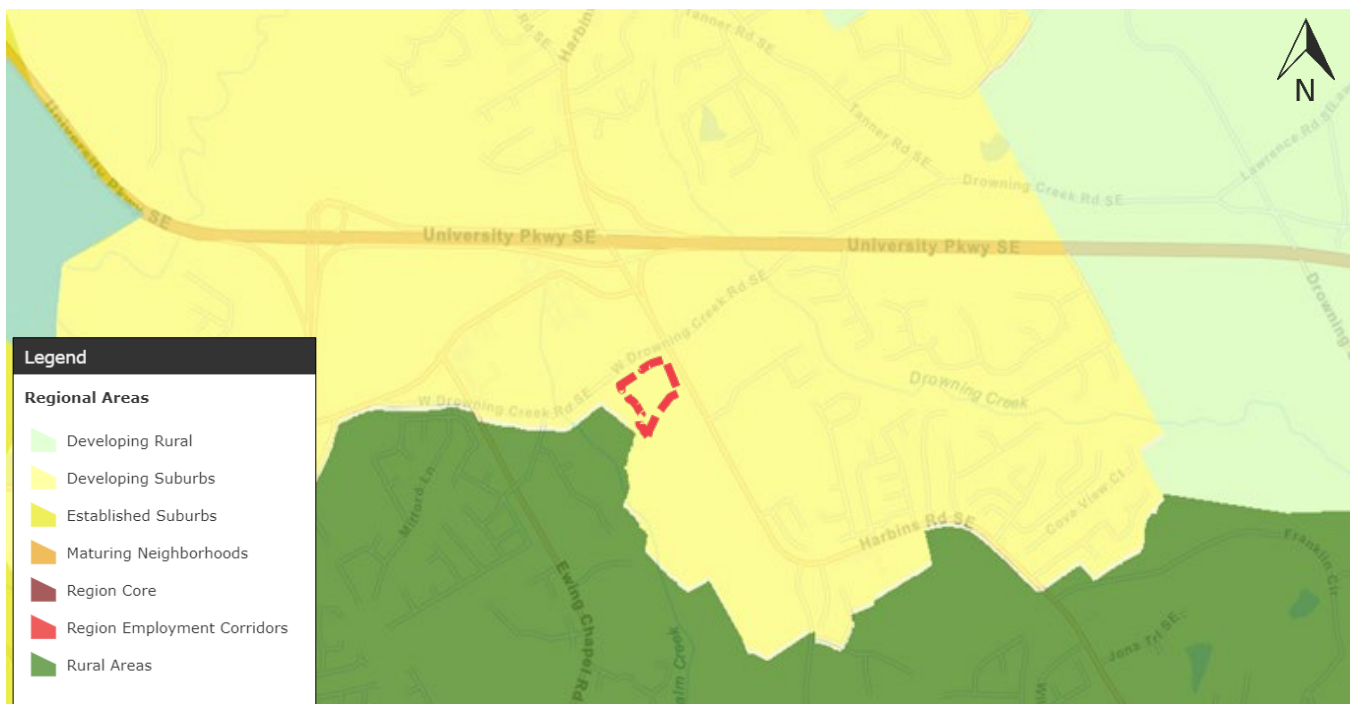


Figure 5: Site's Location per the ARC's Unified Policy Growth Map

TRIP GENERATION

The Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th edition, was used to quantify the new trips generated by the proposed development per Land Use Code (LUC). For the five outparcels, assumptions were made for the potential land uses in coordination with the developer. For developments with mixed uses such as "Harbins 2", ITE recognizes that due to different factors, actual total trips are less than the aggregate total of the individual land uses, which is detailed in the ITE Trip Generation Handbook, 3rd edition. Table 2 details the assumptions for the Harbins 2 Trip Generation.

Table 2: Trip Generation Assumptions

Reduction Type	Used?	Reduction Type	Used?	Reduction Type	Used?
Internal Capture	Yes	Pass-By Trips	Yes	Alternative Mode	No

Per GRTA guidelines for DRIs, the maximum reduction allowed for pass-by trips is 15% of the adjacent roadway's project traffic. Using the available traffic data for traffic on Harbins Road and W Drowning Creek Road, the calculated pass-by reduction does not exceed this maximum. Consequently, the full number of pass-by trips per the ITE Trip Generation factors were used.

The gross and net two-way daily plus peak weekday morning and weekday afternoon volumes are shown in Table 3 for the proposed development. Appendix C includes the detailed worksheets for the trip generation.

Table 3: Harbins 2 Mixed-Use Development Trip Generation Summary

Description	LUC	Quantity	Daily	AM Peak			PM Peak		
			Two-way	Enter	Exit	Total	Enter	Exit	Total
Outparcel #5 - Self-Storage Facility	151	105,000 SF	152	5	4	9	7	9	16
Parcel 6 - Townhomes	215	53 Units	353	7	15	22	16	12	28
Parcel 7 - Multifamily Homes	220	304 Units	2,024	28	89	117	95	56	151
Outparcel #3 - Hotel	310	110 Rooms	769	27	21	48	27	27	54
Outparcel #2 - Strip Retail Plaza (>40K)	822	10,300 SF	662	17	12	29	39	40	79
Outparcel #4(a) - Strip Retail Plaza (>40K)	822	10,000 SF	652	17	12	29	39	39	78
Outparcel #4(b) - High Turnover Sit Down Rest	932	5,000 SF	536	26	22	48	27	18	45
Outparcel #1 - High Turnover Sit Down Rest	932	7,000 SF	750	37	30	67	38	25	63
Gross Site Trips (without reductions)			5,898	164	205	369	288	226	514
<i>Internal Capture for Retail^{1 4}</i>			<i>-403</i>	<i>-5</i>	<i>-4</i>	<i>-9</i>	<i>-28</i>	<i>-44</i>	<i>-72</i>
<i>Internal Capture for Restaurant^{1 4}</i>			<i>-491</i>	<i>-18</i>	<i>-6</i>	<i>-24</i>	<i>-31</i>	<i>-29</i>	<i>-60</i>
<i>Internal Capture for Residential^{1 4}</i>			<i>-464</i>	<i>-3</i>	<i>-14</i>	<i>-17</i>	<i>-29</i>	<i>-19</i>	<i>-48</i>
<i>Internal Capture for Hotel^{1 4}</i>			<i>-132</i>	<i>-1</i>	<i>-3</i>	<i>-4</i>	<i>-9</i>	<i>-5</i>	<i>-14</i>
<i>Shopping Center Pass-by Trips - 0% AM; 34% PM²</i>			<i>-242</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-17</i>	<i>-12</i>	<i>-29</i>
<i>High Turnover Sit Down Rest Pass-by-Trips - 0% AM, 43% PM³</i>			<i>-253</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-15</i>	<i>-6</i>	<i>-21</i>
Total Trip Reductions			-1,985	-27	-27	-54	-129	-115	-244
Net External Site Trips (with reductions)			3,913	137	178	315	159	111	270

1) Daily Internal Capture rate is an average of AM & PM rates.

2) AM/PM Internal capture percentages and trips were calculated using NCHRP 684 Internal Trip Capture Estimation Tool.

3) For daily pass-by trips, 78% of Shopping Center Trips are made in PM.

4) For daily pass-by trips, 74% of High Turnover Sit-down Restaurant Trips are made in PM.

TRIP DISTRIBUTION

The distribution of Harbins 2 new trips was determined based on locations of major roadways and highways that will serve the development; anticipated travel patterns; and surrounding land uses. Figure 6 shows the area wide trip distribution for the proposed development. Given the mixed-use nature of the site, separate trip orientations were developed for commercial trips to/from the site versus trip patterns for the residential trips to/from the site.

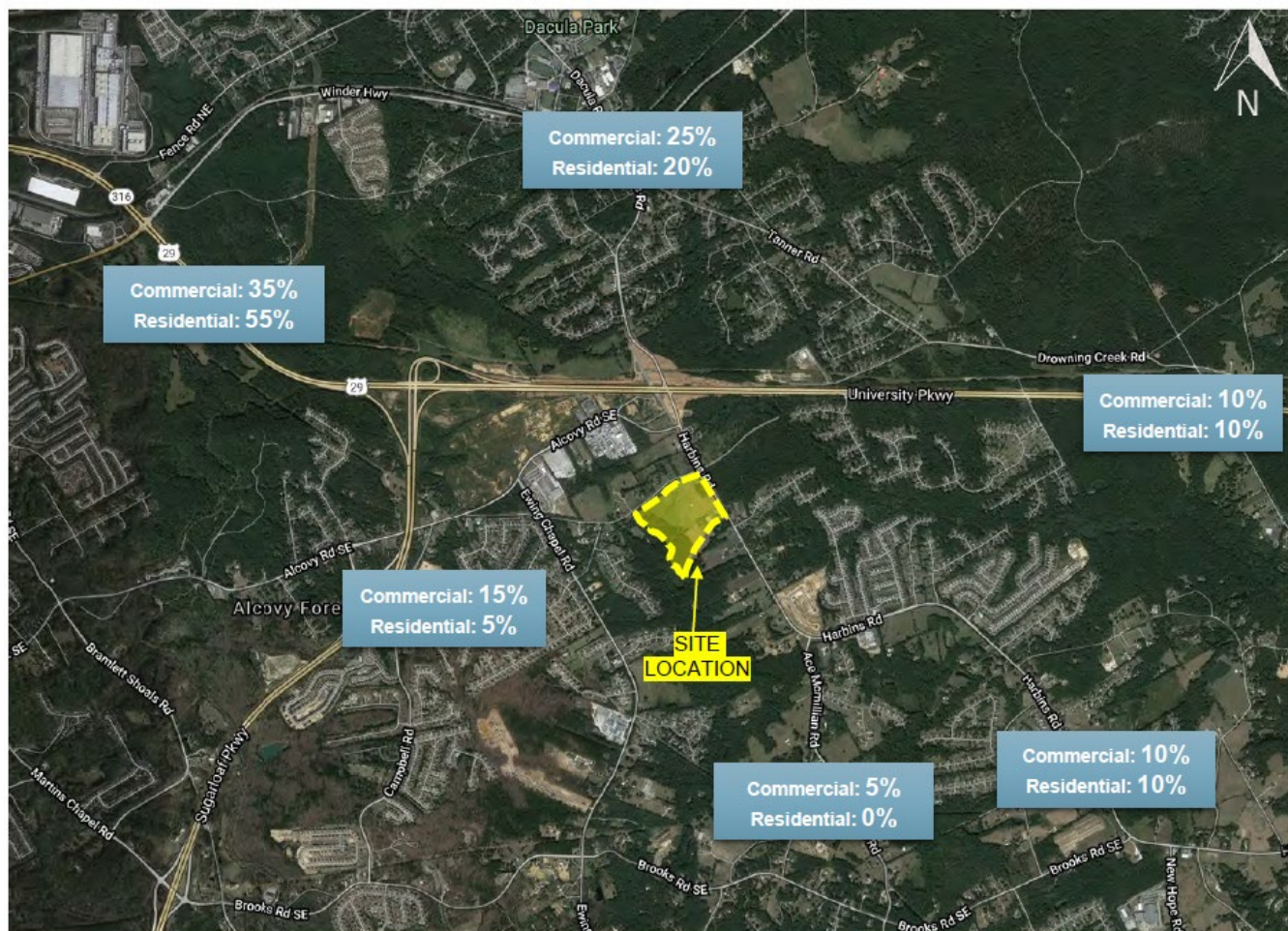


Figure 6: Area-wide Trip Distribution for Proposed Development

STUDY NETWORK

Based on the type of roadway and a LOS standard as designated in Table 5.4 of GRTA's DRI Review Package Technical Guidelines, the percent of service flow volume used by the project's traffic was calculated for each adjacent roadway using the preliminary trip distribution percentages in Figure 6. Every roadway segment starting from the site location that consumed more than 7% of the service volume was identified. The worksheet to determine thresholds are included in Attachment B. The signalized and major unsignalized intersections along those roadway segments were identified as study intersections in Figure 7. The proposed study intersections are shown in Table 4. Aerial photography of the study intersections is shown in Figure 8 through Figure 16.

Table 4: Proposed Study Intersections

Study Intersections	
1. W Drowning Creek Rd- Main Driveway at Harbins Road	6. US 29/SR 8/Winder Hwy at Harbins Road
2. Alcovy Rd at Harbins Road	7. W Drowning Creek Rd at Jordan Rd
3. SR 316/University Parkway at Harbins Road EB Ramp	8. W Drowning Creek Rd at Ewing Chapel Rd
4. SR 316/University Parkway at Harbins Road WB Ramp	9. W Drowning Creek Rd at Alcovy Rd
5. Tanner Road at Harbins Road	10 – 14. Site Driveways (5)

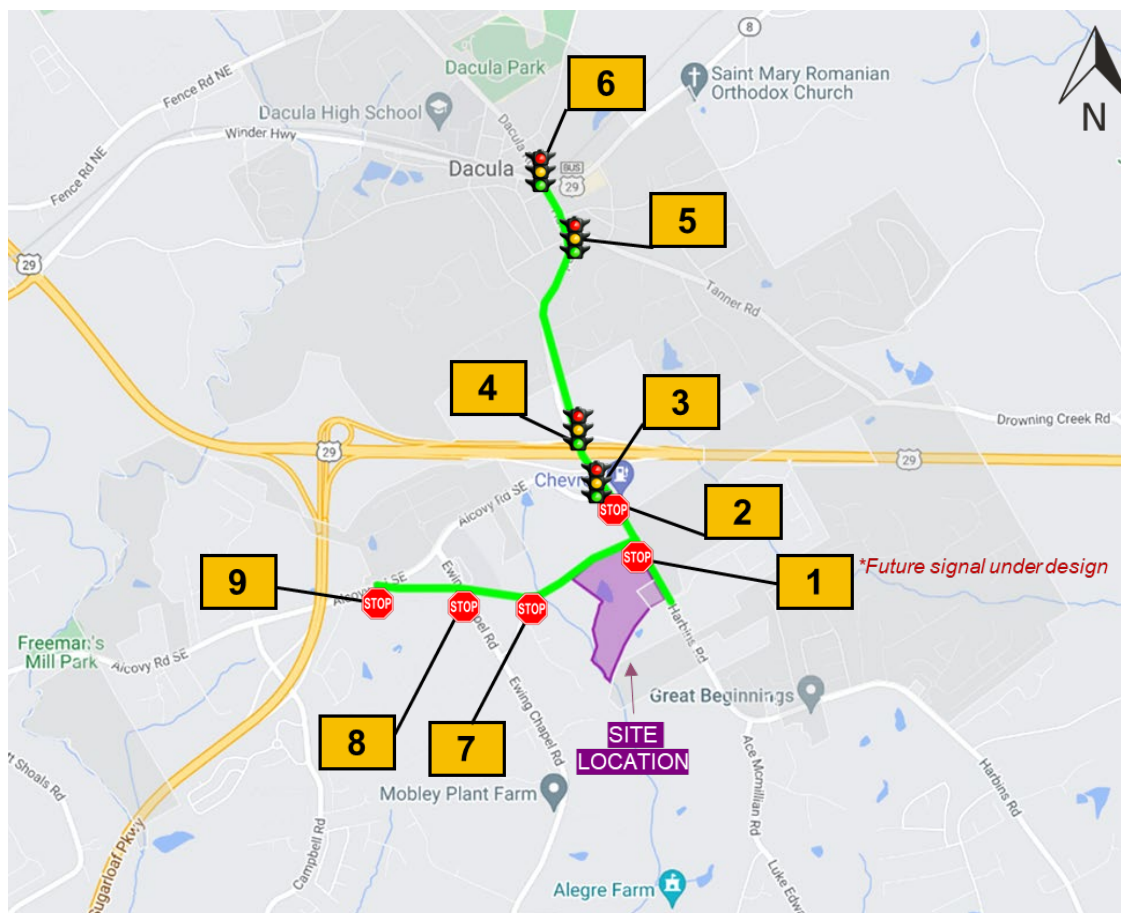


Figure 7: Study Intersections per GRTA's 7% Threshold

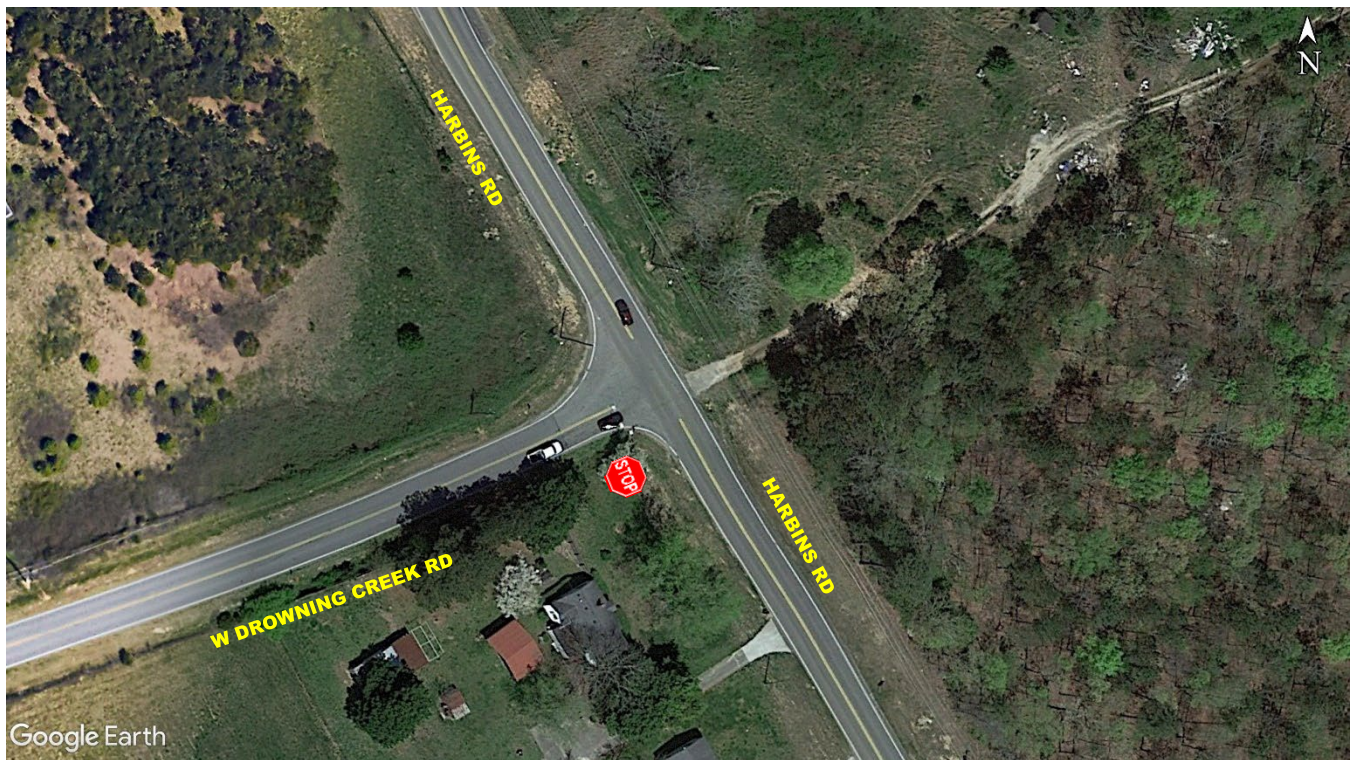


Figure 8: Intersection 1 – Harbins Road at W Drowning Creek Road



Figure 9: Intersection 2 – Harbins Road at Alcovy Road



Figure 10: Intersection 3 - Harbins Road at SR 316/University Parkway EB Ramp



Figure 11: Intersection 4 – Harbins Road at SR 316/University Parkway WB Ramp



Figure 12: Intersection 5 – Harbins Road at Tanner Road-Sanjo Street



Figure 13: Intersection 6 – Harbins Road-Dacula Road at US 29/SR 8/Winder Highway



Figure 14: Intersection 7 – W Drowning Creek Road at Jordan Road



Figure 15: Intersection 8 – W Drowning Creek Road at Ewing Chapel Road

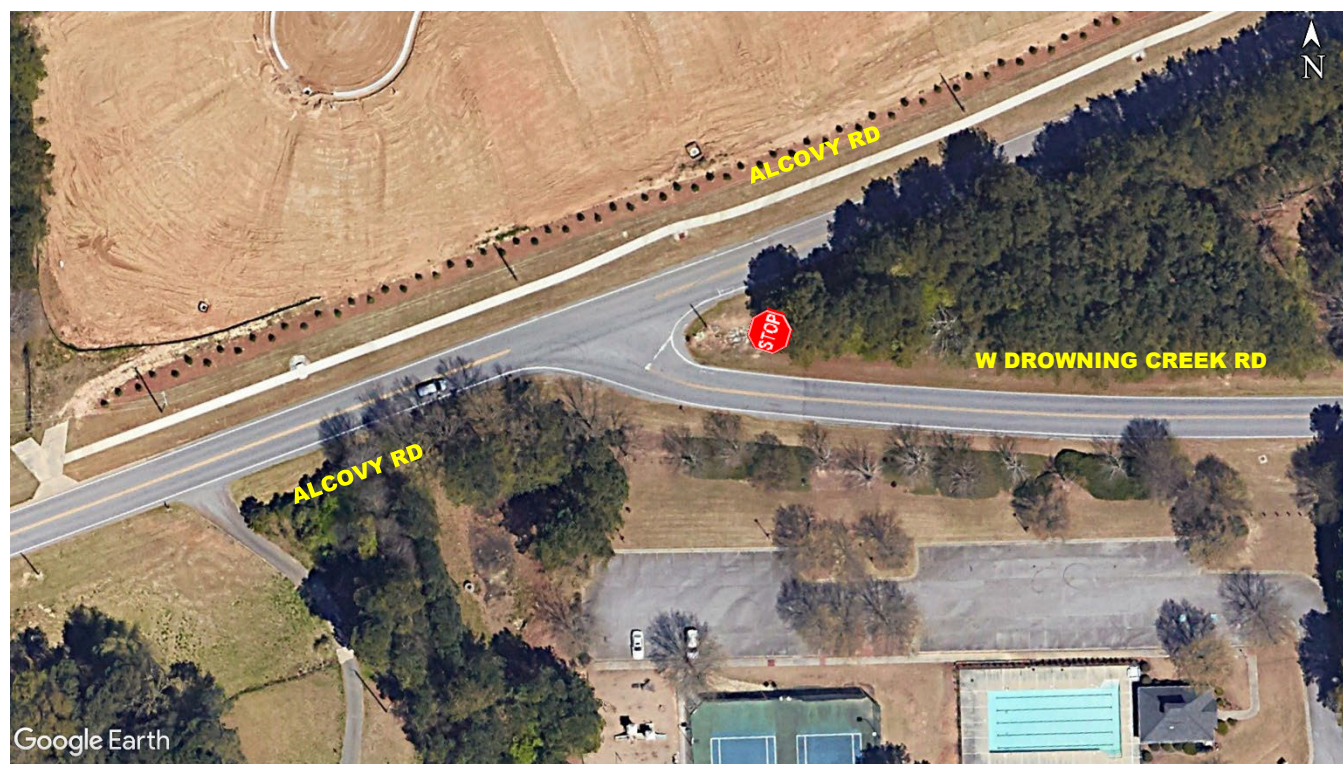


Figure 16: Intersection 9 – W Drowning Creek Road at Alcovy Road

EXISTING TRANSPORTATION FACILITIES

ROADWAY FACILITIES

The Harbins 2 Mixed-Use development will abut Harbins Road southwest of W Drowning Creek Road. Harbins Road is a two-lane undivided roadway that extends from US 29/SR 8/Winder Highway to the north and southeast into Barrow County. Currently, Harbins Road south of SR 316/University is primarily surrounded by residential subdivisions and agricultural land uses. There are two schools south of site, Harbins Preparatory School just south of Ace McMillian Road and Harbins Elementary School accessed via New Hope Road southwest of Harbins Road. Also, Alcovy Elementary School is located on Alcovy Road east of Ewing Chapel Road. Table 5 summarizes the character of the other roadway facilities located within the study network.

Table 5: Adjacent Roadway Network Classifications

Roadway	Classification	# of Lanes	Speed Limit
Harbins Road	Minor Arterial	2-Lane Undivided	45 MPH (S of SR 316) 35 MPH (N of SR 316)
SR 316/University Parkway	Principal Arterial	6-Lane Divided	65 MPH
SR 8/Winder Highway	Minor Arterial	2-Lane Undivided	35 MPH
W Drowning Creek Road	Local Road	2-Lane Undivided	35 MPH
Jordan Road	Local Road	2-Lane Undivided	35 MPH
Ewing Chapel Road	Local Road	2-Lane Undivided	35 MPH
Alcovy Road	Local Road	2-Lane Undivided	35 MPH
Tanner Road	Local Road	2-Lane Undivided	35 MPH

TRANSIT FACILITIES

There is no fixed route transit service in proximity to the Harbins 2 site. Xpress, operated by the Atlanta-Region Transit Link Authority (ATL), has a Park-and-Ride location on Dacula Road north of US 29/SR 8/Winder Highway for Route No. 416. Route No. 416 stops at the Dacula Park-and-Ride (Hebron Church) and provides express service to/from Downtown Atlanta. Xpress provides service Monday through Friday from approximately 5 AM to 7 PM. Currently, a new Park-and-Ride lot is under design to be located northwest of SR 316 at Harbins Road.

PEDESTRIAN AND BICYCLE FACILITIES

There are no existing sidewalks along Harbins Road south of SR 316/University Parkway aside from discontinuous segments abutting some residential subdivisions. There is sidewalk along the west side of Harbins Road north of Harbin Oak Drive, which is approximately 1,500 feet north of SR 316/University Parkway. There is no sidewalk along W Drowning Creek Road.

Gwinnett County’s Countywide Trails Master Plan (2018) identifies the “Harbins Greenway” as a proposed off-road trail to connect three major Gwinnett County Parks: Harbins Conservation Park, Tribble Mill Park, and Palm Creek Park. In addition to the three parks, this greenway will also intersect with Archer High School. As an off-road trail, the alignment will be constructed within the existing landscape and feature natural vegetation on both sides. Relative to the Harbins 2 site, the nearest portion of the trail is at the New Hope Road intersection southwest of Harbins Road. Figure 17 shows the proposed Harbins Greenway Map extracted from Gwinnett’s Trails Master Plan.

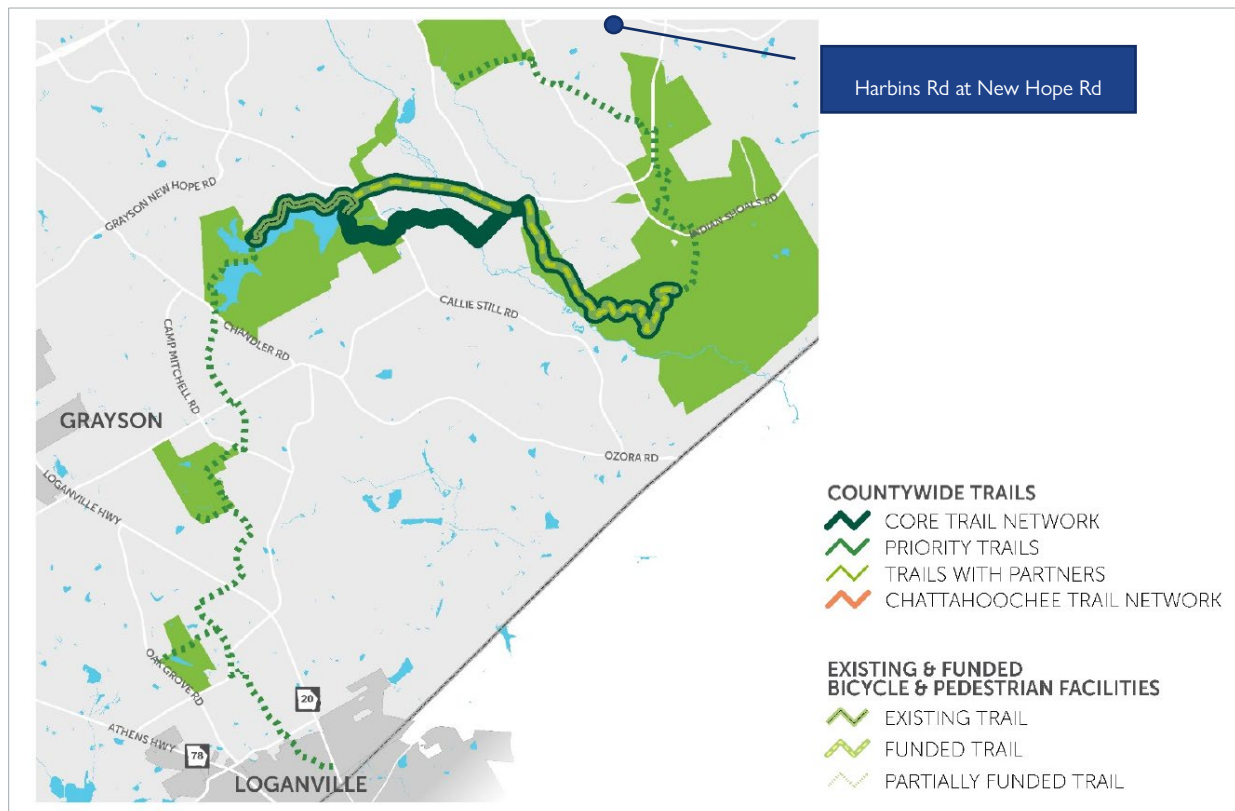


Figure 17: Harbins Greenway Map, Gwinnett’s Countywide Trails Master Plan (2018)

VOLUMES

Traffic counts were conducted August 2022 at the study intersections while Gwinnett County Schools were in session. Turning movement counts were performed during the two-hour morning peak period and the two-hour evening peak period. The morning and afternoon peak hours for the study intersection were from 7:15 AM – 8:15 AM and 5:00 PM – 6:00 PM, respectively. The existing peak hour volumes are shown in Figure 18. The sheets for the raw traffic count are in Appendix B.

PLANNED/PROGRAMMED IMPROVEMENTS

Programmed and planned transportation plans in the vicinity of the proposed development were reviewed per the ARC's Atlanta's Region Plan, GDOT Statewide TIP (STIP), Regional Transportation Plan (RTP), GDOT's Construction Work Program, and Gwinnett County's Comprehensive Transportation Plan and SPLOST. Table 6 lists the projects and the completion year.

Table 6: Planned and Programmed Transportation Improvements in Study Area

Source	Year	(Project ID) Name
DRI #3207 – Inland Pass Mixed-Use	2022	Traffic Signal at Harbins Road and W Drowning Creek Road
Gwinnett DOT	2025	SR 316 at Harbins Road Park and Ride
Gwinnett CTP/ 2017 SPLOST	2027	Harbins Road Widening (SR 8 to SR 316)
ARC RTP/GDOT	2030	P.I. 0013901 (SR 316 – New Interchange at Drowning Creek Rd)
ARC RTP/GDOT	2030	P.I. 0006924 (Sugarloaf Parkway Extension – Phase 2)
ARC RTP/GDOT	TBD	P.I. 0016070 (Gwinnett County ITS Enhancements – Phase 2)

The planned improvements that will have the most direct impact on the traffic surrounding Harbins 2 include the new traffic signal at Harbins Road and W Drowning Creek Road. Figure 19 shows the 2026 No Build Lane configurations at the study intersections.

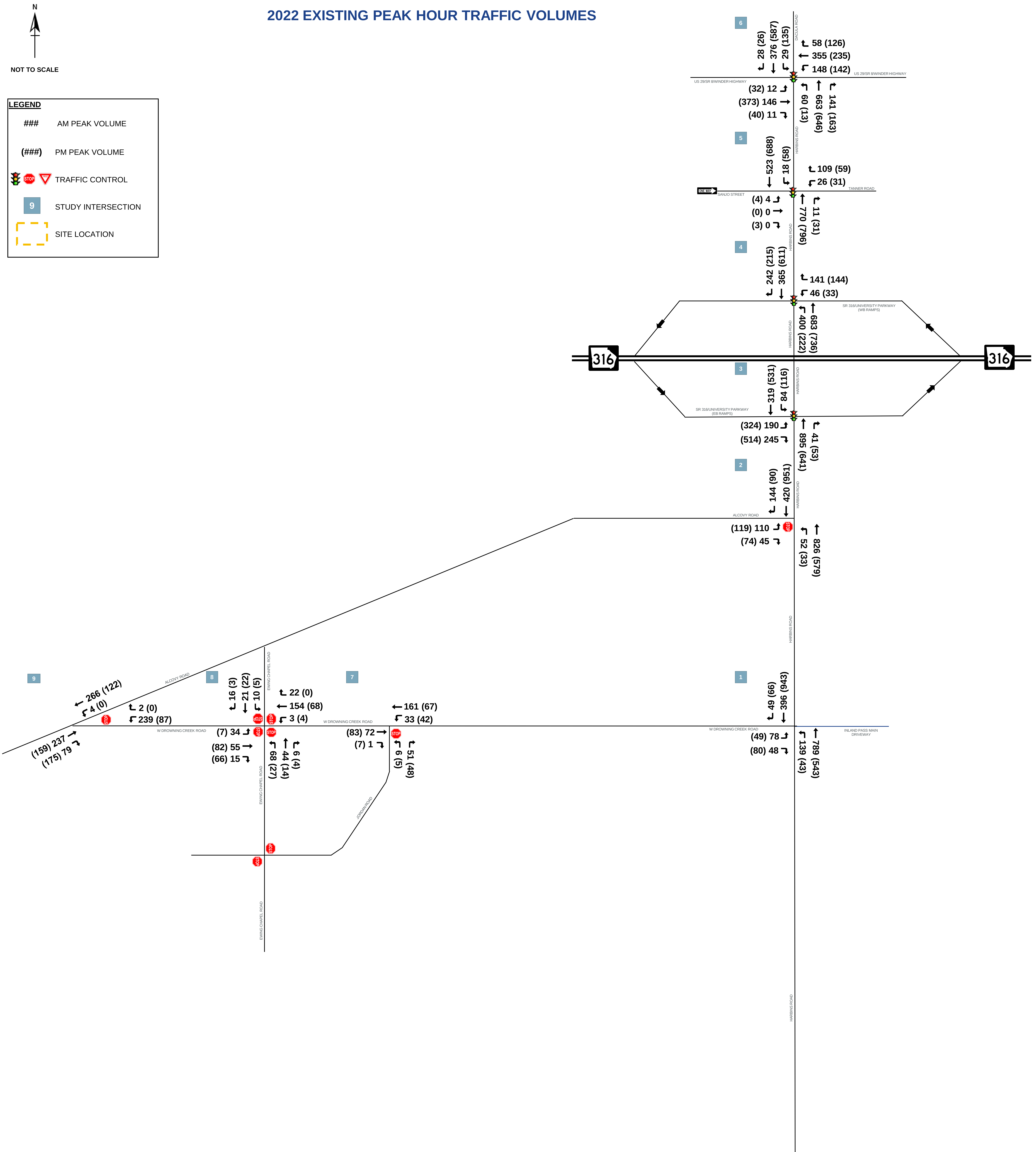


Figure 18: 2022 Existing Peak Hour Traffic Volumes

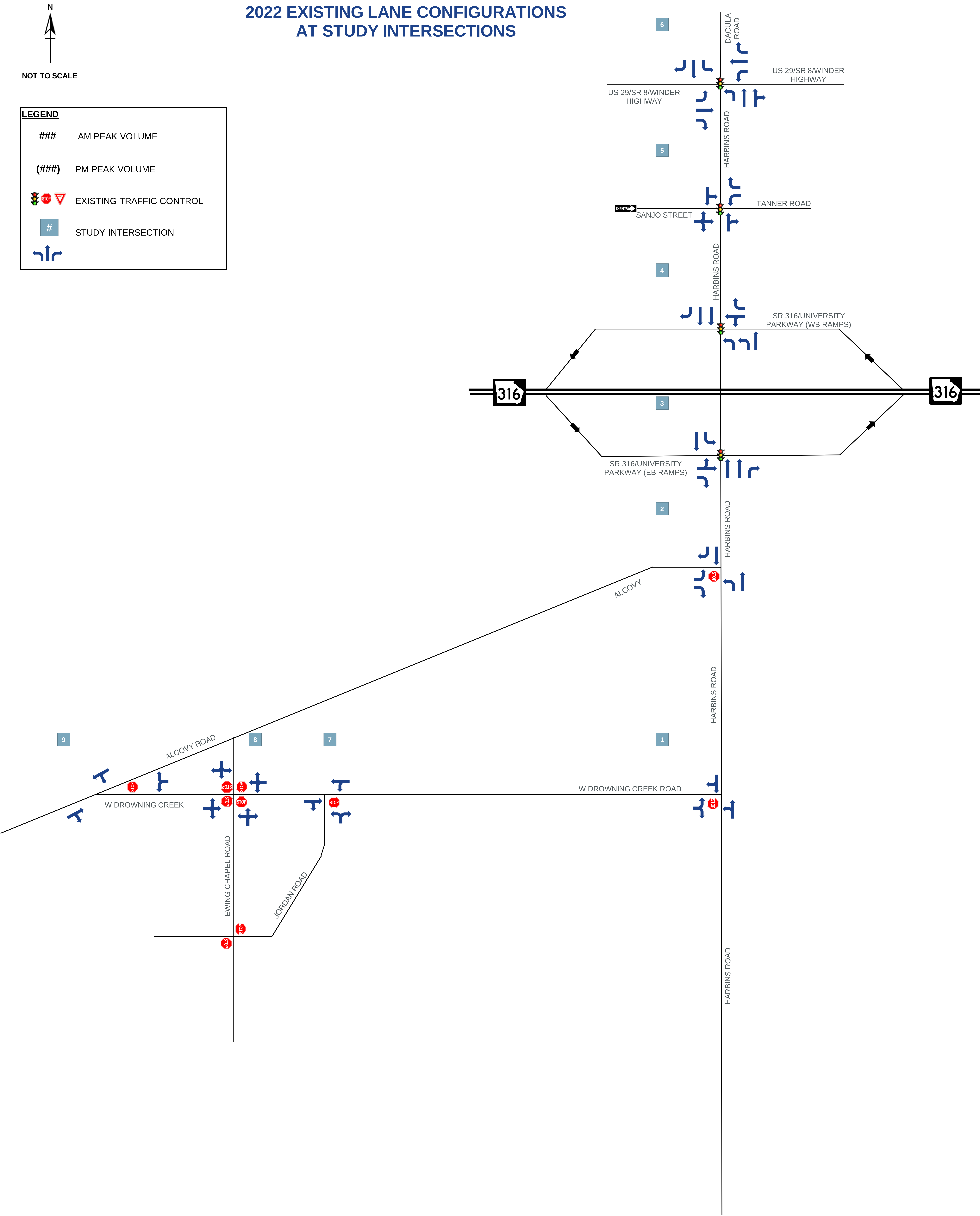


Figure 18: 2022 Existing Lane Configurations at Study Intersections

TRAFFIC FORECASTING

Based on the historical growth rates in the area according to Georgia's Traffic Analysis & Data Application (TADA), population forecasts and knowledge of proposed developments in the area, a 2% annual growth rate (AGR) is recommended to project the traffic to the 2026 build-out year and confirmed in the Letter of Understanding.

In addition to the standard AGR, two major developments, the Summerwind residential subdivision and the Inland Pass Mixed-Use Development (DRI #3207), are currently under construction and will be brought on-line prior to the Harbins 2 build out. The residential development will consist of 277 single-family lots and will be accessed via Alcovy Road opposite its intersection with Ewing Chapel Road. A trip generation estimate was completed for the site and distributed at the study intersections based on its anticipated trip distribution. These trips were added to the 2026 No Build traffic conditions. Additionally, the new trips estimated from the traffic study completed for Inland Pass (DRI #3207) were added to the 2026 No Build traffic conditions as well.

To determine the base traffic conditions prior to the introduction of new trips generated by the Harbins 2 development, the existing 2022 traffic volumes were grown to the 2026 build-out year using the AGR plus the addition of the trips generated by the Summerwind and Inland Pass developments. The resulting 2026 No Build traffic volumes are shown in Figure 20. All traffic volume worksheets are attached in Appendix C.

NEW TRIPS ASSIGNMENT

The assignment of the Harbins 2 new trips is based on area-wide trip distribution in Figure 6. Figure 21 shows the trip distribution assignment at the study intersections. Percentages from Figure 21 were then applied to the net peak hour trips from Table 3. The distribution of pass-by trips for the retail land uses is shown in Figure 22. The total new trips for the Harbins 2 development are shown in Figure 23.

The Build traffic volumes were calculated by adding the Harbins 2 new trips and pass-by trips to the No Build traffic volumes, and the 2026 Build traffic volumes are shown on Figure 24. All trip generation data and traffic volume worksheets are in Appendix C.

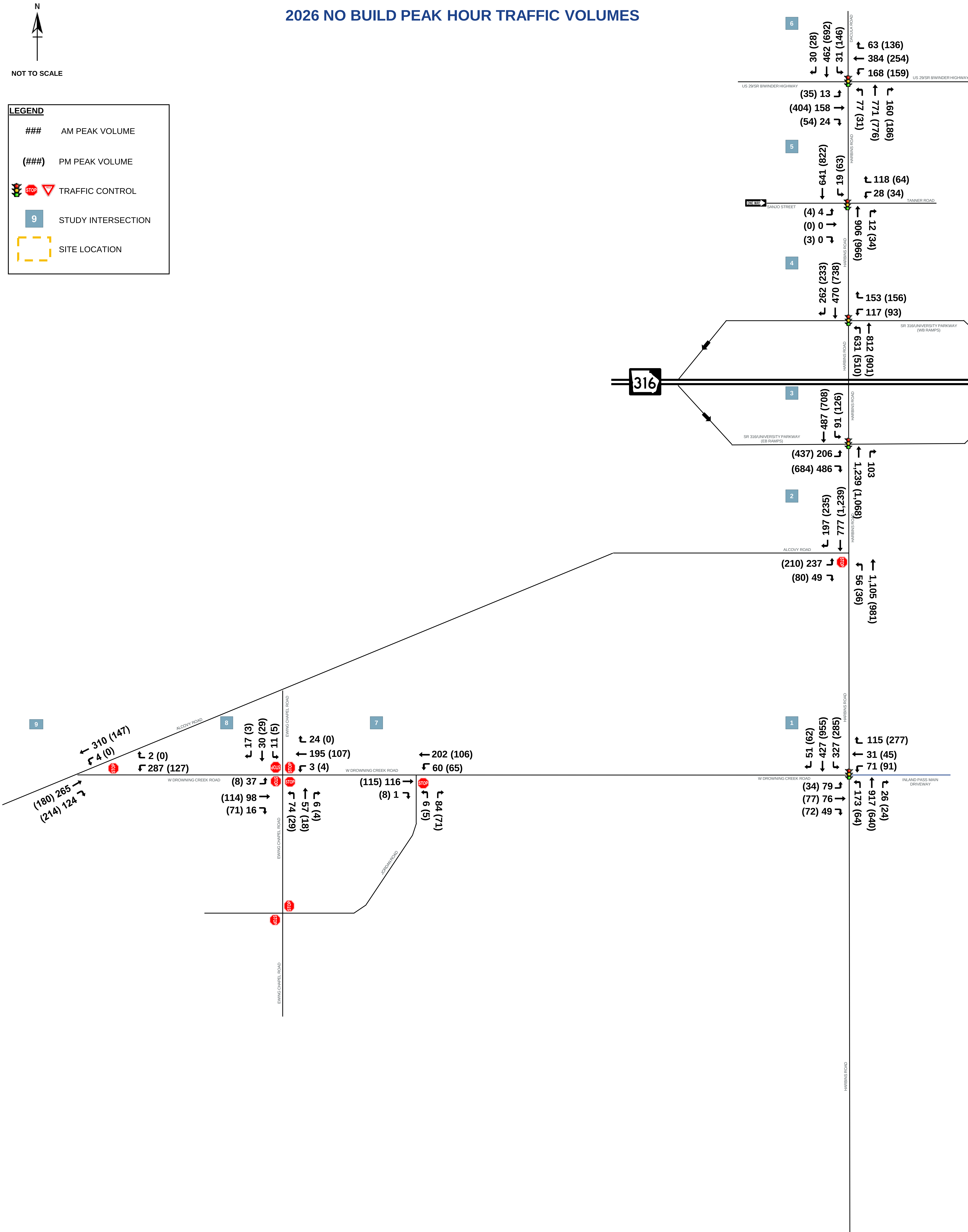


Figure 20: 2026 No Build Peak Hour Traffic Volumes



Croy Project #: 2524.001

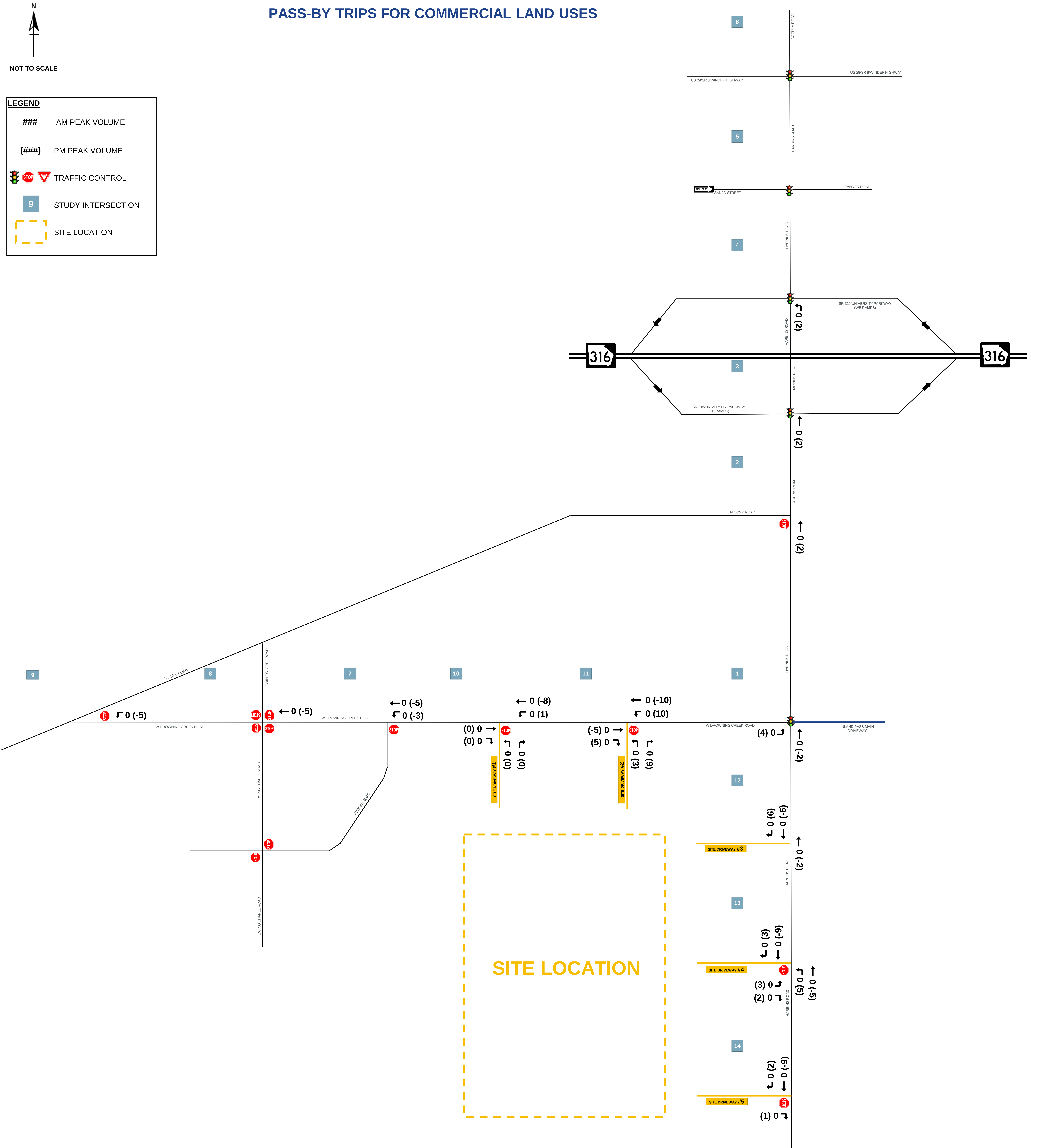


Figure 22: Pass-By Trips for Commercial Land Uses

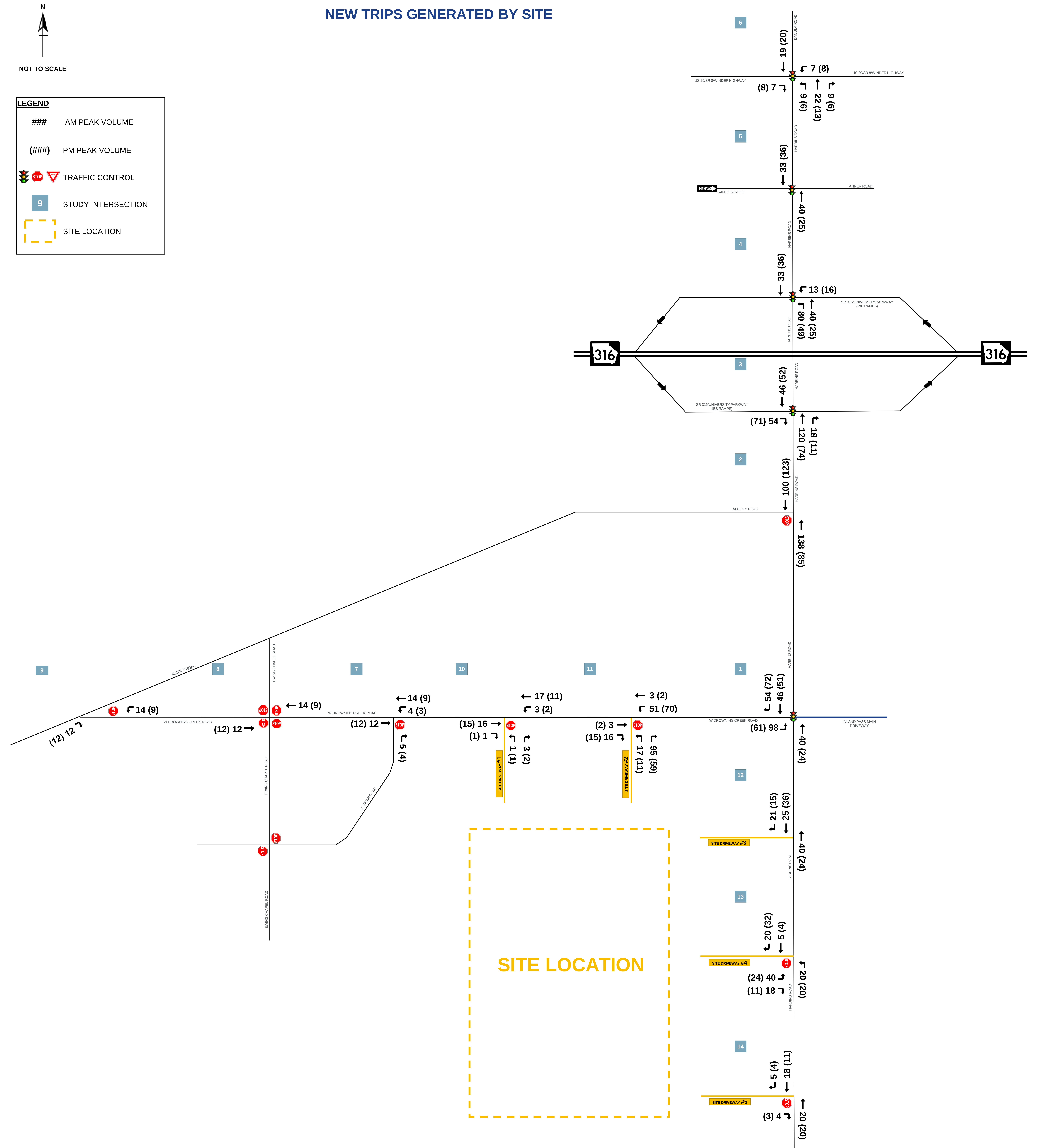


Figure 23: New Trips Generated by Site

2026 BUILD PEAK HOUR TRAFFIC VOLUMES

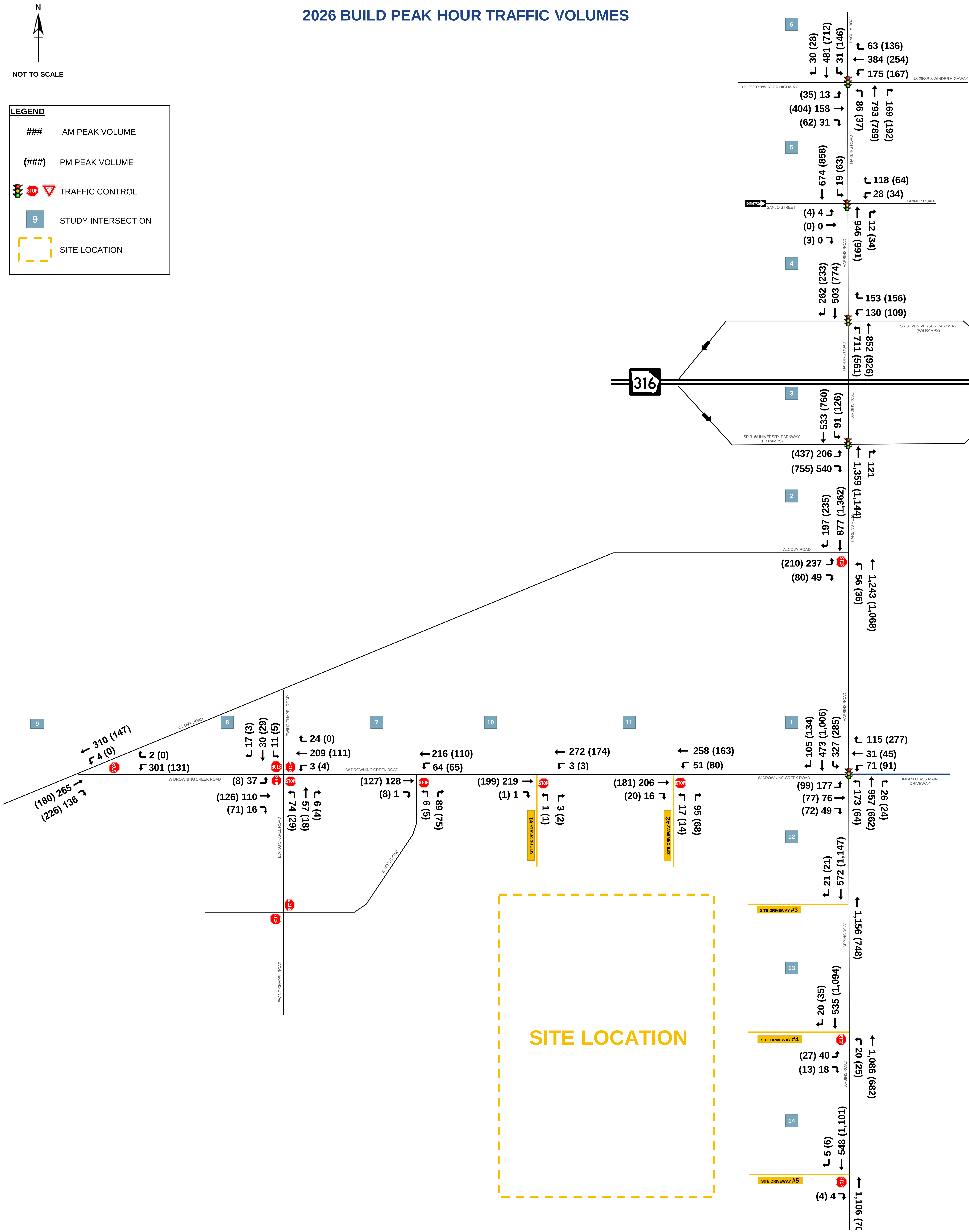


Figure 24: 2026 Build Peak Hour Traffic Volumes

TRAFFIC OPERATIONS ANALYSIS

The Transportation Research Board's Highway Capacity Manual, 2016 edition (HCM 2016) methodology was used to analyze level of service and delay at study intersections via Synchro simulation software. Level of Service (LOS) is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The HCM defines six levels of service, which are quantified by average control delay. The LOS criteria for signalized and unsignalized intersections are given in Table 7. LOS are reported for individual movements as well as for the intersection as a whole; thus, an individual movement of an intersection may experience a low level of service, while the intersection, as a whole, may operate acceptably.

For signalized intersections, LOS and capacity analyses are necessary to determine the overall operation of the intersection. The capacity analysis is defined by a volume to capacity ratio (v/c) for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic on the roadway has exceeded the capacity available, resulting in a temporary surplus of demand.

For unsignalized intersections, the only criteria for evaluating traffic operation are the LOS of the turning movements and the overall intersection. LOS for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches. Low LOS for side street approaches is not uncommon, as vehicles may experience delay in turning onto a major roadway.

Per GRTA's technical guidelines, the LOS standard for all intersections will be LOS D, except for intersections currently at or below LOS E.

Table 7: Level of Service Criteria for Signalized and Unsignalized Intersections

	SIGNALIZED	UNSIGNALIZED
Level of Service	Average Delay (sec)	Average Delay (sec)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Using the collected traffic data, lane configurations, signal timing data, and other pertinent inputs, LOS and delay were evaluated for the 2022 Existing, 2026 No Build and 2026 Build traffic conditions during the morning and afternoon peak hours.

EXISTING TRAFFIC OPERATIONS ANALYSIS

Using the adjusted existing traffic volumes from Figure 18, a traffic operations analysis for the 2022 existing traffic conditions was completed. The results of the analysis are shown in Table 8 and the Synchro output sheets are included Appendix D: Capacity Analysis Outputs.

Table 8: 2022 Existing LOS and Delay at Study Intersections

#	Study Intersection	Traffic Control	2022 EXISTING	
			AM Peak	PM Peak
1	Harbins Rd @ W Drowning Creek Rd <i>Eastbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>F (126.3 s)</i>	n/a¹ <i>F (89.1 s)</i>
2	Harbins Rd @ Alcovy Rd <i>Eastbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>F (120.8 s)</i>	n/a¹ <i>F (333.3 s)²</i>
3	Harbins Rd @ SR 316/University Pkwy (EB Ramps) <i>Eastbound Approach</i> <i>Northbound Approach</i> <i>Southbound Approach</i>	Traffic Signal	B (14.4 s) <i>C (32.9 s)</i> <i>B (10.4 s)</i> <i>A (3.6 s)</i>	C (25.6 s) <i>D (39.3 s)</i> <i>B (19.6 s)</i> <i>B (14.1 s)</i>
4	Harbins Rd @ SR 316/University Pkwy (WB Ramps) <i>Westbound Approach</i> <i>Northbound Approach</i> <i>Southbound Approach</i>	Traffic Signal	B (18.0 s) <i>C (29.3 s)</i> <i>C (22.6 s)</i> <i>A (6.4 s)</i>	B (13.6 s) <i>C (26.7 s)</i> <i>B (17.5 s)</i> <i>A (6.2 s)</i>
5	Harbins Rd @ Sanjo St-Tanner Rd <i>Eastbound Approach</i> <i>Westbound Approach</i> <i>Northbound Approach</i> <i>Southbound Approach</i>	Traffic Signal	A (7.1 s) <i>E (55.8 s)</i> <i>C (27.2 s)</i> <i>A (3.8 s)</i> <i>A (6.5 s)</i>	B (11.9 s) <i>A (1.0 s)</i> <i>C (34.0 s)</i> <i>A (6.3 s)</i> <i>B (15.6 s)</i>
6	Harbins Rd-Dacula Rd @ US 29/SR 8/Winder Hwy <i>Eastbound Approach</i> <i>Westbound Approach</i> <i>Northbound Approach</i> <i>Southbound Approach</i>	Traffic Signal	C (30.0 s) <i>C (25.0 s)</i> <i>C (20.7 s)</i> <i>D (37.1 s)</i> <i>C (29.7 s)</i>	D (36.7 s) <i>C (34.3 s)</i> <i>B (19.7 s)</i> <i>D (47.1 s)</i> <i>D (38.1 s)</i>
7	Jordan Rd @ W Drowning Creek Rd <i>Northbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>A (9.2 s)</i>	n/a¹ <i>A (9.2 s)</i>
8	Ewing Chapel Rd @ W Drowning Creek Rd <i>Eastbound Approach</i> <i>Westbound Approach</i> <i>Northbound Approach</i> <i>Southbound Approach</i>	All-Way Stop Controlled	A (9.6 s) <i>B (10.2 s)</i> <i>A (9.5 s)</i> <i>A (9.4 s)</i> <i>A (9.2 s)</i>	A (9.0 s) <i>A (9.8 s)</i> <i>A (8.0 s)</i> <i>A (8.2 s)</i> <i>A (8.7 s)</i>
9	Alcovy Rd @ W Drowning Creek Rd <i>Westbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>D (29.2 s)</i>	n/a¹ <i>B (12.7 s)</i>

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.
2. Delay is more than 300 seconds, which is upper bound of HCM capacity analysis methodology.

Under existing conditions, the overall LOS all of the signalized study intersections are at or above the standard LOS D during the morning and afternoon peak hours. Harbins Road at W Drowning Creek Road and Harbins Road at Alcovy Road are operating at LOS F during the morning and afternoon peak hours. All other unsignalized intersections are operating at acceptable LOS.

NO BUILD TRAFFIC OPERATIONS ANALYSIS

To quantify traffic operations prior to the introduction of the new trips generated by the Harbins 2 development, LOS and delay were calculated for the 2026 No Build traffic volumes shown in Figure 20. These volumes included the addition of trips from the Summerwind residential development on Alcovy Road and the Inland Pass Mixed-Use development on Harbins Road. The simulation model also included the new signal being installed as part of the Inland Pass development at Harbins Road and W Drowning Creek Road as 2026 base conditions. The results of the 2026 No Build traffic operations analysis are shown in Table 9. The Synchro output sheets are included Appendix D: Capacity Analysis Outputs.

Table 9: 2026 No Build LOS and Delay at Study Intersections

#	Study Intersection	Traffic Control	2026 NO BUILD	
			AM Peak	PM Peak
1	<u>Harbins Rd @ W Drowning Creek Rd</u>	Traffic Signal	<u>D (44.4 s)</u>	<u>C (23.4 s)</u>
	Eastbound Approach		<i>E (55.2 s)</i>	<i>C (33.0 s)</i>
	Westbound Approach		<i>D (47.5 s)</i>	<i>C (26.6 s)</i>
	Northbound Approach		<i>D (47.4 s)</i>	<i>B (19.3 s)</i>
	Southbound Approach		<i>D (36.7 s)</i>	<i>C (23.2 s)</i>
2	<u>Harbins Rd @ Alcovy Rd</u>	Side Street Stop Controlled	<u>n/a¹</u>	<u>n/a¹</u>
	Eastbound Approach		<i>F (***) s²</i>	<i>F (***) s²</i>
3	<u>Harbins Rd @ SR 316/University Pkwy (EB Ramps)</u>	Traffic Signal	<u>B (17.6 s)</u>	<u>D (40.9 s)</u>
	Eastbound Approach		<i>C (34.0 s)</i>	<i>D (46.9 s)</i>
	Northbound Approach		<i>B (14.6 s)</i>	<i>D (39.5 s)</i>
	Southbound Approach		<i>A (4.7 s)</i>	<i>C (34.8 s)</i>
4	<u>Harbins Rd @ SR 316/University Pkwy (WB Ramps)</u>	Traffic Signal	<u>C (24.7 s)</u>	<u>C (23.0 s)</u>
	Westbound Approach		<i>D (35.2 s)</i>	<i>C (32.7 s)</i>
	Northbound Approach		<i>C (27.8 s)</i>	<i>C (24.9 s)</i>
	Southbound Approach		<i>B (14.9 s)</i>	<i>B (17.9 s)</i>
5	<u>Harbins Rd @ Sanjo St-Tanner Rd</u>	Traffic Signal	<u>B (10.2 s)</u>	<u>B (17.3 s)</u>
	Eastbound Approach		<i>E (55.8 s)</i>	<i>A (1.0 s)</i>
	Westbound Approach		<i>C (27.0 s)</i>	<i>C (33.9 s)</i>
	Northbound Approach		<i>A (7.9 s)</i>	<i>B (10.4 s)</i>
	Southbound Approach		<i>A (9.3 s)</i>	<i>C (23.4 s)</i>
6	<u>Harbins Rd-Dacula Rd @ US 29/SR 8/Winder Hwy</u>	Traffic Signal	<u>C (31.4 s)</u>	<u>D (44.7 s)</u>
	Eastbound Approach		<i>C (25.6 s)</i>	<i>D (41.2 s)</i>
	Westbound Approach		<i>C (23.2 s)</i>	<i>C (23.2 s)</i>
	Northbound Approach		<i>D (37.9 s)</i>	<i>E (59.7 s)</i>
	Southbound Approach		<i>C (30.8 s)</i>	<i>D (43.3 s)</i>
7	<u>Jordan Rd @ W Drowning Creek Rd</u>	Side Street Stop Controlled	<u>n/a¹</u>	<u>n/a¹</u>
	Northbound Approach		<i>A (9.7 s)</i>	<i>A (9.6 s)</i>
8	<u>Ewing Chapel Rd @ W Drowning Creek Rd</u>	All-Way Stop Controlled	<u>B (11.0 s)</u>	<u>A (9.8 s)</u>
	Eastbound Approach		<i>B (11.8 s)</i>	<i>B (10.9 s)</i>
	Westbound Approach		<i>B (11.0 s)</i>	<i>A (8.5 s)</i>
	Northbound Approach		<i>B (10.4 s)</i>	<i>A (8.6 s)</i>
	Southbound Approach		<i>A (10.0 s)</i>	<i>A (9.1 s)</i>
9	<u>Alcovy Rd @ W Drowning Creek Rd</u>	Side Street Stop Controlled	<u>n/a¹</u>	<u>n/a¹</u>
	Eastbound Approach		<i>F (67.2 s)</i>	<i>B (14.9 s)</i>

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.
2. Delay is more than 300 seconds, which is upper bound of HCM capacity analysis methodology.

As shown in Table 9, under the 2026 No Build conditions, the W Drowning Creek Road at Harbins Road improves significantly with the installation of the traffic signal. The stop-controlled eastbound approach of Alcovy Road at Harbins Road delay becomes significantly worse with LOS F. Additionally, the stop-controlled westbound approach of W Drowning Creek Road at Alcovy Road reaches LOS F during the morning peak hour. It is important to note that it is likely that at side-street stop-controlled intersections where the delay is excessive, motorists may be executing turns from the side streets by accepting smaller gaps than are applied by model assumptions.

SYSTEM IMPROVEMENTS ANALYSIS

Improvements that are identified as “System Improvements” address deficiencies that are found in the study network for the “No Build” conditions without the addition of traffic from the proposed development. Table 10 shows the proposed System Improvements to the study network.

Table 10: Proposed System Improvements to Study Network

System Improvement Location	System Improvement Recommendation
Harbins Road at Alcovy Rd	Install traffic signal
Alcovy Rd at W Drowning Creek Road	Install roundabout

For the proposed traffic signal at Alcovy Road and Harbins Road, a traffic signal warrant did exceed volumes per FHWA MUTCD guidelines for the four hours of peak traffic data collected as part of this study; however, further evaluation may be needed beyond this study, including a 12-hour signal warrant analysis.

For the proposed roundabout at Alcovy Road and W Drowning Creek Road, the improvement would improve the delay during the morning peak hour significantly. Given that the LOS is only estimated as an issue during the morning peak hour, the installation of a roundabout may be cost prohibitive when completing a benefit-cost analysis. It is important to note that there are parcels along W Drowning Creek Road and Alcovy Road that may be developed or redeveloped in the future. With that in mind, it is recommended that a future traffic study be conducted at the intersection to determine if the delay and LOS during the morning peak hour exacerbates with the growth in the area to justify the installation of a roundabout.

Table 11 shows the 2026 No Build operations when the proposed System Improvements are made to the study network. These system Improvements result in the overall study network and particular intersections operating with significantly less delay and/or an enhanced LOS. These are recommended for consideration in future local transportation planning.

Table 11:2026 No Build + System Improvements LOS and Delay at Study Intersections

#	Study Intersection	Traffic Control	NO BUILD + SYSTEM IMP	
			AM Peak	PM Peak
1	<u>Harbins Rd @ W Drowning Creek Rd</u>	Traffic Signal	<u>D (44.4 s)</u>	<u>C (22.2 s)</u>
	Eastbound Approach		<i>E (55.2 s)</i>	<i>C (33.0 s)</i>
	Westbound Approach		<i>D (47.5 s)</i>	<i>C (26.6 s)</i>
	Northbound Approach		<i>D (47.4 s)</i>	<i>B (19.3 s)</i>
	Southbound Approach		<i>D (36.7 s)</i>	<i>C (20.9 s)</i>
2	<u>Harbins Rd @ Alcovy Rd</u>	Traffic Signal (System Improvement)	<u>C (25.7 s)</u>	<u>D (44.5 s)</u>
	Eastbound Approach		<i>F (80.1 s)</i>	<i>E (63.2 s)</i>
	Northbound Approach		<i>C (24.2 s)</i>	<i>B (11.2 s)</i>
	Southbound Approach		<i>B (11.6 s)</i>	<i>E (63.9 s)</i>
3	<u>Harbins Rd @ SR 316/University Pkwy (EB Ramps)</u>	Traffic Signal	<u>C (20.0 s)</u>	<u>D (45.1 s)</u>
	Eastbound Approach		<i>C (34.3 s)</i>	<i>D (49.2 s)</i>
	Northbound Approach		<i>B (19.2 s)</i>	<i>D (53.7 s)</i>
	Southbound Approach		<i>A (4.7 s)</i>	<i>C (27.5 s)</i>
4	<u>Harbins Rd @ SR 316/University Pkwy (WB Ramps)</u>	Traffic Signal	<u>C (24.6 s)</u>	<u>C (23.4 s)</u>
	Westbound Approach		<i>D (35.2 s)</i>	<i>C (32.7 s)</i>
	Northbound Approach		<i>C (27.6 s)</i>	<i>C (25.6 s)</i>
	Southbound Approach		<i>B (14.9 s)</i>	<i>B (17.9 s)</i>
5	<u>Harbins Rd @ Sanjo St-Tanner Rd</u>	Traffic Signal	<u>B (10.1 s)</u>	<u>B (17.3 s)</u>
	Eastbound Approach		<i>E (55.8 s)</i>	<i>A (1.0 s)</i>
	Westbound Approach		<i>C (27.0 s)</i>	<i>C (33.9 s)</i>
	Northbound Approach		<i>A (7.7 s)</i>	<i>B (10.5 s)</i>
	Southbound Approach		<i>A (9.3 s)</i>	<i>C (23.4 s)</i>
6	<u>Harbins Rd-Dacula Rd @ US 29/SR 8/Winder Hwy</u>	Traffic Signal	<u>C (31.3 s)</u>	<u>D (44.6 s)</u>
	Eastbound Approach		<i>C (25.6 s)</i>	<i>D (41.2 s)</i>
	Westbound Approach		<i>C (23.2 s)</i>	<i>C (23.2 s)</i>
	Northbound Approach		<i>D (37.7 s)</i>	<i>E (59.2 s)</i>
	Southbound Approach		<i>C (30.8 s)</i>	<i>D (43.3 s)</i>
7	<u>Jordan Rd @ W Drowning Creek Rd</u>	Side Street Stop Controlled	<u>n/a¹</u>	<u>n/a¹</u>
	Northbound Approach		<i>A (9.7 s)</i>	<i>A (9.6 s)</i>
8	<u>Ewing Chapel Rd @ W Drowning Creek Rd</u>	All-Way Stop Controlled	<u>B (11.0 s)</u>	<u>A (9.8 s)</u>
	Eastbound Approach		<i>B (11.8 s)</i>	<i>B (10.9 s)</i>
	Westbound Approach		<i>B (11.0 s)</i>	<i>A (8.5 s)</i>
	Northbound Approach		<i>B (10.4 s)</i>	<i>A (8.6 s)</i>
	Southbound Approach		<i>A (10.0 s)</i>	<i>A (9.1 s)</i>
9	<u>Alcovy Rd @ W Drowning Creek Rd</u>	Roundabout (System Improvement)	<u>A (7.6 s)</u>	<u>A (5.9 s)</u>
	Eastbound Approach		<i>A (6.4 s)</i>	<i>A (6.8 s)</i>
	Westbound Approach		<i>A (8.9 s)</i>	<i>A (4.7 s)</i>
	Northbound Approach		<i>A (7.7 s)</i>	<i>A (4.7 s)</i>

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.

BUILD TRAFFIC OPERATIONS ANALYSIS

To quantify traffic operations after the introduction of DRI #3207 – Harbins 2 Mixed-Use Development's new trips, LOS and delay were calculated for the build traffic conditions for 2026 build-out year. The results of the analysis for the 2026 Build conditions with no improvements and with the proposed System Improvements are shown in Table 12. The Synchro output sheets are included Appendix D: Capacity Analysis Outputs.

With the proposed System Improvements, the traffic operations at the majority of the study intersections remain relatively the same as the 2026 No Build conditions, except for Harbins Road at SR 316/University Parkway Eastbound Ramps during the afternoon peak hour. Given that the delay increases at the eastbound ramps with the proposed signal at Alcovy Road and Harbins Road, it is recommended that signal coordination be updated at the SR 316/University ramps, Alcovy Road, and W Drowning Creek Road if and when the new signal is installed.

For the unsignalized intersections, the side street approaches at the intersections identified under the 2026 No Build conditions as deficient will continue to operate below the LOS standard. The side street approaches control delay incrementally increases with the addition of the new trips generated by the Harbins 2 development. It is important to note that it is likely that at side-street stop-controlled intersections where the delay is excessive, motorists may, in reality, be executing turns from the side streets by accepting smaller gaps than are applied by model assumptions.

SITE IMPACT ANALYSIS

Improvements that are identified as "Site Mitigation Improvements" address deficiencies that are caused by site traffic and can be identified as related to the proposed development. Based on the 2026 Build traffic operations, no additional Site Mitigations improvements are recommended in addition to the proposed System Improvements for the 2026 No Build conditions, with the exception of signal timing coordination along Harbins Road with the introduction of the new signal recommended as a system improvement.

Table 12: 2026 Build LOS and Delay at Study Intersections

#	Study Intersection	Traffic Control	BUILD (NO IMPROVEMENTS)		BUILD (INCL. SYSTEM IMP)	
			AM Peak	PM Peak	AM Peak	PM Peak
1	Harbins Rd @ W Drowning Creek Rd	Traffic Signal	D (50.4 s)	C (29.6 s)	D (50.4 s)	C (24.5 s)
	Eastbound Approach		F (84.6 s)	C (34.1 s)	F (84.6 s)	C (34.1 s)
	Westbound Approach		D (47.5 s)	C (26.6 s)	D (47.5 s)	C (26.6 s)
	Northbound Approach		D (54.8 s)	C (23.2 s)	D (54.8 s)	C (23.2 s)
	Southbound Approach		C (34.3 s)	C (33.0 s)	C (34.3 s)	C (22.8 s)
2	Harbins Rd @ Alcovy Rd	Side Street Stop Controlled Sys Imp: Traffic Signal	n/a¹	n/a¹	D (45.2 s)	D (45.2 s)
	Eastbound Approach		F (*** s) ²	F (*** s) ²	F (133.0 s)	E (63.6 s)
	Northbound Approach		n/a ¹	n/a ¹	D (53.7 s)	B (12.8 s)
	Southbound Approach		n/a ¹	n/a ¹	B (11.6 s)	E (64.3 s)
3	Harbins Rd @ SR 316/University Pkwy (EB Ramps)	Traffic Signal	C (22.1 s)	D (49.3 s)	C (32.0 s)	E (66.1 s)
	Eastbound Approach		D (41.5 s)	F (84.5 s)	D (42.8 s)	F (84.5 s)
	Northbound Approach		B (19.0 s)	C (32.2 s)	D (37.4 s)	E (76.3 s)
	Southbound Approach		A (6.2 s)	C (26.7 s)	A (6.2 s)	C (26.7 s)
4	Harbins Rd @ SR 316/University Pkwy (WB Ramps)	Traffic Signal	C (26.2 s)	C (24.7 s)	C (26.2 s)	C (24.7 s)
	Westbound Approach		D (36.0 s)	C (34.1 s)	D (36.0 s)	C (34.1 s)
	Northbound Approach		C (28.5 s)	C (24.6 s)	C (28.4 s)	C (24.6 s)
	Southbound Approach		B (17.9 s)	C (22.4 s)	B (17.9 s)	C (22.4 s)
5	Harbins Rd @ Sanjo St-Tanner Rd	Traffic Signal	B (10.8 s)	B (18.6 s)	B (10.7 s)	B (18.6 s)
	Eastbound Approach		E (55.8 s)	A (1.0 s)	E (55.8 s)	A (1.0 s)
	Westbound Approach		C (27.0 s)	C (33.9 s)	C (27.0 s)	C (33.9 s)
	Northbound Approach		A (8.8 s)	B (11.2 s)	A (8.7 s)	B (11.2 s)
	Southbound Approach		A (9.9 s)	C (25.3 s)	A (9.9 s)	C (25.3 s)
6	Harbins Rd-Dacula Rd @ US 29/SR 8/Winder Hwy	Traffic Signal	C (33.9 s)	D (45.4 s)	C (33.7 s)	D (45.4 s)
	Eastbound Approach		C (25.1 s)	D (41.9 s)	C (25.1 s)	D (41.9 s)
	Westbound Approach		C (23.8 s)	C (24.3 s)	C (23.8 s)	C (24.3 s)
	Northbound Approach		D (43.2 s)	E (59.0 s)	D (42.7 s)	E (59.0 s)
	Southbound Approach		C (30.8 s)	D (45.1 s)	C (30.8 s)	D (45.1 s)
7	Jordan Rd @ W Drowning Creek Rd	Side Street Stop Controlled	n/a¹	n/a¹	n/a¹	n/a¹
	Northbound Approach		A (9.9 s)	A (9.7 s)	A (9.9 s)	A (9.7 s)
8	Ewing Chapel Rd @ W Drowning Creek Rd	All-Way Stop Controlled	B (11.3 s)	A (10.0 s)	B (11.3 s)	A (10.0 s)
	Eastbound Approach		B (12.2 s)	B (11.2 s)	B (12.2 s)	B (11.2 s)
	Westbound Approach		B (11.5 s)	A (8.6 s)	B (11.5 s)	A (8.6 s)
	Northbound Approach		B (10.6 s)	A (8.6 s)	B (10.6 s)	A (8.6 s)
	Southbound Approach		B (10.1 s)	A (9.2 s)	B (10.1 s)	A (9.2 s)
9	Alcovy Rd @ W Drowning Creek Rd	Side Street Stop Controlled Sys Imp: Roundabout	n/a¹	n/a¹	A (7.8 s)	A (6.1 s)
	Westbound Approach		F (80.1 s)	C (15.1 s)	A (6.6 s)	A (7.0 s)
	Northbound Approach		n/a ¹	n/a ¹	A (9.2 s)	A (4.7 s)
	Southbound Approach		n/a ¹	n/a ¹	A (7.9 s)	A (4.7 s)

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.
2. Delay is more than 300 seconds, which is upper bound of HCM capacity analysis methodology.

NO BUILD VERSUS BUILD COMPARATIVE ANALYSIS

For a comparative analysis, Table 13 shows the net difference in delay for the No Build and Build traffic conditions at the study intersections for the 2026 analysis year with and without the proposed system improvements.

The results of Table 13 indicate that the highest increase in delay will occur for the eastbound approach and W Drowning Creek Road and Harbins Road. With that, the overall LOS at the signal remains above the LOS standard. Additionally, with the proposed System Improvement of installing a traffic signal at Harbins Road and Alcovy Road, the delay incrementally increases at the eastbound ramps by 21 seconds. With that, it is recommended that signal coordination along Harbins Road occur if the new signal is installed as a System Improvements as discussed in the previous section.

Table 13: Net Difference in Delay between No Build and Build Traffic Conditions

#	Study Intersection	Traffic Control	NO BUILD vs BUILD (NO IMP)		NO BUILD (SYS) vs BUILD (SYS)	
			AM Peak	PM Peak	AM Peak	PM Peak
1	<u>Harbins Rd @ W Drowning Creek Rd</u>	Traffic Signal	+6.0 s	+6.2 s	+6.0 s	+2.3 s
	Eastbound Approach		+29.4 s	+1.1 s	+29.4 s	+1.1 s
	Westbound Approach		0.0 s	0.0 s	0.0 s	0.0 s
	Northbound Approach		+7.4 s	+3.9 s	+7.4 s	+3.9 s
	Southbound Approach		-2.4 s	+9.8 s	-2.4 s	+1.9 s
2	<u>Harbins Rd @ Alcovy Rd</u>	Side Street Stop Controlled Sys Imp: Traffic Signal	n/a¹	n/a¹	n/a¹	n/a¹
	Eastbound Approach		n/a	n/a	n/a ²	n/a ²
	Northbound Approach		n/a ¹	n/a ¹	+53.7 s	+12.8 s
	Southbound Approach		n/a ¹	n/a ¹	+11.6 s	+64.3 s
3	<u>Harbins Rd @ SR 316/University Pkwy (EB Ramps)</u>	Traffic Signal	+4.5 s	+8.4 s	+12.0 s	+21.0 s
	Eastbound Approach		+7.5 s	+37.6 s	+8.5 s	+35.3 s
	Northbound Approach		+4.4 s	-7.3 s	+18.2 s	+22.6 s
	Southbound Approach		+1.5 s	-8.1 s	+1.5 s	-0.8 s
4	<u>Harbins Rd @ SR 316/University Pkwy (WB Ramps)</u>	Traffic Signal	+1.5 s	+1.7 s	+1.6 s	+1.3 s
	Westbound Approach		+0.8 s	+1.4 s	+0.8 s	+1.4 s
	Northbound Approach		+0.7 s	-0.3 s	+0.8 s	-1.0 s
	Southbound Approach		+3.0 s	+4.5 s	+3.0 s	+4.5 s
5	<u>Harbins Rd @ Sanjo St-Tanner Rd</u>	Traffic Signal	+0.6 s	+1.3 s	+0.6 s	+1.3 s
	Eastbound Approach		0.0 s	0.0 s	0.0 s	0.0 s
	Westbound Approach		0.0 s	0.0 s	0.0 s	0.0 s
	Northbound Approach		+0.9 s	+0.8 s	+1.0 s	+0.7 s
	Southbound Approach		+0.6 s	+1.9 s	+0.6 s	+1.9 s
6	<u>Harbins Rd-Dacula Rd @ US 29/SR 8/Winder Hwy</u>	Traffic Signal	+2.5 s	+0.7 s	+2.4 s	+0.8 s
	Eastbound Approach		-0.5 s	+0.7 s	-0.5 s	+0.7 s
	Westbound Approach		+0.6 s	+1.1 s	+0.6 s	+1.1 s
	Northbound Approach		+5.3 s	-0.7 s	+5.0 s	-0.2 s
	Southbound Approach		0.0 s	+1.8 s	0.0 s	+1.8 s
7	<u>Jordan Rd @ W Drowning Creek Rd</u> Northbound Approach	Side Street Stop Controlled	n/a¹ +0.2 s	n/a¹ +0.1 s	n/a¹ +0.2 s	n/a¹ +0.1 s
8	<u>Ewing Chapel Rd @ W Drowning Creek Rd</u>	All-Way Stop Controlled	+0.3 s	+0.2 s	+0.3 s	+0.2 s
	Eastbound Approach		+0.4 s	+0.3 s	+0.4 s	+0.3 s
	Westbound Approach		+0.5 s	+0.1 s	+0.5 s	+0.1 s
	Northbound Approach		+0.2 s	0.0 s	+0.2 s	0.0 s
	Southbound Approach		+0.1 s	+0.1 s	+0.1 s	+0.1 s
9	<u>Alcovy Rd @ W Drowning Creek Rd</u>	Side Street Stop Controlled Sys Imp: Roundabout	n/a¹	n/a¹	n/a¹	n/a¹
	Westbound Approach		+12.9 s	+0.2 s	+0.2 s	+0.2 s
	Northbound Approach		n/a ¹	n/a ¹	+0.3 s	0.0 s
	Southbound Approach		n/a ¹	n/a ¹	+0.2 s	0.0 s

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.
2. Delay is more than 300 seconds, which is upper bound of HCM capacity analysis methodology.

SITE ACCESS ANALYSIS

SITE INGRESS/EGRESS

For Harbins 2 site access, five access points are proposed. The following access configurations were utilized when modeling the proposed site driveway intersections and are recommended for the site's construction plans. Table 14 shows the traffic operations at the site driveways given the proposed layouts. The Synchro output sheets are included Appendix D: Capacity Analysis Outputs.

Site Driveways Proposed Configurations:

- Driveway 1 on W Drowning Creek Road provides access to the self-storage facility only.
- Driveway 2 being a main entrance into the mixed-use site with ingress right and left turn lanes into the site.
- On Harbins Road, Driveway 3 is right-in only with a right-turn deceleration lane.
- Driveway 4 is proposed as a full access main entrance with ingress right and left turn lanes.
- Driveway 5, the southernmost driveway is shown as right-in/right-out.

Table 14: 2026 Build LOS and Delay at Site Driveways

#	Study Intersection	Traffic Control	BUILD (NO IMPROVEMENTS)	
			AM Peak	PM Peak
10	<u>W Drowning Creek Rd @ Site Driveway #1</u> <i>Northbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>B (10.2 s)</i>	n/a¹ <i>B (10.7 s)</i>
11	<u>W Drowning Creek Rd @ Site Driveway #2</u> <i>Northbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>B (11.0 s)</i>	n/a¹ <i>B (10.5 s)</i>
12	<u>Harbins Rd @ Site Driveway #3</u> <i>Eastbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>n/a¹</i>	n/a¹ <i>n/a¹</i>
13	<u>Harbins Rd @ Site Driveway #4</u> <i>Eastbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>F (62.6 s)</i>	n/a¹ <i>F (76.0 s)</i>
14	<u>Harbins Rd @ Site Driveway #5</u> <i>Eastbound Approach</i>	Side Street Stop Controlled	n/a¹ <i>B (12.2 s)</i>	n/a¹ <i>C (21.3 s)</i>

1. For Side-Street Stop Controlled (SSSC) intersections, LOS are reported for the side street approaches only.

Under the Build traffic conditions, all site driveways will operate above acceptable Levels of Service during both peak periods. Figure 25 shows the future recommended lane configurations at the study intersections given the proposed System and Site Mitigation improvements.

ON SITE CIRCULATION

The proposed site plan for Harbins 2 Mixed-Use development was reviewed to determine if the on-site circulation was sufficient in terms of vehicles, pedestrians, and parking. The site plan shows adequate parking per the City of Dacula's development standards and internal sidewalks throughout the site.

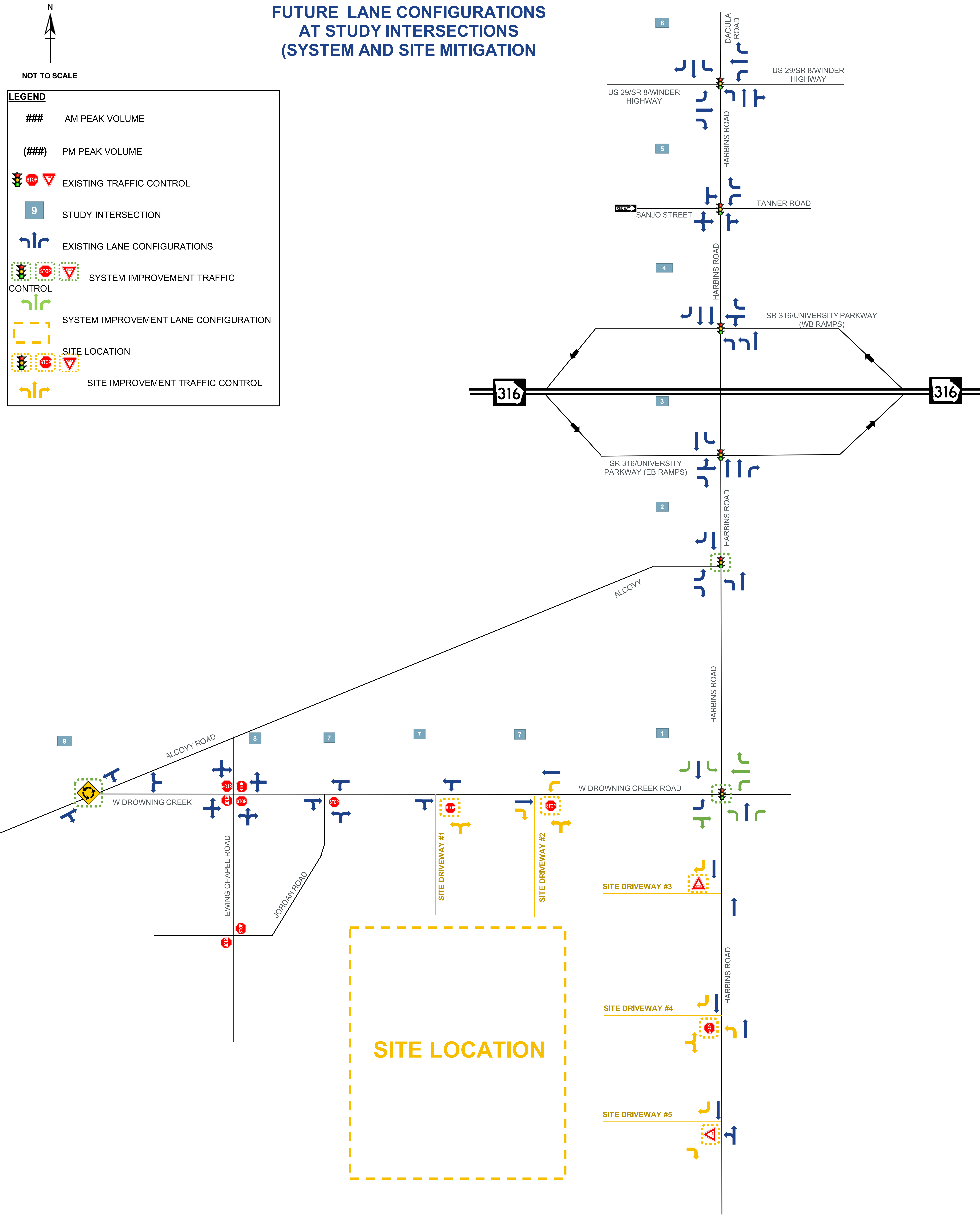


Figure 25: Future Recommended Lane Configurations at Study Intersections
(System and Site Mitigation Improvements)

SUMMARY AND CONCLUSION

WWP Acquisition, LLC is in the rezoning and annexation process for 3 parcels totaling 53.96-acres on Harbins Road south of SR 316/University Parkway on the southwest corner of Harbins Road and W Drowning Creek Road in the City of Dacula, Georgia. The current zonings for the parcels are RA-200 and O&I. The rezoning request is to convert the parcels to Planned Mixed-Use District (PMUD). The proposed mixed-use development will consist of residential townhomes and multifamily units, and 5 outparcels including a hotel, retail, restaurants, and a self-storage facility. The project will be constructed in one phase to be completed in 2026.

Since the mixed-use project exceeds the 500,000 SF mixed-use threshold required to be designated as a Development of Regional Impact (DRI), the developer must follow a reviewing process outlined by the Georgia Regional Transportation Authority (GRTA). Following a Pre-Review and Methodology meeting, the transportation impact analysis was completed for the predetermined study network agreed upon by GRTA. Traffic data was collected at the confirmed study intersections. The capacity analysis of the study network included the following traffic conditions:

- 2022 Existing
- 2026 No Build
- 2026 No Build with System Improvements
- 2026 Build with No Improvements
- 2026 Build with System Improvements

At the time of this study, estimated trips generated by the Summerwind subdivision currently under construction on Alcovy Road opposite Ewing Chapel Road and the Inland Pass Mixed-Use development (DRI #3207) on the eastside of W Drowning Creek Road at Harbins Road were included in the 2026 No Build traffic conditions.

SYSTEM IMPROVEMENTS

Based on the results of the 2026 No Build traffic operations analysis, the following are recommended as System Improvements within the study network, prior to the introduction of Harbins 2 new trips:

System Improvement Location	System Improvement Recommendation
Harbins Road at Alcovy Rd	Install traffic signal
Alcovy Rd at W Drowning Creek Road	Install roundabout

For the proposed traffic signal at Alcovy Road and Harbins Road, a traffic signal warrant did exceed volumes per FHWA MUTCD guidelines for the four hours of peak traffic data collected as part of this study; however, further evaluation may be needed beyond this study, including a 12-hour signal warrant analysis.

For the proposed roundabout at Alcovy Road and W Drowning Creek Road, the improvement would improve the delay during the morning peak hour significantly. Given that the LOS is only estimated as an issue during the morning peak hour, the installation of a roundabout may be cost prohibitive when completing a benefit-cost analysis. With

that in mind, it is recommended that a future traffic study be conducted at the intersection to determine if the delay and LOS during the morning peak hour exacerbates with the growth in the area to justify the installation of a roundabout.

With the proposed System Improvements, the traffic operations at the majority of the study intersections remain relatively the same as the 2026 No Build conditions, except for Harbins Road at SR 316/University Parkway Eastbound Ramps during the afternoon peak hour. Given that the delay increases at the eastbound ramps with the proposed signal at Alcovy Road and Harbins Road, it is recommended that signal coordination be updated at the SR 316/University ramps, Alcovy Road, and W Drowning Creek Road if and when the new signal is installed.

SITE MITIGATION IMPROVEMENTS

Based on the 2026 Build traffic operations, no additional Site Mitigations improvements are recommended in addition to the proposed System Improvements for the 2026 No Build conditions, with the exception of signal timing coordination along Harbins Road with the introduction of the new signal recommended as a system improvement.

With the requested rezoning of the assembled parcels to Planned Mixed-Use District (PMUD) for the Harbins 2 Mixed-Use Development, the proposed site is compatible with the City of Dacula's Future Land Use Plan. The proposed retail and residential land uses offer amenities to both the onsite residents as well as those in the surrounding community.



APPENDIX A

HARBINS 2 MIXED-USE SITE PLAN



PROJECT INFORMATION	
EXISTING ZONING	RA 200 Gwinnett County
PROPOSED ZONING	PMUD City of Dacula
SITE AREA (ACRES)	53.96 AC
LAND AREA R/W GCDOT DEDICATION	0.29 AC
PRIVATE ACCESS ESMT	3.58 AC
REQUIRED OPEN SPACE (25% OF 53.96)	13.49 AC
PROVIDED OPEN SPACE (25%)	13.49 AC
SITE AREA AFTER OPEN SPACE IS PROVIDED	40.47 AC
RESIDENTIAL LAND USE AREA PROPOSED	22.02 AC (54.4%)
VARIANCE TO INCREASE FROM 40% TO 54.4% OF REMAINING AREA	
PROPOSED RESIDENTIAL DENSITY	16.21 DU/AC
VARIANCE TO INCREASE FROM 13 DU/AC TO 16.21 DU/AC	
PROPOSED NUMBER OF RESIDENTIAL UNITS	357 UNITS

OUT PARCEL 1	
SITE AREA	2.23 AC
OPEN SPACE AREA ALLOTMENT	0.00 AC

OUT PARCEL 2	
SITE AREA	1.71
OPEN SPACE AREA ALLOTMENT	0.00 AC

OUTPARCEL 3	
SITE AREA	2.37 AC
OPEN SPACE AREA ALLOTMENT	0.00 AC

OUTPARCEL 4	
SITE AREA	4.27 AC
OPEN SPACE AREA ALLOTMENT	0.41 AC

OUTPARCEL 5	
SITE AREA	5.04 AC
OPEN SPACE AREA ALLOTMENT	0.62 AC

PARCEL 6 TOWNHOME TRACT	
SITE AREA	2.97 AC
NUMBER OF UNITS	53 UNITS
OPEN SPACE AREA ALLOTMENT	0 AC
PARKING PROVIDED	159 SPACES

PARCEL 7 APARTMENT TRACT	
TOTAL SITE AREA	23.98 AC
RESIDENTIAL LAND USE AREA	19.05 AC
OPEN SPACE AREA ALLOTMENT	4.93 AC
NUMBER OF UNITS	304 UNITS
PARKING PROVIDED	611 SPACES

OPEN SPACE PARCEL 'A'	
TOTAL SITE AREA	6.97 AC
OPEN SPACE AREA ALLOTMENT	6.97 AC

OPEN SPACE PARCEL 'B'	
TOTAL SITE AREA	0.54 AC
OPEN SPACE AREA ALLOTMENT	0.54 AC

PROPOSED SETBACKS	
FRONT - ARTERIAL OR COLLECTOR ST.	50'
FRONT - LOCAL STREET	10'
FRONT - INTERNAL STREET	5'
SIDE	10'
REAR	25'
PROPOSED MAXIMUM HEIGHT	60'

LANDSCAPE STRIPS	
ADJACENT TO PUBLIC STREET R/W	10'

LANDSCAPE BUFFERS	
BETWEEN SINGLE FAMILY & COMMERCIAL	50'
BETWEEN SINGLE FAMILY & MULTI-FAMILY	50'

DRI #3700

REV: 7-12-2022
REV: 7-6-2022
REV: 6-17-2022
DATE: 5-12-2022

HARBIN 2

MIXED-USE DEVELOPMENT

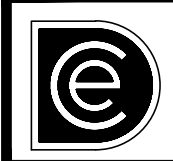
DACULA GEORGIA

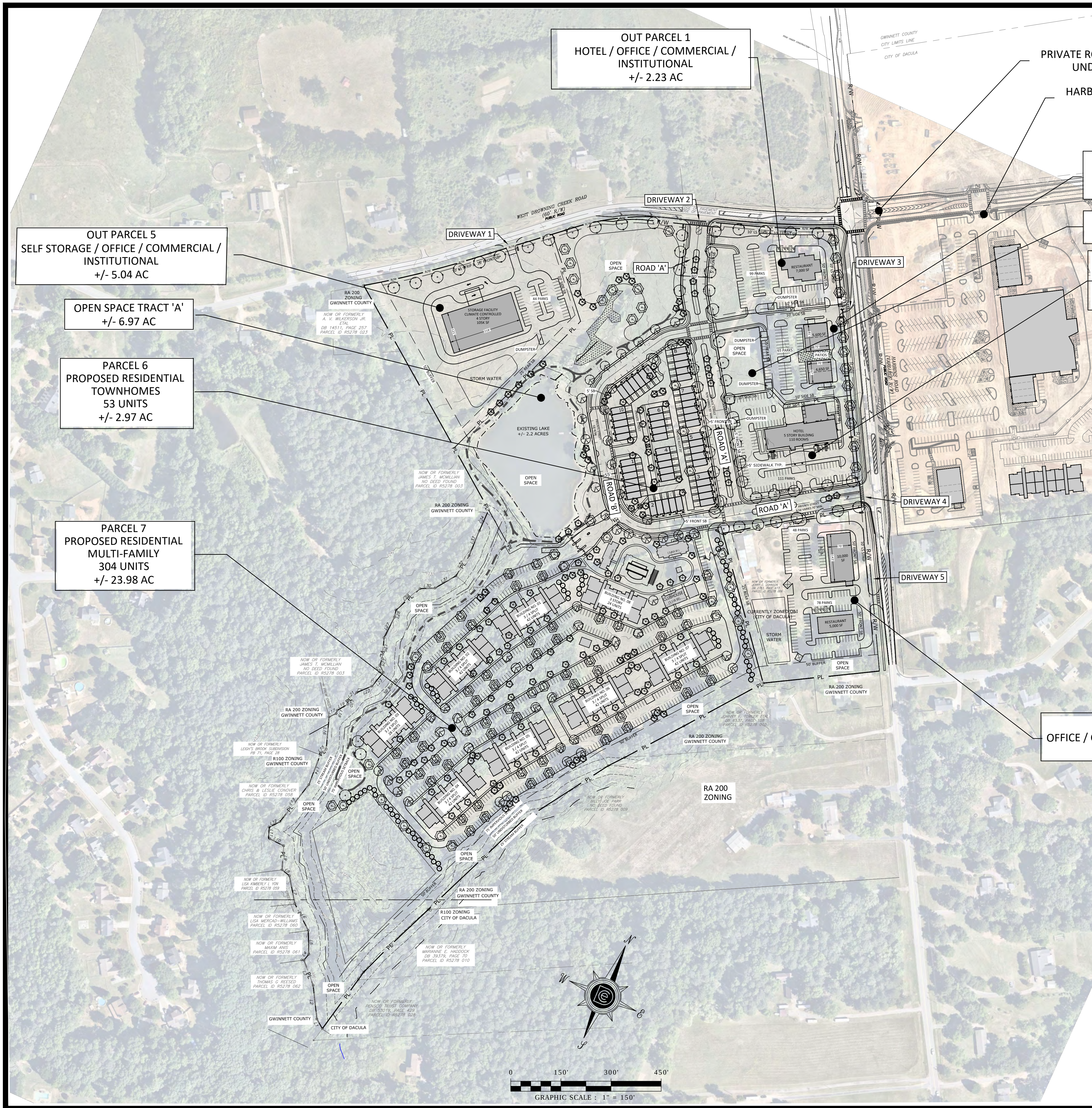
LOCATED IN LAND LOTS 277 & 278, DISTRICT 5, DACULA, GWINNETT COUNTY, GA
OWNER AND/OR DEVELOPER:

WWP ACQUISITION, LLC

1958 MONROE DRIVE NE ATLANTA, GEORGIA 30324, PHONE: 404-872-8666

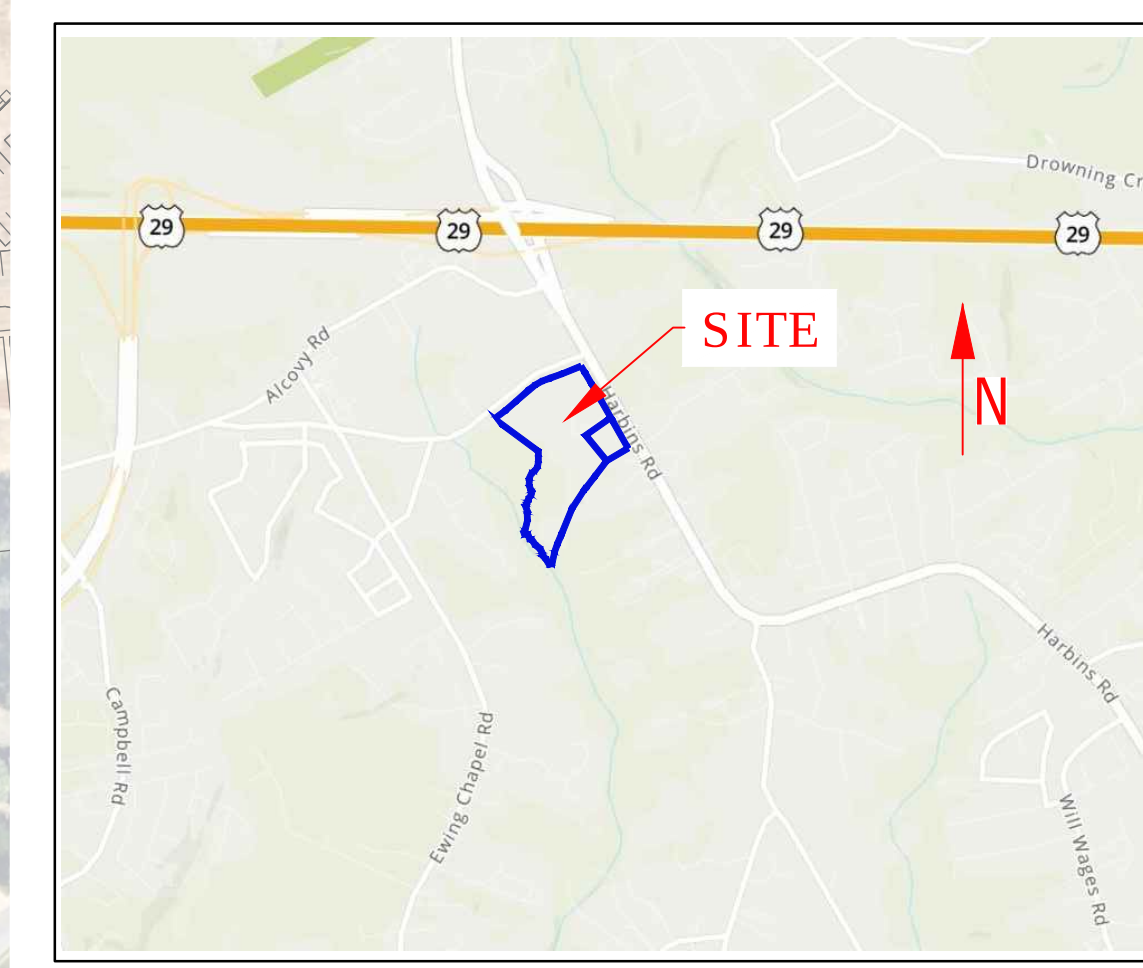
CONCEPTUAL MASTER PLAN

 DOULGERAKIS CONSULTING ENGINEERS, INC.
planning * civil engineering * sanitary engineering
400 Abbey Court, Alpharetta, Georgia 30004, phone: 770-753-9800



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FRONT - INTERNAL STREET	5'
SIDE	10'
REAR	25'
PROPOSED MAXIMUM HEIGHT	60'
LANDSCAPE STRIPS	
ADJACENT TO PUBLIC STREET R/W	10'
LANDSCAPE BUFFERS	
BETWEEN SINGLE FAMILY & COMMERCIAL	50'
BETWEEN SINGLE FAMILY & MULTI-FAMILY	50'



VICINITY MAP

NOT TO SCALE

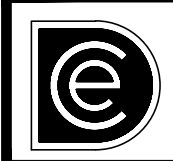
DRI #3700

REV: 7-12-2022
REV: 7-6-2022
REV: 6-17-2022
DATE: 5-12-2022

HARBIN 2 MIXED-USE DEVELOPMENT DACULA GEORGIA

LOCATED IN LAND LOTS 277 & 278, DISTRICT 5, DACULA, GWINNETT COUNTY, GA
OWNER AND/OR DEVELOPER:

WWP ACQUISITION, LLC
1958 MONROE DRIVE NE ATLANTA, GEORGIA 30324, PHONE: 404-872-8666
CONCEPTUAL MASTER PLAN



DOULGERAKIS CONSULTING ENGINEERS, INC.
planning * civil engineering * sanitary engineering
400 Abbey Court, Alpharetta, Georgia 30004, phone: 770-753-9800

NOTES:
1. TRAFFIC CONSULTANT SERVICES PROVIDED BY:
CROY
230 COBB PARKWAY NORTH
BLDG 400, SUITE 413
MARIETTA, GA 30062
770-971-5407



APPENDIX B

TRAFFIC VOLUME COUNTS

Greater Traffic Company

File Name : 01
 Site Code :
 Start Date : 8/16/2022
 Page No : 1

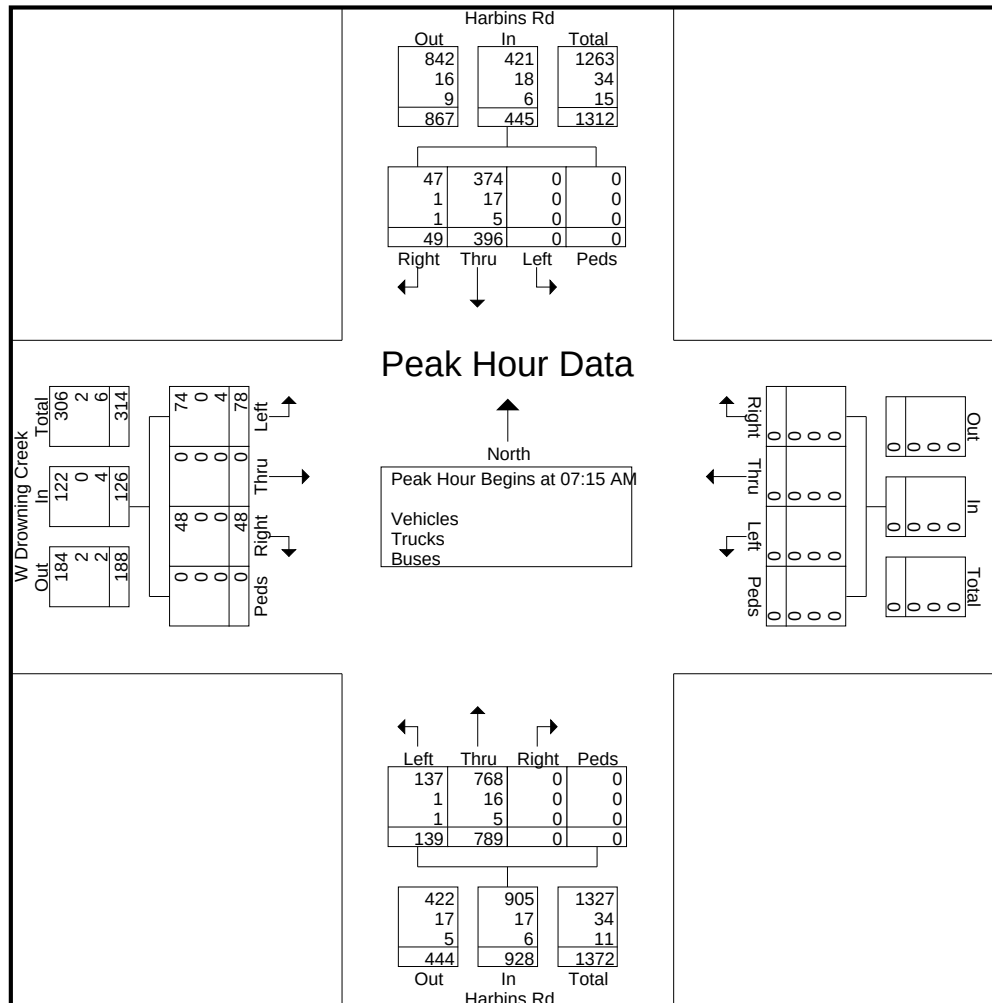
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Harbins Rd Southbound					W Drowning Creek Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	43	178	0	0	221	0	63	10	0	73	9	0	6	0	15	0	0	0	0	0	309
07:15 AM	49	204	0	0	253	0	101	8	0	109	16	0	9	0	25	0	0	0	0	0	387
07:30 AM	40	198	0	0	238	0	85	5	0	90	18	0	17	0	35	0	0	0	0	0	363
07:45 AM	32	208	0	0	240	0	100	24	0	124	18	0	8	0	26	0	0	0	0	0	390
Total	164	788	0	0	952	0	349	47	0	396	61	0	40	0	101	0	0	0	0	0	1449
08:00 AM	18	179	0	0	197	0	110	12	0	122	26	0	14	0	40	0	0	0	0	0	359
08:15 AM	19	173	0	0	192	0	98	12	0	110	15	0	4	0	19	0	0	0	0	0	321
08:30 AM	21	139	0	0	160	0	70	8	0	78	18	0	6	0	24	0	0	0	0	0	262
08:45 AM	17	132	0	0	149	0	66	7	0	73	19	0	4	0	23	0	0	0	0	0	245
Total	75	623	0	0	698	0	344	39	0	383	78	0	28	0	106	0	0	0	0	0	1187
*** BREAK ***																					
04:00 PM	8	100	0	0	108	0	182	15	0	197	6	0	16	0	22	0	0	0	0	0	327
04:15 PM	5	114	0	0	119	0	220	16	0	236	10	0	15	0	25	0	0	0	0	0	380
04:30 PM	10	125	0	0	135	0	225	20	0	245	13	0	21	0	34	0	0	0	0	0	414
04:45 PM	13	103	0	0	116	0	221	18	0	239	13	0	15	0	28	0	0	0	0	0	383
Total	36	442	0	0	478	0	848	69	0	917	42	0	67	0	109	0	0	0	0	0	1504
05:00 PM	8	129	0	0	137	0	210	15	0	225	8	0	19	0	27	0	0	0	0	0	389
05:15 PM	12	137	0	0	149	0	241	10	0	251	14	0	22	0	36	0	0	0	0	0	436
05:30 PM	12	125	0	0	137	0	247	19	0	266	13	0	23	0	36	0	0	0	0	0	439
05:45 PM	11	152	0	0	163	0	245	22	0	267	14	0	16	0	30	0	0	0	0	0	460
Total	43	543	0	0	586	0	943	66	0	1009	49	0	80	0	129	0	0	0	0	0	1724
Grand Total	318	2396	0	0	2714	0	2484	221	0	2705	230	0	215	0	445	0	0	0	0	0	5864
Apprch %	11.7	88.3	0	0		0	91.8	8.2	0		51.7	0	48.3	0		0	0	0	0		
Total %	5.4	40.9	0	0	46.3	0	42.4	3.8	0	46.1	3.9	0	3.7	0	7.6	0	0	0	0	0	
Vehicles	313	2293	0	0	2606	0	2396	218	0	2614	215	0	212	0	427	0	0	0	0	0	5647
% Vehicles	98.4	95.7	0	0	96	0	96.5	98.6	0	96.6	93.5	0	98.6	0	96	0	0	0	0	0	96.3
Trucks	3	78	0	0	81	0	74	2	0	76	3	0	3	0	6	0	0	0	0	0	163
% Trucks	0.9	3.3	0	0	3	0	3	0.9	0	2.8	1.3	0	1.4	0	1.3	0	0	0	0	0	2.8
Buses	2	25	0	0	27	0	14	1	0	15	12	0	0	0	12	0	0	0	0	0	54
% Buses	0.6	1	0	0	1	0	0.6	0.5	0	0.6	5.2	0	0	0	2.7	0	0	0	0	0	0.9

Greater Traffic Company

File Name : 01
 Site Code :
 Start Date : 8/16/2022
 Page No : 2

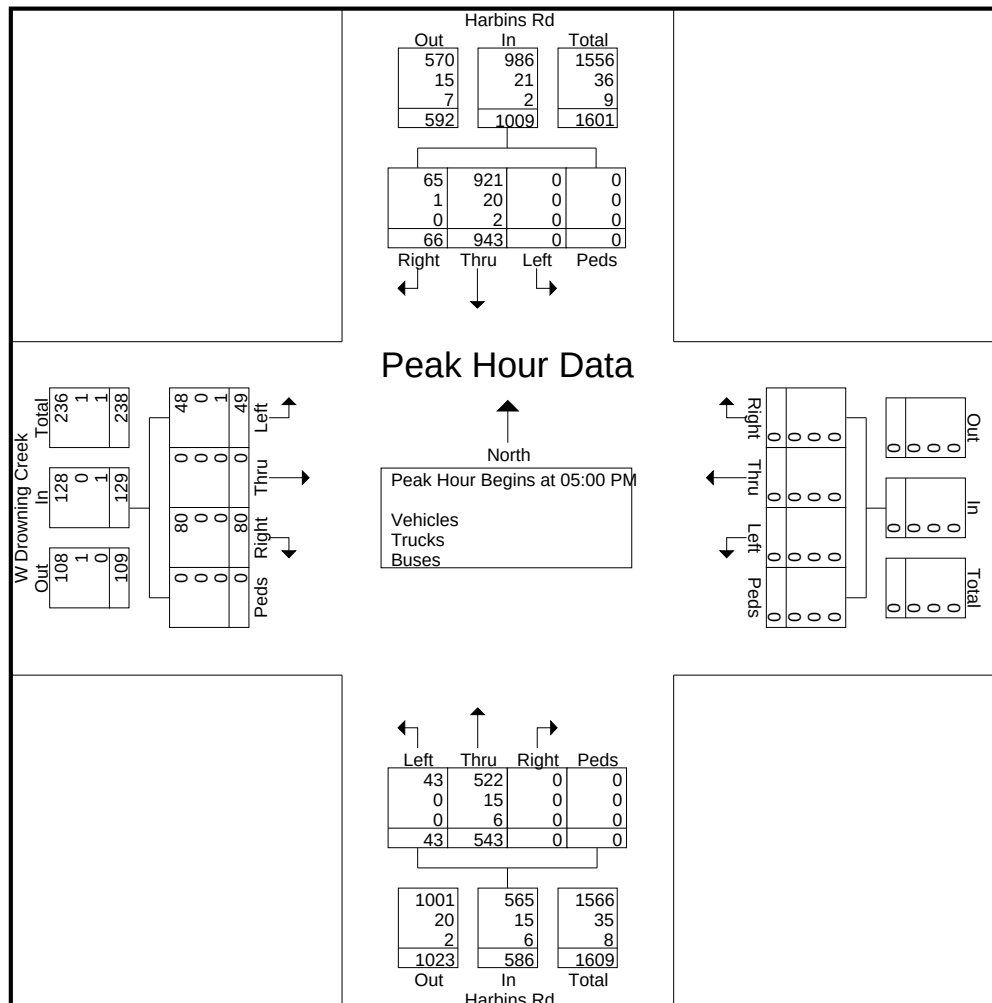
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Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	49	204	0	0	253	0	101	8	0	109	16	0	9	0	25	0	0	0	0	0	387
07:30 AM	40	198	0	0	238	0	85	5	0	90	18	0	17	0	35	0	0	0	0	0	363
07:45 AM	32	208	0	0	240	0	100	24	0	124	18	0	8	0	26	0	0	0	0	0	390
08:00 AM	18	179	0	0	197	0	110	12	0	122	26	0	14	0	40	0	0	0	0	0	359
Total Volume	139	789	0	0	928	0	396	49	0	445	78	0	48	0	126	0	0	0	0	0	1499
% App. Total	15	85	0	0		0	89	11	0		61.9	0	38.1	0		0	0	0	0		
PHF	.709	.948	.000	.000	.917	.000	.900	.510	.000	.897	.750	.000	.706	.000	.788	.000	.000	.000	.000	.000	.961
Vehicles	137	768	0	0	905	0	374	47	0	421	74	0	48	0	122	0	0	0	0	0	1448
% Vehicles																					
Trucks	1	16	0	0	17	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0	35
% Trucks	0.7	2.0	0	0	1.8	0	4.3	2.0	0	4.0	0	0	0	0	0	0	0	0	0	0	2.3
Buses	1	5	0	0	6	0	5	1	0	6	4	0	0	0	4	0	0	0	0	0	16
% Buses	0.7	0.6	0	0	0.6	0	1.3	2.0	0	1.3	5.1	0	0	0	3.2	0	0	0	0	0	1.1



Greater Traffic Company

File Name : 01
 Site Code :
 Start Date : 8/16/2022
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	Harbins Rd Northbound					Harbins Rd Southbound					W Drowning Creek Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	129	0	0	137	0	210	15	0	225	8	0	19	0	27	0	0	0	0	0	389
05:15 PM	12	137	0	0	149	0	241	10	0	251	14	0	22	0	36	0	0	0	0	0	436
05:30 PM	12	125	0	0	137	0	247	19	0	266	13	0	23	0	36	0	0	0	0	0	439
05:45 PM	11	152	0	0	163	0	245	22	0	267	14	0	16	0	30	0	0	0	0	0	460
Total Volume	43	543	0	0	586	0	943	66	0	1009	49	0	80	0	129	0	0	0	0	0	1724
% App. Total	7.3	92.7	0	0		0	93.5	6.5	0		38	0	62	0		0	0	0	0	0	
PHF	.896	.893	.000	.000	.899	.000	.954	.750	.000	.945	.875	.000	.870	.000	.896	.000	.000	.000	.000	.000	.937
Vehicles	43	522	0	0	565	0	921	65	0	986	48	0	80	0	128	0	0	0	0	0	1679
% Vehicles																					
Trucks	0	15	0	0	15	0	20	1	0	21	0	0	0	0	0	0	0	0	0	0	36
% Trucks	0	2.8	0	0	2.6	0	2.1	1.5	0	2.1	0	0	0	0	0	0	0	0	0	0	2.1
Buses	0	6	0	0	6	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	9
% Buses	0	1.1	0	0	1.0	0	0.2	0	0	0.2	2.0	0	0	0	0.8	0	0	0	0	0	0.5



Greater Traffic Company

File Name : 05
 Site Code :
 Start Date : 8/16/2022
 Page No : 1

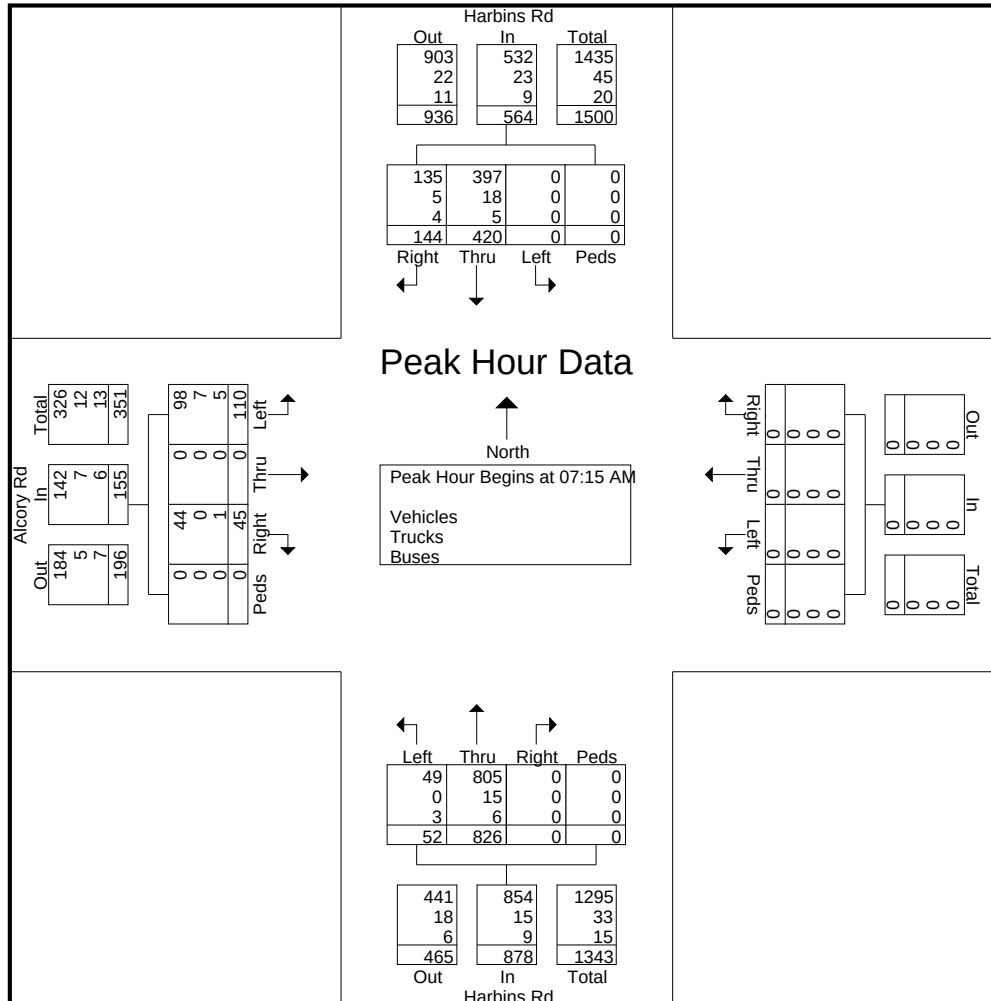
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Harbins Rd Southbound					Alcory Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	13	173	0	0	186	0	66	37	0	103	14	0	8	0	22	0	0	0	0	0	311
07:15 AM	10	211	0	0	221	0	108	44	0	152	29	0	3	0	32	0	0	0	0	0	405
07:30 AM	13	203	0	0	216	0	96	37	0	133	12	0	2	0	14	0	0	0	0	0	363
07:45 AM	21	220	0	0	241	0	96	38	0	134	34	0	22	0	56	0	0	0	0	0	431
Total	57	807	0	0	864	0	366	156	0	522	89	0	35	0	124	0	0	0	0	0	1510
08:00 AM	8	192	0	0	200	0	120	25	0	145	35	0	18	0	53	0	0	0	0	0	398
08:15 AM	15	168	0	0	183	0	95	19	0	114	24	0	5	0	29	0	0	0	0	0	326
08:30 AM	11	165	0	0	176	0	86	8	0	94	20	0	5	0	25	0	0	0	0	0	295
08:45 AM	6	151	0	0	157	0	66	14	0	80	18	0	5	0	23	0	0	0	0	0	260
Total	40	676	0	0	716	0	367	66	0	433	97	0	33	0	130	0	0	0	0	0	1279
*** BREAK ***																					
04:00 PM	5	99	0	0	104	0	182	26	0	208	26	0	10	0	36	0	0	0	0	0	348
04:15 PM	9	130	0	0	139	0	219	23	0	242	22	0	14	0	36	0	0	0	0	0	417
04:30 PM	8	133	0	0	141	0	247	16	0	263	28	0	15	0	43	0	0	0	0	0	447
04:45 PM	6	113	0	0	119	0	231	22	0	253	29	0	18	0	47	0	0	0	0	0	419
Total	28	475	0	0	503	0	879	87	0	966	105	0	57	0	162	0	0	0	0	0	1631
05:00 PM	13	130	0	0	143	0	210	20	0	230	29	0	21	0	50	0	0	0	0	0	423
05:15 PM	10	144	0	0	154	0	234	21	0	255	27	0	18	0	45	0	0	0	0	0	454
05:30 PM	3	140	0	0	143	0	260	21	0	281	34	0	15	0	49	0	0	0	0	0	473
05:45 PM	7	165	0	0	172	0	247	28	0	275	29	0	20	0	49	0	0	0	0	0	496
Total	33	579	0	0	612	0	951	90	0	1041	119	0	74	0	193	0	0	0	0	0	1846
Grand Total	158	2537	0	0	2695	0	2563	399	0	2962	410	0	199	0	609	0	0	0	0	0	6266
Apprch %	5.9	94.1	0	0		0	86.5	13.5	0		67.3	0	32.7	0		0	0	0	0		
Total %	2.5	40.5	0	0	43	0	40.9	6.4	0	47.3	6.5	0	3.2	0	9.7	0	0	0	0	0	
Vehicles	137	2443	0	0	2580	0	2466	341	0	2807	381	0	196	0	577	0	0	0	0	0	5964
% Vehicles	86.7	96.3	0	0	95.7	0	96.2	85.5	0	94.8	92.9	0	98.5	0	94.7	0	0	0	0	0	95.2
Trucks	4	74	0	0	78	0	81	11	0	92	19	0	1	0	20	0	0	0	0	0	190
% Trucks	2.5	2.9	0	0	2.9	0	3.2	2.8	0	3.1	4.6	0	0.5	0	3.3	0	0	0	0	0	3
Buses	17	20	0	0	37	0	16	47	0	63	10	0	2	0	12	0	0	0	0	0	112
% Buses	10.8	0.8	0	0	1.4	0	0.6	11.8	0	2.1	2.4	0	1	0	2	0	0	0	0	0	1.8

Greater Traffic Company

File Name : 05
 Site Code :
 Start Date : 8/16/2022
 Page No : 2

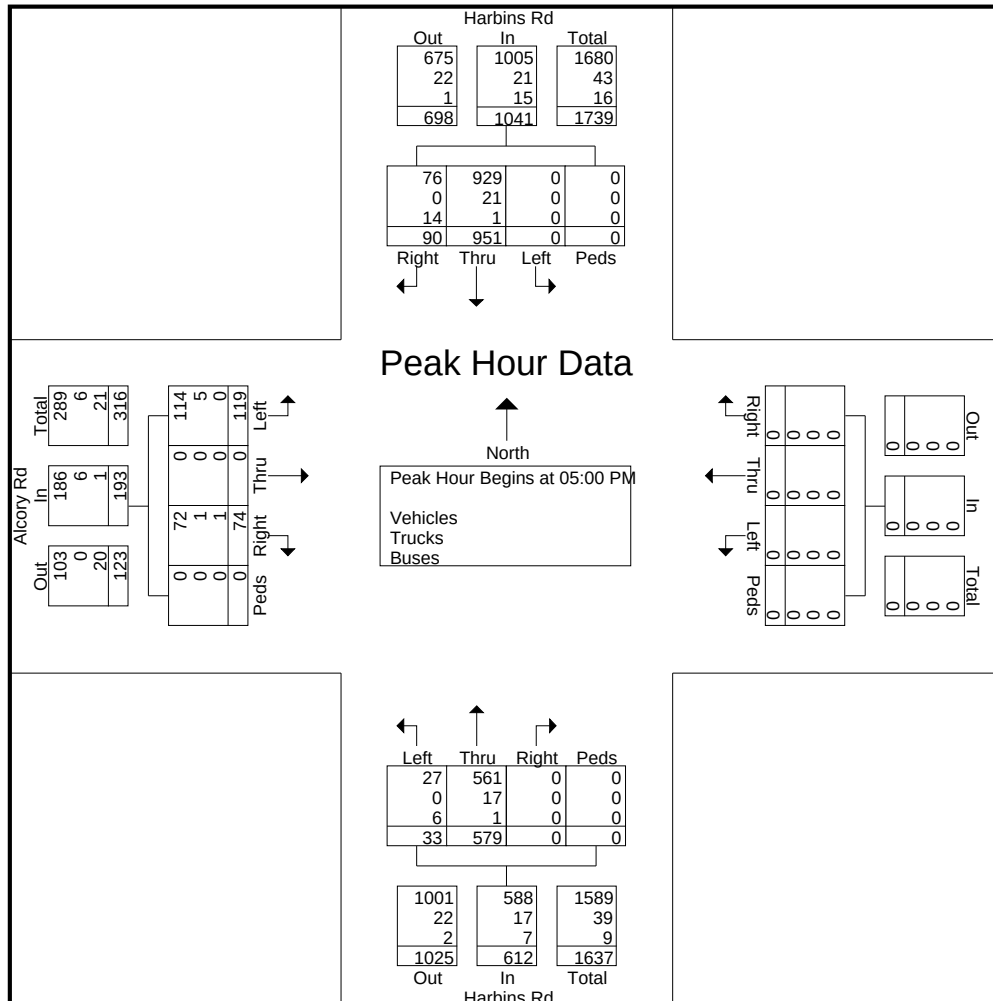
	Harbins Rd Northbound					Harbins Rd Southbound					Alcory Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	10	211	0	0	221	0	108	44	0	152	29	0	3	0	32	0	0	0	0	0	405
07:30 AM	13	203	0	0	216	0	96	37	0	133	12	0	2	0	14	0	0	0	0	0	363
07:45 AM	21	220	0	0	241	0	96	38	0	134	34	0	22	0	56	0	0	0	0	0	431
08:00 AM	8	192	0	0	200	0	120	25	0	145	35	0	18	0	53	0	0	0	0	0	398
Total Volume	52	826	0	0	878	0	420	144	0	564	110	0	45	0	155	0	0	0	0	0	1597
% App. Total	5.9	94.1	0	0		0	74.5	25.5	0		71	0	29	0		0	0	0	0		
PHF	.619	.939	.000	.000	.911	.000	.875	.818	.000	.928	.786	.000	.511	.000	.692	.000	.000	.000	.000	.000	.926
Vehicles	49	805	0	0	854	0	397	135	0	532	98	0	44	0	142	0	0	0	0	0	1528
% Vehicles																					
Trucks	0	15	0	0	15	0	18	5	0	23	7	0	0	0	7	0	0	0	0	0	45
% Trucks	0	1.8	0	0	1.7	0	4.3	3.5	0	4.1	6.4	0	0	0	4.5	0	0	0	0	0	2.8
Buses	3	6	0	0	9	0	5	4	0	9	5	0	1	0	6	0	0	0	0	0	24
% Buses	5.8	0.7	0	0	1.0	0	1.2	2.8	0	1.6	4.5	0	2.2	0	3.9	0	0	0	0	0	1.5



Greater Traffic Company

File Name : 05
 Site Code :
 Start Date : 8/16/2022
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	Harbins Rd Northbound					Harbins Rd Southbound					Alcory Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	130	0	0	143	0	210	20	0	230	29	0	21	0	50	0	0	0	0	0	423
05:15 PM	10	144	0	0	154	0	234	21	0	255	27	0	18	0	45	0	0	0	0	0	454
05:30 PM	3	140	0	0	143	0	260	21	0	281	34	0	15	0	49	0	0	0	0	0	473
05:45 PM	7	165	0	0	172	0	247	28	0	275	29	0	20	0	49	0	0	0	0	0	496
Total Volume	33	579	0	0	612	0	951	90	0	1041	119	0	74	0	193	0	0	0	0	0	1846
% App. Total	5.4	94.6	0	0		0	91.4	8.6	0		61.7	0	38.3	0		0	0	0	0	0	
PHF	.635	.877	.000	.000	.890	.000	.914	.804	.000	.926	.875	.000	.881	.000	.965	.000	.000	.000	.000	.000	.930
Vehicles	27	561	0	0	588	0	929	76	0	1005	114	0	72	0	186	0	0	0	0	0	1779
% Vehicles																					
Trucks	0	17	0	0	17	0	21	0	0	21	5	0	1	0	6	0	0	0	0	0	44
% Trucks	0	2.9	0	0	2.8	0	2.2	0	0	2.0	4.2	0	1.4	0	3.1	0	0	0	0	0	2.4
Buses	6	1	0	0	7	0	1	14	0	15	0	0	1	0	1	0	0	0	0	0	23
% Buses	18.2	0.2	0	0	1.1	0	0.1	15.6	0	1.4	0	0	1.4	0	0.5	0	0	0	0	0	1.2



Greater Traffic Company

File Name : 06
 Site Code :
 Start Date : 8/16/2022
 Page No : 1

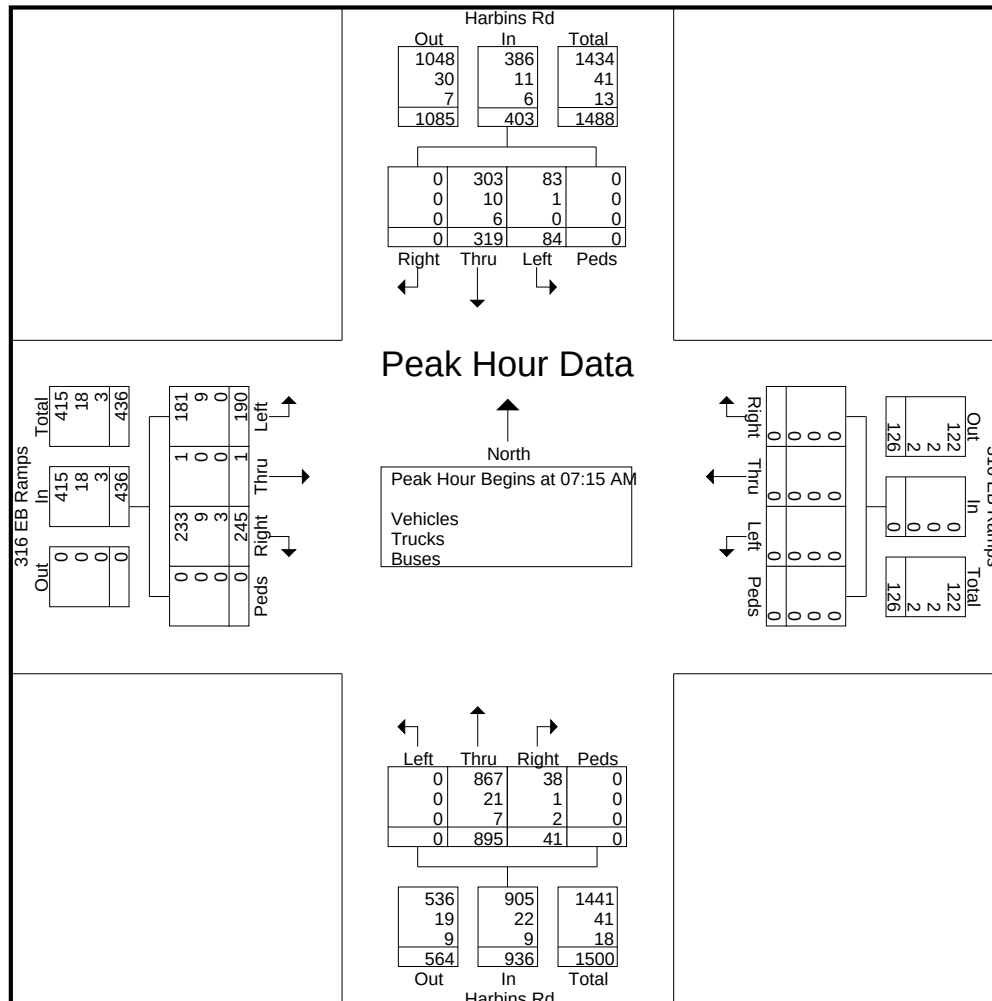
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Harbins Rd Southbound					316 EB Ramps Eastbound					316 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	178	7	0	185	16	66	0	0	82	51	0	37	0	88	0	0	0	0	0	355
07:15 AM	0	232	10	0	242	26	96	0	0	122	43	0	55	0	98	0	0	0	0	0	462
07:30 AM	0	212	8	0	220	15	64	0	0	79	45	0	70	0	115	0	0	0	0	0	414
07:45 AM	0	226	13	0	239	27	74	0	0	101	55	1	61	0	117	0	0	0	0	0	457
Total	0	848	38	0	886	84	300	0	0	384	194	1	223	0	418	0	0	0	0	0	1688
08:00 AM	0	225	10	0	235	16	85	0	0	101	47	0	59	0	106	0	0	0	0	0	442
08:15 AM	0	185	3	0	188	23	62	0	0	85	53	0	53	0	106	0	0	0	0	0	379
08:30 AM	0	182	8	0	190	18	56	0	0	74	52	0	38	0	90	0	0	0	0	0	354
08:45 AM	0	148	8	0	156	19	44	0	0	63	40	1	35	0	76	0	0	0	0	0	295
Total	0	740	29	0	769	76	247	0	0	323	192	1	185	0	378	0	0	0	0	0	1470
*** BREAK ***																					
04:00 PM	0	116	11	0	127	29	112	0	0	141	56	0	95	0	151	0	0	0	0	0	419
04:15 PM	0	135	14	0	149	32	130	0	0	162	68	0	113	0	181	0	0	0	0	0	492
04:30 PM	0	147	16	0	163	38	145	0	0	183	61	1	120	0	182	0	0	0	0	0	528
04:45 PM	0	118	15	0	133	36	124	0	0	160	61	1	128	0	190	0	0	0	0	0	483
Total	0	516	56	0	572	135	511	0	0	646	246	2	456	0	704	0	0	0	0	0	1922
05:00 PM	0	153	13	0	166	22	118	0	0	140	67	0	111	0	178	0	0	0	0	0	484
05:15 PM	0	154	10	0	164	36	124	0	0	160	96	0	137	0	233	0	0	0	0	0	557
05:30 PM	0	154	22	0	176	31	142	0	0	173	83	0	134	0	217	0	0	0	0	0	566
05:45 PM	0	180	8	0	188	27	147	0	0	174	78	0	132	0	210	0	0	0	0	0	572
Total	0	641	53	0	694	116	531	0	0	647	324	0	514	0	838	0	0	0	0	0	2179
Grand Total	0	2745	176	0	2921	411	1589	0	0	2000	956	4	1378	0	2338	0	0	0	0	0	7259
Apprch %	0	94	6	0		20.5	79.4	0	0		40.9	0.2	58.9	0		0	0	0	0		
Total %	0	37.8	2.4	0	40.2	5.7	21.9	0	0	27.6	13.2	0.1	19	0	32.2	0	0	0	0	0	
Vehicles	0	2635	167	0	2802	404	1501	0	0	1905	920	4	1318	0	2242	0	0	0	0	0	6949
% Vehicles	0	96	94.9	0	95.9	98.3	94.5	0	0	95.2	96.2	100	95.6	0	95.9	0	0	0	0	0	95.7
Trucks	0	89	3	0	92	6	33	0	0	39	25	0	51	0	76	0	0	0	0	0	207
% Trucks	0	3.2	1.7	0	3.1	1.5	2.1	0	0	2	2.6	0	3.7	0	3.3	0	0	0	0	0	2.9
Buses	0	21	6	0	27	1	55	0	0	56	11	0	9	0	20	0	0	0	0	0	103
% Buses	0	0.8	3.4	0	0.9	0.2	3.5	0	0	2.8	1.2	0	0.7	0	0.9	0	0	0	0	0	1.4

Greater Traffic Company

File Name : 06
 Site Code :
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 Page No : 2

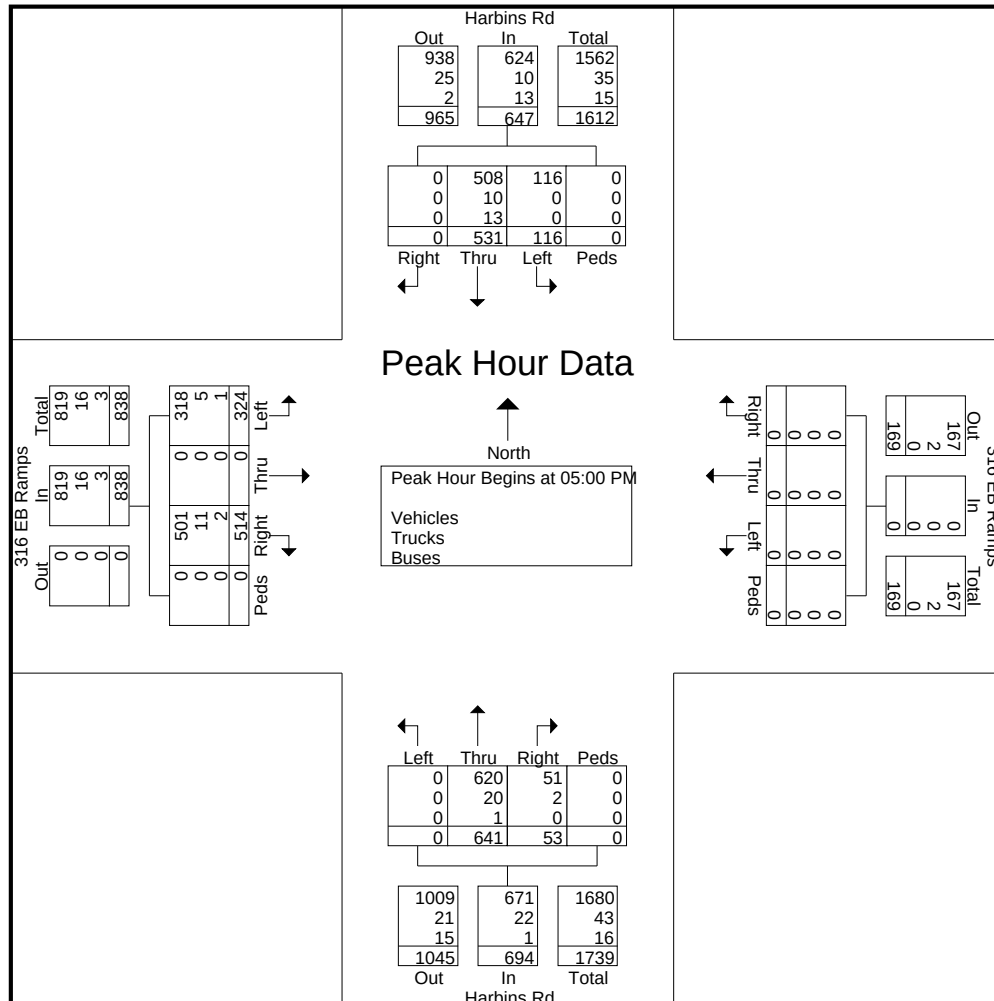
	Harbins Rd Northbound					Harbins Rd Southbound					316 EB Ramps Eastbound					316 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	232	10	0	242	26	96	0	0	122	43	0	55	0	98	0	0	0	0	0	462
07:30 AM	0	212	8	0	220	15	64	0	0	79	45	0	70	0	115	0	0	0	0	0	414
07:45 AM	0	226	13	0	239	27	74	0	0	101	55	1	61	0	117	0	0	0	0	0	457
08:00 AM	0	225	10	0	235	16	85	0	0	101	47	0	59	0	106	0	0	0	0	0	442
Total Volume	0	895	41	0	936	84	319	0	0	403	190	1	245	0	436	0	0	0	0	0	1775
% App. Total	0	95.6	4.4	0		20.8	79.2	0	0		43.6	0.2	56.2	0		0	0	0	0		
PHF	.000	.964	.788	.000	.967	.778	.831	.000	.000	.826	.864	.250	.875	.000	.932	.000	.000	.000	.000	.000	.960
Vehicles	0	867	38	0	905	83	303	0	0	386	181	1	233	0	415	0	0	0	0	0	1706
% Vehicles																					
Trucks	0	21	1	0	22	1	10	0	0	11	9	0	9	0	18	0	0	0	0	0	51
% Trucks	0	2.3	2.4	0	2.4	1.2	3.1	0	0	2.7	4.7	0	3.7	0	4.1	0	0	0	0	0	2.9
Buses	0	7	2	0	9	0	6	0	0	6	0	0	3	0	3	0	0	0	0	0	18
% Buses	0	0.8	4.9	0	1.0	0	1.9	0	0	1.5	0	0	1.2	0	0.7	0	0	0	0	0	1.0



Greater Traffic Company

File Name : 06
 Site Code :
 Start Date : 8/16/2022
 Page No : 3

	Harbins Rd Northbound					Harbins Rd Southbound					316 EB Ramps Eastbound					316 EB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	153	13	0	166	22	118	0	0	140	67	0	111	0	178	0	0	0	0	0	484
05:15 PM	0	154	10	0	164	36	124	0	0	160	96	0	137	0	233	0	0	0	0	0	557
05:30 PM	0	154	22	0	176	31	142	0	0	173	83	0	134	0	217	0	0	0	0	0	566
05:45 PM	0	180	8	0	188	27	147	0	0	174	78	0	132	0	210	0	0	0	0	0	572
Total Volume	0	641	53	0	694	116	531	0	0	647	324	0	514	0	838	0	0	0	0	0	2179
% App. Total	0	92.4	7.6	0		17.9	82.1	0	0		38.7	0	61.3	0		0	0	0	0	0	
PHF	.000	.890	.602	.000	.923	.806	.903	.000	.000	.930	.844	.000	.938	.000	.899	.000	.000	.000	.000	.000	.952
Vehicles	0	620	51	0	671	116	508	0	0	624	318	0	501	0	819	0	0	0	0	0	2114
% Vehicles																					
Trucks	0	20	2	0	22	0	10	0	0	10	5	0	11	0	16	0	0	0	0	0	48
% Trucks	0	3.1	3.8	0	3.2	0	1.9	0	0	1.5	1.5	0	2.1	0	1.9	0	0	0	0	0	2.2
Buses	0	1	0	0	1	0	13	0	0	13	1	0	2	0	3	0	0	0	0	0	17
% Buses	0	0.2	0	0	0.1	0	2.4	0	0	2.0	0.3	0	0.4	0	0.4	0	0	0	0	0	0.8



Greater Traffic Company

File Name : 07
 Site Code :
 Start Date : 8/16/2022
 Page No : 1

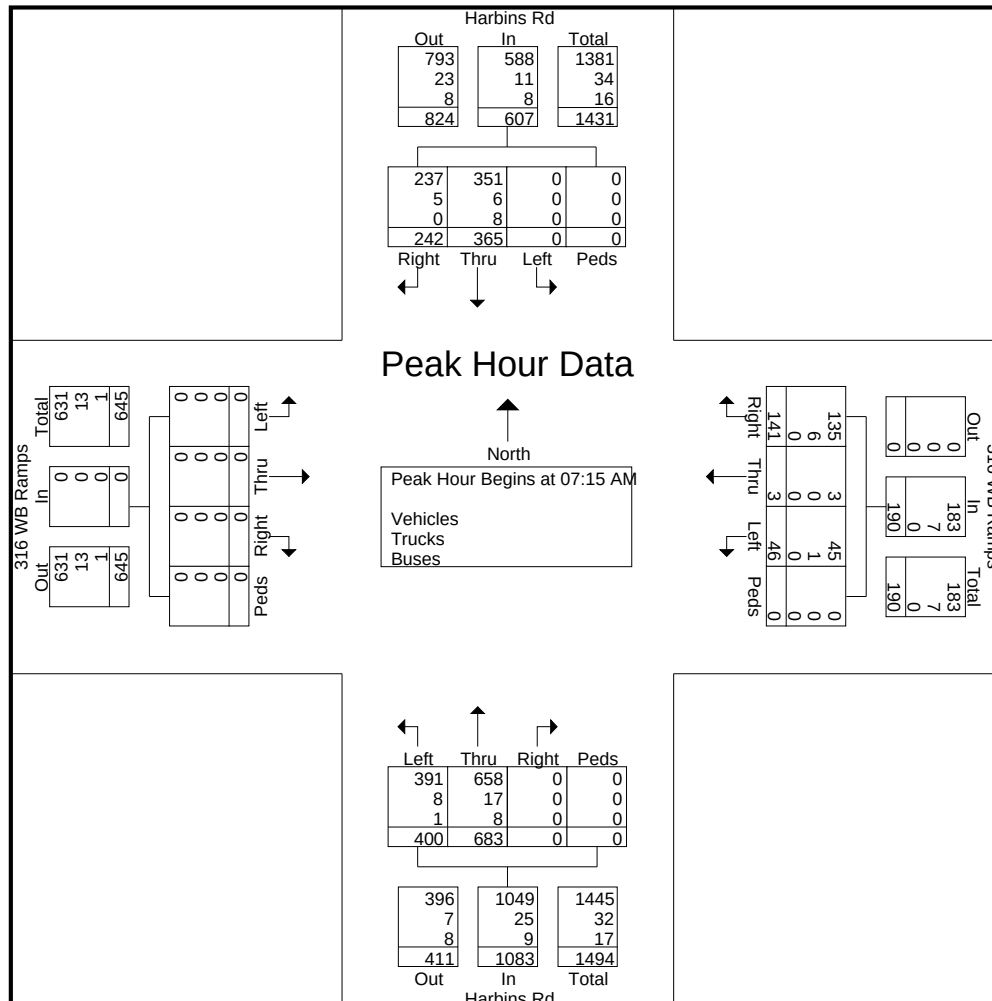
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Harbins Rd Southbound					316 WB Ramps Eastbound					316 WB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	106	142	0	0	248	0	59	66	0	125	0	0	0	0	0	6	0	29	0	35	408
07:15 AM	107	156	0	0	263	0	114	62	0	176	0	0	0	0	0	15	0	37	0	52	491
07:30 AM	95	168	0	0	263	0	73	63	0	136	0	0	0	0	0	14	1	37	0	52	451
07:45 AM	94	178	0	0	272	0	77	62	0	139	0	0	0	0	0	13	2	35	0	50	461
Total	402	644	0	0	1046	0	323	253	0	576	0	0	0	0	0	48	3	138	0	189	1811
08:00 AM	104	181	0	0	285	0	101	55	0	156	0	0	0	0	0	4	0	32	0	36	477
08:15 AM	91	155	0	0	246	0	82	52	0	134	0	0	0	0	0	4	0	24	0	28	408
08:30 AM	66	151	0	0	217	0	65	72	0	137	0	0	0	0	0	5	0	39	0	44	398
08:45 AM	69	152	0	0	221	0	71	55	0	126	0	0	0	0	0	2	0	25	0	27	374
Total	330	639	0	0	969	0	319	234	0	553	0	0	0	0	0	15	0	120	0	135	1657
*** BREAK ***																					
04:00 PM	54	120	0	0	174	0	142	40	0	182	0	0	0	0	0	6	2	14	0	22	378
04:15 PM	55	149	0	0	204	0	145	44	0	189	0	0	0	0	0	4	0	20	0	24	417
04:30 PM	58	129	0	0	187	0	180	69	0	249	0	0	0	0	0	1	0	32	0	33	469
04:45 PM	38	151	0	0	189	0	147	47	0	194	0	0	0	0	0	10	0	34	0	44	427
Total	205	549	0	0	754	0	614	200	0	814	0	0	0	0	0	21	2	100	0	123	1691
05:00 PM	49	165	0	0	214	0	135	51	0	186	0	0	0	0	0	11	0	31	0	42	442
05:15 PM	50	187	0	0	237	0	150	66	0	216	0	0	0	0	0	5	1	42	0	48	501
05:30 PM	56	200	0	0	256	0	171	49	0	220	0	0	0	0	0	5	0	40	0	45	521
05:45 PM	67	184	0	0	251	0	155	49	0	204	0	0	0	0	0	12	0	31	0	43	498
Total	222	736	0	0	958	0	611	215	0	826	0	0	0	0	0	33	1	144	0	178	1962
Grand Total	1159	2568	0	0	3727	0	1867	902	0	2769	0	0	0	0	0	117	6	502	0	625	7121
Apprch %	31.1	68.9	0	0		0	67.4	32.6	0		0	0	0	0		18.7	1	80.3	0		
Total %	16.3	36.1	0	0	52.3	0	26.2	12.7	0	38.9	0	0	0	0	0	1.6	0.1	7	0	8.8	
Vehicles	1113	2472	0	0	3585	0	1781	873	0	2654	0	0	0	0	0	114	6	485	0	605	6844
% Vehicles	96	96.3	0	0	96.2	0	95.4	96.8	0	95.8	0	0	0	0	0	97.4	100	96.6	0	96.8	96.1
Trucks	43	62	0	0	105	0	32	25	0	57	0	0	0	0	0	3	0	17	0	20	182
% Trucks	3.7	2.4	0	0	2.8	0	1.7	2.8	0	2.1	0	0	0	0	0	2.6	0	3.4	0	3.2	2.6
Buses	3	34	0	0	37	0	54	4	0	58	0	0	0	0	0	0	0	0	0	0	95
% Buses	0.3	1.3	0	0	1	0	2.9	0.4	0	2.1	0	0	0	0	0	0	0	0	0	0	1.3

Greater Traffic Company

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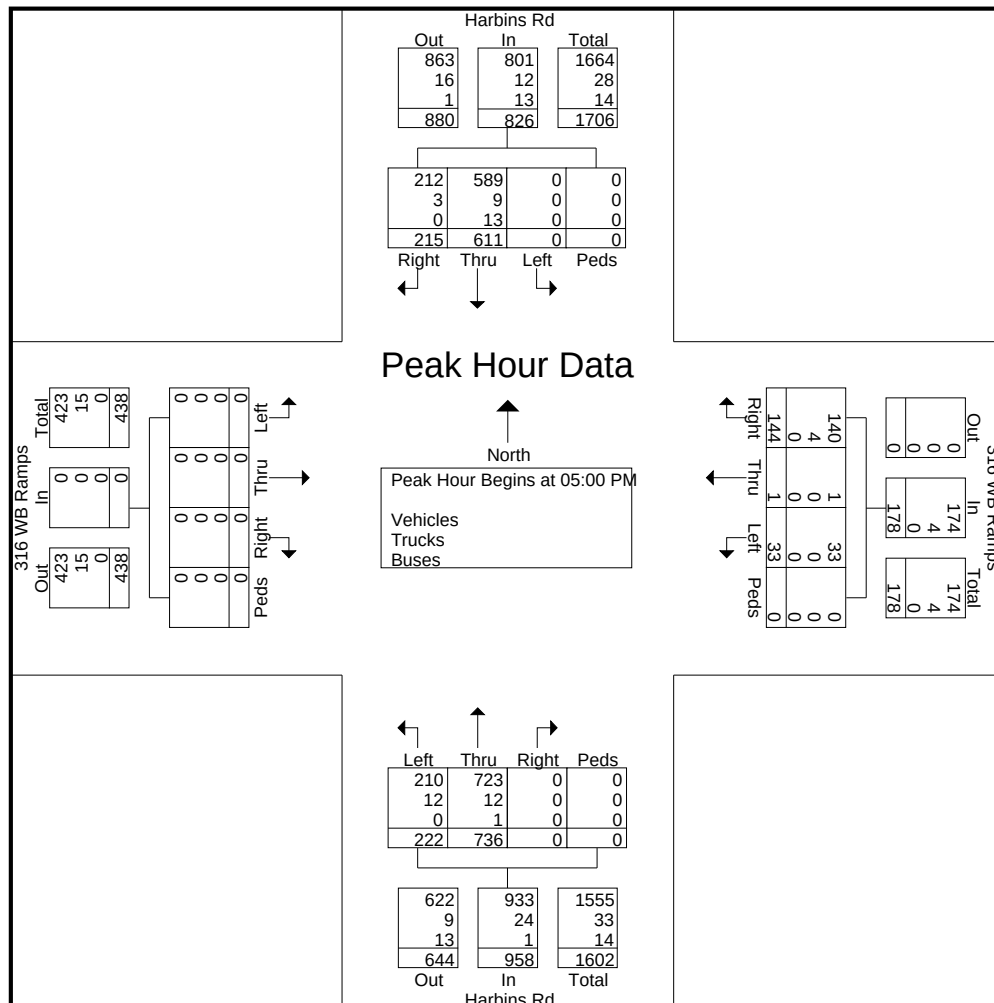
	Harbins Rd Northbound					Harbins Rd Southbound					316 WB Ramps Eastbound					316 WB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	107	156	0	0	263	0	114	62	0	176	0	0	0	0	0	15	0	37	0	52	491
07:30 AM	95	168	0	0	263	0	73	63	0	136	0	0	0	0	0	14	1	37	0	52	451
07:45 AM	94	178	0	0	272	0	77	62	0	139	0	0	0	0	0	13	2	35	0	50	461
08:00 AM	104	181	0	0	285	0	101	55	0	156	0	0	0	0	0	4	0	32	0	36	477
Total Volume	400	683	0	0	1083	0	365	242	0	607	0	0	0	0	0	46	3	141	0	190	1880
% App. Total	36.9	63.1	0	0		0	60.1	39.9	0		0	0	0	0		24.2	1.6	74.2	0		
PHF	.935	.943	.000	.000	.950	.000	.800	.960	.000	.862	.000	.000	.000	.000	.000	.767	.375	.953	.000	.913	.957
Vehicles	391	658	0	0	1049	0	351	237	0	588	0	0	0	0	0	45	3	135	0	183	1820
% Vehicles																					
Trucks	8	17	0	0	25	0	6	5	0	11	0	0	0	0	0	1	0	6	0	7	43
% Trucks	2.0	2.5	0	0	2.3	0	1.6	2.1	0	1.8	0	0	0	0	0	2.2	0	4.3	0	3.7	2.3
Buses	1	8	0	0	9	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	17
% Buses	0.3	1.2	0	0	0.8	0	2.2	0	0	1.3	0	0	0	0	0	0	0	0	0	0	0.9



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	Harbins Rd Northbound					Harbins Rd Southbound					316 WB Ramps Eastbound					316 WB Ramps Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	49	165	0	0	214	0	135	51	0	186	0	0	0	0	0	11	0	31	0	42	442
05:15 PM	50	187	0	0	237	0	150	66	0	216	0	0	0	0	0	5	1	42	0	48	501
05:30 PM	56	200	0	0	256	0	171	49	0	220	0	0	0	0	0	5	0	40	0	45	521
05:45 PM	67	184	0	0	251	0	155	49	0	204	0	0	0	0	0	12	0	31	0	43	498
Total Volume	222	736	0	0	958	0	611	215	0	826	0	0	0	0	0	33	1	144	0	178	1962
% App. Total	23.2	76.8	0	0		0	74	26	0		0	0	0	0	0	18.5	0.6	80.9	0		
PHF	.828	.920	.000	.000	.936	.000	.893	.814	.000	.939	.000	.000	.000	.000	.000	.688	.250	.857	.000	.927	.941
Vehicles	210	723	0	0	933	0	589	212	0	801	0	0	0	0	0	33	1	140	0	174	1908
% Vehicles																					
Trucks	12	12	0	0	24	0	9	3	0	12	0	0	0	0	0	0	0	4	0	4	40
% Trucks	5.4	1.6	0	0	2.5	0	1.5	1.4	0	1.5	0	0	0	0	0	0	0	2.8	0	2.2	2.0
Buses	0	1	0	0	1	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	14
% Buses	0	0.1	0	0	0.1	0	2.1	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0.7



Greater Traffic Company

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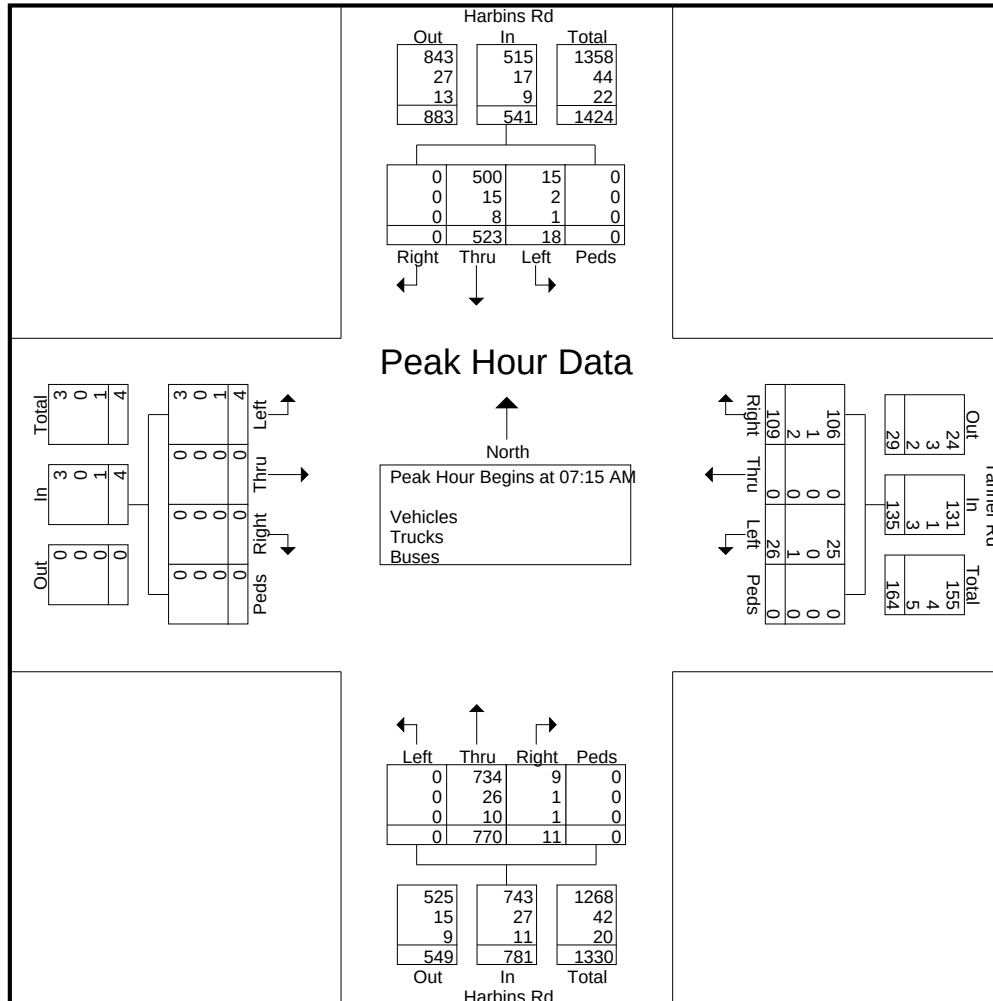
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Harbins Rd Southbound					Eastbound					Tanner Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	150	4	0	154	3	108	0	0	111	1	0	0	0	1	8	0	25	0	33	299
07:15 AM	0	206	2	0	208	8	130	0	0	138	2	0	0	0	2	11	0	26	0	37	385
07:30 AM	0	171	2	0	173	4	115	0	0	119	1	0	0	0	1	8	0	25	0	33	326
07:45 AM	0	199	3	0	202	1	139	0	0	140	0	0	0	0	0	5	0	25	0	30	372
Total	0	726	11	0	737	16	492	0	0	508	4	0	0	0	4	32	0	101	0	133	1382
08:00 AM	0	194	4	0	198	5	139	0	0	144	1	0	0	0	1	2	0	33	0	35	378
08:15 AM	0	165	1	0	166	3	122	0	0	125	0	0	0	0	0	8	0	22	0	30	321
08:30 AM	0	170	5	0	175	10	133	0	0	143	2	0	2	0	4	6	0	28	0	34	356
08:45 AM	0	174	3	0	177	13	94	0	0	107	2	2	0	0	4	7	0	17	0	24	312
Total	0	703	13	0	716	31	488	0	0	519	5	2	2	0	9	23	0	100	0	123	1367
*** BREAK ***																					
04:00 PM	0	133	9	0	142	18	127	0	0	145	0	1	0	0	1	4	0	12	0	16	304
04:15 PM	0	148	6	0	154	13	160	0	0	173	1	0	0	0	1	12	0	16	0	28	356
04:30 PM	0	157	10	0	167	17	202	0	0	219	1	1	2	0	4	7	0	14	0	21	411
04:45 PM	0	160	9	0	169	19	170	0	0	189	0	0	2	0	2	6	0	13	0	19	379
Total	0	598	34	0	632	67	659	0	0	726	2	2	4	0	8	29	0	55	0	84	1450
05:00 PM	0	173	8	0	181	17	161	0	0	178	2	0	0	0	2	10	0	15	0	25	386
05:15 PM	0	217	4	0	221	14	182	0	0	196	1	0	1	0	2	10	0	20	0	30	449
05:30 PM	0	198	7	0	205	17	171	0	0	188	1	0	1	0	2	4	0	13	0	17	412
05:45 PM	0	208	12	0	220	10	174	0	0	184	0	0	1	0	1	7	0	11	0	18	423
Total	0	796	31	0	827	58	688	0	0	746	4	0	3	0	7	31	0	59	0	90	1670
Grand Total	0	2823	89	0	2912	172	2327	0	0	2499	15	4	9	0	28	115	0	315	0	430	5869
Apprch %	0	96.9	3.1	0		6.9	93.1	0	0		53.6	14.3	32.1	0		26.7	0	73.3	0		
Total %	0	48.1	1.5	0	49.6	2.9	39.6	0	0	42.6	0.3	0.1	0.2	0	0.5	2	0	5.4	0	7.3	
Vehicles	0	2707	86	0	2793	161	2204	0	0	2365	14	1	9	0	24	109	0	305	0	414	5596
% Vehicles	0	95.9	96.6	0	95.9	93.6	94.7	0	0	94.6	93.3	25	100	0	85.7	94.8	0	96.8	0	96.3	95.3
Trucks	0	79	1	0	80	8	61	0	0	69	0	2	0	0	2	3	0	4	0	7	158
% Trucks	0	2.8	1.1	0	2.7	4.7	2.6	0	0	2.8	0	50	0	0	7.1	2.6	0	1.3	0	1.6	2.7
Buses	0	37	2	0	39	3	62	0	0	65	1	1	0	0	2	3	0	6	0	9	115
% Buses	0	1.3	2.2	0	1.3	1.7	2.7	0	0	2.6	6.7	25	0	0	7.1	2.6	0	1.9	0	2.1	2

Greater Traffic Company

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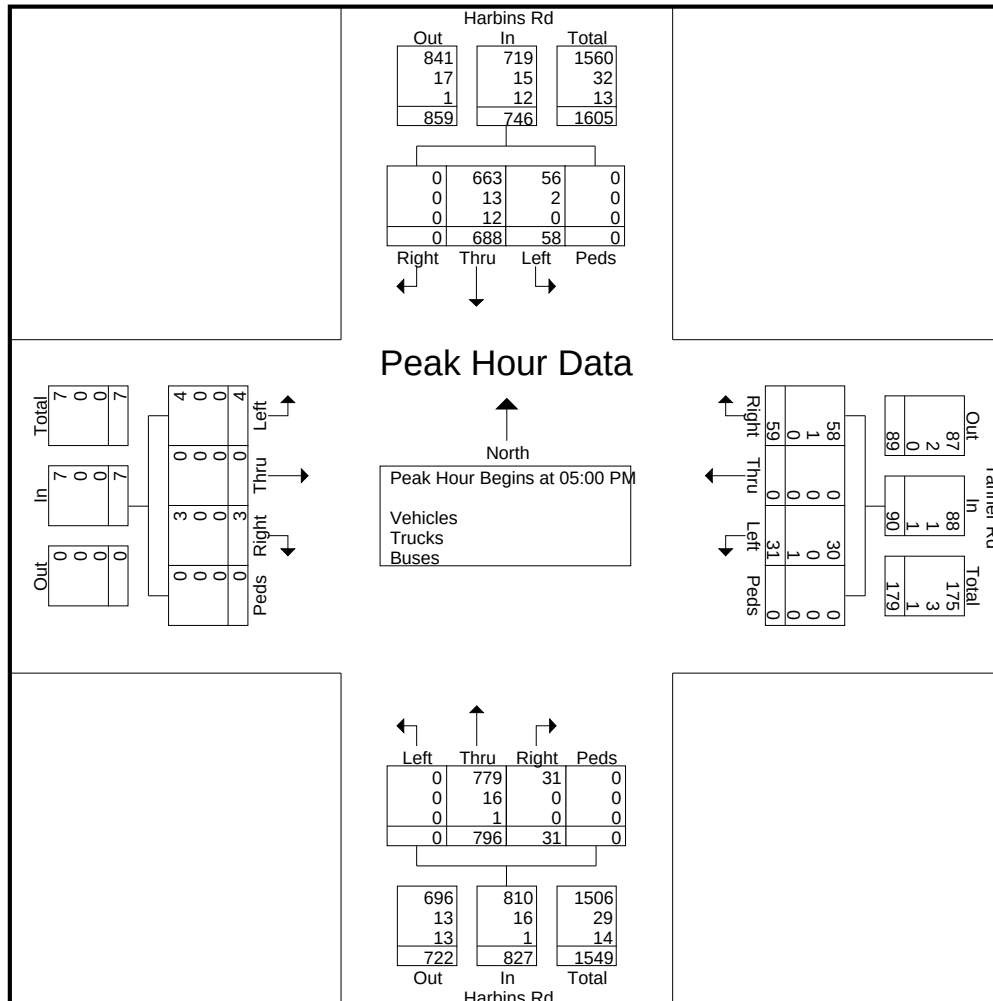
	Harbins Rd Northbound					Harbins Rd Southbound					Eastbound					Tanner Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	206	2	0	208	8	130	0	0	138	2	0	0	0	2	11	0	26	0	37	385
07:30 AM	0	171	2	0	173	4	115	0	0	119	1	0	0	0	1	8	0	25	0	33	326
07:45 AM	0	199	3	0	202	1	139	0	0	140	0	0	0	0	0	5	0	25	0	30	372
08:00 AM	0	194	4	0	198	5	139	0	0	144	1	0	0	0	1	2	0	33	0	35	378
Total Volume	0	770	11	0	781	18	523	0	0	541	4	0	0	0	4	26	0	109	0	135	1461
% App. Total	0	98.6	1.4	0		3.3	96.7	0	0		100	0	0	0		19.3	0	80.7	0		
PHF	.000	.934	.688	.000	.939	.563	.941	.000	.000	.939	.500	.000	.000	.000	.500	.591	.000	.826	.000	.912	.949
Vehicles	0	734	9	0	743	15	500	0	0	515	3	0	0	0	3	25	0	106	0	131	1392
% Vehicles																					
Trucks	0	26	1	0	27	2	15	0	0	17	0	0	0	0	0	0	0	1	0	1	45
% Trucks	0	3.4	9.1	0	3.5	11.1	2.9	0	0	3.1	0	0	0	0	0	0	0	0.9	0	0.7	3.1
Buses	0	10	1	0	11	1	8	0	0	9	1	0	0	0	1	1	0	2	0	3	24
% Buses	0	1.3	9.1	0	1.4	5.6	1.5	0	0	1.7	25.0	0	0	0	25.0	3.8	0	1.8	0	2.2	1.6



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	Harbins Rd Northbound					Harbins Rd Southbound					Eastbound					Tanner Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	173	8	0	181	17	161	0	0	178	2	0	0	0	2	10	0	15	0	25	386
05:15 PM	0	217	4	0	221	14	182	0	0	196	1	0	1	0	2	10	0	20	0	30	449
05:30 PM	0	198	7	0	205	17	171	0	0	188	1	0	1	0	2	4	0	13	0	17	412
05:45 PM	0	208	12	0	220	10	174	0	0	184	0	0	1	0	1	7	0	11	0	18	423
Total Volume	0	796	31	0	827	58	688	0	0	746	4	0	3	0	7	31	0	59	0	90	1670
% App. Total	0	96.3	3.7	0		7.8	92.2	0	0		57.1	0	42.9	0		34.4	0	65.6	0		
PHF	.000	.917	.646	.000	.936	.853	.945	.000	.000	.952	.500	.000	.750	.000	.875	.775	.000	.738	.000	.750	.930
Vehicles	0	779	31	0	810	56	663	0	0	719	4	0	3	0	7	30	0	58	0	88	1624
% Vehicles																					
Trucks	0	16	0	0	16	2	13	0	0	15	0	0	0	0	0	0	0	1	0	1	32
% Trucks	0	2.0	0	0	1.9	3.4	1.9	0	0	2.0	0	0	0	0	0	0	0	1.7	0	1.1	1.9
Buses	0	1	0	0	1	0	12	0	0	12	0	0	0	0	0	1	0	0	0	1	14
% Buses	0	0.1	0	0	0.1	0	1.7	0	0	1.6	0	0	0	0	0	3.2	0	0	0	1.1	0.8



Greater Traffic Company

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 Site Code :
 Start Date : 8/16/2022
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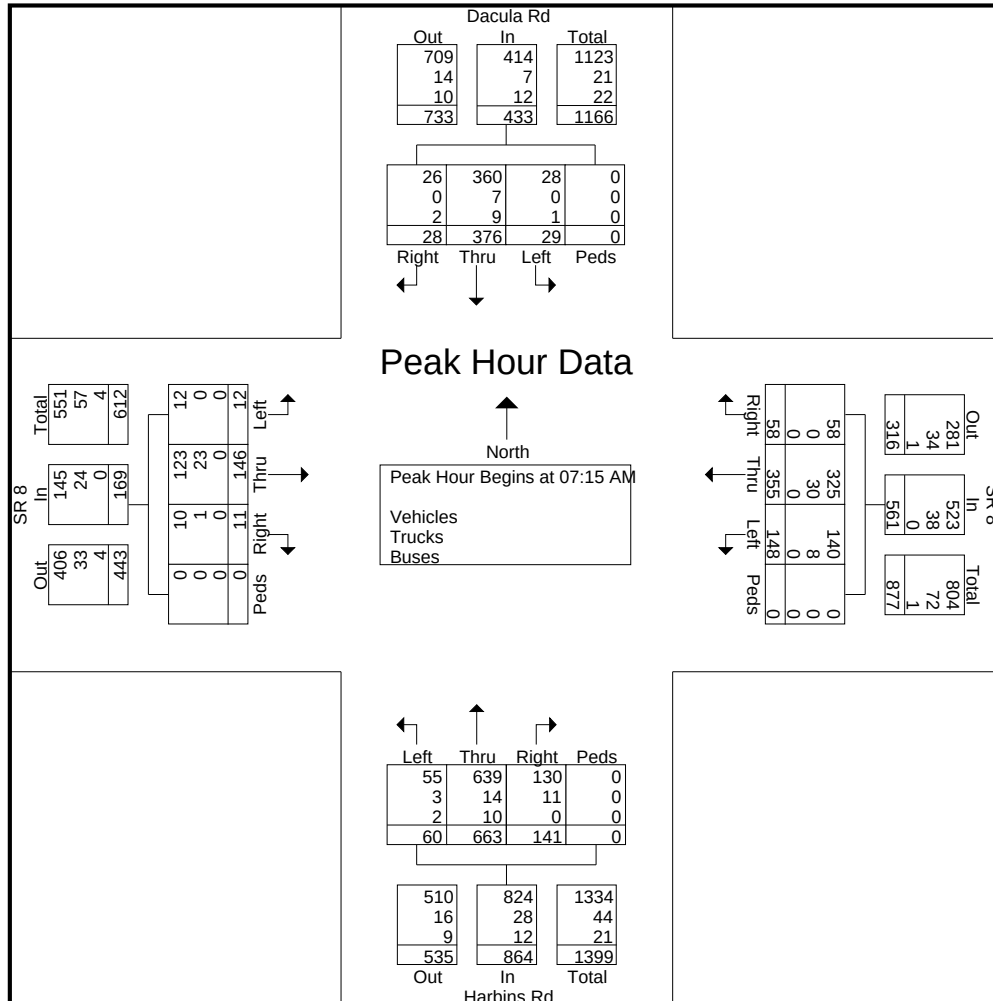
Groups Printed- Vehicles - Trucks - Buses

	Harbins Rd Northbound					Dacula Rd Southbound					SR 8 Eastbound					SR 8 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	132	26	0	167	7	72	15	0	94	4	45	5	0	54	35	111	12	0	158	473
07:15 AM	14	189	27	0	230	5	108	9	0	122	2	29	2	0	33	26	92	15	0	133	518
07:30 AM	14	138	36	0	188	5	68	5	0	78	5	44	4	0	53	37	110	20	0	167	486
07:45 AM	18	172	42	0	232	13	101	7	0	121	3	37	3	0	43	47	91	14	0	152	548
Total	55	631	131	0	817	30	349	36	0	415	14	155	14	0	183	145	404	61	0	610	2025
08:00 AM	14	164	36	0	214	6	99	7	0	112	2	36	2	0	40	38	62	9	0	109	475
08:15 AM	8	160	19	0	187	6	98	6	0	110	10	30	2	0	42	21	43	20	0	84	423
08:30 AM	15	146	34	0	195	7	106	7	0	120	11	28	5	0	44	36	68	17	0	121	480
08:45 AM	14	165	21	0	200	9	94	10	0	113	16	40	8	0	64	20	62	20	0	102	479
Total	51	635	110	0	796	28	397	30	0	455	39	134	17	0	190	115	235	66	0	416	1857
*** BREAK ***																					
04:00 PM	6	76	34	0	116	17	125	15	0	157	8	69	10	0	87	20	62	19	0	101	461
04:15 PM	6	120	53	0	179	19	125	10	0	154	8	88	16	0	112	41	37	14	0	92	537
04:30 PM	8	115	39	0	162	29	154	4	0	187	1	78	10	0	89	43	48	12	0	103	541
04:45 PM	6	133	34	0	173	27	148	10	0	185	2	100	10	0	112	31	44	23	0	98	568
Total	26	444	160	0	630	92	552	39	0	683	19	335	46	0	400	135	191	68	0	394	2107
05:00 PM	4	148	40	0	192	33	155	10	0	198	10	82	9	0	101	28	59	31	0	118	609
05:15 PM	2	159	51	0	212	35	142	4	0	181	9	100	12	0	121	45	53	33	0	131	645
05:30 PM	7	170	40	0	217	33	143	5	0	181	4	98	13	0	115	32	67	26	0	125	638
05:45 PM	0	169	32	0	201	34	147	7	0	188	9	93	6	0	108	37	56	36	0	129	626
Total	13	646	163	0	822	135	587	26	0	748	32	373	40	0	445	142	235	126	0	503	2518
Grand Total	145	2356	564	0	3065	285	1885	131	0	2301	104	997	117	0	1218	537	1065	321	0	1923	8507
Apprch %	4.7	76.9	18.4	0		12.4	81.9	5.7	0		8.5	81.9	9.6	0		27.9	55.4	16.7	0		
Total %	1.7	27.7	6.6	0	36	3.4	22.2	1.5	0	27	1.2	11.7	1.4	0	14.3	6.3	12.5	3.8	0	22.6	
Vehicles	136	2267	536	0	2939	282	1782	107	0	2171	90	905	109	0	1104	508	951	314	0	1773	7987
% Vehicles	93.8	96.2	95	0	95.9	98.9	94.5	81.7	0	94.4	86.5	90.8	93.2	0	90.6	94.6	89.3	97.8	0	92.2	93.9
Trucks	4	48	28	0	80	2	37	0	0	39	1	91	8	0	100	29	114	5	0	148	367
% Trucks	2.8	2	5	0	2.6	0.7	2	0	0	1.7	1	9.1	6.8	0	8.2	5.4	10.7	1.6	0	7.7	4.3
Buses	5	41	0	0	46	1	66	24	0	91	13	1	0	0	14	0	0	2	0	2	153
% Buses	3.4	1.7	0	0	1.5	0.4	3.5	18.3	0	4	12.5	0.1	0	0	1.1	0	0	0.6	0	0.1	1.8

Greater Traffic Company

File Name : 09
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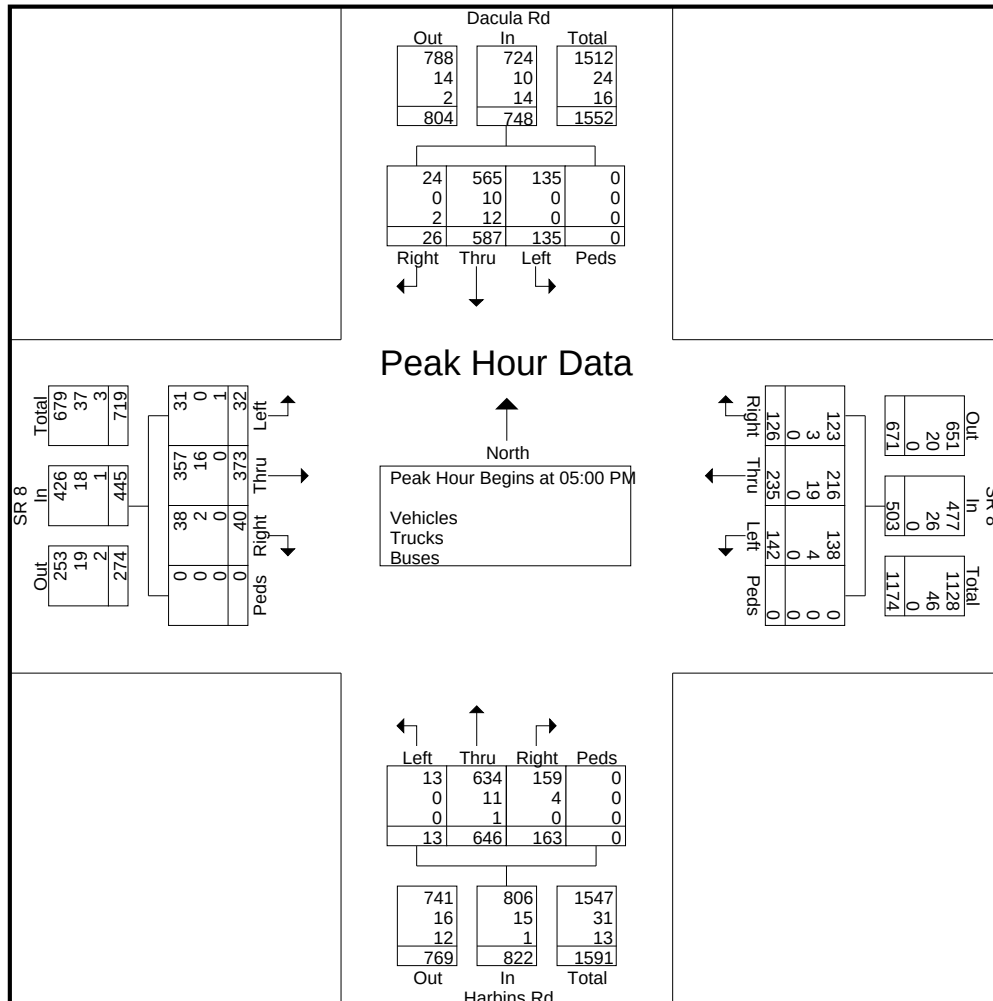
	Harbins Rd Northbound					Dacula Rd Southbound					SR 8 Eastbound					SR 8 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	14	189	27	0	230	5	108	9	0	122	2	29	2	0	33	26	92	15	0	133	518
07:30 AM	14	138	36	0	188	5	68	5	0	78	5	44	4	0	53	37	110	20	0	167	486
07:45 AM	18	172	42	0	232	13	101	7	0	121	3	37	3	0	43	47	91	14	0	152	548
08:00 AM	14	164	36	0	214	6	99	7	0	112	2	36	2	0	40	38	62	9	0	109	475
Total Volume	60	663	141	0	864	29	376	28	0	433	12	146	11	0	169	148	355	58	0	561	2027
% App. Total	6.9	76.7	16.3	0		6.7	86.8	6.5	0		7.1	86.4	6.5	0		26.4	63.3	10.3	0		
PHF	.833	.877	.839	.000	.931	.558	.870	.778	.000	.887	.600	.830	.688	.000	.797	.787	.807	.725	.000	.840	.925
Vehicles	55	639	130	0	824	28	360	26	0	414	12	123	10	0	145	140	325	58	0	523	1906
% Vehicles																					
Trucks	3	14	11	0	28	0	7	0	0	7	0	23	1	0	24	8	30	0	0	38	97
% Trucks	5.0	2.1	7.8	0	3.2	0	1.9	0	0	1.6	0	15.8	9.1	0	14.2	5.4	8.5	0	0	6.8	4.8
Buses	2	10	0	0	12	1	9	2	0	12	0	0	0	0	0	0	0	0	0	0	24
% Buses	3.3	1.5	0	0	1.4	3.4	2.4	7.1	0	2.8	0	0	0	0	0	0	0	0	0	0	1.2



Greater Traffic Company

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	Harbins Rd Northbound					Dacula Rd Southbound					SR 8 Eastbound					SR 8 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	4	148	40	0	192	33	155	10	0	198	10	82	9	0	101	28	59	31	0	118	609
05:15 PM	2	159	51	0	212	35	142	4	0	181	9	100	12	0	121	45	53	33	0	131	645
05:30 PM	7	170	40	0	217	33	143	5	0	181	4	98	13	0	115	32	67	26	0	125	638
05:45 PM	0	169	32	0	201	34	147	7	0	188	9	93	6	0	108	37	56	36	0	129	626
Total Volume	13	646	163	0	822	135	587	26	0	748	32	373	40	0	445	142	235	126	0	503	2518
% App. Total	1.6	78.6	19.8	0		18	78.5	3.5	0		7.2	83.8	9	0		28.2	46.7	25	0		
PHF	.464	.950	.799	.000	.947	.964	.947	.650	.000	.944	.800	.933	.769	.000	.919	.789	.877	.875	.000	.960	.976
Vehicles	13	634	159	0	806	135	565	24	0	724	31	357	38	0	426	138	216	123	0	477	2433
% Vehicles																					
Trucks	0	11	4	0	15	0	10	0	0	10	0	16	2	0	18	4	19	3	0	26	69
% Trucks	0	1.7	2.5	0	1.8	0	1.7	0	0	1.3	0	4.3	5.0	0	4.0	2.8	8.1	2.4	0	5.2	2.7
Buses	0	1	0	0	1	0	12	2	0	14	1	0	0	0	1	0	0	0	0	0	16
% Buses	0	0.2	0	0	0.1	0	2.0	7.7	0	1.9	3.1	0	0	0	0.2	0	0	0	0	0	0.6



Greater Traffic Company

File Name : 02
 Site Code :
 Start Date : 8/16/2022
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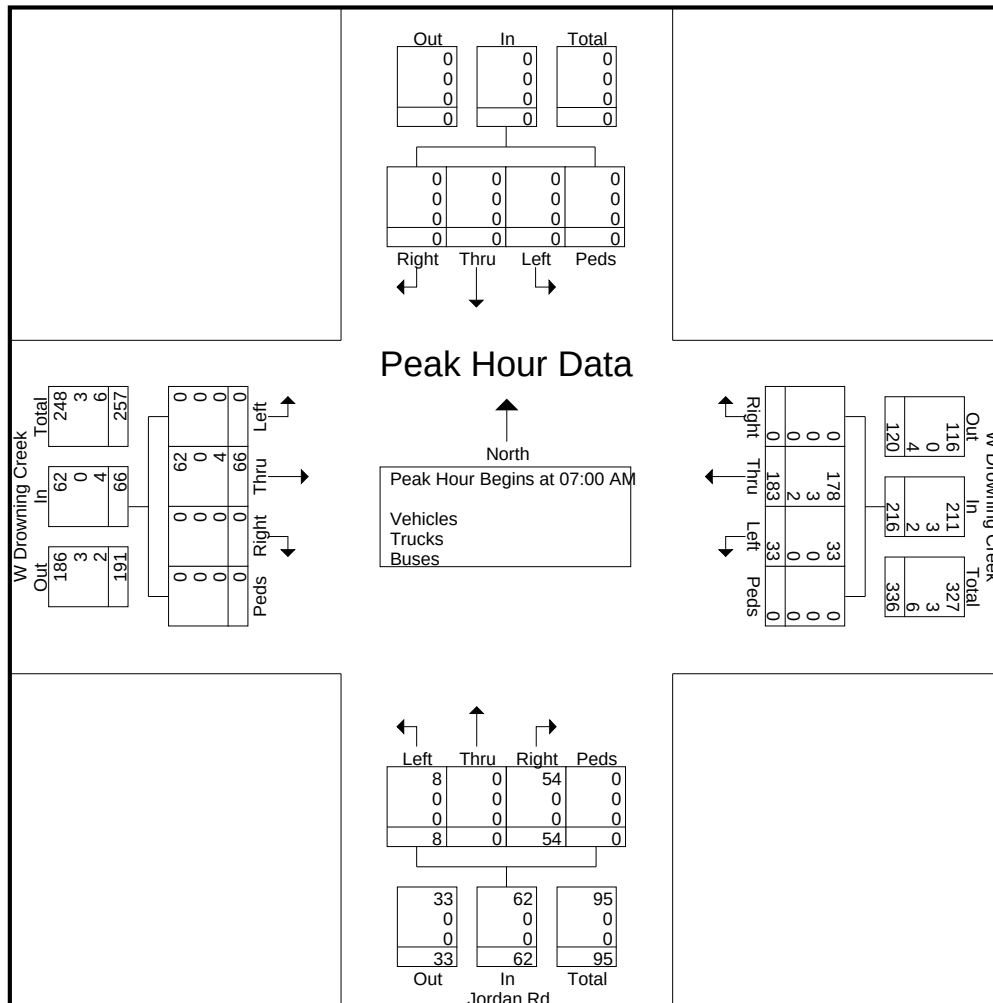
Groups Printed- Vehicles - Trucks - Buses

	Jordan Rd Northbound					Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	0	11	0	14	0	0	0	0	0	0	9	0	0	9	7	46	0	0	53	76
07:15 AM	3	0	14	0	17	0	0	0	0	0	0	13	0	0	13	10	50	0	0	60	90
07:30 AM	2	0	16	0	18	0	0	0	0	0	0	15	0	0	15	4	40	0	0	44	77
07:45 AM	0	0	13	0	13	0	0	0	0	0	0	29	0	0	29	12	47	0	0	59	101
Total	8	0	54	0	62	0	0	0	0	0	0	66	0	0	66	33	183	0	0	216	344
08:00 AM	1	0	8	0	9	0	0	0	0	0	0	15	1	0	16	7	24	0	0	31	56
08:15 AM	1	0	10	0	11	0	0	0	0	0	0	10	1	0	11	9	21	0	0	30	52
08:30 AM	0	0	17	0	17	0	0	0	0	0	0	11	1	0	12	4	25	0	0	29	58
08:45 AM	2	0	8	0	10	0	0	0	0	0	0	10	0	0	10	4	19	0	0	23	43
Total	4	0	43	0	47	0	0	0	0	0	0	46	3	0	49	24	89	0	0	113	209
*** BREAK ***																					
04:00 PM	2	0	11	0	13	0	0	0	0	0	0	13	3	0	16	10	13	0	0	23	52
04:15 PM	0	0	11	0	11	0	0	0	0	0	0	19	2	0	21	11	10	0	0	21	53
04:30 PM	2	0	8	0	10	0	0	0	0	0	0	25	0	0	25	13	16	0	0	29	64
04:45 PM	1	0	10	0	11	0	0	0	0	0	0	16	3	0	19	11	20	0	0	31	61
Total	5	0	40	0	45	0	0	0	0	0	0	73	8	0	81	45	59	0	0	104	230
05:00 PM	2	0	11	0	13	0	0	0	0	0	0	20	0	0	20	9	15	0	0	24	57
05:15 PM	0	0	14	0	14	0	0	0	0	0	0	23	1	0	24	11	12	0	0	23	61
05:30 PM	2	0	12	0	14	0	0	0	0	0	0	22	4	0	26	11	20	0	0	31	71
05:45 PM	1	0	11	0	12	0	0	0	0	0	0	18	2	0	20	11	20	0	0	31	63
Total	5	0	48	0	53	0	0	0	0	0	0	83	7	0	90	42	67	0	0	109	252
Grand Total	22	0	185	0	207	0	0	0	0	0	0	268	18	0	286	144	398	0	0	542	1035
Apprch %	10.6	0	89.4	0		0	0	0	0		0	93.7	6.3	0		26.6	73.4	0	0		
Total %	2.1	0	17.9	0	20	0	0	0	0	0	0	25.9	1.7	0	27.6	13.9	38.5	0	0	52.4	
Vehicles	21	0	180	0	201	0	0	0	0	0	0	256	16	0	272	143	391	0	0	534	1007
% Vehicles	95.5	0	97.3	0	97.1	0	0	0	0	0	0	95.5	88.9	0	95.1	99.3	98.2	0	0	98.5	97.3
Trucks	0	0	2	0	2	0	0	0	0	0	0	3	1	0	4	1	4	0	0	5	11
% Trucks	0	0	1.1	0	1	0	0	0	0	0	0	1.1	5.6	0	1.4	0.7	1	0	0	0.9	1.1
Buses	1	0	3	0	4	0	0	0	0	0	0	9	1	0	10	0	3	0	0	3	17
% Buses	4.5	0	1.6	0	1.9	0	0	0	0	0	0	3.4	5.6	0	3.5	0	0.8	0	0	0.6	1.6

Greater Traffic Company

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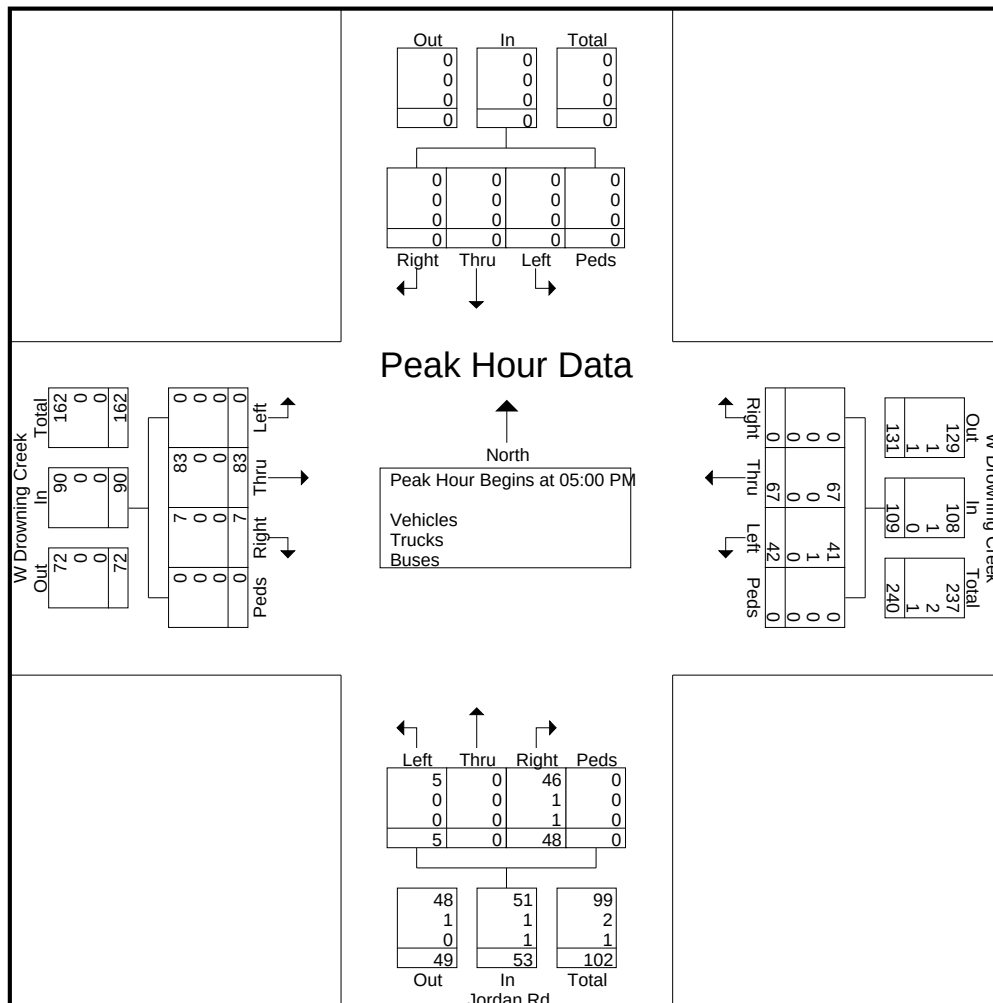
	Jordan Rd Northbound					Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	3	0	11	0	14	0	0	0	0	0	0	9	0	0	9	7	46	0	0	53	76
07:15 AM	3	0	14	0	17	0	0	0	0	0	0	13	0	0	13	10	50	0	0	60	90
07:30 AM	2	0	16	0	18	0	0	0	0	0	0	15	0	0	15	4	40	0	0	44	77
07:45 AM	0	0	13	0	13	0	0	0	0	0	0	29	0	0	29	12	47	0	0	59	101
Total Volume	8	0	54	0	62	0	0	0	0	0	0	66	0	0	66	33	183	0	0	216	344
% App. Total	12.9	0	87.1	0		0	0	0	0		0	100	0	0		15.3	84.7	0	0		
PHF	.667	.000	.844	.000	.861	.000	.000	.000	.000	.000	.000	.569	.000	.000	.569	.688	.915	.000	.000	.900	.851
Vehicles	8	0	54	0	62	0	0	0	0	0	0	62	0	0	62	33	178	0	0	211	335
% Vehicles																					
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	1.4	0.9
Buses	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	6
% Buses	0	0	0	0	0	0	0	0	0	0	0	6.1	0	0	6.1	0	1.1	0	0	0.9	1.7



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	Jordan Rd Northbound					Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	0	11	0	13	0	0	0	0	0	0	20	0	0	20	9	15	0	0	24	57
05:15 PM	0	0	14	0	14	0	0	0	0	0	0	23	1	0	24	11	12	0	0	23	61
05:30 PM	2	0	12	0	14	0	0	0	0	0	0	22	4	0	26	11	20	0	0	31	71
05:45 PM	1	0	11	0	12	0	0	0	0	0	0	18	2	0	20	11	20	0	0	31	63
Total Volume	5	0	48	0	53	0	0	0	0	0	0	83	7	0	90	42	67	0	0	109	252
% App. Total	9.4	0	90.6	0		0	0	0	0	0	0	92.2	7.8	0		38.5	61.5	0	0		
PHF	.625	.000	.857	.000	.946	.000	.000	.000	.000	.000	.000	.902	.438	.000	.865	.955	.838	.000	.000	.879	.887
Vehicles	5	0	46	0	51	0	0	0	0	0	0	83	7	0	90	41	67	0	0	108	249
% Vehicles																					
Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
% Trucks	0	0	2.1	0	1.9	0	0	0	0	0	0	0	0	0	0	2.4	0	0	0	0.9	0.8
Buses	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	0	2.1	0	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4



Greater Traffic Company

File Name : 03
 Site Code :
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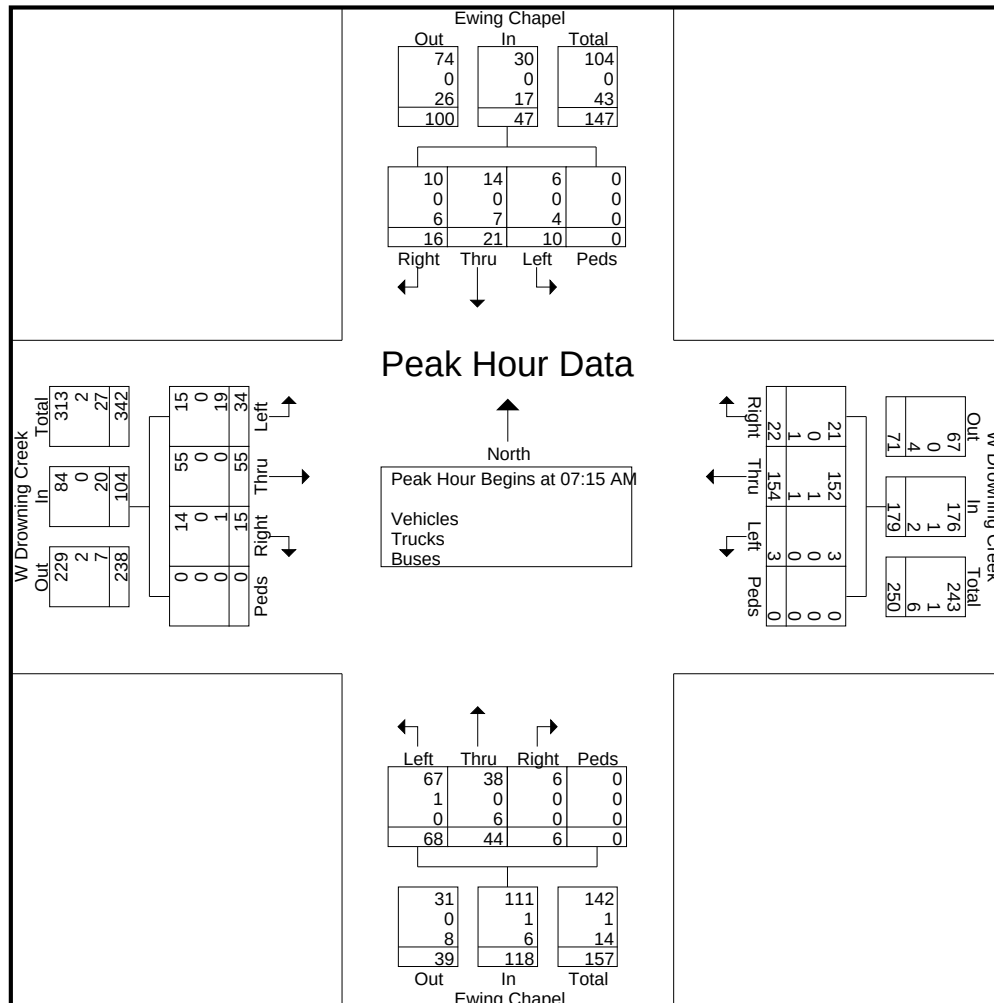
Groups Printed- Vehicles - Trucks - Buses

	Ewing Chapel Northbound					Ewing Chapel Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	3	3	0	15	0	1	1	0	2	5	8	3	0	16	1	35	2	0	38	71
07:15 AM	19	10	1	0	30	1	3	0	0	4	2	8	5	0	15	0	42	12	0	54	103
07:30 AM	20	10	0	0	30	0	1	1	0	2	10	16	3	0	29	2	40	4	0	46	107
07:45 AM	18	15	3	0	36	6	8	9	0	23	17	20	2	0	39	0	41	5	0	46	144
Total	66	38	7	0	111	7	13	11	0	31	34	52	13	0	99	3	158	23	0	184	425
08:00 AM	11	9	2	0	22	3	9	6	0	18	5	11	5	0	21	1	31	1	0	33	94
08:15 AM	11	6	3	0	20	1	3	3	0	7	0	9	3	0	12	3	18	0	0	21	60
08:30 AM	7	3	1	0	11	0	1	0	0	1	1	11	2	0	14	0	19	0	0	19	45
08:45 AM	16	1	1	0	18	1	3	0	0	4	1	9	3	0	13	1	22	2	0	25	60
Total	45	19	7	0	71	5	16	9	0	30	7	40	13	0	60	5	90	3	0	98	259
*** BREAK ***																					
04:00 PM	7	4	1	0	12	2	2	2	0	6	1	13	11	0	25	0	12	1	0	13	56
04:15 PM	8	1	0	0	9	0	7	1	0	8	0	16	6	0	22	5	6	0	0	11	50
04:30 PM	5	1	0	0	6	3	2	1	0	6	3	26	11	0	40	2	15	1	0	18	70
04:45 PM	5	7	0	0	12	2	1	0	0	3	0	16	13	0	29	0	16	1	0	17	61
Total	25	13	1	0	39	7	12	4	0	23	4	71	41	0	116	7	49	3	0	59	237
05:00 PM	4	1	1	0	6	1	2	1	0	4	2	18	15	0	35	1	18	0	0	19	64
05:15 PM	10	2	2	0	14	0	7	1	0	8	0	20	20	0	40	2	13	0	0	15	77
05:30 PM	6	4	0	0	10	1	4	0	0	5	3	26	20	0	49	1	17	0	0	18	82
05:45 PM	7	7	1	0	15	3	9	1	0	13	2	18	11	0	31	0	20	0	0	20	79
Total	27	14	4	0	45	5	22	3	0	30	7	82	66	0	155	4	68	0	0	72	302
Grand Total	163	84	19	0	266	24	63	27	0	114	52	245	133	0	430	19	365	29	0	413	1223
Apprch %	61.3	31.6	7.1	0		21.1	55.3	23.7	0		12.1	57	30.9	0		4.6	88.4	7	0		
Total %	13.3	6.9	1.6	0	21.7	2	5.2	2.2	0	9.3	4.3	20	10.9	0	35.2	1.6	29.8	2.4	0	33.8	
Vehicles	161	74	17	0	252	18	53	20	0	91	33	239	124	0	396	19	362	25	0	406	1145
% Vehicles	98.8	88.1	89.5	0	94.7	75	84.1	74.1	0	79.8	63.5	97.6	93.2	0	92.1	100	99.2	86.2	0	98.3	93.6
Trucks	1	0	1	0	2	1	0	1	0	2	0	2	0	0	2	0	2	1	0	3	9
% Trucks	0.6	0	5.3	0	0.8	4.2	0	3.7	0	1.8	0	0.8	0	0	0.5	0	0.5	3.4	0	0.7	0.7
Buses	1	10	1	0	12	5	10	6	0	21	19	4	9	0	32	0	1	3	0	4	69
% Buses	0.6	11.9	5.3	0	4.5	20.8	15.9	22.2	0	18.4	36.5	1.6	6.8	0	7.4	0	0.3	10.3	0	1	5.6

Greater Traffic Company

File Name : 03
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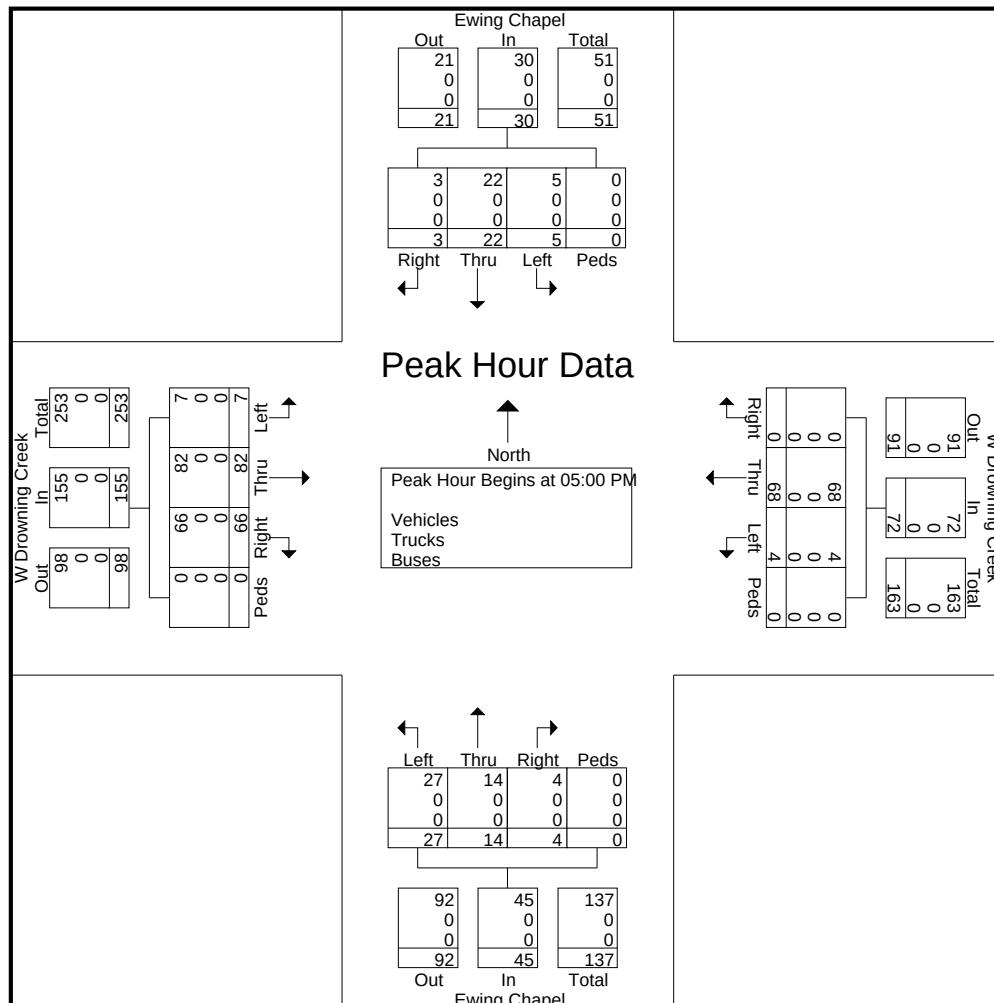
	Ewing Chapel Northbound					Ewing Chapel Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	19	10	1	0	30	1	3	0	0	4	2	8	5	0	15	0	42	12	0	54	103
07:30 AM	20	10	0	0	30	0	1	1	0	2	10	16	3	0	29	2	40	4	0	46	107
07:45 AM	18	15	3	0	36	6	8	9	0	23	17	20	2	0	39	0	41	5	0	46	144
08:00 AM	11	9	2	0	22	3	9	6	0	18	5	11	5	0	21	1	31	1	0	33	94
Total Volume	68	44	6	0	118	10	21	16	0	47	34	55	15	0	104	3	154	22	0	179	448
% App. Total	57.6	37.3	5.1	0		21.3	44.7	34	0		32.7	52.9	14.4	0		1.7	86	12.3	0		
PHF	.850	.733	.500	.000	.819	.417	.583	.444	.000	.511	.500	.688	.750	.000	.667	.375	.917	.458	.000	.829	.778
Vehicles	67	38	6	0	111	6	14	10	0	30	15	55	14	0	84	3	152	21	0	176	401
% Vehicles																					
Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
% Trucks	1.5	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.6	0.4
Buses	0	6	0	0	6	4	7	6	0	17	19	0	1	0	20	0	1	1	0	2	45
% Buses	0	13.6	0	0	5.1	40.0	33.3	37.5	0	36.2	55.9	0	6.7	0	19.2	0	0.6	4.5	0	1.1	10.0



Greater Traffic Company

File Name : 03
 Site Code :
 Start Date : 8/16/2022
 Page No : 3

	Ewing Chapel Northbound					Ewing Chapel Southbound					W Drowning Creek Eastbound					W Drowning Creek Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	4	1	1	0	6	1	2	1	0	4	2	18	15	0	35	1	18	0	0	19	64
05:15 PM	10	2	2	0	14	0	7	1	0	8	0	20	20	0	40	2	13	0	0	15	77
05:30 PM	6	4	0	0	10	1	4	0	0	5	3	26	20	0	49	1	17	0	0	18	82
05:45 PM	7	7	1	0	15	3	9	1	0	13	2	18	11	0	31	0	20	0	0	20	79
Total Volume	27	14	4	0	45	5	22	3	0	30	7	82	66	0	155	4	68	0	0	72	302
% App. Total	60	31.1	8.9	0		16.7	73.3	10	0		4.5	52.9	42.6	0		5.6	94.4	0	0		
PHF	.675	.500	.500	.000	.750	.417	.611	.750	.000	.577	.583	.788	.825	.000	.791	.500	.850	.000	.000	.900	.921
Vehicles	27	14	4	0	45	5	22	3	0	30	7	82	66	0	155	4	68	0	0	72	302
% Vehicles																					
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Greater Traffic Company

File Name : 04
 Site Code :
 Start Date : 8/16/2022
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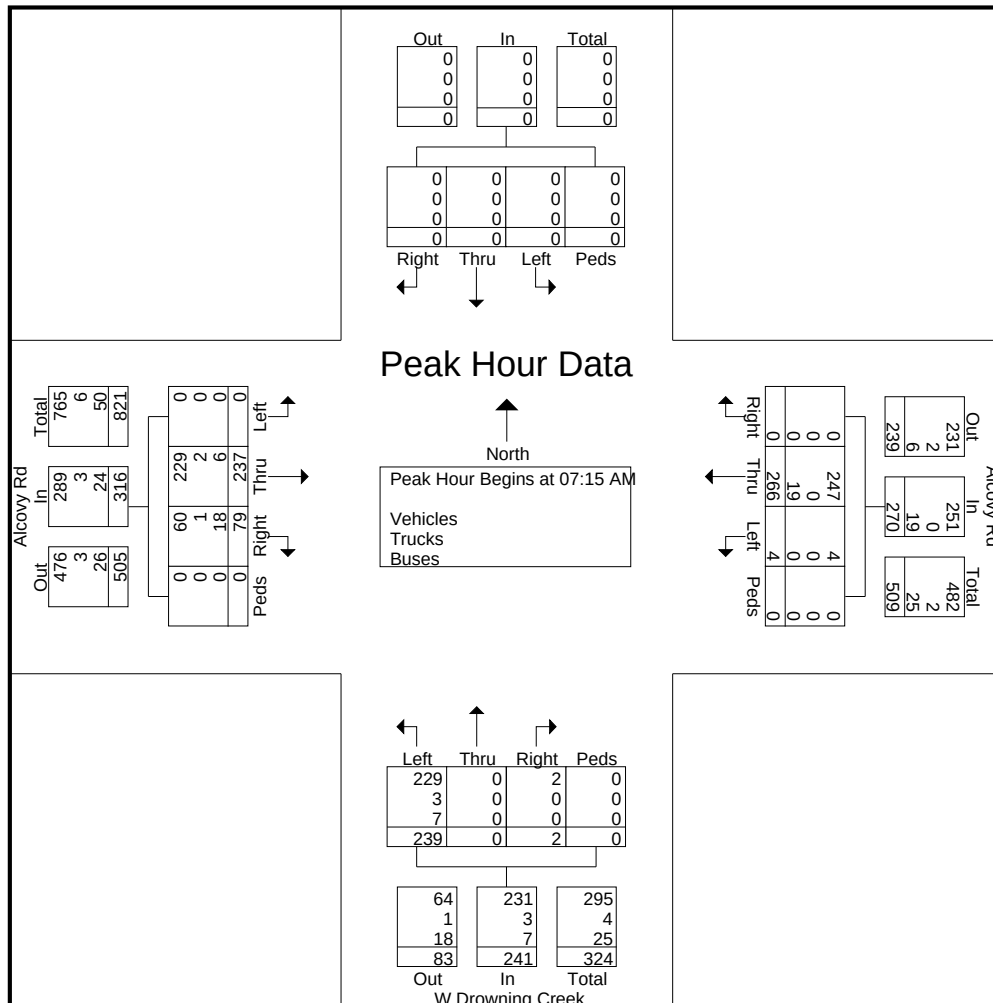
Groups Printed- Vehicles - Trucks - Buses

	W Drowning Creek Northbound					Southbound					Alcovy Rd Eastbound					Alcovy Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	58	0	0	0	58	0	0	0	0	0	0	39	8	0	47	0	28	0	0	28	133
07:15 AM	61	0	1	0	62	0	0	0	0	0	0	62	11	0	73	1	38	0	0	39	174
07:30 AM	74	0	0	0	74	0	0	0	0	0	0	63	24	0	87	2	24	0	0	26	187
07:45 AM	66	0	1	0	67	0	0	0	0	0	0	51	25	0	76	0	102	0	0	102	245
Total	259	0	2	0	261	0	0	0	0	0	0	215	68	0	283	3	192	0	0	195	739
08:00 AM	38	0	0	0	38	0	0	0	0	0	0	61	19	0	80	1	102	0	0	103	221
08:15 AM	39	0	0	0	39	0	0	0	0	0	0	12	8	0	20	2	46	0	0	48	107
08:30 AM	31	0	1	0	32	0	0	0	0	0	0	12	5	0	17	0	17	0	0	17	66
08:45 AM	42	0	0	0	42	0	0	0	0	0	0	16	13	0	29	0	13	0	0	13	84
Total	150	0	1	0	151	0	0	0	0	0	0	101	45	0	146	3	178	0	0	181	478
*** BREAK ***																					
04:00 PM	17	0	0	0	17	0	0	0	0	0	0	20	22	0	42	0	18	0	0	18	77
04:15 PM	18	0	0	0	18	0	0	0	0	0	0	22	35	0	57	1	24	0	0	25	100
04:30 PM	22	0	0	0	22	0	0	0	0	0	0	31	39	0	70	1	26	0	0	27	119
04:45 PM	15	0	0	0	15	0	0	0	0	0	0	40	25	0	65	0	29	0	0	29	109
Total	72	0	0	0	72	0	0	0	0	0	0	113	121	0	234	2	97	0	0	99	405
05:00 PM	13	0	0	0	13	0	0	0	0	0	0	43	47	0	90	0	28	0	0	28	131
05:15 PM	23	0	0	0	23	0	0	0	0	0	0	38	44	0	82	0	31	0	0	31	136
05:30 PM	27	0	0	0	27	0	0	0	0	0	0	42	49	0	91	0	34	0	0	34	152
05:45 PM	24	0	0	0	24	0	0	0	0	0	0	36	35	0	71	0	29	0	0	29	124
Total	87	0	0	0	87	0	0	0	0	0	0	159	175	0	334	0	122	0	0	122	543
Grand Total	568	0	3	0	571	0	0	0	0	0	0	588	409	0	997	8	589	0	0	597	2165
Apprch %	99.5	0	0.5	0		0	0	0	0		0	59	41	0		1.3	98.7	0	0		
Total %	26.2	0	0.1	0	26.4	0	0	0	0	0	0	27.2	18.9	0	46.1	0.4	27.2	0	0	27.6	
Vehicles	557	0	3	0	560	0	0	0	0	0	0	525	379	0	904	8	550	0	0	558	2022
% Vehicles	98.1	0	100	0	98.1	0	0	0	0	0	0	89.3	92.7	0	90.7	100	93.4	0	0	93.5	93.4
Trucks	3	0	0	0	3	0	0	0	0	0	0	5	3	0	8	0	3	0	0	3	14
% Trucks	0.5	0	0	0	0.5	0	0	0	0	0	0	0.9	0.7	0	0.8	0	0.5	0	0	0.5	0.6
Buses	8	0	0	0	8	0	0	0	0	0	0	58	27	0	85	0	36	0	0	36	129
% Buses	1.4	0	0	0	1.4	0	0	0	0	0	0	9.9	6.6	0	8.5	0	6.1	0	0	6	6

Greater Traffic Company

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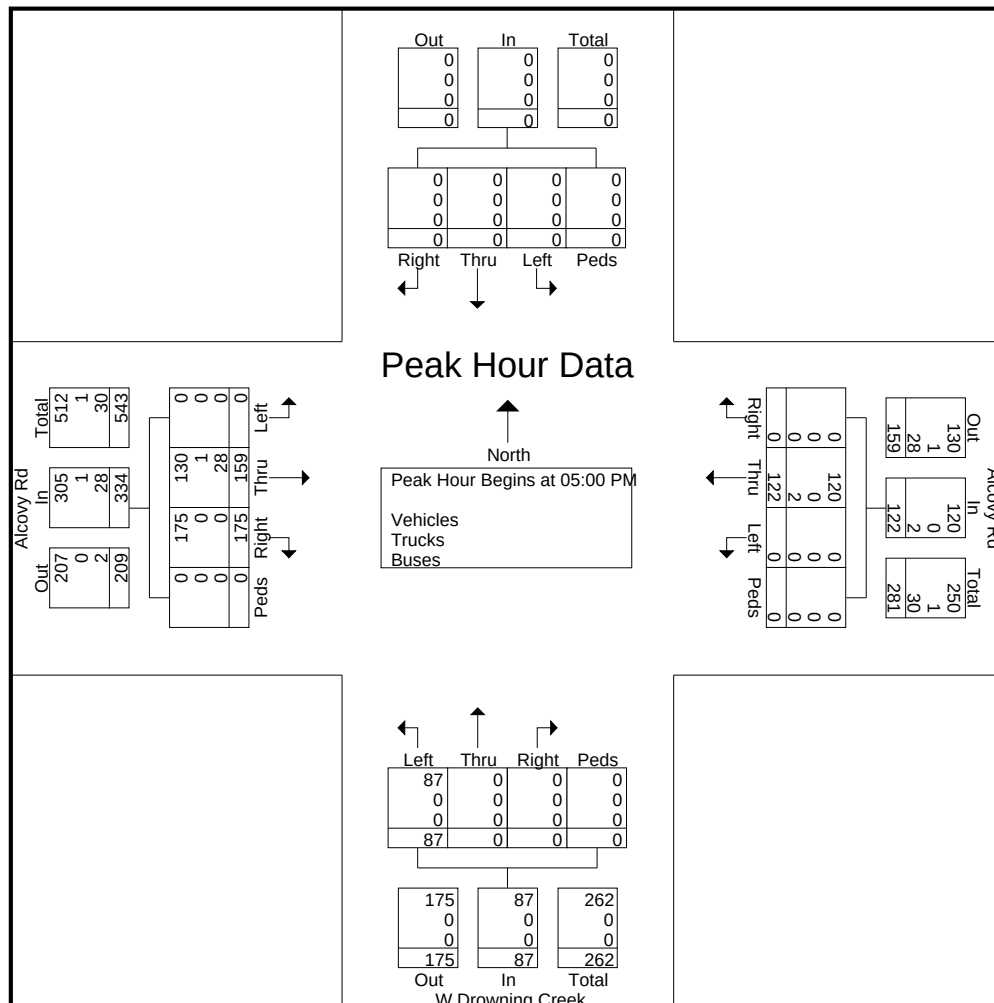
	W Drowning Creek Northbound					Southbound					Alcovy Rd Eastbound					Alcovy Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	61	0	1	0	62	0	0	0	0	0	0	62	11	0	73	1	38	0	0	39	174
07:30 AM	74	0	0	0	74	0	0	0	0	0	0	63	24	0	87	2	24	0	0	26	187
07:45 AM	66	0	1	0	67	0	0	0	0	0	0	51	25	0	76	0	102	0	0	102	245
08:00 AM	38	0	0	0	38	0	0	0	0	0	0	61	19	0	80	1	102	0	0	103	221
Total Volume	239	0	2	0	241	0	0	0	0	0	0	237	79	0	316	4	266	0	0	270	827
% App. Total	99.2	0	0.8	0		0	0	0	0		0	75	25	0		1.5	98.5	0	0		
PHF	.807	.000	.500	.000	.814	.000	.000	.000	.000	.000	.000	.940	.790	.000	.908	.500	.652	.000	.000	.655	.844
Vehicles	229	0	2	0	231	0	0	0	0	0	0	229	60	0	289	4	247	0	0	251	771
% Vehicles																					
Trucks	3	0	0	0	3	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	6
% Trucks	1.3	0	0	0	1.2	0	0	0	0	0	0	0.8	1.3	0	0.9	0	0	0	0	0	0.7
Buses	7	0	0	0	7	0	0	0	0	0	0	6	18	0	24	0	19	0	0	19	50
% Buses	2.9	0	0	0	2.9	0	0	0	0	0	0	2.5	22.8	0	7.6	0	7.1	0	0	7.0	6.0



Greater Traffic Company

File Name : 04
 Site Code :
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	W Drowning Creek Northbound					Southbound					Alcovy Rd Eastbound					Alcovy Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	0	0	0	13	0	0	0	0	0	0	43	47	0	90	0	28	0	0	28	131
05:15 PM	23	0	0	0	23	0	0	0	0	0	0	38	44	0	82	0	31	0	0	31	136
05:30 PM	27	0	0	0	27	0	0	0	0	0	0	42	49	0	91	0	34	0	0	34	152
05:45 PM	24	0	0	0	24	0	0	0	0	0	0	36	35	0	71	0	29	0	0	29	124
Total Volume	87	0	0	0	87	0	0	0	0	0	0	159	175	0	334	0	122	0	0	122	543
% App. Total	100	0	0	0		0	0	0	0		0	47.6	52.4	0		0	100	0	0		
PHF	.806	.000	.000	.000	.806	.000	.000	.000	.000	.000	.000	.924	.893	.000	.918	.000	.897	.000	.000	.897	.893
Vehicles	87	0	0	0	87	0	0	0	0	0	0	130	175	0	305	0	120	0	0	120	512
% Vehicles																					
Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.3	0	0	0	0	0	0.2
Buses	0	0	0	0	0	0	0	0	0	0	0	28	0	0	28	0	2	0	0	2	30
% Buses	0	0	0	0	0	0	0	0	0	0	0	17.6	0	0	8.4	0	1.6	0	0	1.6	5.5



Greater Traffic Company

W Drowing Creek west of Harbins Rd

04

EB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
00:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:15	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
04:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
04:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
05:30	0	6	4	0	1	0	0	0	0	0	0	0	0	0	11
05:45	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
06:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	18
06:15	0	6	1	0	2	0	0	0	0	0	0	0	0	0	9
06:30	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
06:45	0	30	10	0	3	0	0	0	0	0	0	0	0	0	43
07:00	0	8	2	0	1	1	0	0	0	0	0	0	0	0	12
07:15	0	10	8	1	0	0	0	0	0	0	0	0	0	0	19
07:30	0	18	6	0	2	0	0	0	0	0	0	0	0	0	26
07:45	0	19	6	0	4	0	0	0	0	0	0	0	0	0	29
08:00	0	55	22	1	7	1	0	0	0	0	0	0	0	0	86
08:15	0	20	4	0	0	0	0	0	0	0	0	0	0	0	24
08:30	0	18	6	0	0	0	0	0	0	0	0	0	0	0	24
08:45	0	27	3	0	0	0	0	0	0	0	0	0	0	0	30
09:00	0	28	3	2	1	0	0	0	0	0	0	0	0	0	34
09:15	0	93	16	2	1	0	0	0	0	0	0	0	0	0	112
09:30	0	17	6	0	2	0	0	0	0	0	0	0	0	0	25
09:45	0	13	2	1	3	0	0	0	0	0	0	0	0	0	19
10:00	0	21	5	3	1	0	0	0	0	0	0	0	0	0	30
10:15	0	6	5	2	3	0	0	0	0	0	0	0	0	0	16
10:30	0	57	18	6	9	0	0	0	0	0	0	0	0	0	90
10:45	0	15	6	0	0	0	0	0	0	0	0	0	0	0	21
11:00	0	9	4	1	4	0	0	0	0	0	0	0	0	0	18
11:15	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
11:30	0	12	5	0	0	0	0	0	0	0	0	0	0	0	17
11:45	0	50	16	1	4	0	0	0	0	0	0	0	0	0	71
12:00	0	8	3	0	3	0	0	0	0	0	0	0	0	0	14
12:15	0	10	11	0	1	0	0	0	0	0	0	0	0	0	22
12:30	0	13	5	0	1	0	0	0	0	0	0	0	0	0	19
12:45	0	13	7	0	1	0	0	0	0	0	0	0	0	0	21
13:00	0	44	26	0	6	0	0	0	0	0	0	0	0	0	76
13:15	0	15	9	0	1	0	0	0	0	0	0	0	0	0	25
13:30	0	5	4	0	0	0	0	0	0	0	0	0	0	0	9
13:45	0	14	5	0	3	0	0	0	0	0	0	0	0	0	22
14:00	0	18	7	0	0	0	0	0	0	0	0	0	0	0	25
14:15	0	52	25	0	4	0	0	0	0	0	0	0	0	0	81
Total	0	401	141	10	36	1	0	0	0	0	0	0	0	0	589
Percent	0.0%	68.1%	23.9%	1.7%	6.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Greater Traffic Company

W Drowing Creek west of Harbins Rd

04

EB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	11	5	1	1	0	0	1	0	0	0	0	0	0	19
12:15	0	14	4	0	2	0	0	0	0	0	0	0	0	0	20
12:30	0	16	4	1	1	0	0	0	0	0	0	0	0	0	22
12:45	0	19	4	0	0	0	0	0	0	0	0	0	0	0	23
13:00	0	60	17	2	4	0	0	1	0	0	0	0	0	0	84
13:15	0	14	3	0	0	1	0	0	0	0	0	0	0	0	18
13:30	0	16	5	0	0	0	0	0	0	0	0	0	0	0	21
13:45	0	18	3	0	0	0	0	0	0	0	0	0	0	0	21
14:00	0	18	6	0	1	0	0	0	0	0	0	0	0	0	25
14:15	0	66	17	0	1	1	0	0	0	0	0	0	0	0	85
14:30	0	19	6	1	0	0	0	0	0	0	0	0	0	0	26
14:45	0	16	3	0	3	1	0	0	0	0	0	0	0	0	23
15:00	0	24	7	0	3	0	0	0	0	0	0	0	0	0	34
15:15	0	22	7	1	4	0	0	1	0	0	0	0	0	0	35
15:30	0	81	23	2	10	1	0	1	0	0	0	0	0	0	118
15:45	0	15	5	2	1	0	0	0	0	0	0	0	0	0	23
16:00	0	16	2	0	4	0	0	0	0	0	0	0	0	0	22
16:15	0	28	6	0	2	0	0	0	0	0	0	0	0	0	36
16:30	0	16	4	1	2	0	0	0	0	0	0	0	0	0	23
16:45	0	75	17	3	9	0	0	0	0	0	0	0	0	0	104
17:00	0	11	8	0	2	1	0	0	0	0	0	0	0	0	22
17:15	0	24	5	0	2	0	0	0	0	0	0	0	0	0	31
17:30	0	26	6	0	0	0	0	1	0	0	0	0	0	0	33
17:45	0	17	8	0	0	0	0	0	0	0	0	0	0	0	25
18:00	0	78	27	0	4	1	0	1	0	0	0	0	0	0	111
18:15	0	23	7	1	1	0	0	1	0	0	0	0	0	0	33
18:30	0	18	15	0	2	0	0	0	0	0	0	0	0	0	35
18:45	0	23	10	0	1	0	0	0	0	0	0	0	0	0	34
19:00	0	22	5	0	1	0	0	0	0	0	0	0	0	0	28
19:15	0	86	37	1	5	0	0	1	0	0	0	0	0	0	130
19:30	0	24	6	0	1	0	0	1	0	0	0	0	0	0	32
19:45	0	22	9	0	0	1	0	0	0	0	0	0	0	0	32
20:00	0	13	4	0	0	0	0	0	0	0	0	0	0	0	17
20:15	0	19	6	0	1	0	0	0	0	0	0	0	0	0	26
20:30	0	78	25	0	2	1	0	1	0	0	0	0	0	0	107
20:45	0	22	3	0	0	0	0	0	0	0	0	0	0	0	25
21:00	0	12	8	0	0	0	0	1	0	0	0	0	0	0	21
21:15	0	14	4	0	0	0	0	0	0	0	0	0	0	0	18
21:30	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
21:45	0	65	18	0	0	0	0	1	0	0	0	0	0	0	84
22:00	0	12	5	0	1	0	0	0	0	0	0	0	0	0	18
22:15	0	10	4	0	1	1	0	0	0	0	0	0	0	0	16
22:30	1	13	2	0	2	0	0	0	0	0	0	0	0	0	18
22:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
23:00	1	41	13	0	4	1	0	0	0	0	0	0	0	0	60
23:15	0	12	5	0	0	0	0	0	0	0	0	0	0	0	17
23:30	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
23:45	0	9	1	0	2	0	0	0	0	0	0	0	0	0	12
24:00	0	11	2	0	0	0	0	0	0	0	0	0	0	0	13
24:15	0	40	10	0	2	0	0	0	0	0	0	0	0	0	52
24:30	0	4	3	0	0	0	0	0	0	0	0	0	0	0	7
24:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
25:00	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
25:15	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
25:30	0	10	7	0	1	0	0	0	0	0	0	0	0	0	18
25:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
26:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
26:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
26:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
26:45	0	9	2	0	0	0	0	0	1	0	0	0	0	0	12
Total	1	689	213	8	42	5	0	6	1	0	0	0	0	0	965
Percent	0.1%	71.4%	22.1%	0.8%	4.4%	0.5%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	1	1090	354	18	78	6	0	6	1	0	0	0	0	0	1554
Percent	0.1%	70.1%	22.8%	1.2%	5.0%	0.4%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

W Drowing Creek west of Harbins Rd

04

WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
00:15	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	12	2	0	1	0	0	0	0	0	0	0	0	0	15
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:15	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
05:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30	0	7	2	0	1	0	0	0	0	0	0	0	0	0	10
05:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
06:00	0	3	0	0	2	0	0	0	0	0	0	0	0	0	5
06:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
06:30	0	9	2	0	0	1	0	0	0	0	0	0	0	0	12
06:45	0	20	5	0	2	1	0	0	0	0	0	0	0	0	28
07:00	0	6	3	0	1	0	0	0	0	0	0	0	0	0	10
07:15	0	14	6	0	0	0	0	0	0	0	0	0	0	0	20
07:30	0	18	14	0	3	0	0	0	0	0	0	0	0	0	35
07:45	0	25	11	0	1	0	0	0	0	0	0	0	0	0	37
08:00	0	63	34	0	5	0	0	0	0	0	0	0	0	0	102
08:15	0	40	8	0	4	0	0	0	0	0	0	0	0	0	52
08:30	0	41	15	0	2	0	0	0	0	0	0	0	0	0	58
08:45	0	40	4	0	1	0	0	0	0	0	0	0	0	0	45
09:00	0	42	12	0	2	0	0	0	0	0	0	0	0	0	56
09:15	0	163	39	0	9	0	0	0	0	0	0	0	0	0	211
09:30	0	20	7	0	0	0	0	0	0	0	0	0	0	0	27
09:45	0	23	9	0	1	0	0	0	0	0	0	0	0	0	33
10:00	0	18	8	0	2	0	0	0	0	0	0	0	0	0	28
10:15	0	20	4	0	0	0	0	0	0	0	0	0	0	0	24
10:30	0	81	28	0	3	0	0	0	0	0	0	0	0	0	112
10:45	0	20	5	0	1	0	0	0	0	0	0	0	0	0	26
11:00	0	17	4	1	2	0	0	0	0	0	0	0	0	0	24
11:15	0	8	5	0	0	0	0	0	0	0	0	0	0	0	13
11:30	0	7	5	0	0	0	0	0	0	0	0	0	0	0	12
11:45	0	52	19	1	3	0	0	0	0	0	0	0	0	0	75
12:00	0	9	5	0	1	0	0	0	0	0	0	0	0	0	15
12:15	0	8	6	0	2	0	0	0	0	0	0	0	0	0	16
12:30	0	9	5	1	1	0	0	0	0	0	0	0	0	0	16
12:45	0	11	4	0	1	0	0	0	0	0	0	0	0	0	16
13:00	0	37	20	1	5	0	0	0	0	0	0	0	0	0	63
13:15	0	11	2	0	2	0	0	0	0	0	0	0	0	0	15
13:30	0	9	3	0	0	0	0	0	0	0	0	0	0	0	12
13:45	0	9	1	0	0	0	0	1	0	0	0	0	0	0	11
14:00	0	22	2	1	1	0	0	0	0	0	0	0	0	0	26
14:15	0	51	8	1	3	0	0	1	0	0	0	0	0	0	64
Total	0	499	159	3	33	1	0	1	0	0	0	0	0	0	696
Percent	0.0%	71.7%	22.8%	0.4%	4.7%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

W Drowing Creek west of Harbins Rd

04

WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	13	3	0	1	0	0	0	0	0	0	0	0	0	17
12:15	0	10	4	0	0	0	0	0	0	0	0	0	0	0	14
12:30	0	14	7	0	1	0	0	0	0	0	0	0	0	0	22
12:45	0	14	3	1	0	0	0	0	0	0	0	0	0	0	18
13:00	0	51	17	1	2	0	0	0	0	0	0	0	0	0	71
13:15	0	15	5	2	1	1	0	0	0	0	0	0	0	0	24
13:30	0	12	4	0	1	0	0	0	0	0	0	0	0	0	17
13:45	0	21	3	0	1	0	0	0	0	0	0	0	0	0	25
14:00	0	15	6	0	1	0	0	0	0	0	0	0	0	0	22
14:15	0	63	18	2	4	1	0	0	0	0	0	0	0	0	88
14:30	0	12	3	0	2	0	0	0	0	0	0	0	0	0	17
14:45	0	19	7	0	2	0	0	0	0	0	0	0	0	0	28
15:00	0	27	6	0	4	0	0	0	0	0	0	0	0	0	37
15:15	0	29	5	0	1	0	0	0	0	0	0	0	0	0	35
15:30	0	87	21	0	9	0	0	0	0	0	0	0	0	0	117
15:45	1	31	8	1	1	1	0	1	0	0	0	0	0	0	44
16:00	0	8	8	0	2	0	0	0	0	0	0	0	0	0	18
16:15	0	11	5	0	1	0	0	0	0	0	0	0	0	0	17
16:30	0	18	7	0	1	0	0	2	0	0	0	0	0	0	28
16:45	1	68	28	1	5	1	0	3	0	0	0	0	0	0	107
17:00	0	15	5	0	0	0	0	0	0	0	0	0	0	0	20
17:15	0	16	4	0	0	0	0	0	0	0	0	0	0	0	20
17:30	0	25	5	0	2	0	0	0	0	0	0	0	0	0	32
17:45	0	23	6	0	1	0	0	0	0	0	0	0	0	0	30
18:00	0	79	20	0	3	0	0	0	0	0	0	0	0	0	102
18:15	0	22	5	0	0	0	0	0	0	0	0	0	0	0	27
18:30	0	18	1	0	0	0	0	0	0	0	0	0	0	0	19
18:45	0	26	7	0	0	0	0	0	0	0	0	0	0	0	33
19:00	0	27	2	0	1	1	0	0	0	0	0	0	0	0	31
19:15	0	93	15	0	1	1	0	0	0	0	0	0	0	0	110
19:30	0	23	7	0	0	0	0	0	0	0	0	0	0	0	30
19:45	0	33	7	0	1	0	0	0	0	0	0	0	0	0	41
20:00	0	27	6	0	1	0	0	0	0	0	0	0	0	0	34
20:15	0	17	7	0	2	0	0	1	0	0	0	0	0	0	27
20:30	0	100	27	0	4	0	0	1	0	0	0	0	0	0	132
20:45	0	20	6	0	2	0	0	0	0	0	0	0	0	0	28
21:00	0	17	4	1	2	0	0	0	0	0	0	0	0	0	24
21:15	0	23	6	0	1	0	0	0	0	0	0	0	0	0	30
21:30	0	26	6	0	1	0	0	0	0	0	0	0	0	0	33
21:45	0	86	22	1	6	0	0	0	0	0	0	0	0	0	115
22:00	0	26	5	0	2	0	0	0	0	0	0	0	0	0	33
22:15	0	17	3	0	0	0	0	1	0	0	0	0	0	0	21
22:30	0	20	5	0	1	0	0	0	0	0	0	0	0	0	26
22:45	0	17	6	0	1	0	0	0	0	0	0	0	0	0	24
23:00	0	80	19	0	4	0	0	1	0	0	0	0	0	0	104
23:15	0	15	2	0	1	0	0	0	0	0	0	0	0	0	18
23:30	0	15	2	0	0	0	0	0	0	0	0	0	0	0	17
23:45	0	17	1	0	1	0	0	0	0	0	0	0	0	0	19
24:00	0	16	6	0	1	0	0	0	0	0	0	0	0	0	23
24:15	0	63	11	0	3	0	0	0	0	0	0	0	0	0	77
24:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
24:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
25:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
25:15	0	2	3	0	0	0	0	0	0	0	0	0	0	0	5
25:30	0	22	5	0	0	0	0	0	0	0	0	0	0	0	27
25:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
26:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
26:15	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
26:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
26:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
27:00	0	16	5	0	0	0	0	0	0	0	0	0	0	0	21
Total	1	808	208	5	41	3	0	5	0	0	0	0	0	0	1071
Percent	0.1%	75.4%	19.4%	0.5%	3.8%	0.3%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	1	1307	367	8	74	4	0	6	0	0	0	0	0	0	1767
Percent	0.1%	74.0%	20.8%	0.5%	4.2%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

W Drowing Creek west of Harbins Rd

04

EB, WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
00:15	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
00:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	16	2	0	1	0	0	0	0	0	0	0	0	0	19
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
02:00	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
02:15	0	7	2	0	2	0	0	0	0	0	0	0	0	0	11
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3
03:15	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
03:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
04:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
04:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
05:15	0	6	2	0	1	0	0	0	0	0	0	0	0	0	9
05:30	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5
05:45	0	13	6	0	2	0	0	0	0	0	0	0	0	0	21
06:00	0	8	3	0	1	0	0	0	0	0	0	0	0	0	12
06:15	0	17	4	0	2	0	0	0	0	0	0	0	0	0	23
06:30	0	9	3	0	2	0	0	0	0	0	0	0	0	0	14
06:45	0	16	5	0	0	1	0	0	0	0	0	0	0	0	22
07:00	0	50	15	0	5	1	0	0	0	0	0	0	0	0	71
07:15	0	14	5	0	2	1	0	0	0	0	0	0	0	0	22
07:30	0	24	14	1	0	0	0	0	0	0	0	0	0	0	39
07:45	0	36	20	0	5	0	0	0	0	0	0	0	0	0	61
08:00	0	44	17	0	5	0	0	0	0	0	0	0	0	0	66
08:15	0	118	56	1	12	1	0	0	0	0	0	0	0	0	188
08:30	0	60	12	0	4	0	0	0	0	0	0	0	0	0	76
08:45	0	59	21	0	2	0	0	0	0	0	0	0	0	0	82
09:00	0	67	7	0	1	0	0	0	0	0	0	0	0	0	75
09:15	0	70	15	2	3	0	0	0	0	0	0	0	0	0	90
09:30	0	256	55	2	10	0	0	0	0	0	0	0	0	0	323
09:45	0	37	13	0	2	0	0	0	0	0	0	0	0	0	52
10:00	0	36	11	1	4	0	0	0	0	0	0	0	0	0	52
10:15	0	39	13	3	3	0	0	0	0	0	0	0	0	0	58
10:30	0	26	9	2	3	0	0	0	0	0	0	0	0	0	40
10:45	0	138	46	6	12	0	0	0	0	0	0	0	0	0	202
11:00	0	35	11	0	1	0	0	0	0	0	0	0	0	0	47
11:15	0	26	8	2	6	0	0	0	0	0	0	0	0	0	42
11:30	0	22	6	0	0	0	0	0	0	0	0	0	0	0	28
11:45	0	19	10	0	0	0	0	0	0	0	0	0	0	0	29
12:00	0	102	35	2	7	0	0	0	0	0	0	0	0	0	146
12:15	0	17	8	0	4	0	0	0	0	0	0	0	0	0	29
12:30	0	18	17	0	3	0	0	0	0	0	0	0	0	0	38
12:45	0	22	10	1	2	0	0	0	0	0	0	0	0	0	35
13:00	0	24	11	0	2	0	0	0	0	0	0	0	0	0	37
13:15	0	81	46	1	11	0	0	0	0	0	0	0	0	0	139
13:30	0	26	11	0	3	0	0	0	0	0	0	0	0	0	40
13:45	0	14	7	0	0	0	0	0	0	0	0	0	0	0	21
14:00	0	23	6	0	3	0	0	1	0	0	0	0	0	0	33
14:15	0	40	9	1	1	0	0	0	0	0	0	0	0	0	51
14:30	0	103	33	1	7	0	0	1	0	0	0	0	0	0	145
Total	0	900	300	13	69	2	0	1	0	0	0	0	0	0	1285
Percent	0.0%	70.0%	23.3%	1.0%	5.4%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

W Drowing Creek west of Harbins Rd

04

EB, WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	24	8	1	2	0	0	1	0	0	0	0	0	0	36
12:15	0	24	8	0	2	0	0	0	0	0	0	0	0	0	34
12:30	0	30	11	1	2	0	0	0	0	0	0	0	0	0	44
12:45	0	33	7	1	0	0	0	0	0	0	0	0	0	0	41
13:00	0	111	34	3	6	0	0	1	0	0	0	0	0	0	155
13:15	0	29	8	2	1	2	0	0	0	0	0	0	0	0	42
13:30	0	28	9	0	1	0	0	0	0	0	0	0	0	0	38
13:45	0	39	6	0	1	0	0	0	0	0	0	0	0	0	46
14:00	0	33	12	0	2	0	0	0	0	0	0	0	0	0	47
14:15	0	129	35	2	5	2	0	0	0	0	0	0	0	0	173
14:30	0	31	9	1	2	0	0	0	0	0	0	0	0	0	43
14:45	0	35	10	0	5	1	0	0	0	0	0	0	0	0	51
15:00	0	51	13	0	7	0	0	0	0	0	0	0	0	0	71
15:15	0	51	12	1	5	0	0	1	0	0	0	0	0	0	70
15:30	0	168	44	2	19	1	0	1	0	0	0	0	0	0	235
15:45	1	46	13	3	2	1	0	1	0	0	0	0	0	0	67
16:00	0	24	10	0	6	0	0	0	0	0	0	0	0	0	40
16:15	0	39	11	0	3	0	0	0	0	0	0	0	0	0	53
16:30	0	34	11	1	3	0	0	2	0	0	0	0	0	0	51
16:45	1	143	45	4	14	1	0	3	0	0	0	0	0	0	211
17:00	0	26	13	0	2	1	0	0	0	0	0	0	0	0	42
17:15	0	40	9	0	2	0	0	0	0	0	0	0	0	0	51
17:30	0	51	11	0	2	0	0	1	0	0	0	0	0	0	65
17:45	0	40	14	0	1	0	0	0	0	0	0	0	0	0	55
18:00	0	157	47	0	7	1	0	1	0	0	0	0	0	0	213
18:15	0	45	12	1	1	0	0	1	0	0	0	0	0	0	60
18:30	0	36	16	0	2	0	0	0	0	0	0	0	0	0	54
18:45	0	49	17	0	1	0	0	0	0	0	0	0	0	0	67
19:00	0	49	7	0	2	1	0	0	0	0	0	0	0	0	59
19:15	0	179	52	1	6	1	0	1	0	0	0	0	0	0	240
19:30	0	47	13	0	1	0	0	1	0	0	0	0	0	0	62
19:45	0	55	16	0	1	1	0	0	0	0	0	0	0	0	73
20:00	0	40	10	0	1	0	0	0	0	0	0	0	0	0	51
20:15	0	36	13	0	3	0	0	1	0	0	0	0	0	0	53
20:30	0	178	52	0	6	1	0	2	0	0	0	0	0	0	239
20:45	0	42	9	0	2	0	0	0	0	0	0	0	0	0	53
21:00	0	29	12	1	2	0	0	1	0	0	0	0	0	0	45
21:15	0	37	10	0	1	0	0	0	0	0	0	0	0	0	48
21:30	0	43	9	0	1	0	0	0	0	0	0	0	0	0	53
21:45	0	151	40	1	6	0	0	1	0	0	0	0	0	0	199
22:00	0	38	10	0	3	0	0	0	0	0	0	0	0	0	51
22:15	0	27	7	0	1	1	0	1	0	0	0	0	0	0	37
22:30	1	33	7	0	3	0	0	0	0	0	0	0	0	0	44
22:45	0	23	8	0	1	0	0	0	0	0	0	0	0	0	32
23:00	1	121	32	0	8	1	0	1	0	0	0	0	0	0	164
23:15	0	27	7	0	1	0	0	0	0	0	0	0	0	0	35
23:30	0	23	4	0	0	0	0	0	0	0	0	0	0	0	27
23:45	0	26	2	0	3	0	0	0	0	0	0	0	0	0	31
24:00	0	27	8	0	1	0	0	0	0	0	0	0	0	0	36
24:15	0	103	21	0	5	0	0	0	0	0	0	0	0	0	129
24:30	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
24:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
25:00	0	9	1	0	1	0	0	0	0	0	0	0	0	0	11
25:15	0	2	5	0	0	0	0	0	0	0	0	0	0	0	7
25:30	0	32	12	0	1	0	0	0	0	0	0	0	0	0	45
25:45	0	4	1	0	0	0	0	0	1	0	0	0	0	0	6
26:00	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
26:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
26:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
26:45	0	25	7	0	0	0	0	0	1	0	0	0	0	0	33
Total	2	1497	421	13	83	8	0	11	1	0	0	0	0	0	2036
Percent	0.1%	73.5%	20.7%	0.6%	4.1%	0.4%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	2	2397	721	26	152	10	0	12	1	0	0	0	0	0	3321
Percent	0.1%	72.2%	21.7%	0.8%	4.6%	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd n of W Downing Creek

01

NB																
Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total	
08/16/22	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15	
00:15	0	6	2	0	1	0	0	0	0	0	0	0	0	0	9	
00:30	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15	
00:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7	
01:00	0	36	9	0	1	0	0	0	0	0	0	0	0	0	46	
01:15	0	5	3	0	0	0	0	0	0	0	0	0	0	0	8	
01:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3	
01:30	0	3	1	1	0	0	0	0	0	0	0	0	0	0	5	
01:45	0	6	0	0	1	0	0	0	0	0	0	0	0	0	7	
02:00	0	16	5	1	1	0	0	0	0	0	0	0	0	0	23	
02:15	0	5	4	0	2	0	0	0	0	0	0	0	0	0	11	
02:15	0	5	3	0	0	0	0	0	0	0	0	0	0	0	8	
02:30	0	9	4	0	0	0	0	0	0	0	0	0	0	0	13	
02:45	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7	
03:00	0	24	13	0	2	0	0	0	0	0	0	0	0	0	39	
03:15	0	8	0	0	0	0	0	0	1	0	0	0	0	0	9	
03:15	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12	
03:30	0	11	1	1	0	0	0	0	0	0	0	0	0	0	13	
03:45	0	11	3	0	0	0	0	0	0	0	0	0	0	0	14	
04:00	0	40	6	1	0	0	0	0	1	0	0	0	0	0	48	
04:00	1	18	4	0	3	0	0	0	0	0	0	0	0	0	26	
04:15	0	28	7	0	2	0	0	0	0	0	0	0	0	0	37	
04:30	0	30	16	0	0	0	0	1	0	0	0	0	0	0	47	
04:45	0	39	11	0	4	0	0	0	0	0	0	0	0	0	54	
05:00	1	115	38	0	9	0	0	1	0	0	0	0	0	0	164	
05:00	0	47	22	0	5	0	0	1	0	0	0	0	0	0	75	
05:15	1	72	28	0	6	0	0	0	0	0	0	0	0	0	107	
05:30	0	90	33	0	8	0	0	1	0	0	0	0	0	0	132	
05:45	0	88	35	1	10	0	0	0	2	0	0	0	0	0	136	
06:00	1	297	118	1	29	0	0	2	2	0	0	0	0	0	450	
06:00	1	97	44	0	7	1	0	2	0	0	0	0	0	0	152	
06:15	0	107	54	0	15	1	0	2	0	0	0	0	0	0	179	
06:30	0	138	45	1	7	0	0	1	0	0	0	0	0	0	192	
06:45	0	159	39	0	8	2	0	2	0	0	0	0	0	0	210	
07:00	1	501	182	1	37	4	0	7	0	0	0	0	0	0	733	
07:00	0	149	34	0	9	0	1	3	0	0	0	0	0	0	196	
07:15	0	169	38	1	9	0	0	3	0	0	0	0	0	0	220	
07:30	0	161	46	0	10	0	0	2	0	0	0	0	0	0	219	
07:45	0	173	40	2	6	0	0	4	2	0	0	0	0	0	227	
08:00	0	652	158	3	34	0	1	12	2	0	0	0	0	0	862	
08:00	0	149	41	4	6	1	0	3	0	0	0	0	0	0	204	
08:15	1	146	30	1	10	1	0	1	0	0	0	0	0	0	190	
08:30	1	131	26	0	13	1	0	1	2	0	0	0	0	0	175	
08:45	0	106	26	4	11	1	0	1	0	0	0	0	0	0	149	
09:00	2	532	123	9	40	4	0	6	2	0	0	0	0	0	718	
09:00	0	91	29	2	6	1	0	3	0	0	0	0	0	0	132	
09:15	1	104	36	1	7	0	0	2	1	0	0	0	0	0	152	
09:30	0	87	21	1	6	2	0	1	0	0	0	0	0	0	118	
09:45	0	102	20	0	4	1	0	2	0	0	0	0	0	0	129	
10:00	1	384	106	4	23	4	0	8	1	0	0	0	0	0	531	
10:00	1	85	32	1	9	1	0	0	0	0	0	0	0	0	129	
10:15	0	74	21	1	4	0	0	2	0	0	0	0	0	0	102	
10:30	0	96	39	2	4	0	0	2	0	0	0	0	0	0	143	
10:45	0	68	17	2	7	3	0	0	0	0	0	0	0	0	97	
11:00	1	323	109	6	24	4	0	4	0	0	0	0	0	0	471	
11:00	0	84	26	1	8	1	0	0	2	0	0	0	0	0	122	
11:15	0	82	29	1	4	1	0	0	1	0	0	0	0	0	118	
11:30	0	78	24	1	7	0	0	2	1	0	0	0	0	0	113	
11:45	0	67	20	0	5	1	0	0	3	0	0	0	0	0	96	
12:00	0	311	99	3	24	3	0	2	7	0	0	0	0	0	449	
Total	7	3231	966	29	224	19	1	42	15	0	0	0	0	0	4534	
Percent	0.2%	71.3%	21.3%	0.6%	4.9%	0.4%	0.0%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%		

Harbins Rd n of W Downing Creek

01

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	76	18	4	6	1	0	2	0	0	0	0	0	0	107
12:15	0	103	21	2	10	2	0	1	4	0	0	0	0	0	143
12:30	0	83	16	0	6	0	0	1	1	0	0	0	0	0	107
12:45	0	85	21	1	2	0	0	2	0	0	0	0	0	0	111
13:00	0	347	76	7	24	3	0	6	5	0	0	0	0	0	468
13:15	0	85	24	1	1	3	0	0	1	0	0	0	0	0	115
13:30	0	93	16	0	4	2	0	0	1	0	0	0	0	0	116
13:45	0	96	16	0	3	1	0	1	0	0	0	0	0	0	117
14:00	0	79	20	1	5	0	0	1	0	0	0	0	0	0	106
14:15	0	353	76	2	13	6	0	2	2	0	0	0	0	0	454
14:30	0	76	22	0	7	3	0	1	0	0	0	0	0	0	109
14:45	0	101	22	0	5	1	0	1	0	0	0	0	0	0	130
15:00	0	111	25	1	4	2	0	1	2	0	0	0	0	0	146
15:15	0	98	26	0	5	1	0	1	1	0	0	0	0	0	132
15:30	0	386	95	1	21	7	0	4	3	0	0	0	0	0	517
15:45	0	98	22	1	11	3	0	2	3	0	0	0	0	0	140
16:00	0	98	26	1	8	2	0	2	1	0	0	0	0	0	138
16:15	0	79	26	2	8	0	0	2	1	0	0	0	0	0	118
16:30	0	87	15	2	9	0	0	2	3	0	0	0	0	0	118
16:45	0	362	89	6	36	5	0	8	8	0	0	0	0	0	514
17:00	0	79	23	1	2	1	0	0	0	0	0	0	0	0	106
17:15	0	104	17	0	10	1	0	2	0	0	0	0	0	0	134
17:30	0	94	15	1	9	0	0	1	2	0	0	0	0	0	122
17:45	1	91	20	1	2	0	0	0	2	0	0	0	0	0	117
18:00	1	368	75	3	23	2	0	3	4	0	0	0	0	0	479
18:15	0	102	26	4	5	1	0	2	0	0	0	0	0	0	140
18:30	0	97	37	2	4	0	0	0	1	0	0	0	0	0	141
18:45	0	119	25	1	8	0	0	0	0	0	0	0	0	0	153
19:00	0	116	25	1	8	1	0	1	0	0	0	0	0	0	152
19:15	0	434	113	8	25	2	0	3	1	0	0	0	0	0	586
19:30	1	109	21	0	6	0	0	0	0	0	0	0	0	0	137
19:45	0	102	22	1	3	0	0	1	1	0	0	0	0	0	130
20:00	0	108	24	0	1	0	0	0	1	0	0	0	0	0	134
20:15	0	89	22	1	6	1	0	4	0	0	0	0	0	0	123
20:30	1	408	89	2	16	1	0	5	2	0	0	0	0	0	524
20:45	0	82	28	0	6	0	0	0	0	0	0	0	0	0	116
21:00	1	65	20	1	3	0	0	1	1	0	0	0	0	0	92
21:15	0	57	20	0	5	0	0	1	0	0	0	0	0	0	83
21:30	0	55	15	0	2	0	0	0	0	0	0	0	0	0	72
21:45	1	259	83	1	16	0	0	2	1	0	0	0	0	0	363
22:00	0	54	10	0	2	0	0	0	0	0	0	0	0	0	66
22:15	0	56	9	0	4	0	0	1	0	0	0	0	0	0	70
22:30	1	57	19	0	1	0	0	1	0	0	0	0	0	0	79
22:45	0	40	13	0	5	0	0	1	0	0	0	0	0	0	59
23:00	1	207	51	0	12	0	0	3	0	0	0	0	0	0	274
23:15	1	34	10	0	4	0	0	0	1	0	0	0	0	0	50
23:30	0	40	14	0	1	0	0	0	0	0	0	0	0	0	55
23:45	0	40	7	0	3	0	0	1	0	0	0	0	0	0	51
24:00	1	47	11	0	1	0	0	0	0	0	0	0	0	0	60
24:15	2	161	42	0	9	0	0	1	1	0	0	0	0	0	216
24:30	0	31	5	1	0	0	0	0	0	0	0	0	0	0	37
24:45	0	21	1	0	2	0	0	1	0	0	0	0	0	0	25
25:00	0	23	3	0	1	0	0	0	1	0	0	0	0	0	28
25:15	0	17	4	0	1	0	0	1	0	0	0	0	0	0	23
25:30	0	92	13	1	4	0	0	2	1	0	0	0	0	0	113
25:45	1	22	2	0	1	0	0	0	0	0	0	0	0	0	26
26:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	13
26:15	0	19	2	0	1	0	0	0	0	0	0	0	0	0	22
26:30	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
26:45	1	62	8	0	2	0	0	0	0	0	0	0	0	0	73
Total	7	3439	810	31	201	26	0	39	28	0	0	0	0	0	4581
Percent	0.2%	75.1%	17.7%	0.7%	4.4%	0.6%	0.0%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	14	6670	1776	60	425	45	1	81	43	0	0	0	0	0	9115
Percent	0.2%	73.2%	19.5%	0.7%	4.7%	0.5%	0.0%	0.9%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd n of W Downing Creek

01

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	21	5	1	1	0	0	0	1	0	0	0	0	0	29
00:15	0	22	1	0	1	0	0	1	0	0	0	0	0	0	25
00:30	0	14	1	0	3	0	0	0	0	0	0	0	0	0	18
00:45	0	11	2	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	68	9	1	5	0	0	1	1	0	0	0	0	0	85
01:15	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
01:30	0	13	2	0	1	0	0	0	0	0	0	0	0	0	16
01:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	38	3	0	1	0	0	0	0	0	0	0	0	0	42
02:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
03:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
03:30	0	8	4	0	3	0	0	0	0	0	0	0	0	0	15
03:45	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	33	9	0	3	0	0	0	0	0	0	0	0	0	45
04:15	0	6	2	0	3	0	0	0	0	0	0	0	0	0	11
04:30	0	5	3	0	1	0	0	0	1	0	0	0	0	0	9
04:45	0	10	4	0	0	0	0	0	0	0	0	0	0	0	10
05:00	0	27	12	0	4	0	0	0	1	0	0	0	0	0	44
05:15	0	9	2	0	2	0	0	0	0	0	0	0	0	0	13
05:30	0	11	8	1	5	0	0	0	0	0	0	0	0	0	25
05:45	0	10	3	2	3	0	0	0	1	0	0	0	0	0	19
06:00	0	17	2	4	9	1	0	1	0	0	0	0	0	0	34
06:15	0	47	15	7	19	1	0	1	1	0	0	0	0	0	91
06:30	0	23	7	2	2	0	0	0	0	0	0	0	0	0	34
06:45	0	26	16	1	13	1	0	0	1	0	0	0	0	0	58
07:00	0	30	15	0	9	1	0	1	0	0	0	0	0	0	56
07:15	0	45	14	0	15	2	0	1	1	0	0	0	0	0	78
07:30	0	124	52	3	39	4	0	2	2	0	0	0	0	0	226
07:45	0	32	8	0	10	0	0	2	2	0	0	0	0	0	54
08:00	0	64	28	1	17	0	0	2	0	0	0	0	0	0	112
08:15	0	56	27	1	14	0	0	2	1	0	0	0	0	0	101
08:30	0	58	29	1	18	1	0	1	1	0	0	0	0	0	109
08:45	0	210	92	3	59	1	0	7	4	0	0	0	0	0	376
09:00	0	68	43	0	22	1	0	3	0	0	0	0	0	0	137
09:15	0	58	28	0	15	0	0	6	0	0	0	0	0	0	107
09:30	0	37	24	1	14	0	1	1	0	0	0	0	0	0	78
09:45	1	40	21	1	13	0	0	0	1	0	0	0	0	0	77
10:00	1	203	116	2	64	1	1	10	1	0	0	0	0	0	399
10:15	0	52	20	0	9	0	0	2	2	0	0	0	0	0	85
10:30	1	41	30	1	11	2	0	2	2	0	0	0	0	0	90
10:45	1	48	28	2	16	0	0	4	0	0	0	0	0	0	99
11:00	0	45	28	1	16	1	0	1	0	0	0	0	0	0	92
11:15	2	186	106	4	52	3	0	9	4	0	0	0	0	0	366
11:30	1	45	30	1	10	0	0	0	1	0	0	0	0	0	88
11:45	0	50	30	2	11	2	0	3	4	0	0	0	0	0	102
12:00	0	38	34	1	17	1	0	1	0	0	0	0	0	0	92
12:15	2	36	24	0	12	0	0	0	0	0	0	0	0	0	74
12:30	3	169	118	4	50	3	0	4	5	0	0	0	0	0	356
12:45	0	40	27	1	7	1	0	1	0	0	0	0	0	0	77
13:00	0	56	24	1	12	4	0	2	3	0	0	0	0	0	102
13:15	0	56	24	0	16	2	0	2	1	0	0	0	0	0	101
13:30	1	52	33	2	15	0	0	3	0	0	0	0	0	0	106
13:45	1	204	108	4	50	7	0	8	4	0	0	0	0	0	386
Total	7	1337	645	28	346	20	1	42	23	0	0	0	0	0	2449
Percent	0.3%	54.6%	26.3%	1.1%	14.1%	0.8%	0.0%	1.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd n of W Downing Creek

01

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	56	26	2	8	1	0	2	0	0	0	0	0	0	95
12:15	0	72	31	0	5	1	0	2	0	0	0	0	0	0	111
12:30	0	86	28	4	6	1	0	0	0	0	0	0	0	0	125
12:45	0	78	19	2	3	3	0	2	1	0	0	0	0	0	108
13:00	0	292	104	8	22	6	0	6	1	0	0	0	0	0	439
13:15	0	78	25	2	5	1	0	1	0	0	0	0	0	0	112
13:30	0	101	27	5	6	1	0	0	1	0	0	0	0	0	141
13:45	0	88	31	1	6	1	0	1	3	0	0	0	0	0	131
14:00	0	86	27	0	9	3	0	1	2	0	0	0	0	0	128
14:15	0	353	110	8	26	6	0	3	6	0	0	0	0	0	512
14:30	1	87	26	0	7	0	0	2	3	0	0	0	0	0	126
14:45	0	96	28	0	9	3	0	0	0	0	0	0	0	0	136
15:00	0	110	45	1	11	2	0	3	1	0	0	0	0	0	173
15:15	0	119	32	1	7	1	0	2	3	0	0	0	0	0	165
15:30	1	412	131	2	34	6	0	7	7	0	0	0	0	0	600
15:45	0	161	42	1	7	1	0	2	1	0	0	0	0	0	215
16:00	0	134	52	1	4	2	0	2	1	0	0	0	0	0	196
16:15	0	140	39	0	10	0	0	0	1	0	0	0	0	0	190
16:30	0	123	57	0	10	1	0	2	0	0	0	0	0	0	193
16:45	0	558	190	2	31	4	0	6	3	0	0	0	0	0	794
17:00	1	158	41	0	5	0	0	3	0	0	0	0	0	0	208
17:15	1	142	46	0	14	2	0	2	0	0	0	0	0	0	207
17:30	0	193	50	0	10	2	0	3	1	0	0	0	0	0	259
17:45	0	168	60	1	7	0	0	2	0	0	0	0	0	0	238
18:00	2	661	197	1	36	4	0	10	1	0	0	0	0	0	912
18:15	0	149	55	0	6	0	0	0	0	0	0	0	0	0	210
18:30	1	191	49	1	15	0	0	1	1	0	0	0	0	0	259
18:45	0	197	55	1	10	2	0	4	1	0	0	0	0	0	270
19:00	1	209	42	0	15	2	0	3	1	0	0	0	0	0	273
19:15	2	746	201	2	46	4	0	8	3	0	0	0	0	0	1012
19:30	1	180	56	0	17	1	0	4	0	0	0	0	0	0	259
19:45	0	211	52	0	11	0	0	3	1	0	0	0	0	0	278
20:00	1	167	49	0	10	1	0	1	0	0	0	0	0	0	229
20:15	0	135	30	0	10	0	0	2	1	0	0	0	0	0	178
20:30	2	693	187	0	48	2	0	10	2	0	0	0	0	0	944
20:45	2	133	31	2	10	0	0	4	0	0	0	0	0	0	182
21:00	0	123	31	1	6	0	0	1	0	0	0	0	0	0	162
21:15	0	128	23	0	8	0	0	1	1	0	0	0	0	0	161
21:30	1	109	34	1	9	0	0	1	0	0	0	0	0	0	155
21:45	3	493	119	4	33	0	0	7	1	0	0	0	0	0	660
22:00	3	86	42	0	23	0	0	0	0	0	0	0	0	0	154
22:15	0	93	41	0	11	0	0	2	0	0	0	0	0	0	147
22:30	0	90	22	0	18	0	0	1	0	0	0	0	0	0	131
22:45	0	95	39	0	14	0	0	1	0	0	0	0	0	0	149
23:00	3	364	144	0	66	0	0	4	0	0	0	0	0	0	581
23:15	0	76	23	1	16	0	0	0	0	0	0	0	0	0	116
23:30	1	81	19	0	10	1	0	2	0	0	0	0	0	0	114
23:45	2	80	24	0	12	0	0	1	0	0	0	0	0	0	119
24:00	0	60	27	0	12	0	0	1	0	0	0	0	0	0	100
24:15	3	297	93	1	50	1	0	4	0	0	0	0	0	0	449
24:30	0	45	21	0	9	0	0	1	0	0	0	0	0	0	76
24:45	0	50	13	0	3	0	0	0	0	0	0	0	0	0	66
25:00	1	32	14	0	4	0	0	2	0	0	0	0	0	0	53
25:15	1	37	16	0	4	0	0	2	0	0	0	0	0	0	60
25:30	2	164	64	0	20	0	0	5	0	0	0	0	0	0	255
25:45	0	16	10	0	1	0	0	0	0	0	0	0	0	0	27
26:00	0	29	9	0	3	0	0	0	0	0	0	0	0	0	41
26:15	1	17	6	0	5	0	0	0	0	0	0	0	0	0	29
26:30	0	31	6	0	6	0	0	0	0	0	0	0	0	0	43
26:45	1	93	31	0	15	0	0	0	0	0	0	0	0	0	140
Total	19	5126	1571	28	427	33	0	70	24	0	0	0	0	0	7298
Percent	0.3%	70.2%	21.5%	0.4%	5.9%	0.5%	0.0%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	26	6463	2216	56	773	53	1	112	47	0	0	0	0	0	9747
Percent	0.3%	66.3%	22.7%	0.6%	7.9%	0.5%	0.0%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd n of W Downing Creek

01

NB, SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	32	9	1	1	0	0	0	1	0	0	0	0	0	44
00:15	0	28	3	0	2	0	0	1	0	0	0	0	0	0	34
00:30	0	27	3	0	3	0	0	0	0	0	0	0	0	0	33
00:45	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	104	18	1	6	0	0	1	1	0	0	0	0	0	131
01:15	0	14	3	0	0	0	0	0	0	0	0	0	0	0	17
01:30	0	15	3	0	1	0	0	0	0	0	0	0	0	0	19
01:45	0	12	2	1	0	0	0	0	0	0	0	0	0	0	15
02:00	0	13	0	0	1	0	0	0	0	0	0	0	0	0	14
02:15	0	54	8	1	2	0	0	0	0	0	0	0	0	0	65
02:30	0	10	5	0	2	0	0	0	0	0	0	0	0	0	17
02:45	0	11	5	0	0	0	0	0	0	0	0	0	0	0	16
03:00	0	20	4	0	0	0	0	0	0	0	0	0	0	0	24
03:15	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
03:30	0	52	18	0	2	0	0	0	0	0	0	0	0	0	72
03:45	0	18	1	0	0	0	0	0	1	0	0	0	0	0	20
04:00	0	16	4	0	0	0	0	0	0	0	0	0	0	0	20
04:15	0	19	5	1	3	0	0	0	0	0	0	0	0	0	28
04:30	0	20	5	0	0	0	0	0	0	0	0	0	0	0	25
04:45	0	73	15	1	3	0	0	0	1	0	0	0	0	0	93
05:00	1	24	6	0	6	0	0	0	0	0	0	0	0	0	37
05:15	0	34	10	0	2	0	0	0	0	0	0	0	0	0	46
05:30	0	35	19	0	1	0	0	1	1	0	0	0	0	0	57
05:45	0	49	15	0	4	0	0	0	0	0	0	0	0	0	68
06:00	1	142	50	0	13	0	0	1	1	0	0	0	0	0	208
06:15	0	56	24	0	7	0	0	1	0	0	0	0	0	0	88
06:30	1	83	36	1	11	0	0	0	0	0	0	0	0	0	132
06:45	0	100	36	2	11	0	0	1	1	0	0	0	0	0	151
07:00	0	105	37	5	19	1	0	1	2	0	0	0	0	0	170
07:15	1	344	133	8	48	1	0	3	3	0	0	0	0	0	541
07:30	1	120	51	2	9	1	0	2	0	0	0	0	0	0	186
07:45	0	133	70	1	28	2	0	2	1	0	0	0	0	0	237
08:00	0	168	60	1	16	1	0	2	0	0	0	0	0	0	248
08:15	0	204	53	0	23	4	0	3	1	0	0	0	0	0	288
08:30	1	625	234	4	76	8	0	9	2	0	0	0	0	0	959
08:45	0	181	42	0	19	0	1	5	2	0	0	0	0	0	250
09:00	0	233	66	2	26	0	0	5	0	0	0	0	0	0	332
09:15	0	217	73	1	24	0	0	4	1	0	0	0	0	0	320
09:30	0	231	69	3	24	1	0	5	3	0	0	0	0	0	336
09:45	0	862	250	6	93	1	1	19	6	0	0	0	0	0	1238
10:00	0	217	84	4	28	2	0	6	0	0	0	0	0	0	341
10:15	1	204	58	1	25	1	0	7	0	0	0	0	0	0	297
10:30	1	168	50	1	27	1	1	2	2	0	0	0	0	0	253
10:45	1	146	47	5	24	1	0	1	1	0	0	0	0	0	226
11:00	3	735	239	11	104	5	1	16	3	0	0	0	0	0	1117
11:15	0	143	49	2	15	1	0	5	2	0	0	0	0	0	217
11:30	2	145	66	2	18	2	0	4	3	0	0	0	0	0	242
11:45	1	135	49	3	22	2	0	5	0	0	0	0	0	0	217
12:00	0	147	48	1	20	2	0	3	0	0	0	0	0	0	221
12:15	3	570	212	8	75	7	0	17	5	0	0	0	0	0	897
12:30	2	130	62	2	19	1	0	0	1	0	0	0	0	0	217
12:45	0	124	51	3	15	2	0	5	4	0	0	0	0	0	204
13:00	0	134	73	3	21	1	0	3	0	0	0	0	0	0	235
13:15	2	104	41	2	19	3	0	0	0	0	0	0	0	0	171
13:30	4	492	227	10	74	7	0	8	5	0	0	0	0	0	827
13:45	0	124	53	2	15	2	0	1	2	0	0	0	0	0	199
14:00	0	138	53	2	16	5	0	2	4	0	0	0	0	0	220
14:15	0	134	48	1	23	2	0	4	2	0	0	0	0	0	214
14:30	1	119	53	2	20	1	0	3	3	0	0	0	0	0	202
14:45	1	515	207	7	74	10	0	10	11	0	0	0	0	0	835
Total	14	4568	1611	57	570	39	2	84	38	0	0	0	0	0	6983
Percent	0.2%	65.4%	23.1%	0.8%	8.2%	0.6%	0.0%	1.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd n of W Downing Creek

01

NB, SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	132	44	6	14	2	0	4	0	0	0	0	0	0	202
12:15	0	175	52	2	15	3	0	3	4	0	0	0	0	0	254
12:30	0	169	44	4	12	1	0	1	1	0	0	0	0	0	232
12:45	0	163	40	3	5	3	0	4	1	0	0	0	0	0	219
	0	639	180	15	46	9	0	12	6	0	0	0	0	0	907
13:00	0	163	49	3	6	4	0	1	1	0	0	0	0	0	227
13:15	0	194	43	5	10	3	0	0	2	0	0	0	0	0	257
13:30	0	184	47	1	9	2	0	2	3	0	0	0	0	0	248
13:45	0	165	47	1	14	3	0	2	2	0	0	0	0	0	234
	0	706	186	10	39	12	0	5	8	0	0	0	0	0	966
14:00	1	163	48	0	14	3	0	3	3	0	0	0	0	0	235
14:15	0	197	50	0	14	4	0	1	0	0	0	0	0	0	266
14:30	0	221	70	2	15	4	0	4	3	0	0	0	0	0	319
14:45	0	217	58	1	12	2	0	3	4	0	0	0	0	0	297
	1	798	226	3	55	13	0	11	10	0	0	0	0	0	1117
15:00	0	259	64	2	18	4	0	4	4	0	0	0	0	0	355
15:15	0	232	78	2	12	4	0	4	2	0	0	0	0	0	334
15:30	0	219	65	2	18	0	0	2	2	0	0	0	0	0	308
15:45	0	210	72	2	19	1	0	4	3	0	0	0	0	0	311
	0	920	279	8	67	9	0	14	11	0	0	0	0	0	1308
16:00	1	237	64	1	7	1	0	3	0	0	0	0	0	0	314
16:15	1	246	63	0	24	3	0	4	0	0	0	0	0	0	341
16:30	0	287	65	1	19	2	0	4	3	0	0	0	0	0	381
16:45	1	259	80	2	9	0	0	2	2	0	0	0	0	0	355
	3	1029	272	4	59	6	0	13	5	0	0	0	0	0	1391
17:00	0	251	81	4	11	1	0	2	0	0	0	0	0	0	350
17:15	1	288	86	3	19	0	0	1	2	0	0	0	0	0	400
17:30	0	316	80	2	18	2	0	4	1	0	0	0	0	0	423
17:45	1	325	67	1	23	3	0	4	1	0	0	0	0	0	425
	2	1180	314	10	71	6	0	11	4	0	0	0	0	0	1598
18:00	2	289	77	0	23	1	0	4	0	0	0	0	0	0	396
18:15	0	313	74	1	14	0	0	4	2	0	0	0	0	0	408
18:30	1	275	73	0	11	1	0	1	1	0	0	0	0	0	363
18:45	0	224	52	1	16	1	0	6	1	0	0	0	0	0	301
	3	1101	276	2	64	3	0	15	4	0	0	0	0	0	1468
19:00	2	215	59	2	16	0	0	4	0	0	0	0	0	0	298
19:15	1	188	51	2	9	0	0	2	1	0	0	0	0	0	254
19:30	0	185	43	0	13	0	0	2	1	0	0	0	0	0	244
19:45	1	164	49	1	11	0	0	1	0	0	0	0	0	0	227
	4	752	202	5	49	0	0	9	2	0	0	0	0	0	1023
20:00	3	140	52	0	25	0	0	0	0	0	0	0	0	0	220
20:15	0	149	50	0	15	0	0	3	0	0	0	0	0	0	217
20:30	1	147	41	0	19	0	0	2	0	0	0	0	0	0	210
20:45	0	135	52	0	19	0	0	2	0	0	0	0	0	0	208
	4	571	195	0	78	0	0	7	0	0	0	0	0	0	855
21:00	1	110	33	1	20	0	0	0	1	0	0	0	0	0	166
21:15	1	121	33	0	11	1	0	2	0	0	0	0	0	0	169
21:30	2	120	31	0	15	0	0	2	0	0	0	0	0	0	170
21:45	1	107	38	0	13	0	0	1	0	0	0	0	0	0	160
	5	458	135	1	59	1	0	5	1	0	0	0	0	0	665
22:00	0	76	26	1	9	0	0	1	0	0	0	0	0	0	113
22:15	0	71	14	0	5	0	0	1	0	0	0	0	0	0	91
22:30	1	55	17	0	5	0	0	2	1	0	0	0	0	0	81
22:45	1	54	20	0	5	0	0	3	0	0	0	0	0	0	83
	2	256	77	1	24	0	0	7	1	0	0	0	0	0	368
23:00	1	38	12	0	2	0	0	0	0	0	0	0	0	0	53
23:15	0	38	13	0	3	0	0	0	0	0	0	0	0	0	54
23:30	1	36	8	0	6	0	0	0	0	0	0	0	0	0	51
23:45	0	43	6	0	6	0	0	0	0	0	0	0	0	0	55
	2	155	39	0	17	0	0	0	0	0	0	0	0	0	213
Total	26	8565	2381	59	628	59	0	109	52	0	0	0	0	0	11879
Percent	0.2%	72.1%	20.0%	0.5%	5.3%	0.5%	0.0%	0.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	40	13133	3992	116	1198	98	2	193	90	0	0	0	0	0	18862
Percent	0.2%	69.6%	21.2%	0.6%	6.4%	0.5%	0.0%	1.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Greater Traffic Company

Harbins Rd south of W Drowning Creek

03

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	7	6	0	2	0	0	0	0	0	0	0	0	0	15
00:15	0	3	3	0	1	0	0	0	0	0	0	0	0	0	7
00:30	0	4	9	0	3	0	0	0	0	0	0	0	0	0	16
00:45	0	4	4	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	18	22	0	6	0	0	0	0	0	0	0	0	0	46
01:15	0	3	0	0	2	0	0	0	0	0	0	0	0	0	5
01:30	0	1	3	0	1	0	0	0	0	0	0	0	0	0	5
01:45	0	1	2	0	2	0	0	0	0	0	0	0	0	0	5
02:00	0	3	5	1	0	0	0	0	0	0	0	0	0	0	9
02:15	0	8	10	1	5	0	0	0	0	0	0	0	0	0	24
02:30	0	2	1	0	5	0	0	0	0	0	0	0	0	0	8
02:45	0	2	4	0	2	0	0	0	0	0	0	0	0	0	8
03:00	0	4	3	0	2	0	0	0	0	0	0	0	0	0	9
03:15	0	5	2	0	2	0	0	0	0	0	0	0	0	0	9
03:30	0	13	10	0	11	0	0	0	0	0	0	0	0	0	34
03:45	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	3	3	0	2	0	0	0	1	0	0	0	0	0	9
04:15	0	7	7	0	1	0	0	0	0	0	0	0	0	0	15
04:30	0	2	4	1	2	0	0	0	0	0	0	0	0	0	9
04:45	0	17	16	1	5	0	0	0	1	0	0	0	0	0	40
05:00	0	12	5	0	5	0	0	0	0	0	0	0	0	0	22
05:15	0	11	13	0	6	0	0	0	0	0	0	0	0	0	30
05:30	0	20	19	0	6	0	0	1	0	0	0	0	0	0	46
05:45	0	21	22	0	8	0	0	0	0	0	0	0	0	0	51
06:00	0	64	59	0	25	0	0	1	0	0	0	0	0	0	149
06:15	0	22	27	0	11	0	0	1	0	0	0	0	0	0	61
06:30	1	49	33	0	26	0	0	0	0	0	0	0	0	0	109
06:45	0	44	40	0	29	0	0	1	0	0	0	0	0	0	114
07:00	0	59	37	0	27	0	0	0	2	0	0	0	0	0	125
07:15	1	174	137	0	93	0	0	2	2	0	0	0	0	0	409
07:30	0	63	45	1	39	0	0	2	0	0	0	0	0	0	150
07:45	0	65	53	0	52	1	0	2	0	0	0	0	0	0	173
08:00	0	101	62	0	39	0	0	3	0	0	0	0	0	0	205
08:15	0	95	75	1	43	1	0	4	0	0	0	0	0	0	219
08:30	0	324	235	2	173	2	0	11	0	0	0	0	0	0	747
08:45	1	102	62	0	30	0	0	3	0	0	0	0	0	0	198
09:00	1	148	65	1	32	0	0	4	0	0	0	0	0	0	251
09:15	0	131	87	0	36	0	0	3	0	0	0	0	0	0	257
09:30	1	127	73	1	32	0	0	5	1	0	0	0	0	0	240
09:45	3	508	287	2	130	0	0	15	1	0	0	0	0	0	946
10:00	1	112	77	0	19	1	0	5	1	0	0	0	0	0	216
10:15	0	90	60	2	18	1	0	4	0	0	0	0	0	0	175
10:30	0	96	60	0	19	1	0	4	2	0	0	0	0	0	182
10:45	0	77	54	0	27	0	0	1	0	0	0	0	0	0	159
11:00	1	375	251	2	83	3	0	14	3	0	0	0	0	0	732
11:15	0	58	62	1	25	1	0	4	0	0	0	0	0	0	151
11:30	0	58	42	1	19	0	0	1	1	0	0	0	0	0	122
11:45	0	65	34	2	20	2	0	2	0	0	0	0	0	0	125
12:00	0	73	34	0	15	1	0	3	0	0	0	0	0	0	126
12:15	0	254	172	4	79	4	0	10	1	0	0	0	0	0	524
12:30	1	58	36	2	21	1	0	3	0	0	0	0	0	0	122
12:45	0	40	43	0	14	0	0	3	0	0	0	0	0	0	100
13:00	0	40	58	3	21	0	0	2	0	0	0	0	0	0	124
13:15	0	25	42	4	20	3	0	1	0	0	0	0	0	0	95
13:30	1	163	179	9	76	4	0	9	0	0	0	0	0	0	441
13:45	1	38	41	1	21	2	0	0	0	0	0	0	0	0	104
14:00	0	41	55	1	13	0	0	1	1	0	0	0	0	0	112
14:15	0	32	35	2	19	1	0	1	1	0	0	0	0	0	91
14:30	0	43	37	0	23	1	0	1	2	0	0	0	0	0	107
14:45	1	154	168	4	76	4	0	3	4	0	0	0	0	0	414
Total	7	2072	1546	25	762	17	0	65	12	0	0	0	0	0	4506
Percent	0.2%	46.0%	34.3%	0.6%	16.9%	0.4%	0.0%	1.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	

Greater Traffic Company

Harbins Rd south of W Drowning Creek

03

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	61	32	2	12	2	0	1	0	0	0	0	0	0	110
12:15	0	79	22	0	16	3	0	0	3	0	0	0	0	0	123
12:30	1	59	31	3	12	0	0	1	2	0	0	0	0	0	109
12:45	1	59	32	0	12	0	0	3	0	0	0	0	0	0	107
	2	258	117	5	52	5	0	5	5	0	0	0	0	0	449
13:00	0	68	30	1	10	2	0	0	1	0	0	0	0	0	112
13:15	0	70	28	3	12	2	0	2	1	0	0	0	0	0	118
13:30	1	72	28	0	7	1	0	1	0	0	0	0	0	0	110
13:45	0	61	32	1	21	0	0	1	0	0	0	0	0	0	116
	1	271	118	5	50	5	0	4	2	0	0	0	0	0	456
14:00	1	52	25	1	14	2	0	0	0	0	0	0	0	0	95
14:15	0	71	27	0	9	2	0	3	0	0	0	0	0	0	112
14:30	2	88	51	1	15	2	0	1	0	0	0	0	0	0	160
14:45	0	74	40	0	19	1	0	1	2	0	0	0	0	0	137
	3	285	143	2	57	7	0	5	2	0	0	0	0	0	504
15:00	0	79	31	0	18	2	0	2	2	0	0	0	0	0	134
15:15	1	81	34	1	17	2	0	2	1	0	0	0	0	0	139
15:30	0	51	35	2	21	0	0	3	1	0	0	0	0	0	113
15:45	1	55	27	1	19	0	0	2	2	0	0	0	0	0	107
	2	266	127	4	75	4	0	9	6	0	0	0	0	0	493
16:00	0	57	29	1	14	1	0	2	1	0	0	0	0	0	105
16:15	0	74	34	1	14	0	0	3	1	0	0	0	0	0	127
16:30	0	71	28	1	16	0	0	0	2	0	0	0	0	0	118
16:45	0	72	34	1	12	0	0	0	1	0	0	0	0	0	120
	0	274	125	4	56	1	0	5	5	0	0	0	0	0	470
17:00	1	83	31	3	20	0	0	0	1	0	0	0	0	0	139
17:15	0	76	40	2	14	1	0	1	1	0	0	0	0	0	135
17:30	0	104	33	1	18	0	0	1	0	0	0	0	0	0	157
17:45	0	87	36	1	19	1	0	0	0	0	0	0	0	0	144
	1	350	140	7	71	2	0	2	2	0	0	0	0	0	575
18:00	0	79	38	0	13	0	0	2	0	0	0	0	0	0	132
18:15	0	77	38	1	12	0	0	4	1	0	0	0	0	0	133
18:30	0	81	29	0	10	0	0	1	0	0	0	0	0	0	121
18:45	0	91	18	1	11	1	0	5	0	0	0	0	0	0	127
	0	328	123	2	46	1	0	12	1	0	0	0	0	0	513
19:00	0	56	32	0	19	0	0	2	0	0	0	0	0	0	109
19:15	0	47	19	1	10	0	0	1	1	0	0	0	0	0	79
19:30	0	38	23	0	13	0	0	3	0	0	0	0	0	0	77
19:45	1	51	18	0	13	0	0	1	0	0	0	0	0	0	84
	1	192	92	1	55	0	0	7	1	0	0	0	0	0	349
20:00	0	21	29	0	7	0	0	1	0	0	0	0	0	0	58
20:15	0	15	30	0	11	0	0	0	0	0	0	0	0	0	56
20:30	1	30	25	0	14	0	0	2	0	0	0	0	0	0	72
20:45	0	22	17	0	11	0	0	2	0	0	0	0	0	0	52
	1	88	101	0	43	0	0	5	0	0	0	0	0	0	238
21:00	1	13	21	0	10	0	0	0	1	0	0	0	0	0	46
21:15	0	14	25	0	7	0	0	0	0	0	0	0	0	0	46
21:30	0	22	24	0	7	0	0	1	0	0	0	0	0	0	54
21:45	1	20	17	0	9	0	0	1	0	0	0	0	0	0	48
	2	69	87	0	33	0	0	2	1	0	0	0	0	0	194
22:00	0	13	14	1	4	0	0	0	0	0	0	0	0	0	32
22:15	0	17	11	0	4	0	0	0	0	0	0	0	0	0	32
22:30	0	9	10	0	1	0	0	1	0	0	0	0	0	0	21
22:45	0	9	13	0	4	0	0	0	1	0	0	0	0	0	27
	0	48	48	1	13	0	0	1	1	0	0	0	0	0	112
23:00	0	10	4	0	1	0	0	0	0	0	0	0	0	0	15
23:15	0	8	10	0	4	0	0	0	0	0	0	0	0	0	22
23:30	0	7	4	0	2	0	0	0	0	0	0	0	0	0	13
23:45	0	6	7	0	0	0	0	0	0	0	0	0	0	0	13
	0	31	25	0	7	0	0	0	0	0	0	0	0	0	63
Total	13	2460	1246	31	558	25	0	57	26	0	0	0	0	0	4416
Percent	0.3%	55.7%	28.2%	0.7%	12.6%	0.6%	0.0%	1.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	20	4532	2792	56	1320	42	0	122	38	0	0	0	0	0	8922
Percent	0.2%	50.8%	31.3%	0.6%	14.8%	0.5%	0.0%	1.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd south of W Drowning Creek

03

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	15	2	0	0	0	0	0	0	0	0	0	0	0	17
00:15	0	17	1	0	0	0	0	1	0	0	0	0	0	0	19
00:30	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
00:45	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
01:00	0	54	7	0	0	0	0	1	0	0	0	0	0	0	62
01:15	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
01:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
01:45	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	36	4	0	0	0	0	0	0	0	0	0	0	0	40
02:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
03:15	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
03:30	0	28	4	0	0	0	0	0	0	0	0	0	0	0	32
03:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
04:00	1	7	0	0	1	0	0	0	0	0	0	0	0	0	9
04:15	0	9	1	0	2	0	0	0	0	0	0	0	0	0	12
04:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
04:45	1	34	3	0	3	0	0	0	0	0	0	0	0	0	41
05:00	0	6	3	0	2	0	0	0	0	0	0	0	0	0	11
05:15	0	5	4	0	0	0	0	0	0	0	0	0	0	0	9
05:30	0	7	2	0	0	0	0	0	1	0	0	0	0	0	10
05:45	0	11	2	0	1	0	0	0	0	0	0	0	0	0	14
06:00	0	29	11	0	3	0	0	0	1	0	0	0	0	0	44
06:15	0	7	5	1	1	0	0	0	0	0	0	0	0	0	14
06:30	0	17	7	1	3	0	0	0	1	0	0	0	0	0	29
06:45	0	11	3	2	4	0	0	0	0	0	0	0	0	0	20
07:00	0	19	6	4	5	0	0	0	0	0	0	0	0	0	34
07:15	0	54	21	8	13	0	0	0	1	0	0	0	0	0	97
07:30	0	23	6	1	5	0	0	0	1	0	0	0	0	0	36
07:45	0	33	19	0	8	0	0	0	0	0	0	0	0	0	60
08:00	1	38	16	0	7	0	0	1	2	0	0	0	0	0	65
08:15	0	39	9	0	14	1	0	2	0	0	0	0	0	0	65
08:30	1	133	50	1	34	1	0	3	3	0	0	0	0	0	226
08:45	0	45	15	0	12	0	0	2	2	0	0	0	0	0	76
09:00	1	76	30	2	9	0	0	2	0	0	0	0	0	0	120
09:15	0	54	29	1	12	0	0	0	0	0	0	0	0	0	96
09:30	0	61	34	0	16	1	0	2	1	0	0	0	0	0	115
09:45	1	236	108	3	49	1	0	6	3	0	0	0	0	0	407
10:00	0	68	34	0	9	0	0	3	0	0	0	0	0	0	114
10:15	0	55	25	0	9	0	0	4	0	0	0	0	0	0	93
10:30	0	43	21	1	12	0	0	1	0	0	0	0	0	0	78
10:45	0	48	20	1	8	0	0	0	3	0	0	0	0	0	80
11:00	0	214	100	2	38	0	0	8	3	0	0	0	0	0	365
11:15	0	46	29	0	8	1	0	1	0	0	0	0	0	0	85
11:30	1	32	22	2	14	0	0	2	2	0	0	0	0	0	75
11:45	0	56	23	3	5	0	0	2	0	0	0	0	0	0	89
12:00	0	38	33	0	8	0	0	1	0	0	0	0	0	0	80
12:15	1	172	107	5	35	1	0	6	2	0	0	0	0	0	329
12:30	0	57	29	2	9	1	0	2	2	0	0	0	0	0	102
12:45	1	44	30	1	7	1	0	0	3	0	0	0	0	0	87
13:00	0	40	22	1	12	0	0	1	0	0	0	0	0	0	76
13:15	1	36	22	0	6	0	0	0	0	0	0	0	0	0	65
13:30	2	177	103	4	34	2	0	3	5	0	0	0	0	0	330
13:45	0	53	27	1	8	1	0	1	1	0	0	0	0	0	92
14:00	0	44	19	1	8	1	0	3	2	0	0	0	0	0	78
14:15	0	57	28	1	16	0	0	1	1	0	0	0	0	0	104
14:30	1	52	31	1	4	1	0	3	0	0	0	0	0	0	93
14:45	1	206	105	4	36	3	0	8	4	0	0	0	0	0	367
Total	7	1373	623	27	245	8	0	35	22	0	0	0	0	0	2340
Percent	0.3%	58.7%	26.6%	1.2%	10.5%	0.3%	0.0%	1.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd south of W Drowning Creek

03

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	56	21	1	6	0	0	0	1	0	0	0	0	0	85
12:15	0	67	38	1	5	1	0	1	1	0	0	0	0	0	114
12:30	1	75	22	4	4	2	0	0	1	0	0	0	0	0	109
12:45	0	75	17	1	6	2	0	3	1	0	0	0	0	0	105
13:00	1	273	98	7	21	5	0	4	4	0	0	0	0	0	413
13:15	0	90	29	2	3	0	0	0	0	0	0	0	0	0	124
13:30	1	90	34	4	5	0	0	0	3	0	0	0	0	0	137
13:45	0	79	27	0	6	2	0	1	3	0	0	0	0	0	118
14:00	0	77	29	1	9	0	0	2	3	0	0	0	0	0	121
14:15	1	336	119	7	23	2	0	3	9	0	0	0	0	0	500
14:30	1	98	36	1	9	2	0	0	1	0	0	0	0	0	148
14:45	0	94	28	1	6	1	0	1	1	0	0	0	0	0	132
15:00	2	108	46	0	13	2	0	3	2	0	0	0	0	0	176
15:15	1	110	41	1	9	0	0	4	1	0	0	0	0	0	167
15:30	4	410	151	3	37	5	0	8	5	0	0	0	0	0	623
15:45	0	143	50	1	5	1	0	1	1	0	0	0	0	0	202
16:00	0	131	46	1	9	0	0	1	2	0	0	0	0	0	190
16:15	1	127	55	0	12	0	0	2	0	0	0	0	0	0	197
16:30	0	141	46	0	9	1	0	1	0	0	0	0	0	0	198
16:45	1	542	197	2	35	2	0	5	3	0	0	0	0	0	787
17:00	1	135	56	0	11	0	0	4	0	0	0	0	0	0	207
17:15	0	163	59	1	12	1	0	3	0	0	0	0	0	0	239
17:30	1	180	45	0	10	1	0	4	0	0	0	0	0	0	241
17:45	0	156	68	1	10	0	0	2	0	0	0	0	0	0	237
18:00	2	634	228	2	43	2	0	13	0	0	0	0	0	0	924
18:15	0	166	60	0	9	0	0	1	0	0	0	0	0	0	236
18:30	0	171	70	1	16	0	0	2	2	0	0	0	0	0	262
18:45	0	200	57	0	10	2	0	2	1	0	0	0	0	0	272
19:00	1	192	51	0	18	0	0	3	0	0	0	0	0	0	265
19:15	1	729	238	1	53	2	0	8	3	0	0	0	0	0	1035
19:30	1	175	62	0	11	0	0	6	1	0	0	0	0	0	256
19:45	1	187	64	0	11	0	0	4	0	0	0	0	0	0	267
20:00	1	133	40	0	8	0	0	3	0	0	0	0	0	0	185
20:15	0	131	35	0	7	0	0	4	1	0	0	0	0	0	178
20:30	3	626	201	0	37	0	0	17	2	0	0	0	0	0	886
20:45	1	121	30	1	9	0	0	1	0	0	0	0	0	0	163
21:00	0	120	27	0	7	0	0	2	0	0	0	0	0	0	156
21:15	0	98	30	0	5	0	0	1	1	0	0	0	0	0	135
21:30	1	86	27	1	11	0	0	1	0	0	0	0	0	0	127
21:45	2	425	114	2	32	0	0	5	1	0	0	0	0	0	581
22:00	1	82	36	0	16	0	0	3	0	0	0	0	0	0	138
22:15	0	86	25	0	8	0	0	0	0	0	0	0	0	0	119
22:30	0	89	20	0	10	0	0	0	0	0	0	0	0	0	119
22:45	0	74	27	0	15	0	0	0	0	0	0	0	0	0	116
23:00	1	331	108	0	49	0	0	3	0	0	0	0	0	0	492
23:15	0	75	23	1	8	0	0	0	0	0	0	0	0	0	107
23:30	2	71	20	0	8	1	0	2	0	0	0	0	0	0	104
23:45	2	76	25	0	9	0	0	0	0	0	0	0	0	0	112
24:00	0	40	30	0	5	0	0	1	0	0	0	0	0	0	76
24:15	4	262	98	1	30	1	0	3	0	0	0	0	0	0	399
24:30	0	42	10	0	3	0	0	1	0	0	0	0	0	0	56
24:45	0	47	19	0	1	0	0	1	0	0	0	0	0	0	68
25:00	0	26	12	0	4	0	0	1	0	0	0	0	0	0	43
25:15	2	35	11	0	1	0	0	0	0	0	0	0	0	0	49
25:30	2	150	52	0	9	0	0	3	0	0	0	0	0	0	216
25:45	0	17	7	0	0	0	0	0	0	0	0	0	0	0	24
26:00	0	25	2	0	1	0	0	0	0	0	0	0	0	0	28
26:15	1	22	7	0	6	0	0	0	0	0	0	0	0	0	36
26:30	0	22	8	1	3	0	0	0	1	0	0	0	0	0	35
26:45	1	86	24	1	10	0	0	0	1	0	0	0	0	0	123
Total	23	4804	1628	26	379	19	0	72	28	0	0	0	0	0	6979
Percent	0.3%	68.8%	23.3%	0.4%	5.4%	0.3%	0.0%	1.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	30	6177	2251	53	624	27	0	107	50	0	0	0	0	0	9319
Percent	0.3%	66.3%	24.2%	0.6%	6.7%	0.3%	0.0%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Greater Traffic Company

Harbins Rd south of W Drowning Creek

03

NB, SB

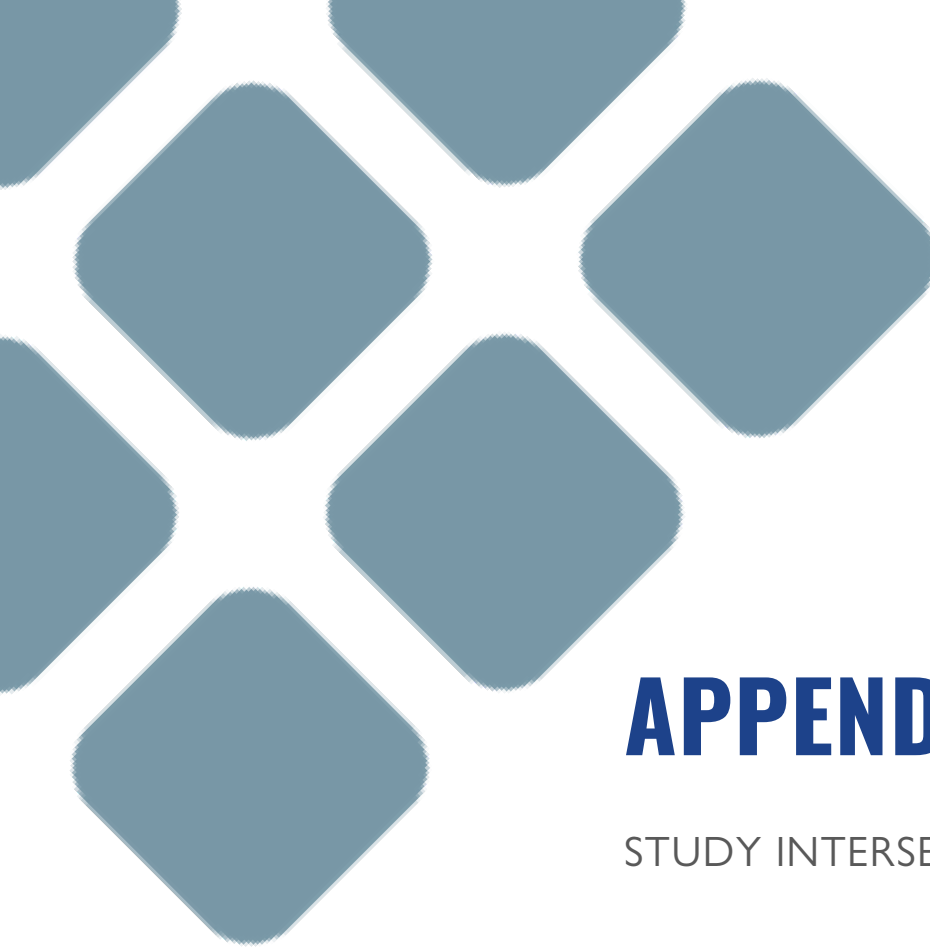
Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
08/16/22	0	22	8	0	2	0	0	0	0	0	0	0	0	0	32
00:15	0	20	4	0	1	0	0	1	0	0	0	0	0	0	26
00:30	0	15	13	0	3	0	0	0	0	0	0	0	0	0	31
00:45	0	15	4	0	0	0	0	0	0	0	0	0	0	0	19
01:00	0	72	29	0	6	0	0	1	0	0	0	0	0	0	108
01:15	0	11	3	0	2	0	0	0	0	0	0	0	0	0	16
01:30	0	12	3	0	1	0	0	0	0	0	0	0	0	0	16
01:45	0	12	2	0	2	0	0	0	0	0	0	0	0	0	16
02:00	0	9	6	1	0	0	0	0	0	0	0	0	0	0	16
02:15	0	44	14	1	5	0	0	0	0	0	0	0	0	0	64
02:30	0	7	2	0	5	0	0	0	0	0	0	0	0	0	14
02:45	0	7	5	0	2	0	0	0	0	0	0	0	0	0	14
03:00	0	14	4	0	2	0	0	0	0	0	0	0	0	0	20
03:15	0	13	3	0	2	0	0	0	0	0	0	0	0	0	18
03:30	0	41	14	0	11	0	0	0	0	0	0	0	0	0	66
03:45	0	12	4	0	0	0	0	0	0	0	0	0	0	0	16
04:00	1	10	3	0	3	0	0	0	1	0	0	0	0	0	18
04:15	0	16	8	0	3	0	0	0	0	0	0	0	0	0	27
04:30	0	13	4	1	2	0	0	0	0	0	0	0	0	0	20
04:45	1	51	19	1	8	0	0	0	1	0	0	0	0	0	81
05:00	0	18	8	0	7	0	0	0	0	0	0	0	0	0	33
05:15	0	16	17	0	6	0	0	0	0	0	0	0	0	0	39
05:30	0	27	21	0	6	0	0	1	1	0	0	0	0	0	56
05:45	0	32	24	0	9	0	0	0	0	0	0	0	0	0	65
06:00	0	93	70	0	28	0	0	1	1	0	0	0	0	0	193
06:15	0	29	32	1	12	0	0	1	0	0	0	0	0	0	75
06:30	1	66	40	1	29	0	0	0	1	0	0	0	0	0	138
06:45	0	55	43	2	33	0	0	1	0	0	0	0	0	0	134
07:00	0	78	43	4	32	0	0	0	2	0	0	0	0	0	159
07:15	1	228	158	8	106	0	0	2	3	0	0	0	0	0	506
07:30	0	86	51	2	44	0	0	2	1	0	0	0	0	0	186
07:45	0	98	72	0	60	1	0	2	0	0	0	0	0	0	233
08:00	1	139	78	0	46	0	0	4	2	0	0	0	0	0	270
08:15	0	134	84	1	57	2	0	6	0	0	0	0	0	0	284
08:30	1	457	285	3	207	3	0	14	3	0	0	0	0	0	973
08:45	1	147	77	0	42	0	0	5	2	0	0	0	0	0	274
09:00	2	224	95	3	41	0	0	6	0	0	0	0	0	0	371
09:15	0	185	116	1	48	0	0	3	0	0	0	0	0	0	353
09:30	1	188	107	1	48	1	0	7	2	0	0	0	0	0	355
09:45	4	744	395	5	179	1	0	21	4	0	0	0	0	0	1353
10:00	1	180	111	0	28	1	0	8	1	0	0	0	0	0	330
10:15	0	145	85	2	27	1	0	8	0	0	0	0	0	0	268
10:30	0	139	81	1	31	1	0	5	2	0	0	0	0	0	260
10:45	0	125	74	1	35	0	0	1	3	0	0	0	0	0	239
11:00	1	589	351	4	121	3	0	22	6	0	0	0	0	0	1097
11:15	0	104	91	1	33	2	0	5	0	0	0	0	0	0	236
11:30	1	90	64	3	33	0	0	3	3	0	0	0	0	0	197
11:45	0	121	57	5	25	2	0	4	0	0	0	0	0	0	214
12:00	0	111	67	0	23	1	0	4	0	0	0	0	0	0	206
12:15	1	426	279	9	114	5	0	16	3	0	0	0	0	0	853
12:30	1	115	65	4	30	2	0	5	2	0	0	0	0	0	224
12:45	1	84	73	1	21	1	0	3	3	0	0	0	0	0	187
13:00	0	80	80	4	33	0	0	3	0	0	0	0	0	0	200
13:15	1	61	64	4	26	3	0	1	0	0	0	0	0	0	160
13:30	3	340	282	13	110	6	0	12	5	0	0	0	0	0	771
13:45	1	91	68	2	29	3	0	1	1	0	0	0	0	0	196
14:00	0	85	74	2	21	1	0	4	3	0	0	0	0	0	190
14:15	0	89	63	3	35	1	0	2	2	0	0	0	0	0	195
14:30	1	95	68	1	27	2	0	4	2	0	0	0	0	0	200
14:45	2	360	273	8	112	7	0	11	8	0	0	0	0	0	781
Total	14	3445	2169	52	1007	25	0	100	34	0	0	0	0	0	6846
Percent	0.2%	50.3%	31.7%	0.8%	14.7%	0.4%	0.0%	1.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Harbins Rd south of W Drowning Creek

03

NB, SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
12 PM	0	117	53	3	18	2	0	1	1	0	0	0	0	0	195
12:15	0	146	60	1	21	4	0	1	4	0	0	0	0	0	237
12:30	2	134	53	7	16	2	0	1	3	0	0	0	0	0	218
12:45	1	134	49	1	18	2	0	6	1	0	0	0	0	0	212
13:00	3	531	215	12	73	10	0	9	9	0	0	0	0	0	862
13:15	0	158	59	3	13	2	0	0	1	0	0	0	0	0	236
13:30	1	160	62	7	17	2	0	2	4	0	0	0	0	0	255
13:45	1	151	55	0	13	3	0	2	3	0	0	0	0	0	228
14:00	0	138	61	2	30	0	0	3	3	0	0	0	0	0	237
14:15	2	607	237	12	73	7	0	7	11	0	0	0	0	0	956
14:30	2	150	61	2	23	4	0	0	1	0	0	0	0	0	243
14:45	0	165	55	1	15	3	0	4	1	0	0	0	0	0	244
15:00	4	196	97	1	28	4	0	4	2	0	0	0	0	0	336
15:15	1	184	81	1	28	1	0	5	3	0	0	0	0	0	304
15:30	7	695	294	5	94	12	0	13	7	0	0	0	0	0	1127
15:45	0	222	81	1	23	3	0	3	3	0	0	0	0	0	336
16:00	1	212	80	2	26	2	0	3	3	0	0	0	0	0	329
16:15	1	178	90	2	33	0	0	5	1	0	0	0	0	0	310
16:30	1	196	73	1	28	1	0	3	2	0	0	0	0	0	305
16:45	3	808	324	6	110	6	0	14	9	0	0	0	0	0	1280
17:00	1	192	85	1	25	1	0	6	1	0	0	0	0	0	312
17:15	0	237	93	2	26	1	0	6	1	0	0	0	0	0	366
17:30	1	251	73	1	26	1	0	4	2	0	0	0	0	0	359
17:45	0	228	102	2	22	0	0	2	1	0	0	0	0	0	357
18:00	2	908	353	6	99	3	0	18	5	0	0	0	0	0	1394
18:15	1	249	91	3	29	0	0	1	1	0	0	0	0	0	375
18:30	0	247	110	3	30	1	0	3	3	0	0	0	0	0	397
18:45	0	304	90	1	28	2	0	3	1	0	0	0	0	0	429
19:00	1	279	87	1	37	1	0	3	0	0	0	0	0	0	409
19:15	2	1079	378	8	124	4	0	10	5	0	0	0	0	0	1610
19:30	1	254	100	0	24	0	0	8	1	0	0	0	0	0	388
19:45	1	264	102	1	23	0	0	8	1	0	0	0	0	0	400
20:00	1	214	69	0	18	0	0	4	0	0	0	0	0	0	306
20:15	0	222	53	1	18	1	0	9	1	0	0	0	0	0	305
20:30	3	954	324	2	83	1	0	29	3	0	0	0	0	0	1399
20:45	1	177	62	1	28	0	0	3	0	0	0	0	0	0	272
21:00	0	167	46	1	17	0	0	3	1	0	0	0	0	0	235
21:15	0	136	53	0	18	0	0	4	1	0	0	0	0	0	212
21:30	2	137	45	1	24	0	0	2	0	0	0	0	0	0	211
21:45	3	617	206	3	87	0	0	12	2	0	0	0	0	0	930
22:00	1	103	65	0	23	0	0	4	0	0	0	0	0	0	196
22:15	0	101	55	0	19	0	0	0	0	0	0	0	0	0	175
22:30	1	119	45	0	24	0	0	2	0	0	0	0	0	0	191
22:45	0	96	44	0	26	0	0	2	0	0	0	0	0	0	168
23:00	2	419	209	0	92	0	0	8	0	0	0	0	0	0	730
23:15	1	88	44	1	18	0	0	0	1	0	0	0	0	0	153
23:30	2	85	45	0	15	1	0	2	0	0	0	0	0	0	150
23:45	2	98	49	0	16	0	0	1	0	0	0	0	0	0	166
24:00	1	60	47	0	14	0	0	2	0	0	0	0	0	0	124
24:15	6	331	185	1	63	1	0	5	1	0	0	0	0	0	593
24:30	0	55	24	1	7	0	0	1	0	0	0	0	0	0	88
24:45	0	64	30	0	5	0	0	1	0	0	0	0	0	0	100
25:00	0	35	22	0	5	0	0	2	0	0	0	0	0	0	64
25:15	2	44	24	0	5	0	0	0	1	0	0	0	0	0	76
25:30	2	198	100	1	22	0	0	4	1	0	0	0	0	0	328
25:45	0	27	11	0	1	0	0	0	0	0	0	0	0	0	39
26:00	0	33	12	0	5	0	0	0	0	0	0	0	0	0	50
26:15	1	29	11	0	8	0	0	0	0	0	0	0	0	0	49
26:30	0	28	15	1	3	0	0	0	1	0	0	0	0	0	48
26:45	1	117	49	1	17	0	0	0	1	0	0	0	0	0	186
Total	36	7264	2874	57	937	44	0	129	54	0	0	0	0	0	11395
Percent	0.3%	63.7%	25.2%	0.5%	8.2%	0.4%	0.0%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	50	10709	5043	109	1944	69	0	229	88	0	0	0	0	0	18241
Percent	0.3%	58.7%	27.6%	0.6%	10.7%	0.4%	0.0%	1.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	



APPENDIX C

STUDY INTERSECTION WORKSHEETS

Trip Generation Summary (NET)

Description	LUC	Unit	Quantity	Daily	AM Peak			PM Peak		
				Two-way	Enter	Exit	Total	Enter	Exit	Total
Outparcel #5 - Self-Storage Facility	151	1000 SF	105	152	5	4	9	7	9	16
Parcel 6 - Townhomes	215	Units	53.0	353	7	15	22	16	12	28
Parcel 7 - Multifamily Homes	220	Units	304.0	2,024	28	89	117	95	56	151
Outparcel #3 - Hotel	310	Rooms	110.0	769	27	21	48	27	27	54
Outparcel #2 - Strip Retail Plaza (>40K)	822	1000 SF	10.3	662	17	12	29	39	40	79
Outparcel #4(a) - Strip Retail Plaza (>40K)	822	1000 SF	10.0	652	17	12	29	39	39	78
Outparcel #4(b) - High Turnover Sit Down Rest	932	1000 SF	5.0	536	26	22	48	27	18	45
Outparcel #1 - High Turnover Sit Down Rest	932	1000 SF	7.0	750	37	30	67	38	25	63
Gross Site Trips (without reductions)				5,898	164	205	369	288	226	514
<i>Internal Capture for Retail^{1 4}</i>				-403	-5	-4	-9	-28	-44	-72
<i>Internal Capture for Restaurant^{1 4}</i>				-491	-18	-6	-24	-31	-29	-60
<i>Internal Capture for Residential^{1 4}</i>				-464	-3	-14	-17	-29	-19	-48
<i>Internal Capture for Hotel^{1 4}</i>				-132	-1	-3	-4	-9	-5	-14
<i>Shopping Center Pass-by Trips - 0% AM; 34% PM²</i>				-242	0	0	0	-17	-12	-29
<i>High Turnover Sit Down Rest Pass-by-Trips - 0% AM, 43% PM³</i>				-253	0	0	0	-15	-6	-21
Total Trip Reductions				-1,985	-27	-27	-54	-129	-115	-244
Net External Site Trips (with reductions)				3,913	137	178	315	159	111	270

Assumptions:

- 1) Daily Internal Capture rate is an average of AM & PM rates.
- 2) For daily pass-by trips, 78% of Shopping Center Trips are made in PM.
- 3) For daily pass-by trips, 74% of Supermarket Trips are made in PM.
- 4) For daily pass-by trips, 38% & 62% of Drive-In Bank Trips are made in AM & PM, respectively.

Daily Internal Capture Percentage Calculation

	AM Peak			PM Peak			Daily Avg
	Entering	Exiting	Total	Entering	Exiting	Total	
Retail	-15%	-17%	-16%	-36%	-56%	-46%	-31%
Restaurant	-29%	-12%	-21%	-48%	-67%	-56%	-38%
Residential	-9%	-13%	-12%	-26%	-28%	-27%	-20%
Hotel	-4%	-14%	-8%	-33%	-19%	-26%	-17%
Overall Internal Capture Percentage	29%	7%	15%	33%	54%	42%	29%

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Harbins 2 Mixed-Use Development		Organization:	WWP Acquisition, LLC	
Project Location:	Harbins Rd at W Drowning Creek		Performed By:	AST	
Scenario Description:			Date:	7/13/2022	
Analysis Year:	2026		Checked By:	DBD	
Analysis Period:	AM Street Peak Hour		Date:	7/13/2022	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	20	1000 SF	58	34	24
Restaurant	932	12	1000 SF	115	63	52
Cinema/Entertainment				0		
Residential	215/220	357	Units	139	35	104
Hotel	310	110	Rooms	48	27	21
All Other Land Uses ²	151	105	1000 SF	9	5	4
Total				369	164	205

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel	1.00			1.00		
All Other Land Uses ²	1.00			1.00		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	1	0
Restaurant	0	3		0	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	13	0		0
Hotel	0	1	2	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	369	164	205
Internal Capture Percentage	15%	16%	13%
External Vehicle-Trips ³	315	137	178
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	15%	17%
Restaurant	29%	12%
Cinema/Entertainment	N/A	N/A
Residential	9%	13%
Hotel	4%	14%

¹ Land Use Codes (LUCs) from <i>Trip Generation Informational Report</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
³ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
⁴ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
<i>Estimation Tool Developed by the Texas Transportation Institute</i>

Project Name:	Harbins 2 Mixed-Use Development
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips				Table 7-A (O): Exiting Trips	
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Person-Trips*
Office	1.00	0	0		1.00	0
Retail	1.00	34	34		1.00	24
Restaurant	1.00	63	63		1.00	52
Cinema/Entertainment	1.00	0	0		1.00	0
Residential	1.00	35	35		1.00	104
Hotel	1.00	27	27		1.00	21

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	7		3	0	3	0
Restaurant	16	7		0	2	2
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	21	0		0
Hotel	16	3	2	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	14	0	0	0
Retail	0		32	0	1	0
Restaurant	0	3		0	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	6	13	0		0
Hotel	0	1	4	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates				External Trips by Mode*	
	Internal	External	Total		Vehicles ¹	Non-Motorized ²
Office	0	0	0		0	0
Retail	5	29	34		29	0
Restaurant	18	45	63		45	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	32	35		32	0
Hotel	1	26	27		26	0
All Other Land Uses ³	0	5	5		5	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates				External Trips by Mode*	
	Internal	External	Total		Vehicles ¹	Non-Motorized ²
Office	0	0	0		0	0
Retail	4	20	24		20	0
Restaurant	6	46	52		46	0
Cinema/Entertainment	0	0	0		0	0
Residential	14	90	104		90	0
Hotel	3	18	21		18	0
All Other Land Uses ³	0	4	4		4	0

¹ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
² Person-Trips
³ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Harbins 2 Mixed-Use Development		Organization:	WWP Acquisition, LLC	
Project Location:	Harbins Rd at W Drowning Creek		Performed By:	AST	
Scenario Description:			Date:	7/13/2022	
Analysis Year:	2026		Checked By:	DBD	
Analysis Period:	PM Street Peak Hour		Date:	7/13/2022	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	20	1000 SF	157	78	79
Restaurant	932	12	1000 SF	108	65	43
Cinema/Entertainment				0		
Residential	215/220	357	Units	179	111	68
Hotel	310	110	Rooms	54	27	27
All Other Land Uses ²	151	105	1000 SF	16	7	9
Total				514	288	226

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00			1.00		
Restaurant	1.00			1.00		
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel	1.00			1.00		
All Other Land Uses ²	1.00			1.00		

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		19	0	21	4
Restaurant	0	18		0	8	3
Cinema/Entertainment	0	0	0		0	0
Residential	0	8	9	0		2
Hotel	0	2	3	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	514	288	226
Internal Capture Percentage	38%	34%	43%
External Vehicle-Trips ³	320	191	129
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	36%	56%
Restaurant	48%	67%
Cinema/Entertainment	N/A	N/A
Residential	26%	28%
Hotel	33%	19%

¹ Land Use Codes (LUCs) from <i>Trip Generation Informational Report</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
³ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
⁴ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
<i>Estimation Tool Developed by the Texas Transportation Institute</i>

Project Name:	Harbins 2 Mixed-Use Development
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	78	78	1.00	79	79
Restaurant	1.00	65	65	1.00	43	43
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	111	111	1.00	68	68
Hotel	1.00	27	27	1.00	27	27

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	2		23	3	21	4
Restaurant	1	18		3	8	3
Cinema/Entertainment	0	0	0		0	0
Residential	3	29	14	0		2
Hotel	0	4	18	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	1	0	4	0
Retail	0		19	0	51	5
Restaurant	0	39		0	18	19
Cinema/Entertainment	0	3	2		4	0
Residential	0	8	9	0		3
Hotel	0	2	3	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	28	50	78	50	0	0
Restaurant	31	34	65	34	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	29	82	111	82	0	0
Hotel	9	18	27	18	0	0
All Other Land Uses ³	0	7	7	7	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	44	35	79	35	0	0
Restaurant	29	14	43	14	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	19	49	68	49	0	0
Hotel	5	22	27	22	0	0
All Other Land Uses ³	0	9	9	9	0	0

¹ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
² Person-Trips
³ Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

Other Developments' Trip Generation Worksheet

Development 1 Name: Inland Pass Mixed-Use
Development 1 Traffic Data Source: Croy Engineering
Development 1 Study Name/Project #: Inland Pass DRI #

Development 2 Name: Summerwind Subdivision
Development 2 Traffic Data Source: ITE Trip Generation
Development 2 Study Name/Project #: N/A

AM Peak

Development	Harbins Road Northbound			Harbins Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	23	63	26	327	-2		-2	-5	76	-3	71	31
Summerwind Subdivision												
Total New Trips (Other)	23	63	26	327	-2		-2	-5	76	-3	71	31

Development	Harbins Road Northbound			Harbins Road Southbound			Alcovy Road Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	211	0	0	322		0	0	0	0	0	0
Summerwind Subdivision							41	118				
Total New Trips (Other)	0	211	0	0	322	41	118	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			0 Eastbound			SR 316 EB Ramp/University Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	124	44	0	0	65	0	0	0	0	62	0	0
Summerwind Subdivision	74	29			10					5		
Total New Trips (Other)	198	73	0	0	75	0	0	0	0	67	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			SR 316 WB Ramp/University Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	167	44	0	127		0	0	0	195	0	0
Summerwind Subdivision				103	15					28		
Total New Trips (Other)	0	270	59	0	142	0	0	0	0	221	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			Sanjo Street Eastbound			Tanner Road Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	44	0	0	65	0	0	0	0	0	0	0
Summerwind Subdivision		29			10							
Total New Trips (Other)	0	73	0	0	75	0	0	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			SR 8/Winder Hwy Eastbound			SR 8/Winder Hwy Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	8	31	4	0	47	0	0	0	0	11	7	0
Summerwind Subdivision	4	22	3		8					1	1	
Total New Trips (Other)	12	53	7	0	55	0	0	0	0	12	8	0

Development	Jordan Road Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	0		29	0	0	0	0	38	0	24	28
Summerwind Subdivision												
Total New Trips (Other)	0	0		29	0	0	0	0	38	0	24	28

Development	Ewing Chapel Road Northbound			Ewing Chapel Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	0		0	0		0	0	38	0	0	28
Summerwind Subdivision				9	7		0	0				
Total New Trips (Other)	0	0		9	7	0	0	0	38	0	0	28

Development	W Drowning Creek Road Northbound			0 Southbound			Alcovy Road Eastbound			Alcovy Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	28	0		0	0		0	0	0	38	0	0
Summerwind Subdivision									8		22	
Total New Trips (Other)	28	0		0	0	0	0	0	8	38	0	22

Development	Site Driveway #1 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use									67			52
Summerwind Subdivision												
Total New Trips (Other)	0	0		0	0	0	0	0	67	0	0	52

Development	Site Driveway #2 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use									67			52
Summerwind Subdivision												
Total New Trips (Other)	0	0		0	0	0	0	0	67	0	0	52

Development	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #3 Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use		112			66							
Summerwind Subdivision												
Total New Trips (Other)	0	112	0	0	66	0	0	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #4 Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use			82			49						
Summerwind Subdivision												
Total New Trips (Other)	0	82	0	0	49	0	0	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #5 Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use			82			49						
Summerwind Subdivision												
Total New Trips (Other)	0	82	0	0	49	0	0	0	0	0	0	0

PM Peak

Development	Harbins Road Northbound			Harbins Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	17	52	24	285	-66		-9	-19	77	-15	91	45
Summerwind Subdivision												
Total New Trips (Other)	17	52	24	285	-66		-9	-19	77	-15	91	45

Development	Harbins Road Northbound			Harbins Road Southbound			Alcovy Road Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	354	0	0	210		0	0	0	0	0	0
Summerwind Subdivision							138	81				
Total New Trips (Other)	0	354	0	0	210	138	81	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			0 Eastbound			SR 316 EB Ramp/University Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	219	84	0	0	43	0	0	0	0	128	0	0
Summerwind Subdivision	51	20			34					17		
Total New Trips (Other)	270	104	0	0	77	0	0	0	0	57	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			SR 316 WB Ramp/University Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	303	51	0	82		0	0	0	128	0	0
Summerwind Subdivision				71	10					86		
Total New Trips (Other)	0	374	61	0	133	0	86	0	128	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			Sanjo Street Eastbound			Tanner Road Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	84	0	0	43	0	0	0	0	0	0	0
Summerwind Subdivision		20			34							
Total New Trips (Other)	0	104	0	0	77	0	0	0	0	0	0	0

Development	Harbins Road Northbound			Harbins Road Southbound			SR 8/Winder Hwy Eastbound			SR 8/Winder Hwy Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	14	62	8	0	31	0	0	0	0	7	4	0
Summerwind Subdivision	3	15	2		26					4	1	
Total New Trips (Other)	17	77	10	0	57	0	0	0	0	11	5	0

Development	Jordan Road Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	0		19	0	0	0	0	25	0	20	33
Summerwind Subdivision												
Total New Trips (Other)	0	0		19	0	0	0	0	25	0	20	33

Development	Ewing Chapel Road Northbound			Ewing Chapel Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Inland Pass Mixed-Use	0	0		0	0		0	0	25	0	0	33
Summerwind Subdivision				3	5		0	0				
Total New Trips (Other)	0	3		3	5	0	0	0	25	0	0	33

Development	W Drowning Creek Road						0						Alcovy Road						Alcovy Road					
	Northbound						Southbound						Eastbound						Westbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right						
Inland Pass Mixed-Use	33	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0						
Summerwind Subdivision												8					15							
Total New Trips (Other)	33	0	0	0	0	0	0	0	0	0	8	25	0	15	0									

Trip Generation Summary Worksheet

Intersection 1/A Harbins Road @ W Drowning Creek Road

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			W Drowning Creek Road Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	139	789	0	0	396	49	78	0	48	0	0	0
Turning Movement Percentage		15%	85%	0%	0%	89%	11%	62%	0%	38%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		23	63	26	327	-2	-2	-5	76	-3	71	31	115
No Build Traffic Volumes	2026	173	917	26	327	427	51	79	76	49	71	31	115
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	35%	35%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	55%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	30%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	40	0	0	46	54	98	0	0	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	173	957	26	327	473	105	177	76	49	71	31	115
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
Heavy Vehicles		2	21	0	0	22	2	4	0	0	0	0	0
Heavy Vehicles %		1.4	2.7	0.0	0.0	5.6	4.1	5.1	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			W Drowning Creek Road Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	43	543	0	0	943	66	49	0	80	0	0	0
Turning Movement Percentage		7%	93%	0%	0%	93%	7%	38%	0%	62%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		17	52	24	285	-66	-9	-19	77	-15	91	45	277
No Build Traffic Volumes	2026	64	640	24	285	955	62	34	77	72	91	45	277
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	35%	35%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	55%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	30%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	24	0	0	51	72	61	0	0	0	0	0
Total Pass-By Trips (PM Peak)		0	-2	0	0	0	0	4	0	0	0	0	0
Build Traffic Volumes	2026	64	662	24	285	1,006	134	99	77	72	91	45	277
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
Heavy Vehicles		0	21	0	0	22	1	1	0	0	0	0	0
Heavy Vehicles %		0.0	3.9	0.0	0.0	2.3	1.5	2.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 2/B Harbins Road @ Alcovy Road

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Alcovy Road Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	52	826	0	0	420	144	110	0	45	0	0	0
Turning Movement Percentage		6%	94%	0%	0%	74%	26%	71%	0%	29%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	211	0	0	322	41	118	0	0	0	0	0
No Build Traffic Volumes	2026	56	1,105	0	0	777	197	237	0	49	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	138	0	0	100	0	0	0	0	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	56	1,243	0	0	877	197	237	0	49	0	0	0
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles		3	21	0	0	23	9	12	0	1	0	0	0
Heavy Vehicles %		5.8	2.5	0.0	0.0	5.5	6.3	10.9	0.0	2.2	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Alcovy Road Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	33	579	0	0	951	90	119	0	74	0	0	0
Turning Movement Percentage		5%	95%	0%	0%	91%	9%	62%	0%	38%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	354	0	0	210	138	81	0	0	0	0	0
No Build Traffic Volumes	2026	36	981	0	0	1,239	235	210	0	80	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	85	0	0	123	0	0	0	0	0	0	0
Total Pass-By Trips (PM Peak)		0	2	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	36	1,068	0	0	1,362	235	210	0	80	0	0	0
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles		6	18	0	0	22	14	5	0	2	0	0	0
Heavy Vehicles %		18.2	3.1	0.0	0.0	2.3	15.6	4.2	0.0	2.7	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 3/C Harbins Road @ SR 316 EB Ramp/University Parkway

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			SR 316 EB Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	895	41	84	319	0	190	0	245	0	0	0
Turning Movement Percentage		0%	96%	4%	21%	79%	0%	44%	0%	56%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	270	59	0	142	0	0	0	221	0	0	0
No Build Traffic Volumes	2026	0	1,239	103	91	487	0	206	0	486	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	35%	0%	0%	0%	35%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	60%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	0%	0%	0%	55%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	75%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	120	18	0	46	0	0	0	54	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	1,359	121	91	533	0	206	0	540	0	0	0
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
Heavy Vehicles		0	28	3	1	16	0	9	0	12	0	0	0
Heavy Vehicles %		0.0	3.1	7.3	1.2	5.0	0.0	4.7	0.0	4.9	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			SR 316 EB Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	641	53	116	531	0	324	0	514	0	0	0
Turning Movement Percentage		0%	92%	8%	18%	82%	0%	39%	0%	61%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	374	61	0	133	0	86	0	128	0	0	0
No Build Traffic Volumes	2026	0	1,068	118	126	708	0	437	0	684	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	35%	0%	0%	0%	35%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	60%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	0%	0%	0%	55%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	75%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	74	11	0	52	0	0	0	71	0	0	0
Total Pass-By Trips (PM Peak)		0	2	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	1,144	129	126	760	0	437	0	755	0	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles		0	21	2	0	23	0	6	0	13	0	0	0
Heavy Vehicles %		0.0	3.3	3.8	0.0	4.3	0.0	1.9	0.0	2.5	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 4/D Harbins Road @ SR 316 WB Ramp/University Parkway

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			0 Eastbound			SR 316 WB Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	400	683	0	0	365	242	0	0	0	46	3	141
Turning Movement Percentage		37%	63%	0%	0%	60%	40%	0%	0%	0%	24%	2%	74%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		198	73	0	0	75	0	0	0	0	67	0	0
No Build Traffic Volumes	2026	631	812	0	0	470	262	0	0	0	117	3	153
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	25%	0%	0%	0%	0%	10%	0%	0%
Exiting Trip Distribution (%) Commercial		35%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	20%	0%	0%	0%	0%	10%	0%	0%
Exiting Trip Distribution (%) Residential		55%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		80	40	0	0	33	0	0	0	0	13	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	711	852	0	0	503	262	0	0	0	130	3	153
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
Heavy Vehicles		9	25	0	0	14	5	0	0	0	1	0	6
Heavy Vehicles %		2.3	3.7	0.0	0.0	3.8	2.1	0.0	0.0	0.0	2.2	0.0	4.3
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			0 Eastbound			SR 316 WB Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	222	736	0	0	611	215	0	0	0	33	1	144
Turning Movement Percentage		23%	77%	0%	0%	74%	26%	0%	0%	0%	19%	1%	81%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		270	104	0	0	77	0	0	0	0	57	0	0
No Build Traffic Volumes	2026	510	901	0	0	738	233	0	0	0	93	1	156
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	25%	0%	0%	0%	0%	10%	0%	0%
Exiting Trip Distribution (%) Commercial		35%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	20%	0%	0%	0%	0%	10%	0%	0%
Exiting Trip Distribution (%) Residential		55%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		49	25	0	0	36	0	0	0	0	16	0	0
Total Pass-By Trips (PM Peak)		2	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	561	926	0	0	774	233	0	0	0	109	1	156
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
Heavy Vehicles		12	13	0	0	22	3	0	0	0	0	0	4
Heavy Vehicles %		5.4	1.8	0.0	0.0	3.6	1.4	0.0	0.0	0.0	0.0	0.0	2.8
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 5/E
Harbins Road @ Sanjo Street-Tanner Road

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Sanjo Street Eastbound			Tanner Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	770	11	18	523	0	4	0	0	26	0	109
Turning Movement Percentage		0%	99%	1%	3%	97%	0%	100%	0%	0%	19%	0%	81%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	73	0	0	75	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	906	12	19	641	0	4	0	0	28	0	118
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	40	0	0	33	0	0	0	0	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	946	12	19	674	0	4	0	0	28	0	118
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles		0	36	2	3	23	0	1	0	0	1	0	3
Heavy Vehicles %		0.0	4.7	18.2	16.7	4.4	0.0	25.0	0.0	0.0	3.8	0.0	2.8
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Sanjo Street Eastbound			Tanner Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	796	31	58	688	0	4	0	3	31	0	59
Turning Movement Percentage		0%	96%	4%	8%	92%	0%	57%	0%	43%	34%	0%	66%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	104	0	0	77	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	966	34	63	822	0	4	0	3	34	0	64
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	25	0	0	36	0	0	0	0	0	0	0
Total Pass-By Trips (PM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	991	34	63	858	0	4	0	3	34	0	64
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles		0	17	0	2	25	0	0	0	0	1	0	1
Heavy Vehicles %		0.0	2.1	0.0	3.4	3.6	0.0	0.0	0.0	0.0	3.2	0.0	1.7
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 6/F Harbins Road @ SR 8/Winder Hwy

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			SR 8/Winder Hwy Eastbound			SR 8/Winder Hwy Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	60	663	141	29	376	28	12	146	11	148	355	58
Turning Movement Percentage		7%	77%	16%	7%	87%	6%	7%	86%	7%	26%	63%	10%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		12	53	7	0	55	0	0	0	12	8	0	0
No Build Traffic Volumes	2026	77	771	160	31	462	30	13	158	24	168	384	63
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	15%	0%	0%	0%	5%	5%	0%	0%
Exiting Trip Distribution (%) Commercial		5%	15%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	10%	0%	0%	0%	5%	5%	0%	0%
Exiting Trip Distribution (%) Residential		5%	10%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		9	22	9	0	19	0	0	0	7	7	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	86	793	169	31	481	30	13	158	31	175	384	63
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles		5	24	11	1	16	2	0	23	1	8	30	0
Heavy Vehicles %		8.3	3.6	7.8	3.4	4.3	7.1	0.0	15.8	9.1	5.4	8.5	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			SR 8/Winder Hwy Eastbound			SR 8/Winder Hwy Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	13	646	163	135	587	26	32	373	40	142	235	126
Turning Movement Percentage		2%	79%	20%	18%	78%	3%	7%	84%	9%	28%	47%	25%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		17	77	10	0	57	0	0	0	11	5	0	0
No Build Traffic Volumes	2026	31	776	186	146	692	28	35	404	54	159	254	136
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	15%	0%	0%	0%	5%	5%	0%	0%
Exiting Trip Distribution (%) Commercial		5%	15%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	10%	0%	0%	0%	5%	5%	0%	0%
Exiting Trip Distribution (%) Residential		5%	10%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		6	13	6	0	20	0	0	0	8	8	0	0
Total Pass-By Trips (PM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	37	789	192	146	712	28	35	404	62	167	254	136
Peak Hour Factor		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles		0	12	4	0	22	2	1	16	2	4	19	3
Heavy Vehicles %		0.0	1.9	2.5	0.0	3.7	7.7	3.1	4.3	5.0	2.8	8.1	2.4
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 7/G
Jordan Road @ W Drowning Creek Road

AM Peak

Scenario	Year	Jordan Road Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	6	0	51	0	0	0	0	72	1	33	161	0
Turning Movement Percentage		11%	0%	89%	0%	0%	0%	0%	99%	1%	17%	83%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	29	0	0	0	0	38	0	24	28	0
No Build Traffic Volumes	2026	6	0	84	0	0	0	0	116	1	60	202	0
Entering Trip Distribution (%) Commercial		0%	0%	5%	0%	0%	0%	0%	10.0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0.0%	0%	0%	0%	0%	0.0%	0%	5%	10%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (AM Peak)		0	0	5	0	0	0	0	12	0	4	14	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	6	0	89	0	0	0	0	128	1	64	216	0
Peak Hour Factor		0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles		0	0	0	0	0	0	0	4	1	0	4	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	100.0	0.0	2.5	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Jordan Road Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	5	0	48	0	0	0	0	83	7	42	67	0
Turning Movement Percentage		9%	0%	91%	0%	0%	0%	0%	92%	8%	39%	61%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	19	0	0	0	0	25	0	20	33	0
No Build Traffic Volumes	2026	5	0	71	0	0	0	0	115	8	65	106	0
Entering Trip Distribution (%) Commercial		0%	0%	5%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (PM Peak)		0	0	4	0	0	0	0	12	0	3	9	0
Total Pass-By Trips (PM Peak)		0	0	0	0	0	0	0	0	0	-3	-5	0
Build Traffic Volumes	2026	5	0	75	0	0	0	0	127	8	65	110	0
Peak Hour Factor		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles		0	0	2	0	0	0	0	0	0	1	0	0
Heavy Vehicles %		0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 8/H Ewing Chapel Road @ W Drowning Creek Road

AM Peak

Scenario	Year	Ewing Chapel Road Northbound			Ewing Chapel Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	68	44	6	10	21	16	34	55	15	3	154	22
Turning Movement Percentage		58%	37%	5%	21%	45%	34%	33%	53%	14%	2%	86%	12%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	9	0	0	7	0	0	38	0	0	28	0
No Build Traffic Volumes	2026	74	57	6	11	30	17	37	98	16	3	195	24
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0.0%	0%	0.0%	10.0%	0%	0.0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0.0%	0%	0.0%	0%	0%	0.0%	0%	0%	10.0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (AM Peak)		0	0	0	0	0	0	0	12	0	0	14	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	74	57	6	11	30	17	37	110	16	3	209	24
Peak Hour Factor		0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles		1	6	0	4	7	6	19	0	1	0	2	1
Heavy Vehicles %		1.5	13.6	0.0	40.0	33.3	37.5	55.9	0.0	6.7	0.0	1.3	4.5
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Ewing Chapel Road Northbound			Ewing Chapel Road Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	27	14	4	5	22	3	7	82	66	4	68	0
Turning Movement Percentage		60%	31%	9%	17%	73%	10%	5%	53%	43%	6%	94%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	3	0	0	5	0	0	25	0	0	33	0
No Build Traffic Volumes	2026	29	18	4	5	29	3	8	114	71	4	107	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (PM Peak)		0	0	0	0	0	0	0	12	0	0	9	0
Total Pass-By Trips (PM Peak)		0	0	0	0	0	0	0	0	0	0	-5	0
Build Traffic Volumes	2026	29	18	4	5	29	3	8	126	71	4	111	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 9/I W Drowning Creek Road @ Alcovy Road

AM Peak

Scenario	Year	W Drowning Creek Road Northbound			0 Southbound			Alcovy Road Eastbound			Alcovy Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	239	0	2	0	0	0	0	237	79	4	266	0
Turning Movement Percentage		99%	0%	1%	0%	0%	0%	0%	75%	25%	1%	99%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		28	0	0	0	0	0	0	8	38	0	22	0
No Build Traffic Volumes	2026	287	0	2	0	0	0	0	265	124	4	310	0
Entering Trip Distribution (%) Commercial		0.0%	0.0%	0%	0%	0%	0%	0%	0%	10.0%	0.0%	0%	0%
Exiting Trip Distribution (%) Commercial		10.0%	0%	0%	0%	0%	0%	0%	0%	0%	0.0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Exiting Trip Distribution (%) Residential		5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		14	0	0	0	0	0	0	0	12	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	301	0	2	0	0	0	0	265	136	4	310	0
Peak Hour Factor		0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles		10	0	0	0	0	0	0	8	19	0	19	0
Heavy Vehicles %		4.2	0.0	0.0	0.0	0.0	0.0	0.0	3.4	24.1	0.0	7.1	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	W Drowning Creek Road Northbound			0 Southbound			Alcovy Road Eastbound			Alcovy Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	87	0	0	0	0	0	0	159	175	0	122	0
Turning Movement Percentage		100%	0%	0%	0%	0%	0%	0%	48%	52%	0%	100%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		33	0	0	0	0	0	0	8	25	0	15	0
No Build Traffic Volumes	2026	127	0	0	0	0	0	0	180	214	0	147	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Exiting Trip Distribution (%) Residential		5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		9	0	0	0	0	0	0	0	12	0	0	0
Total Pass-By Trips (PM Peak)		-5	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	131	0	0	0	0	0	0	180	226	0	147	0
Peak Hour Factor		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles		0	0	0	0	0	0	0	29	0	0	2	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	1.6	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Intersection 10/J
Site Driveway #1 @ W Drowning Creek Road

AM Peak

Scenario	Year	Site Driveway #1 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	0	0	0	0	0	0	126	0	0	188	0
Turning Movement Percentage		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	0	0	0	0	0	67	0	0	52	0
No Build Traffic Volumes	2026	0	0	0	0	0	0	0	203	0	0	255	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	14%	1%	3%	0%	0%
Exiting Trip Distribution (%) Commercial		1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	14%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (AM Peak)		1	0	3	0	0	0	0	16	1	3	17	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	1	0	3	0	0	0	0	219	1	3	272	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Site Driveway #1 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	0	0	0	0	0	0	129	0	0	109	0
Turning Movement Percentage		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	0	0	0	0	0	44	0	0	53	0
No Build Traffic Volumes	2026	0	0	0	0	0	0	0	184	0	0	171	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	14%	1%	3%	0%	0%
Exiting Trip Distribution (%) Commercial		1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	14%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Total New Trips (PM Peak)		1	0	2	0	0	0	0	15	1	2	11	0
Total Pass-By Trips (PM Peak)		0	0	0	0	0	0	0	0	0	1	-8	0
Build Traffic Volumes	2026	1	0	2	0	0	0	0	199	1	3	174	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Intersection 11/K
Site Driveway #2 @ W Drowning Creek Road

AM Peak

Scenario	Year	Site Driveway #2 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	0	0	0	0	0	0	126	0	0	188	0
Turning Movement Percentage		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	0	0	0	0	0	67	0	0	52	0
No Build Traffic Volumes	2026	0	0	0	0	0	0	0	203	0	0	255	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	0%	14%	32%	3%	0%
Exiting Trip Distribution (%) Commercial		14%	0%	52%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	5%	55%	0%	0%
Exiting Trip Distribution (%) Residential		5%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		17	0	95	0	0	0	0	3	16	51	3	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	17	0	95	0	0	0	0	206	16	51	258	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Site Driveway #2 Northbound			0 Southbound			W Drowning Creek Road Eastbound			W Drowning Creek Road Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	0	0	0	0	0	0	129	0	0	109	0
Turning Movement Percentage		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	0	0	0	0	0	0	44	0	0	53	0
No Build Traffic Volumes	2026	0	0	0	0	0	0	0	184	0	0	171	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	0%	0%	14%	32%	3%	0%
Exiting Trip Distribution (%) Commercial		14%	0%	52%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	0%	0%	5%	55%	0%	0%
Exiting Trip Distribution (%) Residential		5%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		11	0	59	0	0	0	0	2	15	70	2	0
Total Pass-By Trips (PM Peak)		3	0	9	0	0	0	0	-5	5	10	-10	0
Build Traffic Volumes	2026	14	0	68	0	0	0	0	181	20	80	163	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 12/L Harbins Road @ Site Driveway #3

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #3 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	928	0	0	444	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	112	0	0	66	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	1,116	0	0	547	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	15%	20%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	40	0	0	25	21	0	0	0	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	1,156	0	0	572	21	0	0	0	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #3 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	586	0	0	1,023	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	92	0	0	10	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	726	0	0	1,117	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		0%	0%	0%	0%	15%	20%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	24	0	0	36	15	0	0	0	0	0	0
Total Pass-By Trips (PM Peak)		0	-2	0	0	-6	6	0	0	0	0	0	0
Build Traffic Volumes	2026	0	748	0	0	1,147	21	0	0	0	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

Intersection 13/M Harbins Road @ Site Driveway #4

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #4 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	928	0	0	444	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	82	0	0	49	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	1,086	0	0	530	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		15%	0%	0%	0%	5%	10%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	15%	0%	10%	0%	0%	0%
Entering Trip Distribution (%) Residential		10%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	30%	0%	10%	0%	0%	0%
Total New Trips (AM Peak)		20	0	0	0	5	20	40	0	18	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	20	1,086	0	0	535	20	40	0	18	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #4 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	586	0	0	1,023	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	53	0	0	-8	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	687	0	0	1,099	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		15%	0%	0%	0%	5%	10%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	0%	0%	15%	0%	10%	0%	0%	0%
Entering Trip Distribution (%) Residential		10%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	0%	0%	30%	0%	10%	0%	0%	0%
Total New Trips (PM Peak)		20	0	0	0	4	32	24	0	11	0	0	0
Total Pass-By Trips (PM Peak)		5	-5	0	0	-9	3	3	0	2	0	0	0
Build Traffic Volumes	2026	25	682	0	0	1,094	35	27	0	13	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

Trip Generation Summary Worksheet

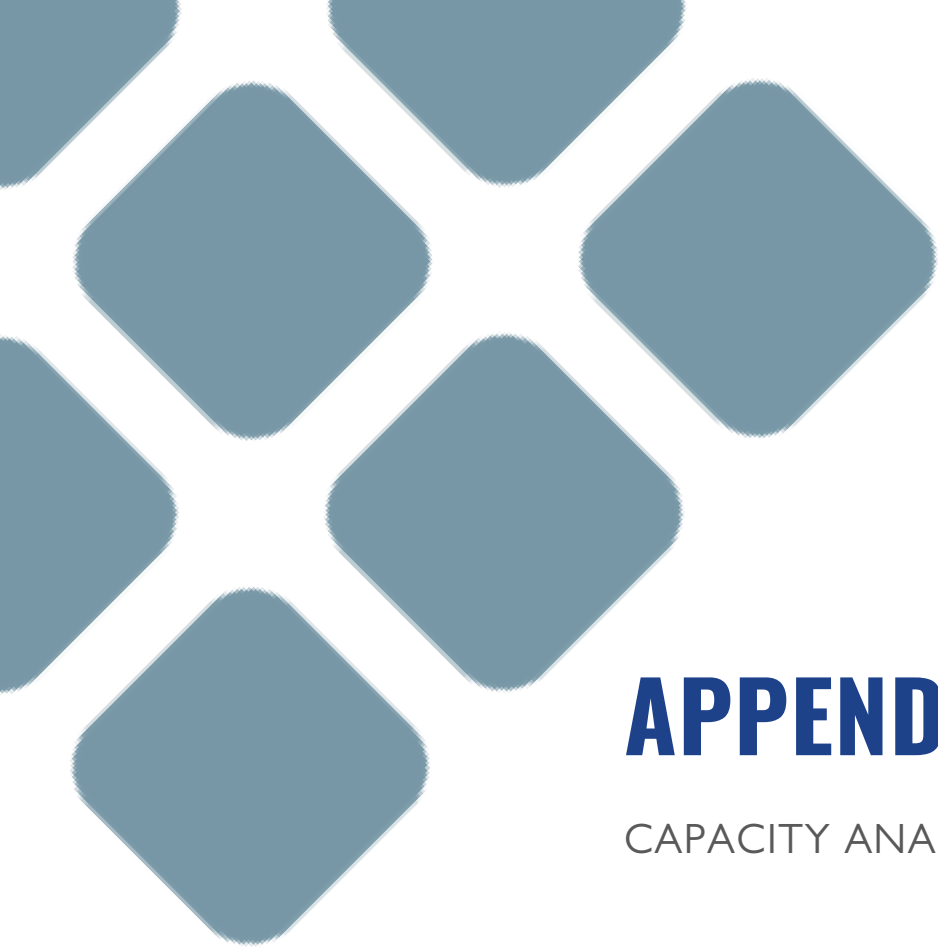
Intersection 14/N Harbins Road @ Site Driveway #5

AM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #5 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	928	0	0	444	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	82	0	0	49	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	1,086	0	0	530	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	10%	0%	0%	0%	5%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (AM Peak)		0	20	0	0	18	5	0	0	4	0	0	0
Total Pass-By Trips (AM Peak)		0	0	0	0	0	0	0	0	0	0	0	0
Build Traffic Volumes	2026	0	1,106	0	0	548	5	0	0	4	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0

PM Peak

Scenario	Year	Harbins Road Northbound			Harbins Road Southbound			Site Driveway #5 Eastbound			0 Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Traffic Volumes	2022	0	586	0	0	1,023	0	0	0	0	0	0	0
Turning Movement Percentage		0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
Growth Factor (%)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
New Trips (Other Dev.)		0	53	0	0	-8	0	0	0	0	0	0	0
No Build Traffic Volumes	2026	0	687	0	0	1,099	0	0	0	0	0	0	0
Entering Trip Distribution (%) Commercial		0%	15%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Commercial		0%	0%	0%	0%	10%	0%	0%	0%	5%	0%	0%	0%
Entering Trip Distribution (%) Residential		0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exiting Trip Distribution (%) Residential		0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Total New Trips (PM Peak)		0	20	0	0	11	4	0	0	3	0	0	0
Total Pass-By Trips (PM Peak)		0	0	0	0	-9	2	0	0	1	0	0	0
Build Traffic Volumes	2026	0	707	0	0	1,101	6	0	0	4	0	0	0
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles		0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrians		0			0			0			0		
Conflicting Pedestrians		0		0	0		0	0		0	0		0



APPENDIX D

CAPACITY ANALYSIS OUTPUTS

Intersection						
Int Delay, s/veh	11.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	48	139	789	396	49
Future Vol, veh/h	78	48	139	789	396	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	0	1	3	6	4
Mvmt Flow	81	50	145	822	413	51
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1551	439	464	0	-	0
Stage 1	439	-	-	-	-	-
Stage 2	1112	-	-	-	-	-
Critical Hdwy	6.45	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	123	622	1103	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	310	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	622	1103	-	-	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	310	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	126.3	1.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1103	-	138	-	-	
HCM Lane V/C Ratio	0.131	-	0.951	-	-	
HCM Control Delay (s)	8.8	0	126.3	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.5	-	6.6	-	-	

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	110	45	52	826	420	144
Future Vol, veh/h	110	45	52	826	420	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	0	160	250	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	2	6	3	5	6
Mvmt Flow	118	48	56	888	452	155
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1452	-	452	0	-	0
Stage 1	452	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Critical Hdwy	6.51	-	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	-	2.254	-	-	-
Pot Cap-1 Maneuver	137	0	1088	-	-	-
Stage 1	622	0	-	-	-	-
Stage 2	342	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	130	-	1088	-	-	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	120.8	0.5		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1088	-	130	-	-	-
HCM Lane V/C Ratio	0.051	-	0.91	-	-	-
HCM Control Delay (s)	8.5	-	120.8	0	-	-
HCM Lane LOS	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	6	-	-	-

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2022 Existing AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	0	245	0	0	0	0	895	41	84	319	0
Future Volume (vph)	190	0	245	0	0	0	0	895	41	84	319	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.252		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	458	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			255						55			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	198	0	255	0	0	0	0	932	43	88	332	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	38.0		38.0					67.0	67.0	15.0	82.0	
Total Split (%)	31.7%		31.7%					55.8%	55.8%	12.5%	68.3%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	19.6		19.6					79.7	79.7	91.4	91.4	
Actuated g/C Ratio	0.16		0.16					0.66	0.66	0.76	0.76	
v/c Ratio	0.73		0.56					0.41	0.04	0.21	0.25	
Control Delay	62.6		9.9					10.8	2.0	4.5	3.4	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.0	
Total Delay	62.6		9.9					10.8	2.0	4.5	3.4	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2022 Existing AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E		A					B	A	A	A	
Approach Delay		32.9						10.4				3.6
Approach LOS		C						B				A
Queue Length 50th (ft)	147		0					161	0	8	31	
Queue Length 95th (ft)	216		69					252	11	19	75	
Internal Link Dist (ft)		1486			1155			279				462
Turn Bay Length (ft)									250			
Base Capacity (vph)	463		598					2250	987	459	1331	
Starvation Cap Reductn	0		0					0	0	0	0	
Spillback Cap Reductn	0		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.43		0.43					0.41	0.04	0.19	0.25	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 14.4

Intersection LOS: B

Intersection Capacity Utilization 52.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)



Timings
4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

2022 Existing AM
09/30/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶	↷	↶↷	↶			↶↷	↷
Traffic Volume (vph)	0	0	0	46	3	141	400	683	0	0	365	242
Future Volume (vph)	0	0	0	46	3	141	400	683	0	0	365	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1722	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.955		0.950					
Satd. Flow (perm)	0	0	0	0	1722	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						147						252
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	51	147	417	711	0	0	380	252
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				27.0	27.0	27.0	35.0	93.0			58.0	58.0
Total Split (%)				22.5%	22.5%	22.5%	29.2%	77.5%			48.3%	48.3%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					9.0	9.0	20.4	102.0			77.1	77.1
Actuated g/C Ratio					0.08	0.08	0.17	0.85			0.64	0.64
v/c Ratio					0.40	0.59	0.74	0.47			0.18	0.23
Control Delay					60.9	18.3	54.7	3.6			8.3	3.5
Queue Delay					0.0	0.0	0.0	0.1			0.0	0.0
Total Delay					60.9	18.3	54.7	3.7			8.3	3.5

Timings

2022 Existing AM

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	A			A	A
Approach Delay					29.3			22.6			6.4	
Approach LOS					C			C			A	
Queue Length 50th (ft)					38	0	151	73			56	2
Queue Length 95th (ft)					78	62	205	127			118	98
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					322	400	843	1500			2156	1073
Starvation Cap Reductn					0	0	0	131			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.16	0.37	0.49	0.52			0.18	0.23

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 18.0

Intersection LOS: B

Intersection Capacity Utilization 52.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2022 Existing AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	26	0	109	0	770	11	18	523	0
Future Volume (vph)	4	0	0	26	0	109	0	770	11	18	523	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1396	0	1678	0	1516	0	1743	0	0	1755	0
Flt Permitted		0.950		0.950							0.965	
Satd. Flow (perm)	0	1396	0	1678	0	1516	0	1743	0	0	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						115			1			
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	27	0	115	0	823	0	0	570	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		6.0		7.8		7.8		100.9			100.9	
Actuated g/C Ratio		0.05		0.06		0.06		0.84			0.84	
v/c Ratio		0.06		0.25		0.56		0.56			0.40	
Control Delay		55.8		57.7		20.1		3.8			6.5	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		55.8		57.7		20.1		3.8			6.5	

Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2022 Existing AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E		E		C		A			A	
Approach Delay		55.8			27.2			3.8			6.5	
Approach LOS		E			C			A			A	
Queue Length 50th (ft)		3		20		0		27			39	
Queue Length 95th (ft)		15		50		57		327			320	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		209		251		325		1465			1426	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.02		0.11		0.35		0.56			0.40	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 7.1

Intersection LOS: A

Intersection Capacity Utilization 63.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2022 Existing AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	146	11	148	355	58	60	663	141	29	376	28
Future Volume (vph)	12	146	11	148	355	58	60	663	141	29	376	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3246	0	1694	1766	1459
Flt Permitted	0.483			0.573			0.428			0.115		
Satd. Flow (perm)	887	1583	1432	1002	1701	1561	728	3246	0	205	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			24			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	157	12	159	382	62	65	865	0	31	404	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.0	46.7	46.7	14.3	51.0	51.0	49.0	49.0		10.0	59.0	59.0
Total Split (%)	8.3%	38.9%	38.9%	11.9%	42.5%	42.5%	40.8%	40.8%		8.3%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	56.1	50.4	50.4	65.2	61.1	61.1	38.2	38.2		45.8	45.8	45.8
Actuated g/C Ratio	0.47	0.42	0.42	0.54	0.51	0.51	0.32	0.32		0.38	0.38	0.38
v/c Ratio	0.03	0.24	0.02	0.26	0.44	0.07	0.28	0.82		0.19	0.60	0.05
Control Delay	17.9	27.5	0.1	17.9	24.9	2.0	27.7	37.8		21.5	32.4	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	17.9	27.5	0.1	17.9	24.9	2.0	27.7	37.8		21.5	32.4	1.5

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2022 Existing AM
09/30/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	B	C	A	C	D		C	C	A
Approach Delay		25.0			20.7			37.1			29.7	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	5	85	0	66	184	0	28	323		14	230	0
Queue Length 95th (ft)	18	150	0	123	352	13	m65	418		30	291	6
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	456	684	673	605	878	851	269	1218		167	813	701
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.03	0.23	0.02	0.26	0.44	0.07	0.24	0.71		0.19	0.50	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 30.0

Intersection LOS: C

Intersection Capacity Utilization 64.8%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy

Ø1	Ø2 (R)		Ø4
10 s	51 s		59 s
Ø5	Ø6 (R)	Ø7	Ø8
14.3 s	46.7 s	10 s	49 s

Intersection

Int Delay, s/veh 2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	1	33	161	6	51
Future Vol, veh/h	72	1	33	161	6	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	85	1	39	189	7	60

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	86
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1523
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1523
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	924	-	-	1523	-
HCM Lane V/C Ratio	0.073	-	-	0.025	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	34	55	15	3	154	22	68	44	6	10	21	16
Future Vol, veh/h	34	55	15	3	154	22	68	44	6	10	21	16
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	44	71	19	4	197	28	87	56	8	13	27	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	9.5	9.4	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	33%	2%	21%
Vol Thru, %	37%	53%	86%	45%
Vol Right, %	5%	14%	12%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	104	179	47
LT Vol	68	34	3	10
Through Vol	44	55	154	21
RT Vol	6	15	22	16
Lane Flow Rate	151	133	229	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.21	0.209	0.291	0.093
Departure Headway (Hd)	4.989	5.647	4.566	5.529
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	716	633	783	644
Service Time	3.044	3.705	2.615	3.595
HCM Lane V/C Ratio	0.211	0.21	0.292	0.093
HCM Control Delay	9.4	10.2	9.5	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.8	0.8	1.2	0.3

Intersection						
Int Delay, s/veh	8.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	237	79	4	266	239	2
Future Vol, veh/h	237	79	4	266	239	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	282	94	5	317	285	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	376	0	656	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	327	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1194	-	427	717
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	726	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	425	717
Mov Cap-2 Maneuver	-	-	-	-	425	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	722	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		29.2	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	426	-	-	1194	-	
HCM Lane V/C Ratio	0.673	-	-	0.004	-	
HCM Control Delay (s)	29.2	-	-	8	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile O(veh)	4.8	-	-	0	-	

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	80	43	543	943	66
Future Vol, veh/h	49	80	43	543	943	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	5	0	1	3	6	4
Mvmt Flow	51	83	45	566	982	69
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1673	1017	1051	0	-	0
Stage 1	1017	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Critical Hdwy	6.45	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	103	291	666	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	291	666	-	-	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	89.1	0.8		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	666	-	161	-	-	
HCM Lane V/C Ratio	0.067	-	0.835	-	-	
HCM Control Delay (s)	10.8	0	89.1	-	-	
HCM Lane LOS	B	A	F	-	-	
HCM 95th %tile Q(veh)	0.2	-	5.6	-	-	

Intersection						
Int Delay, s/veh	22.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	119	74	33	579	951	90
Future Vol, veh/h	119	74	33	579	951	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	0	200	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	2	6	3	5	6
Mvmt Flow	128	80	35	623	1023	97
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1716	-	1023	0	-	0
Stage 1	1023	-	-	-	-	-
Stage 2	693	-	-	-	-	-
Critical Hdwy	6.51	-	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	-	2.254	-	-	-
Pot Cap-1 Maneuver	~ 94	0	663	-	-	-
Stage 1	334	0	-	-	-	-
Stage 2	480	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 89	-	663	-	-	-
Mov Cap-2 Maneuver	~ 89	-	-	-	-	-
Stage 1	316	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s\$	333.3	0.6		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	663	-	89	-	-	-
HCM Lane V/C Ratio	0.054	-	1.438	-	-	-
HCM Control Delay (s)	10.7	\$ 333.3		0	-	-
HCM Lane LOS	B	-	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	9.8	-	-	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	0	514	0	0	0	0	641	53	116	531	0
Future Volume (vph)	324	0	514	0	0	0	0	641	53	116	531	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.314		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	571	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			249						55			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	338	0	535	0	0	0	0	668	55	121	553	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	57.0		57.0					49.0	49.0	14.0	63.0	
Total Split (%)	47.5%		47.5%					40.8%	40.8%	11.7%	52.5%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	35.0		35.0					62.3	62.3	76.0	76.0	
Actuated g/C Ratio	0.29		0.29					0.52	0.52	0.63	0.63	
v/c Ratio	0.70		0.88					0.38	0.07	0.27	0.50	
Control Delay	44.3		36.2					20.7	6.4	8.1	15.3	
Queue Delay	0.0		0.0					0.0	0.0	0.0	0.1	
Total Delay	44.3		36.2					20.7	6.4	8.1	15.4	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		D					C	A	A	B	
Approach Delay		39.3						19.6			14.1	
Approach LOS		D						B			B	
Queue Length 50th (ft)	233		229					155	0	9	330	
Queue Length 95th (ft)	277		320					275	28	101	537	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	727		790					1766	787	461	1107	
Starvation Cap Reductn	0		0					0	0	0	70	
Spillback Cap Reductn	7		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.47		0.68					0.38	0.07	0.26	0.53	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 25.6

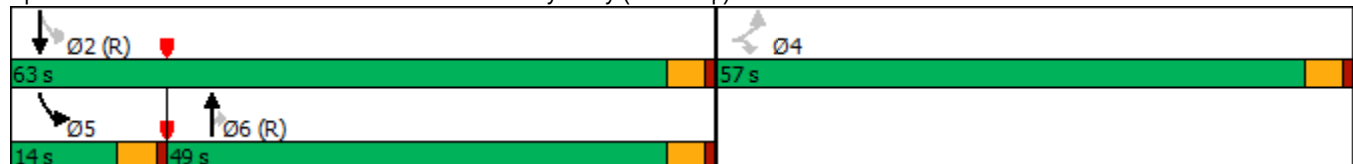
Intersection LOS: C

Intersection Capacity Utilization 67.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)



Timings
4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	33	1	144	222	736	0	0	611	215
Future Volume (vph)	0	0	0	33	1	144	222	736	0	0	611	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1719	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.954		0.950					
Satd. Flow (perm)	0	0	0	0	1719	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						150						224
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	35	150	231	767	0	0	636	224
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				26.0	26.0	26.0	23.0	94.0			71.0	71.0
Total Split (%)				21.7%	21.7%	21.7%	19.2%	78.3%			59.2%	59.2%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					8.4	8.4	13.6	102.6			84.5	84.5
Actuated g/C Ratio					0.07	0.07	0.11	0.86			0.70	0.70
v/c Ratio					0.29	0.61	0.61	0.51			0.27	0.20
Control Delay					58.1	19.4	52.9	6.5			7.6	2.3
Queue Delay					0.0	0.0	0.0	0.4			0.0	0.0
Total Delay					58.1	19.4	52.9	6.8			7.6	2.3

Timings

2022 Existing PM

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	A			A	A
Approach Delay					26.7			17.5			6.2	
Approach LOS					C			B			A	
Queue Length 50th (ft)					26	0	81	83			116	21
Queue Length 95th (ft)					58	63	123	384			148	39
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					307	392	511	1510			2362	1144
Starvation Cap Reductn					0	0	0	278			0	0
Spillback Cap Reductn					0	0	0	0			103	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.11	0.38	0.45	0.62			0.28	0.20

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.6

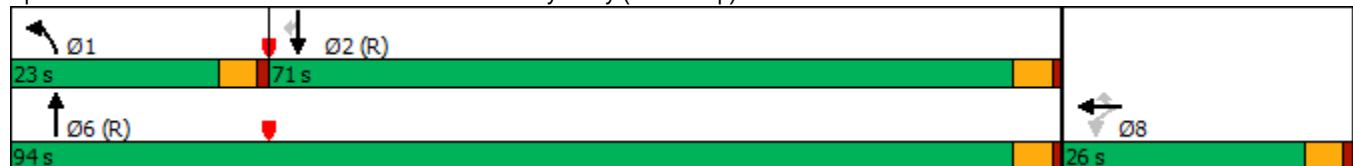
Intersection LOS: B

Intersection Capacity Utilization 67.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	3	31	0	59	0	796	31	58	688	0
Future Volume (vph)	4	0	3	31	0	59	0	796	31	58	688	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1471	0	1678	0	1516	0	1732	0	0	1742	0
Flt Permitted		0.972		0.950							0.881	
Satd. Flow (perm)	0	1471	0	1678	0	1516	0	1732	0	0	1541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55				62		3				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	33	0	62	0	871	0	0	785	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		5.5		7.9		7.9		104.0			104.0	
Actuated g/C Ratio		0.05		0.07		0.07		0.87			0.87	
v/c Ratio		0.06		0.30		0.39		0.58			0.59	
Control Delay		1.0		59.7		20.4		6.3			15.6	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		1.0		59.7		20.4		6.3			15.6	

Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A		E		C		A			B	
Approach Delay		1.0			34.0			6.3			15.6	
Approach LOS		A			C			A			B	
Queue Length 50th (ft)		0		25		0		40			425	
Queue Length 95th (ft)		0		58		43		706			702	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		267		251		280		1501			1335	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.03		0.13		0.22		0.58			0.59	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 95.8%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	373	40	142	235	126	13	646	163	135	587	26
Future Volume (vph)	32	373	40	142	235	126	13	646	163	135	587	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3230	0	1694	1766	1459
Flt Permitted	0.591			0.298			0.232			0.099		
Satd. Flow (perm)	1085	1583	1432	521	1701	1561	395	3230	0	177	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			135			28			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	401	43	153	253	135	14	870	0	145	631	28
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	48.0	48.0	13.0	51.4	51.4	44.0	44.0		15.0	59.0	59.0
Total Split (%)	8.0%	40.0%	40.0%	10.8%	42.8%	42.8%	36.7%	36.7%		12.5%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	50.8	45.1	45.1	58.5	52.9	52.9	36.4	36.4		52.1	52.1	52.1
Actuated g/C Ratio	0.42	0.38	0.38	0.49	0.44	0.44	0.30	0.30		0.43	0.43	0.43
v/c Ratio	0.07	0.67	0.07	0.45	0.34	0.18	0.12	0.87		0.67	0.82	0.04
Control Delay	18.2	39.3	0.2	22.9	25.9	4.6	33.8	47.3		38.2	39.8	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	18.2	39.3	0.2	22.9	25.9	4.6	33.8	47.3		38.2	39.8	1.3

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2022 Existing PM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	D	A	C	C	A	C	D		D	D	A
Approach Delay		34.3			19.7			47.1			38.1	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	14	277	0	68	143	0	7	343		65	404	0
Queue Length 95th (ft)	33	383	0	111	210	40	m18	438		#142	566	5
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	490	612	612	344	762	774	130	1081		222	811	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.07	0.66	0.07	0.44	0.33	0.17	0.11	0.80		0.65	0.78	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 36.7

Intersection LOS: D

Intersection Capacity Utilization 77.6%

ICU Level of Service D

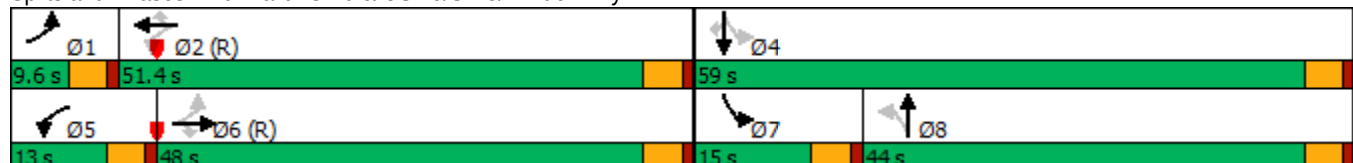
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy



Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	83	7	42	67	5	48
Future Vol, veh/h	83	7	42	67	5	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	98	8	49	79	6	56
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	106	0	279	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1498	-	715	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1498	-	691	959
Mov Cap-2 Maneuver	-	-	-	-	691	-
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	830	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.9		9.2	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	925	-	-	1498	-	
HCM Lane V/C Ratio	0.067	-	-	0.033	-	
HCM Control Delay (s)	9.2	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	82	66	4	68	0	27	14	4	5	22	3
Future Vol, veh/h	7	82	66	4	68	0	27	14	4	5	22	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	9	105	85	5	87	0	35	18	5	6	28	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	8	8.2	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	60%	5%	6%	17%
Vol Thru, %	31%	53%	94%	73%
Vol Right, %	9%	43%	0%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	155	72	30
LT Vol	27	7	4	5
Through Vol	14	82	68	22
RT Vol	4	66	0	3
Lane Flow Rate	58	199	92	38
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.273	0.113	0.057
Departure Headway (Hd)	4.756	4.95	4.395	5.347
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	727	817	671
Service Time	2.778	2.967	2.413	3.372
HCM Lane V/C Ratio	0.077	0.274	0.113	0.057
HCM Control Delay	8.2	9.8	8	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	1.1	0.4	0.2

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	159	175	0	122	87	0
Future Vol, veh/h	159	175	0	122	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	189	208	0	145	104	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	397	0	438	293
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1173	-	572	751
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	877	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1173	-	572	751
Mov Cap-2 Maneuver	-	-	-	-	572	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	877	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		12.7	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	572	-	-	1173	-	
HCM Lane V/C Ratio	0.181	-	-	-	-	
HCM Control Delay (s)	12.7	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile O(veh)	0.7	-	-	0	-	

Timings

2026 No Build AM

1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

09/30/2022

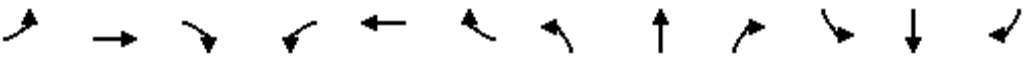
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	76	49	71	31	115	173	917	26	327	427	51
Future Volume (vph)	79	76	49	71	31	115	173	917	26	327	427	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1770	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.555			0.671			0.505			0.046		
Satd. Flow (perm)	1004	1770	0	1250	1863	1583	918	1783	1583	86	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				125			109			76
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		1151			237			379			468	
Travel Time (s)		22.4			6.5			5.7			7.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	134	0	77	34	125	180	955	28	355	445	53
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	33.5		22.5	22.5	22.5	13.2	87.5	87.5	29.0	103.3	103.3
Total Split (%)	7.3%	22.3%		15.0%	15.0%	15.0%	8.8%	58.3%	58.3%	19.3%	68.9%	68.9%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	25.1	25.1		13.9	13.9	13.9	91.1	82.5	82.5	115.9	102.7	102.7
Actuated g/C Ratio	0.17	0.17		0.09	0.09	0.09	0.61	0.55	0.55	0.77	0.68	0.68
v/c Ratio	0.41	0.43		0.67	0.20	0.48	0.30	0.97	0.03	0.91	0.38	0.05
Control Delay	60.2	52.1		91.7	63.7	15.9	8.3	56.1	0.1	73.5	11.6	0.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	52.1		91.7	63.7	15.9	8.3	56.1	0.1	73.5	11.6	0.9

Timings

2026 No Build AM

1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	D		F	E	B	A	E	A	E	B	A
Approach Delay		55.2			47.5			47.4			36.7	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)	71	103		74	31	0	40	872	0	292	177	0
Queue Length 95th (ft)	122	167		130	67	63	68	#1198	0	#532	256	8
Internal Link Dist (ft)		1071			157			299			388	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	199	356		150	223	299	608	986	924	391	1186	1087
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38		0.51	0.15	0.42	0.30	0.97	0.03	0.91	0.38	0.05

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

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

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 44.4

Intersection LOS: D

Intersection Capacity Utilization 92.5%

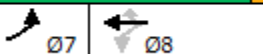
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

			
29 s		33.5 s	
			
13.2 s		22.5 s	

Intersection						
Int Delay, s/veh	221.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	237	49	56	1105	777	197
Future Vol, veh/h	237	49	56	1105	777	197
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	0	200	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	2	6	3	5	6
Mvmt Flow	255	53	60	1188	835	212
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2143	-	835	0	-	0
Stage 1	835	-	-	-	-	-
Stage 2	1308	-	-	-	-	-
Critical Hdwy	6.51	-	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	-	2.254	-	-	-
Pot Cap-1 Maneuver	~ 50	0	781	-	-	-
Stage 1	411	0	-	-	-	-
Stage 2	~ 242	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 46	-	781	-	-	-
Mov Cap-2 Maneuver	~ 46	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	~ 242	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, \$	2217.7	0.5		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	781	-	46	-	-	-
HCM Lane V/C Ratio	0.077	-	5.54	-	-	-
HCM Control Delay (s)	10	\$	2217.7	0	-	-
HCM Lane LOS	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	29.4	-	-	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	0	486	0	0	0	0	1239	103	91	487	0
Future Volume (vph)	206	0	486	0	0	0	0	1239	103	91	487	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%				0%				0%			
Storage Length (ft)	0			0			0	0	250	0		
Storage Lanes	1			1			0	0	1	1		
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.145		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	264	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			396							107		
Link Speed (mph)	65				65				45			45
Link Distance (ft)	1566				1235				359			542
Travel Time (s)	16.4				13.0				5.4			8.2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%				0%				0%			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	0	506	0	0	0	0	1291	107	95	507	0
Turn Type	Perm	Perm						NA	Perm	pm+pt	NA	
Protected Phases							6			5		
Permitted Phases	4	4						6			2	
Detector Phase	4	4						6			6	
Switch Phase												
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)	38.0	38.0						67.0			67.0	
Total Split (%)	31.7%	31.7%						55.8%			55.8%	
Yellow Time (s)	3.5	3.5						3.5			3.5	
All-Red Time (s)	1.0	1.0						1.0			1.0	
Lost Time Adjust (s)	0.0	0.0						0.0			0.0	
Total Lost Time (s)	4.5	4.5						4.5			4.5	
Lead/Lag							Lag			Lag		
Lead-Lag Optimize?							Yes			Yes		
Recall Mode	None	None						C-Min			C-Min	
Act Effct Green (s)	22.2	22.2						76.8			76.8	
Actuated g/C Ratio	0.18	0.18						0.64			0.64	
v/c Ratio	0.70	0.85						0.60			0.11	
Control Delay	57.0	24.1						15.6			2.7	
Queue Delay	0.3	0.0						0.0			0.0	
Total Delay	57.3	24.1						15.6			2.7	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build AM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E		C					B	A	A	A	
Approach Delay		34.0						14.6				4.7
Approach LOS		C						B				A
Queue Length 50th (ft)	160		83					271	0	5	39	
Queue Length 95th (ft)	215		208					474	27	4	379	
Internal Link Dist (ft)		1486			1155			279				462
Turn Bay Length (ft)									250			
Base Capacity (vph)	463		700					2168	972	323	1294	
Starvation Cap Reductn	0		0					0	0	0	194	
Spillback Cap Reductn	36		0					58	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.50		0.72					0.61	0.11	0.29	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.6

Intersection LOS: B

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)



Timings
4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

2026 No Build AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	117	3	153	631	812	0	0	470	262
Future Volume (vph)	0	0	0	117	3	153	631	812	0	0	470	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						159						273
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	125	159	657	846	0	0	490	273
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				27.0	27.0	27.0	35.0	93.0			58.0	58.0
Total Split (%)				22.5%	22.5%	22.5%	29.2%	77.5%			48.3%	48.3%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					14.0	14.0	28.7	97.0			63.8	63.8
Actuated g/C Ratio					0.12	0.12	0.24	0.81			0.53	0.53
v/c Ratio					0.62	0.50	0.83	0.59			0.27	0.29
Control Delay					63.6	12.8	50.7	9.4			18.7	8.1
Queue Delay					0.0	0.0	0.0	0.6			0.0	0.0
Total Delay					63.6	12.8	50.7	10.0			18.7	8.1

Timings

2026 No Build AM

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	A			B	A
Approach Delay					35.2			27.8			14.9	
Approach LOS					D			C			B	
Queue Length 50th (ft)					94	0	257	144			96	10
Queue Length 95th (ft)					151	61	313	597			230	155
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					321	410	872	1427			1791	944
Starvation Cap Reductn					0	0	0	247			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.39	0.39	0.75	0.72			0.27	0.29

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.7

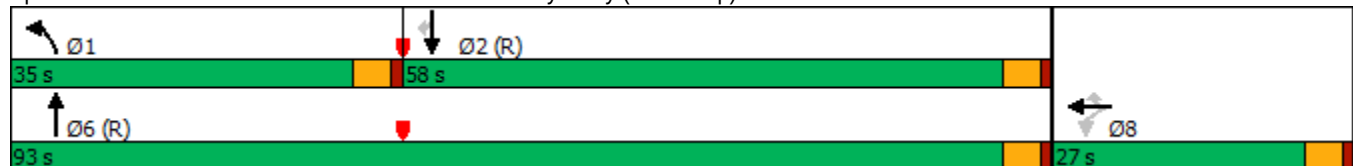
Intersection LOS: C

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build AM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	28	0	118	0	906	12	19	641	0
Future Volume (vph)	4	0	0	28	0	118	0	906	12	19	641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1396	0	1678	0	1516	0	1743	0	0	1758	0
Flt Permitted		0.950		0.950							0.963	
Satd. Flow (perm)	0	1396	0	1678	0	1516	0	1743	0	0	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124		1				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	29	0	124	0	967	0	0	695	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		6.0		8.0		8.0		100.7			100.7	
Actuated g/C Ratio		0.05		0.07		0.07		0.84			0.84	
v/c Ratio		0.06		0.26		0.57		0.66			0.49	
Control Delay		55.8		57.9		19.8		7.9			9.3	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		55.8		57.9		19.8		7.9			9.3	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build AM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E		E		B		A			A	
Approach Delay		55.8			27.0			7.9			9.3	
Approach LOS		E			C			A			A	
Queue Length 50th (ft)		3		22		0		60			75	
Queue Length 95th (ft)		15		52		58		915			564	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		209		251		332		1463			1422	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.02		0.12		0.37		0.66			0.49	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 10.2

Intersection LOS: B

Intersection Capacity Utilization 71.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build AM
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	158	24	168	384	63	77	771	160	31	462	30
Future Volume (vph)	13	158	24	168	384	63	77	771	160	31	462	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3247	0	1694	1766	1459
Flt Permitted	0.437			0.545			0.336			0.089		
Satd. Flow (perm)	803	1583	1432	953	1701	1561	571	3247	0	159	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			23			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	170	26	181	413	68	83	1001	0	33	497	32
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.0	46.7	46.7	14.3	51.0	51.0	49.0	49.0		10.0	59.0	59.0
Total Split (%)	8.3%	38.9%	38.9%	11.9%	42.5%	42.5%	40.8%	40.8%		8.3%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	52.0	46.3	46.3	61.6	57.4	57.4	42.2	42.2		49.4	49.4	49.4
Actuated g/C Ratio	0.43	0.39	0.39	0.51	0.48	0.48	0.35	0.35		0.41	0.41	0.41
v/c Ratio	0.04	0.28	0.04	0.33	0.51	0.09	0.41	0.86		0.22	0.68	0.05
Control Delay	18.8	30.0	0.1	20.0	28.0	2.4	32.6	38.3		21.2	33.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	18.8	30.0	0.1	20.0	28.0	2.4	32.6	38.3		21.2	33.3	1.9

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build AM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	C	C	A	C	D		C	C	A
Approach Delay		25.6			23.2			37.9			30.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	6	101	0	83	222	0	35	266		14	281	0
Queue Length 95th (ft)	18	157	0	134	376	16	m96	497		32	392	8
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	393	648	642	555	835	814	213	1231		152	824	710
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.04	0.26	0.04	0.33	0.49	0.08	0.39	0.81		0.22	0.60	0.05

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 70.0%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy

					
10 s		51 s		59 s	
					
14.3 s		46.7 s		10 s	49 s

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	1	60	202	6	84
Future Vol, veh/h	116	1	60	202	6	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	136	1	71	238	7	99
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	137	0	517	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1459	-	522	917
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1459	-	493	917
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	657	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.7	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	867	-	-	1459	-	
HCM Lane V/C Ratio	0.122	-	-	0.048	-	
HCM Control Delay (s)	9.7	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile O(veh)	0.4	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	98	16	3	195	24	74	57	6	11	30	17
Future Vol, veh/h	37	98	16	3	195	24	74	57	6	11	30	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	47	126	21	4	250	31	95	73	8	14	38	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	1	1		1		1						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	1	1		1		1						
HCM Control Delay	11.8	11		10.4		10						
HCM LOS	B	B		B		A						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	25%	1%	19%
Vol Thru, %	42%	65%	88%	52%
Vol Right, %	4%	11%	11%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	151	222	58
LT Vol	74	37	3	11
Through Vol	57	98	195	30
RT Vol	6	16	24	17
Lane Flow Rate	176	194	285	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.265	0.322	0.388	0.125
Departure Headway (Hd)	5.435	5.982	4.906	6.057
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	604	737	592
Service Time	3.463	3.991	2.912	4.09
HCM Lane V/C Ratio	0.266	0.321	0.387	0.125
HCM Control Delay	10.4	11.8	11	10
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	1.4	1.8	0.4

Intersection						
Int Delay, s/veh	19.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	265	124	4	310	287	2
Future Vol, veh/h	265	124	4	310	287	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	315	148	5	369	342	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	463	0	768	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	379	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1109	-	367	664
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1109	-	365	664
Mov Cap-2 Maneuver	-	-	-	-	365	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	684	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		67.2	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	366	-	-	1109	-	
HCM Lane V/C Ratio	0.94	-	-	0.004	-	
HCM Control Delay (s)	67.2	-	-	8.3	0	
HCM Lane LOS	F	-	-	A	A	
HCM 95th %tile Q(veh)	10.1	-	-	0	-	

Timings

2026 No Build PM

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	77	72	91	45	277	64	640	24	285	955	62
Future Volume (vph)	34	77	72	91	45	277	64	640	24	285	955	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1747	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.549			0.656			0.124			0.244		
Satd. Flow (perm)	993	1747	0	1222	1863	1583	225	1783	1583	455	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				301			149			104
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		1151			248			326			454	
Travel Time (s)		22.4			6.8			4.9			6.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	159	0	99	49	301	67	667	26	310	995	65
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	32.0		22.5	22.5	22.5	9.5	59.6	59.6	18.4	68.5	68.5
Total Split (%)	8.6%	29.1%		20.5%	20.5%	20.5%	8.6%	54.2%	54.2%	16.7%	62.3%	62.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	19.7	19.7		14.0	14.0	14.0	70.7	65.0	65.0	81.1	73.1	73.1
Actuated g/C Ratio	0.18	0.18		0.13	0.13	0.13	0.64	0.59	0.59	0.74	0.66	0.66
v/c Ratio	0.17	0.46		0.64	0.21	0.65	0.30	0.63	0.03	0.65	0.86	0.06
Control Delay	35.4	32.5		63.3	43.2	11.9	10.3	20.9	0.0	12.6	28.0	0.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	32.5		63.3	43.2	11.9	10.3	20.9	0.0	12.6	28.0	0.7

Timings

2026 No Build PM

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		E	D	B	B	C	A	B	C	A
Approach Delay		33.0			26.6			19.3			23.2	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	20	71		67	31	0	13	335	0	72	632	0
Queue Length 95th (ft)	46	129		121	66	78	30	515	0	120	#970	6
Internal Link Dist (ft)		1071			168			246			374	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	212	466		199	304	510	222	1053	996	503	1151	1066
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.34		0.50	0.16	0.59	0.30	0.63	0.03	0.62	0.86	0.06

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 23.4

Intersection LOS: C

Intersection Capacity Utilization 82.9%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd

											
Ø1	Ø2 (R)	Ø4	Ø5	Ø6 (R)	Ø7	Ø8					
18.4 s	59.6 s	32 s	9.5 s	68.5 s	9.5 s	22.5 s					

Intersection						
Int Delay, s/veh	258.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	210	80	36	981	1239	235
Future Vol, veh/h	210	80	36	981	1239	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	0	200	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	2	6	3	5	6
Mvmt Flow	226	86	39	1055	1332	253
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2465	-	1332	0	-	0
Stage 1	1332	-	-	-	-	-
Stage 2	1133	-	-	-	-	-
Critical Hdwy	6.51	-	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	-	2.254	-	-	-
Pot Cap-1 Maneuver	~ 31	0	505	-	-	-
Stage 1	236	0	-	-	-	-
Stage 2	295	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 29	-	505	-	-	-
Mov Cap-2 Maneuver	~ 29	-	-	-	-	-
Stage 1	~ 218	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	3319.4	0.5		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	505	-	29	-	-	-
HCM Lane V/C Ratio	0.077	-	7.786	-	-	-
HCM Control Delay (s)	12.7	\$ 3319.4		0	-	-
HCM Lane LOS	B	-	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	27.7	-	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	0	684	0	0	0	0	1068	118	126	708	0
Future Volume (vph)	437	0	684	0	0	0	0	1068	118	126	708	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.080		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	145	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149						110			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	455	0	713	0	0	0	0	1113	123	131	738	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	57.0		57.0					49.0	49.0	14.0	63.0	
Total Split (%)	47.5%		47.5%					40.8%	40.8%	11.7%	52.5%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	51.9		51.9					45.6	45.6	59.1	59.1	
Actuated g/C Ratio	0.43		0.43					0.38	0.38	0.49	0.49	
v/c Ratio	0.63		0.98					0.87	0.20	0.69	0.86	
Control Delay	31.3		56.2					43.1	6.8	39.9	31.4	
Queue Delay	1.0		0.0					0.0	0.0	0.0	2.6	
Total Delay	32.3		56.2					43.1	6.8	39.9	33.9	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C		E					D	A	D	C	
Approach Delay		46.9						39.5			34.8	
Approach LOS		D						D			C	
Queue Length 50th (ft)	267		451					421	6	76	525	
Queue Length 95th (ft)	383		#726					#529	47	#124	#762	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	728		735					1287	622	197	862	
Starvation Cap Reductn	0		0					0	0	0	54	
Spillback Cap Reductn	100		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.72		0.97					0.86	0.20	0.66	0.91	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 40.9

Intersection LOS: D

Intersection Capacity Utilization 103.5%

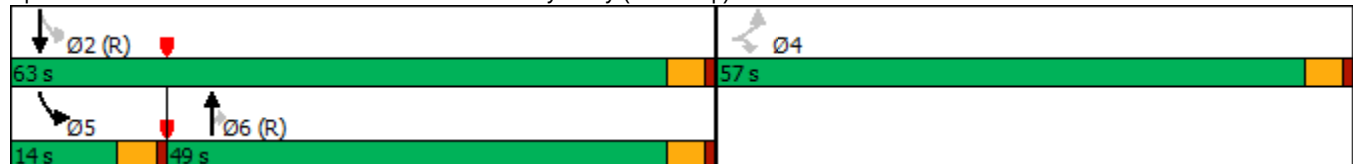
ICU Level of Service G

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

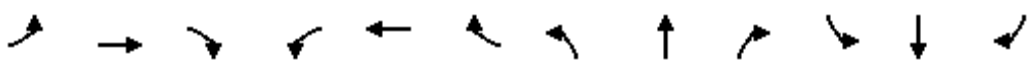


Timings

2026 No Build PM

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	93	1	156	510	901	0	0	738	233
Future Volume (vph)	0	0	0	93	1	156	510	901	0	0	738	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						163						243
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	98	163	531	939	0	0	769	243
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				26.0	26.0	26.0	23.0	94.0			71.0	71.0
Total Split (%)				21.7%	21.7%	21.7%	19.2%	78.3%			59.2%	59.2%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					12.2	12.2	27.6	98.8			66.8	66.8
Actuated g/C Ratio					0.10	0.10	0.23	0.82			0.56	0.56
v/c Ratio					0.56	0.55	0.70	0.65			0.41	0.25
Control Delay					63.2	14.4	36.6	14.9			21.7	5.7
Queue Delay					0.0	0.0	0.0	3.3			0.1	0.0
Total Delay					63.2	14.4	36.6	18.2			21.8	5.7

Timings

2026 No Build PM

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			C	A
Approach Delay					32.7			24.9			17.9	
Approach LOS					C			C			B	
Queue Length 50th (ft)					73	0	195	523			249	31
Queue Length 95th (ft)					125	62	m244	m510			321	m62
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					307	402	762	1454			1910	976
Starvation Cap Reductn					0	0	0	404			0	0
Spillback Cap Reductn					0	0	0	0			314	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.32	0.41	0.70	0.89			0.48	0.25

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 23.0

Intersection LOS: C

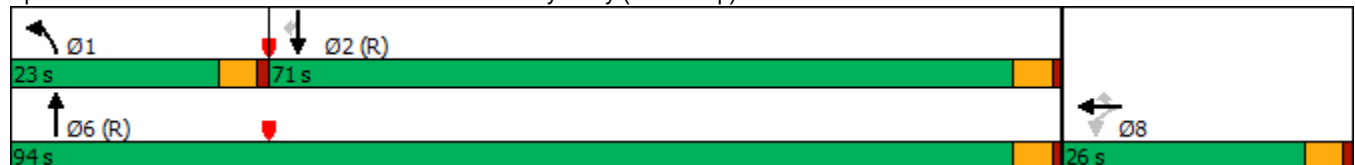
Intersection Capacity Utilization 103.5%

ICU Level of Service G

Analysis Period (min) 15

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

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	3	34	0	64	0	966	34	63	822	0
Future Volume (vph)	4	0	3	34	0	64	0	966	34	63	822	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1471	0	1678	0	1516	0	1733	0	0	1744	0
Flt Permitted		0.972		0.950							0.808	
Satd. Flow (perm)	0	1471	0	1678	0	1516	0	1733	0	0	1414	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55				67		3				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	36	0	67	0	1053	0	0	931	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		5.5		8.1		8.1		103.8			103.8	
Actuated g/C Ratio		0.05		0.07		0.07		0.86			0.86	
v/c Ratio		0.06		0.32		0.41		0.70			0.76	
Control Delay		1.0		60.1		19.9		10.4			23.4	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		1.0		60.1		19.9		10.4			23.4	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A		E		B		B			C	
Approach Delay		1.0			33.9			10.4			23.4	
Approach LOS		A			C			B			C	
Queue Length 50th (ft)		0		27		0		233			641	
Queue Length 95th (ft)		0		61		45		1001			m835	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		267		251		284		1499			1223	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.03		0.14		0.24		0.70			0.76	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 106.8%

ICU Level of Service G

Analysis Period (min) 15

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

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	404	54	159	254	136	31	776	186	146	692	28
Future Volume (vph)	35	404	54	159	254	136	31	776	186	146	692	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3234	0	1694	1766	1459
Flt Permitted	0.555			0.230			0.149			0.088		
Satd. Flow (perm)	1019	1583	1432	402	1701	1561	253	3234	0	157	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			146			26			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	434	58	171	273	146	33	1034	0	157	744	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	48.0	48.0	13.0	51.4	51.4	44.0	44.0		15.0	59.0	59.0
Total Split (%)	8.0%	40.0%	40.0%	10.8%	42.8%	42.8%	36.7%	36.7%		12.5%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	46.5	41.1	41.1	54.0	48.9	48.9	40.8	40.8		56.3	56.3	56.3
Actuated g/C Ratio	0.39	0.34	0.34	0.45	0.41	0.41	0.34	0.34		0.47	0.47	0.47
v/c Ratio	0.09	0.80	0.11	0.62	0.39	0.20	0.38	0.93		0.73	0.90	0.04
Control Delay	19.0	48.4	1.7	31.1	28.2	4.5	51.1	60.0		44.3	44.7	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.0	48.4	1.7	31.1	28.2	4.5	51.1	60.0		44.3	44.7	1.6

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build PM

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	D	A	C	C	A	D	E		D	D	A
Approach Delay		41.2			23.2			59.7			43.3	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	17	314	0	83	163	0	26	443		66	487	0
Queue Length 95th (ft)	36	424	9	123	228	41	m36	#562		#179	#790	7
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	427	578	583	276	709	736	86	1118		217	833	717
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.09	0.75	0.10	0.62	0.39	0.20	0.38	0.92		0.72	0.89	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 44.7

Intersection LOS: D

Intersection Capacity Utilization 85.7%

ICU Level of Service E

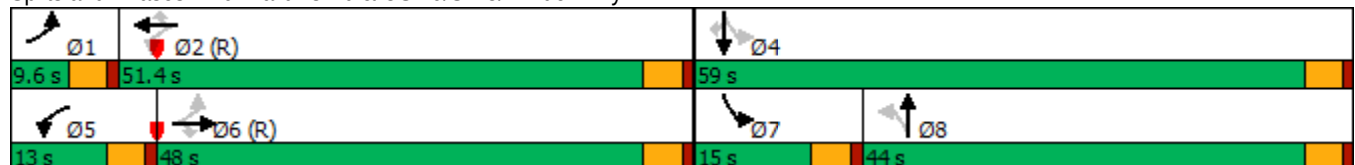
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy



Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	8	65	106	5	71
Future Vol, veh/h	115	8	65	106	5	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	135	9	76	125	6	84
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	144	0	417	140
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	277	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1451	-	596	913
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	563	913
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	731	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.9		9.6	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	877	-	-	1451	-	
HCM Lane V/C Ratio	0.102	-	-	0.053	-	
HCM Control Delay (s)	9.6	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile O(veh)	0.3	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	114	71	4	107	0	29	18	4	5	29	3
Future Vol, veh/h	8	114	71	4	107	0	29	18	4	5	29	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	10	146	91	5	137	0	37	23	5	6	37	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	8.5	8.6	9.1
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	4%	4%	14%
Vol Thru, %	35%	59%	96%	78%
Vol Right, %	8%	37%	0%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	193	111	37
LT Vol	29	8	4	5
Through Vol	18	114	107	29
RT Vol	4	71	0	3
Lane Flow Rate	65	247	142	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.091	0.35	0.178	0.074
Departure Headway (Hd)	5.022	5.096	4.515	5.619
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	705	794	637
Service Time	3.059	3.124	2.545	3.659
HCM Lane V/C Ratio	0.091	0.35	0.179	0.074
HCM Control Delay	8.6	10.9	8.5	9.1
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	1.6	0.6	0.2

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	214	0	147	127	0
Future Vol, veh/h	180	214	0	147	127	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	214	255	0	175	151	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	469	0	517	342
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1103	-	515	705
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1103	-	515	705
Mov Cap-2 Maneuver	-	-	-	-	515	-
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	851	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.9	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	515	-	-	1103	-	
HCM Lane V/C Ratio	0.294	-	-	-	-	
HCM Control Delay (s)	14.9	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile O(veh)	1.2	-	-	0	-	

Timings

2026 No Build AM w/ System Imp

1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

09/30/2022

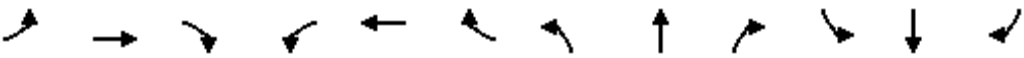
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	76	49	71	31	115	173	917	26	327	427	51
Future Volume (vph)	79	76	49	71	31	115	173	917	26	327	427	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1770	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.555			0.671			0.505			0.046		
Satd. Flow (perm)	1004	1770	0	1250	1863	1583	918	1783	1583	86	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				125			109			76
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		1151			237			379			468	
Travel Time (s)		22.4			6.5			5.7			7.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	134	0	77	34	125	180	955	28	355	445	53
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	33.5		22.5	22.5	22.5	13.2	87.5	87.5	29.0	103.3	103.3
Total Split (%)	7.3%	22.3%		15.0%	15.0%	15.0%	8.8%	58.3%	58.3%	19.3%	68.9%	68.9%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	25.1	25.1		13.9	13.9	13.9	91.1	82.5	82.5	115.9	102.7	102.7
Actuated g/C Ratio	0.17	0.17		0.09	0.09	0.09	0.61	0.55	0.55	0.77	0.68	0.68
v/c Ratio	0.41	0.43		0.67	0.20	0.48	0.30	0.97	0.03	0.91	0.38	0.05
Control Delay	60.2	52.1		91.7	63.7	15.9	8.3	56.1	0.1	73.5	11.6	0.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	52.1		91.7	63.7	15.9	8.3	56.1	0.1	73.5	11.6	0.9

Timings

2026 No Build AM w/ System Imp

1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	D		F	E	B	A	E	A	E	B	A
Approach Delay		55.2			47.5			47.4			36.7	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)	71	103		74	31	0	40	872	0	292	177	0
Queue Length 95th (ft)	122	167		130	67	63	68	#1198	0	#532	256	8
Internal Link Dist (ft)		1071			157			299			388	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	199	356		150	223	299	608	986	924	391	1186	1087
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38		0.51	0.15	0.42	0.30	0.97	0.03	0.91	0.38	0.05

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

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

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 44.4

Intersection LOS: D

Intersection Capacity Utilization 92.5%

ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd/Inland Pass Driveway

 Ø1		 Ø2 (R)		 Ø4	
29 s		87.5 s		33.5 s	
 Ø5		 Ø6 (R)		 Ø7	
13.2 s		103.3 s		11 s	
				 Ø8	
				22.5 s	

Timings
2: Harbins Rd & Alcovy Rd

2026 No Build AM w/ System Imp
09/30/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	237	49	56	1105	777	197
Future Volume (vph)	237	49	56	1105	777	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	200	125			0
Storage Lanes	1	1	1			1
Taper Length (ft)	0		90			
Satd. Flow (prot)	1572	1531	1646	1783	1749	1473
Flt Permitted	0.950		0.263			
Satd. Flow (perm)	1572	1531	456	1783	1749	1473
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		53				212
Link Speed (mph)	35			45	45	
Link Distance (ft)	376			932	359	
Travel Time (s)	7.3			14.1	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	2%	6%	3%	5%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	255	53	60	1188	835	212
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	96.0	96.0	96.0	96.0
Total Split (%)	20.0%	20.0%	80.0%	80.0%	80.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	22.0	22.0	89.0	89.0	89.0	89.0
Actuated g/C Ratio	0.18	0.18	0.74	0.74	0.74	0.74
v/c Ratio	0.89	0.16	0.18	0.90	0.64	0.18
Control Delay	79.6	12.9	5.6	22.7	12.7	1.7
Queue Delay	14.5	0.0	0.0	2.4	1.3	0.5
Total Delay	94.0	12.9	5.6	25.1	13.9	2.2

Timings
2: Harbins Rd & Alcovy Rd

2026 No Build AM w/ System Imp
09/30/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	F	B	A	C	B	A
Approach Delay	80.1			24.2	11.6	
Approach LOS	F			C	B	
Queue Length 50th (ft)	200	0	11	557	301	6
Queue Length 95th (ft)	#373	37	25	868	518	m10
Internal Link Dist (ft)	296			852	279	
Turn Bay Length (ft)		200	125			
Base Capacity (vph)	288	324	347	1359	1333	1173
Starvation Cap Reductn	0	0	0	0	282	613
Spillback Cap Reductn	28	0	0	86	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.16	0.17	0.93	0.79	0.38

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 25.7

Intersection LOS: C

Intersection Capacity Utilization 78.8%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Harbins Rd & Alcovy Rd



Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	0	486	0	0	0	0	1239	103	91	487	0
Future Volume (vph)	206	0	486	0	0	0	0	1239	103	91	487	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.145		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	264	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			396						107			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	0	506	0	0	0	0	1291	107	95	507	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	38.0		38.0					67.0	67.0	15.0	82.0	
Total Split (%)	31.7%		31.7%					55.8%	55.8%	12.5%	68.3%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	22.2		22.2					76.8	76.8	88.8	88.8	
Actuated g/C Ratio	0.18		0.18					0.64	0.64	0.74	0.74	
v/c Ratio	0.70		0.85					0.60	0.11	0.33	0.39	
Control Delay	57.0		24.1					15.2	3.2	5.9	4.4	
Queue Delay	0.3		0.3					5.4	0.0	0.0	0.1	
Total Delay	57.3		24.5					20.5	3.2	5.9	4.5	

Timings

2026 No Build AM w/ System Imp

3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E		C					C	A	A	A	
Approach Delay		34.3						19.2				4.7
Approach LOS		C						B				A
Queue Length 50th (ft)	160		83					271	3	5	39	
Queue Length 95th (ft)	215		208					450	m5	4	379	
Internal Link Dist (ft)		1486			1155			279				462
Turn Bay Length (ft)									250			
Base Capacity (vph)	463		700					2168	972	323	1294	
Starvation Cap Reductn	0		0					805	0	0	194	
Spillback Cap Reductn	36		24					54	0	0	110	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.50		0.75					0.95	0.11	0.29	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 20.0

Intersection LOS: C

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

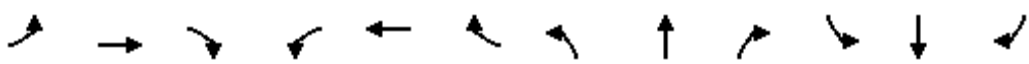


Timings

2026 No Build AM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶	↶	↶↶	↶			↶↶	↶
Traffic Volume (vph)	0	0	0	117	3	153	631	812	0	0	470	262
Future Volume (vph)	0	0	0	117	3	153	631	812	0	0	470	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						159						273
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	125	159	657	846	0	0	490	273
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				27.0	27.0	27.0	35.0	93.0			58.0	58.0
Total Split (%)				22.5%	22.5%	22.5%	29.2%	77.5%			48.3%	48.3%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					14.0	14.0	28.7	97.0			63.8	63.8
Actuated g/C Ratio					0.12	0.12	0.24	0.81			0.53	0.53
v/c Ratio					0.62	0.50	0.83	0.59			0.27	0.29
Control Delay					63.6	12.8	49.4	10.0			18.7	8.1
Queue Delay					0.0	0.0	0.0	0.6			0.0	0.0
Total Delay					63.6	12.8	49.4	10.6			18.7	8.1

Timings

2026 No Build AM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			B	A
Approach Delay					35.2			27.6			14.9	
Approach LOS					D			C			B	
Queue Length 50th (ft)					94	0	257	178			96	10
Queue Length 95th (ft)					151	61	313	597			230	155
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					321	410	872	1427			1791	944
Starvation Cap Reductn					0	0	0	247			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.39	0.39	0.75	0.72			0.27	0.29

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.6

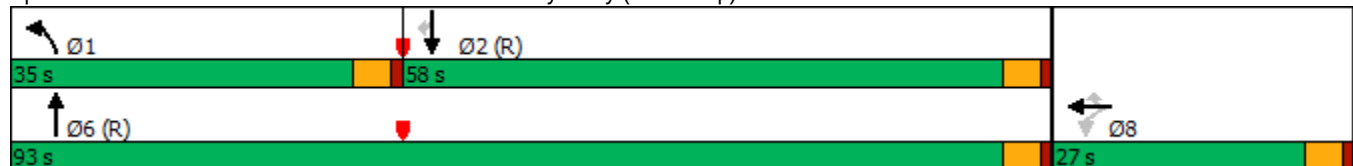
Intersection LOS: C

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	28	0	118	0	906	12	19	641	0
Future Volume (vph)	4	0	0	28	0	118	0	906	12	19	641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1396	0	1678	0	1516	0	1743	0	0	1758	0
Flt Permitted		0.950		0.950							0.963	
Satd. Flow (perm)	0	1396	0	1678	0	1516	0	1743	0	0	1695	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124		1				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	29	0	124	0	967	0	0	695	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		6.0		8.0		8.0		100.7			100.7	
Actuated g/C Ratio		0.05		0.07		0.07		0.84			0.84	
v/c Ratio		0.06		0.26		0.57		0.66			0.49	
Control Delay		55.8		57.9		19.8		7.7			9.3	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		55.8		57.9		19.8		7.7			9.3	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E		E		B		A			A	
Approach Delay		55.8			27.0			7.7			9.3	
Approach LOS		E			C			A			A	
Queue Length 50th (ft)		3		22		0		41			75	
Queue Length 95th (ft)		15		52		58		915			564	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		209		251		332		1463			1422	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.02		0.12		0.37		0.66			0.49	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 10.1

Intersection LOS: B

Intersection Capacity Utilization 71.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	158	24	168	384	63	77	771	160	31	462	30
Future Volume (vph)	13	158	24	168	384	63	77	771	160	31	462	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3247	0	1694	1766	1459
Flt Permitted	0.437			0.545			0.336			0.089		
Satd. Flow (perm)	803	1583	1432	953	1701	1561	571	3247	0	159	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			23			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	170	26	181	413	68	83	1001	0	33	497	32
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.0	46.7	46.7	14.3	51.0	51.0	49.0	49.0		10.0	59.0	59.0
Total Split (%)	8.3%	38.9%	38.9%	11.9%	42.5%	42.5%	40.8%	40.8%		8.3%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	52.0	46.3	46.3	61.6	57.4	57.4	42.2	42.2		49.4	49.4	49.4
Actuated g/C Ratio	0.43	0.39	0.39	0.51	0.48	0.48	0.35	0.35		0.41	0.41	0.41
v/c Ratio	0.04	0.28	0.04	0.33	0.51	0.09	0.41	0.86		0.22	0.68	0.05
Control Delay	18.8	30.0	0.1	20.0	28.0	2.4	32.1	38.1		21.2	33.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	18.8	30.0	0.1	20.0	28.0	2.4	32.1	38.1		21.2	33.3	1.9

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	C	C	A	C	D		C	C	A
Approach Delay		25.6			23.2			37.7			30.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	6	101	0	83	222	0	36	284		14	281	0
Queue Length 95th (ft)	18	157	0	134	376	16	m96	497		32	392	8
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	393	648	642	555	835	814	213	1231		152	824	710
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.04	0.26	0.04	0.33	0.49	0.08	0.39	0.81		0.22	0.60	0.05

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 31.3

Intersection LOS: C

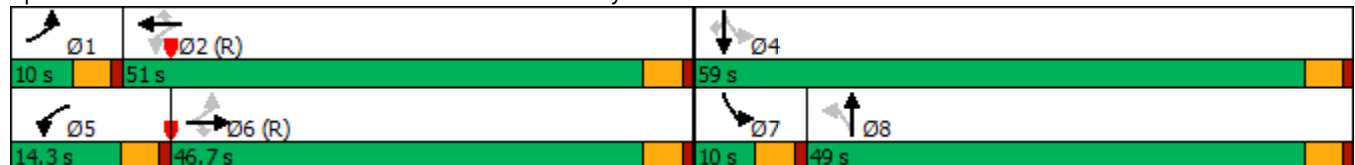
Intersection Capacity Utilization 70.0%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy



Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	1	60	202	6	84
Future Vol, veh/h	116	1	60	202	6	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	136	1	71	238	7	99
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	137	0	517	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1459	-	522	917
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1459	-	493	917
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	657	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	867	-	-	1459	-	
HCM Lane V/C Ratio	0.122	-	-	0.048	-	
HCM Control Delay (s)	9.7	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	98	16	3	195	24	74	57	6	11	30	17
Future Vol, veh/h	37	98	16	3	195	24	74	57	6	11	30	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	47	126	21	4	250	31	95	73	8	14	38	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	1	1		1		1						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	1	1		1		1						
HCM Control Delay	11.8	11		10.4		10						
HCM LOS	B	B		B		A						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	25%	1%	19%
Vol Thru, %	42%	65%	88%	52%
Vol Right, %	4%	11%	11%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	151	222	58
LT Vol	74	37	3	11
Through Vol	57	98	195	30
RT Vol	6	16	24	17
Lane Flow Rate	176	194	285	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.265	0.322	0.388	0.125
Departure Headway (Hd)	5.435	5.982	4.906	6.057
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	604	737	592
Service Time	3.463	3.991	2.912	4.09
HCM Lane V/C Ratio	0.266	0.321	0.387	0.125
HCM Control Delay	10.4	11.8	11	10
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	1.4	1.8	0.4

Intersection			
Intersection Delay, s/veh	7.6		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	463	374	344
Demand Flow Rate, veh/h	508	400	358
Vehicles Circulating, veh/h	5	356	324
Vehicles Exiting, veh/h	751	326	189
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.4	8.9	7.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	508	400	358
Cap Entry Lane, veh/h	1373	960	992
Entry HV Adj Factor	0.911	0.935	0.961
Flow Entry, veh/h	463	374	344
Cap Entry, veh/h	1250	898	953
V/C Ratio	0.370	0.417	0.361
Control Delay, s/veh	6.4	8.9	7.7
LOS	A	A	A
95th %tile Queue, veh	2	2	2

Timings
1: Harbins Rd & W Drowning Creek Rd

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	77	72	91	45	277	64	640	24	285	955	62
Future Volume (vph)	34	77	72	91	45	277	64	640	24	285	955	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1747	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.549			0.656			0.124			0.244		
Satd. Flow (perm)	993	1747	0	1222	1863	1583	225	1783	1583	455	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				301			149			104
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		1151			248			326			454	
Travel Time (s)		22.4			6.8			4.9			6.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	159	0	99	49	301	67	667	26	310	995	65
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	32.0		22.5	22.5	22.5	9.5	59.6	59.6	18.4	68.5	68.5
Total Split (%)	8.6%	29.1%		20.5%	20.5%	20.5%	8.6%	54.2%	54.2%	16.7%	62.3%	62.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	19.7	19.7		14.0	14.0	14.0	70.7	65.0	65.0	81.1	73.1	73.1
Actuated g/C Ratio	0.18	0.18		0.13	0.13	0.13	0.64	0.59	0.59	0.74	0.66	0.66
v/c Ratio	0.17	0.46		0.64	0.21	0.65	0.30	0.63	0.03	0.65	0.86	0.06
Control Delay	35.4	32.5		63.3	43.2	11.9	10.3	20.9	0.0	12.3	24.9	2.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	32.5		63.3	43.2	11.9	10.3	20.9	0.0	12.3	24.9	2.0

Timings

2026 No Build PM w/ System Imp

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		E	D	B	B	C	A	B	C	A
Approach Delay		33.0			26.6			19.3			20.9	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	20	71		67	31	0	13	335	0	101	475	0
Queue Length 95th (ft)	46	129		121	66	78	30	515	0	m112	m550	m0
Internal Link Dist (ft)		1071			168			246			374	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	212	466		199	304	510	222	1053	996	503	1151	1066
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.34		0.50	0.16	0.59	0.30	0.63	0.03	0.62	0.86	0.06

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 22.2

Intersection LOS: C

Intersection Capacity Utilization 82.9%

ICU Level of Service E

Analysis Period (min) 15

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

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd

											
Ø1	Ø2 (R)					Ø4					
18.4 s	59.6 s					32 s					
Ø5	Ø6 (R)					Ø7	Ø8				
9.5 s	68.5 s					9.5 s	22.5 s				

Timings
2: Harbins Rd & Alcovy Rd

2026 No Build PM w/ System Imp
09/30/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	80	36	981	1239	235
Future Volume (vph)	210	80	36	981	1239	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	200	125			0
Storage Lanes	1	1	1			1
Taper Length (ft)	0		90			
Satd. Flow (prot)	1572	1531	1646	1783	1749	1473
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	1572	1531	83	1783	1749	1473
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		86				253
Link Speed (mph)	35			45	45	
Link Distance (ft)	376			945	359	
Travel Time (s)	7.3			14.3	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	2%	6%	3%	5%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	86	39	1055	1332	253
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	87.5	87.5	87.5	87.5
Total Split (%)	20.5%	20.5%	79.5%	79.5%	79.5%	79.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	17.5	17.5	83.5	83.5	83.5	83.5
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.76	0.76
v/c Ratio	0.90	0.27	0.63	0.78	1.00	0.21
Control Delay	83.1	11.1	45.7	9.9	40.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	35.3	0.6
Total Delay	83.1	11.1	45.7	9.9	75.7	1.5

Timings
2: Harbins Rd & Alcovy Rd

2026 No Build PM w/ System Imp
09/30/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	F	B	D	A	E	A
Approach Delay	63.2			11.2	63.9	
Approach LOS	E			B	E	
Queue Length 50th (ft)	158	0	3	77	~849	0
Queue Length 95th (ft)	#297	44	m#51	177	#1249	17
Internal Link Dist (ft)	296			865	279	
Turn Bay Length (ft)		200	125			
Base Capacity (vph)	257	322	62	1353	1327	1179
Starvation Cap Reductn	0	0	0	0	180	602
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.27	0.63	0.78	1.16	0.44

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 44.5

Intersection LOS: D

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

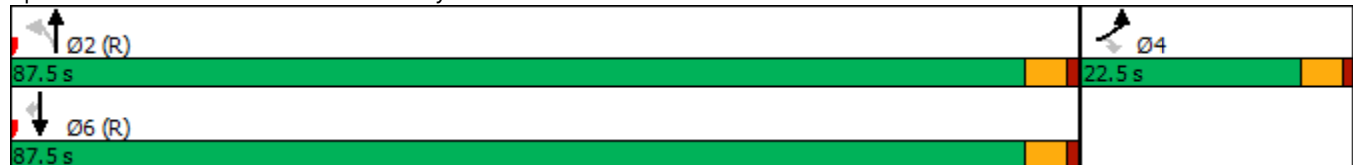
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Harbins Rd & Alcovy Rd



Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	0	684	0	0	0	0	1068	118	126	708	0
Future Volume (vph)	437	0	684	0	0	0	0	1068	118	126	708	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.093		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	169	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			211						123			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	455	0	713	0	0	0	0	1113	123	131	738	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	45.0		45.0					61.0	61.0	14.0	75.0	
Total Split (%)	37.5%		37.5%					50.8%	50.8%	11.7%	62.5%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	48.3		48.3					49.2	49.2	62.7	62.7	
Actuated g/C Ratio	0.40		0.40					0.41	0.41	0.52	0.52	
v/c Ratio	0.68		0.98					0.80	0.18	0.64	0.81	
Control Delay	37.4		56.2					35.8	3.9	32.0	25.8	
Queue Delay	0.7		0.0					23.4	0.0	0.0	0.9	
Total Delay	38.2		56.2					59.2	3.9	32.0	26.7	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		E					E	A	C	C	
Approach Delay		49.2						53.7			27.5	
Approach LOS		D						D			C	
Queue Length 50th (ft)	289		429					390	0	69	522	
Queue Length 95th (ft)	#486		#757					428	33	78	674	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	669		724					1595	752	211	1027	
Starvation Cap Reductn	0		0					517	0	0	97	
Spillback Cap Reductn	53		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.74		0.98					1.03	0.16	0.62	0.79	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 45.1

Intersection LOS: D

Intersection Capacity Utilization 103.5%

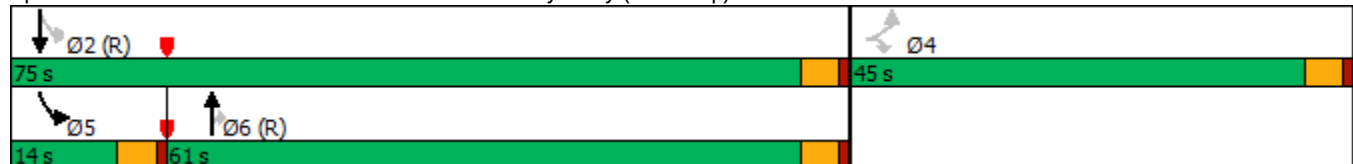
ICU Level of Service G

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

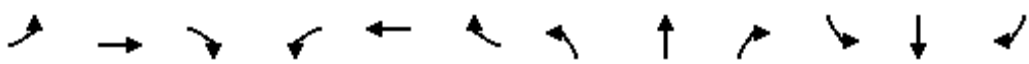


Timings

2026 No Build PM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	93	1	156	510	901	0	0	738	233
Future Volume (vph)	0	0	0	93	1	156	510	901	0	0	738	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						163						243
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	98	163	531	939	0	0	769	243
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				26.0	26.0	26.0	23.0	94.0			71.0	71.0
Total Split (%)				21.7%	21.7%	21.7%	19.2%	78.3%			59.2%	59.2%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					12.2	12.2	27.6	98.8			66.8	66.8
Actuated g/C Ratio					0.10	0.10	0.23	0.82			0.56	0.56
v/c Ratio					0.56	0.55	0.70	0.65			0.41	0.25
Control Delay					63.2	14.4	39.9	14.1			21.7	5.7
Queue Delay					0.0	0.0	0.0	3.3			0.1	0.0
Total Delay					63.2	14.4	39.9	17.4			21.8	5.7

Timings

2026 No Build PM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			C	A
Approach Delay					32.7			25.6			17.9	
Approach LOS					C			C			B	
Queue Length 50th (ft)					73	0	205	451			249	31
Queue Length 95th (ft)					125	62	258	437			321	m62
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					307	402	762	1454			1910	976
Starvation Cap Reductn					0	0	0	404			0	0
Spillback Cap Reductn					0	0	0	0			285	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.32	0.41	0.70	0.89			0.47	0.25

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 23.4

Intersection LOS: C

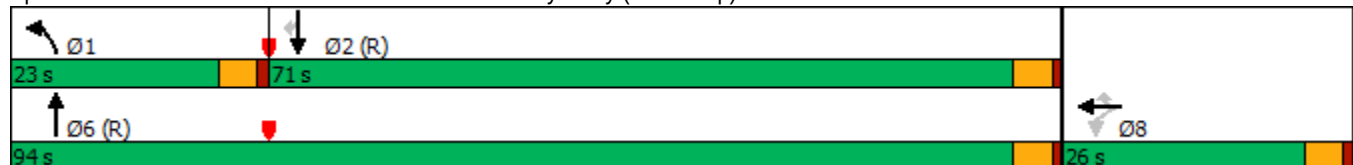
Intersection Capacity Utilization 103.5%

ICU Level of Service G

Analysis Period (min) 15

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

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	3	34	0	64	0	966	34	63	822	0
Future Volume (vph)	4	0	3	34	0	64	0	966	34	63	822	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1471	0	1678	0	1516	0	1733	0	0	1744	0
Flt Permitted		0.972		0.950							0.808	
Satd. Flow (perm)	0	1471	0	1678	0	1516	0	1733	0	0	1414	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55				67		3				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	36	0	67	0	1053	0	0	931	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		5.5		8.1		8.1		103.8			103.8	
Actuated g/C Ratio		0.05		0.07		0.07		0.86			0.86	
v/c Ratio		0.06		0.32		0.41		0.70			0.76	
Control Delay		1.0		60.1		19.9		10.5			23.4	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		1.0		60.1		19.9		10.5			23.4	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A		E		B		B			C	
Approach Delay		1.0			33.9			10.5			23.4	
Approach LOS		A			C			B			C	
Queue Length 50th (ft)		0		27		0		233			641	
Queue Length 95th (ft)		0		61		45		1001			m835	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		267		251		284		1499			1223	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.03		0.14		0.24		0.70			0.76	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 106.8%

ICU Level of Service G

Analysis Period (min) 15

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

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	404	54	159	254	136	31	776	186	146	692	28
Future Volume (vph)	35	404	54	159	254	136	31	776	186	146	692	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3234	0	1694	1766	1459
Flt Permitted	0.555			0.230			0.149			0.088		
Satd. Flow (perm)	1019	1583	1432	402	1701	1561	253	3234	0	157	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			146			26			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	434	58	171	273	146	33	1034	0	157	744	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	48.0	48.0	13.0	51.4	51.4	44.0	44.0		15.0	59.0	59.0
Total Split (%)	8.0%	40.0%	40.0%	10.8%	42.8%	42.8%	36.7%	36.7%		12.5%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	46.5	41.1	41.1	54.0	48.9	48.9	40.8	40.8		56.3	56.3	56.3
Actuated g/C Ratio	0.39	0.34	0.34	0.45	0.41	0.41	0.34	0.34		0.47	0.47	0.47
v/c Ratio	0.09	0.80	0.11	0.62	0.39	0.20	0.38	0.93		0.73	0.90	0.04
Control Delay	19.0	48.4	1.7	31.1	28.2	4.5	51.1	59.4		44.3	44.7	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.0	48.4	1.7	31.1	28.2	4.5	51.1	59.4		44.3	44.7	1.6

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 No Build PM w/ System Imp

09/30/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	D	A	C	C	A	D	E		D	D	A
Approach Delay		41.2			23.2			59.2			43.3	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	17	314	0	83	163	0	26	443		66	487	0
Queue Length 95th (ft)	36	424	9	123	228	41	m36	#562		#179	#790	7
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	427	578	583	276	709	736	86	1118		217	833	717
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.09	0.75	0.10	0.62	0.39	0.20	0.38	0.92		0.72	0.89	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 44.6

Intersection LOS: D

Intersection Capacity Utilization 85.7%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy

9.6 s		51.4 s		59 s	
13 s		48 s		15 s	44 s

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	8	65	106	5	71
Future Vol, veh/h	115	8	65	106	5	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	135	9	76	125	6	84
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	144	0	417	140
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	277	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1451	-	596	913
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	563	913
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	731	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.9		9.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	877	-	-	1451	-	
HCM Lane V/C Ratio	0.102	-	-	0.053	-	
HCM Control Delay (s)	9.6	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	114	71	4	107	0	29	18	4	5	29	3
Future Vol, veh/h	8	114	71	4	107	0	29	18	4	5	29	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	10	146	91	5	137	0	37	23	5	6	37	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	8.5	8.6	9.1
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	4%	4%	14%
Vol Thru, %	35%	59%	96%	78%
Vol Right, %	8%	37%	0%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	193	111	37
LT Vol	29	8	4	5
Through Vol	18	114	107	29
RT Vol	4	71	0	3
Lane Flow Rate	65	247	142	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.091	0.35	0.178	0.074
Departure Headway (Hd)	5.022	5.096	4.515	5.619
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	705	794	637
Service Time	3.059	3.124	2.545	3.659
HCM Lane V/C Ratio	0.091	0.35	0.179	0.074
HCM Control Delay	8.6	10.9	8.5	9.1
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	1.6	0.6	0.2

Intersection			
Intersection Delay, s/veh	5.9		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	469	175	151
Demand Flow Rate, veh/h	536	187	157
Vehicles Circulating, veh/h	0	157	220
Vehicles Exiting, veh/h	344	220	316
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.8	4.7	4.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	536	187	157
Cap Entry Lane, veh/h	1380	1176	1103
Entry HV Adj Factor	0.874	0.935	0.962
Flow Entry, veh/h	469	175	151
Cap Entry, veh/h	1206	1099	1060
V/C Ratio	0.388	0.159	0.142
Control Delay, s/veh	6.8	4.7	4.7
LOS	A	A	A
95th %tile Queue, veh	2	1	0

Timings

2026 Build AM (No Improvements)

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	76	49	71	31	115	173	957	26	327	473	105
Future Volume (vph)	177	76	49	71	31	115	173	957	26	327	473	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1770	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.555			0.671			0.483			0.046		
Satd. Flow (perm)	1004	1770	0	1250	1863	1583	878	1783	1583	86	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				125			109			109
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		433			237			379			468	
Travel Time (s)		8.4			4.6			5.7			7.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	134	0	77	34	125	180	997	28	355	493	109
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	33.5		22.5	22.5	22.5	13.2	87.5	87.5	29.0	103.3	103.3
Total Split (%)	7.3%	22.3%		15.0%	15.0%	15.0%	8.8%	58.3%	58.3%	19.3%	68.9%	68.9%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	24.9	24.9		13.9	13.9	13.9	91.6	83.0	83.0	116.1	103.0	103.0
Actuated g/C Ratio	0.17	0.17		0.09	0.09	0.09	0.61	0.55	0.55	0.77	0.69	0.69
v/c Ratio	0.93	0.44		0.67	0.20	0.48	0.31	1.01	0.03	0.92	0.41	0.10
Control Delay	108.2	52.2		91.7	63.7	15.9	8.4	64.7	0.1	75.1	12.2	1.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.2	52.2		91.7	63.7	15.9	8.4	64.7	0.1	75.1	12.2	1.7

Timings

2026 Build AM (No Improvements)

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	D		F	E	B	A	E	A	E	B	A
Approach Delay		84.6			47.5			54.8			34.3	
Approach LOS		F			D			D			C	
Queue Length 50th (ft)	170	103		74	31	0	40	~982	0	292	203	0
Queue Length 95th (ft)	#295	167		130	67	63	68	#1283	0	#532	292	21
Internal Link Dist (ft)		353			157			299			388	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	197	356		150	223	299	590	986	924	387	1189	1100
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.38		0.51	0.15	0.42	0.31	1.01	0.03	0.92	0.41	0.10

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 50.4

Intersection LOS: D

Intersection Capacity Utilization 97.5%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd



Intersection								
Int Delay, s/veh	317.8							
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Vol, veh/h	237	49	56	1243	877	197		
Future Vol, veh/h	237	49	56	1243	877	197		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	Free	-	None	-	Yield		
Storage Length	0	200	125	-	-	0		
Veh in Median Storage, #	0	-	-	0	0	-		
Grade, %	0	-	-	0	0	-		
Peak Hour Factor	93	93	93	93	93	93		
Heavy Vehicles, %	11	2	6	3	5	6		
Mvmt Flow	255	53	60	1337	943	212		
Major/Minor	Minor2		Major1		Major2			
Conflicting Flow All	2400	-	943	0	-	0		
Stage 1	943	-	-	-	-	-		
Stage 2	1457	-	-	-	-	-		
Critical Hdwy	6.51	-	4.16	-	-	-		
Critical Hdwy Stg 1	5.51	-	-	-	-	-		
Critical Hdwy Stg 2	5.51	-	-	-	-	-		
Follow-up Hdwy	3.599	-	2.254	-	-	-		
Pot Cap-1 Maneuver	~ 34	0	711	-	-	-		
Stage 1	365	0	-	-	-	-		
Stage 2	~ 204	0	-	-	-	-		
Platoon blocked, %				-	-	-		
Mov Cap-1 Maneuver	~ 31	-	711	-	-	-		
Mov Cap-2 Maneuver	~ 31	-	-	-	-	-		
Stage 1	334	-	-	-	-	-		
Stage 2	~ 204	-	-	-	-	-		
Approach	EB		NB		SB			
HCM Control Delay, \$	3497.6		0.5		0			
HCM LOS	F							
Minor Lane/Major Mvmt	NBL		NBT		EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	711		-		31	-	-	-
HCM Lane V/C Ratio	0.085		-		8.221	-	-	-
HCM Control Delay (s)	10.5		\$		3497.6	0	-	-
HCM Lane LOS	B		-		F	A	-	-
HCM 95th %tile Q(veh)	0.3		-		31.1	-	-	-
Notes								
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined		*: All major volume in platoon	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build AM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	0	540	0	0	0	0	1359	121	91	533	0
Future Volume (vph)	206	0	540	0	0	0	0	1359	121	91	533	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.106		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	193	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			359						116			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	0	563	0	0	0	0	1416	126	95	555	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	38.0		38.0					67.0	67.0	15.0	82.0	
Total Split (%)	31.7%		31.7%					55.8%	55.8%	12.5%	68.3%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	26.2		26.2					72.4	72.4	84.8	84.8	
Actuated g/C Ratio	0.22		0.22					0.60	0.60	0.71	0.71	
v/c Ratio	0.59		0.93					0.69	0.14	0.40	0.45	
Control Delay	47.7		39.0					20.4	3.4	12.8	4.9	
Queue Delay	0.4		0.0					0.1	0.0	0.0	0.2	
Total Delay	48.0		39.0					20.4	3.4	12.8	5.1	

Timings

2026 Build AM (No Improvements)

3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		D					C	A	B	A	
Approach Delay		41.5						19.0			6.2	
Approach LOS		D						B			A	
Queue Length 50th (ft)	145		170					395	3	1	177	
Queue Length 95th (ft)	215		#369					557	34	41	181	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	463		673					2045	926	270	1236	
Starvation Cap Reductn	0		0					0	0	0	165	
Spillback Cap Reductn	47		0					42	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.52		0.84					0.71	0.14	0.35	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 22.1

Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

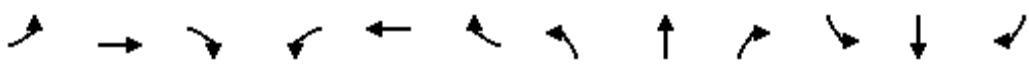
 Ø2 (R)	 Ø4
82 s	38 s
 Ø5	 Ø6 (R)
15 s	67 s

Timings

2026 Build AM (No Improvements)

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶	↶	↶↶	↶			↶↶	↶
Traffic Volume (vph)	0	0	0	130	3	153	711	852	0	0	503	262
Future Volume (vph)	0	0	0	130	3	153	711	852	0	0	503	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						159						273
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	138	159	741	888	0	0	524	273
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				27.0	27.0	27.0	35.0	93.0			58.0	58.0
Total Split (%)				22.5%	22.5%	22.5%	29.2%	77.5%			48.3%	48.3%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					14.9	14.9	32.1	96.1			59.5	59.5
Actuated g/C Ratio					0.12	0.12	0.27	0.80			0.50	0.50
v/c Ratio					0.65	0.49	0.83	0.63			0.32	0.30
Control Delay					63.5	12.2	44.4	13.4			22.3	9.5
Queue Delay					0.0	0.0	0.0	1.9			0.0	0.0
Total Delay					63.5	12.2	44.4	15.3			22.3	9.5

Timings

2026 Build AM (No Improvements)

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			C	A
Approach Delay					36.0			28.5			17.9	
Approach LOS					D			C			B	
Queue Length 50th (ft)					103	0	285	272			106	15
Queue Length 95th (ft)					164	60	352	598			250	151
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					321	410	919	1414			1691	907
Starvation Cap Reductn					0	0	0	357			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.43	0.39	0.81	0.84			0.31	0.30

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 26.2

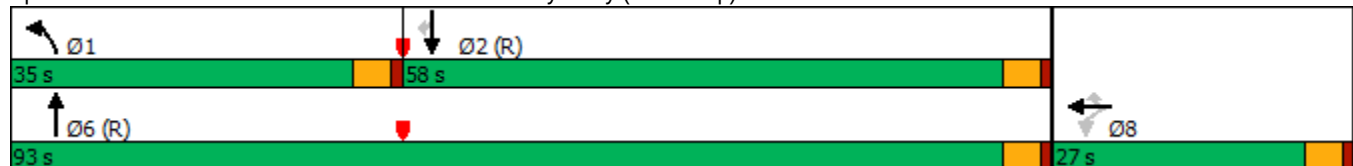
Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build AM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	28	0	118	0	946	12	19	674	0
Future Volume (vph)	4	0	0	28	0	118	0	946	12	19	674	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1396	0	1678	0	1516	0	1743	0	0	1758	0
Flt Permitted		0.950		0.950							0.962	
Satd. Flow (perm)	0	1396	0	1678	0	1516	0	1743	0	0	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124		1				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	29	0	124	0	1009	0	0	729	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		6.0		8.0		8.0		100.7			100.7	
Actuated g/C Ratio		0.05		0.07		0.07		0.84			0.84	
v/c Ratio		0.06		0.26		0.57		0.69			0.51	
Control Delay		55.8		57.9		19.8		8.8			9.9	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		55.8		57.9		19.8		8.8			9.9	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build AM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E		E		B		A			A	
Approach Delay		55.8			27.0			8.8			9.9	
Approach LOS		E			C			A			A	
Queue Length 50th (ft)		3		22		0		170			102	
Queue Length 95th (ft)		15		52		58		960			593	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		209		251		332		1463			1421	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.02		0.12		0.37		0.69			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 10.8

Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build AM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	158	31	175	384	63	86	793	169	31	481	30
Future Volume (vph)	13	158	31	175	384	63	86	793	169	31	481	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3246	0	1694	1766	1459
Flt Permitted	0.430			0.542			0.322			0.084		
Satd. Flow (perm)	790	1583	1432	948	1701	1561	548	3246	0	150	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			24			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	170	33	188	413	68	92	1035	0	33	517	32
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.0	46.7	46.7	14.3	51.0	51.0	49.0	49.0		10.0	59.0	59.0
Total Split (%)	8.3%	38.9%	38.9%	11.9%	42.5%	42.5%	40.8%	40.8%		8.3%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	51.2	45.4	45.4	60.5	56.4	56.4	43.3	43.3		50.4	50.4	50.4
Actuated g/C Ratio	0.43	0.38	0.38	0.50	0.47	0.47	0.36	0.36		0.42	0.42	0.42
v/c Ratio	0.04	0.28	0.06	0.35	0.52	0.09	0.47	0.87		0.22	0.70	0.05
Control Delay	19.1	30.4	0.2	20.8	28.8	2.4	38.4	43.6		20.9	33.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.1	30.4	0.2	20.8	28.8	2.4	38.4	43.6		20.9	33.2	1.9

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build AM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	C	C	A	D	D		C	C	A
Approach Delay		25.1			23.8			43.2			30.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	6	104	0	88	227	0	58	350		13	290	0
Queue Length 95th (ft)	18	157	0	139	376	16	m102	514		32	414	8
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	383	639	635	543	823	804	207	1241		150	831	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.04	0.27	0.05	0.35	0.50	0.08	0.44	0.83		0.22	0.62	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 33.9

Intersection LOS: C

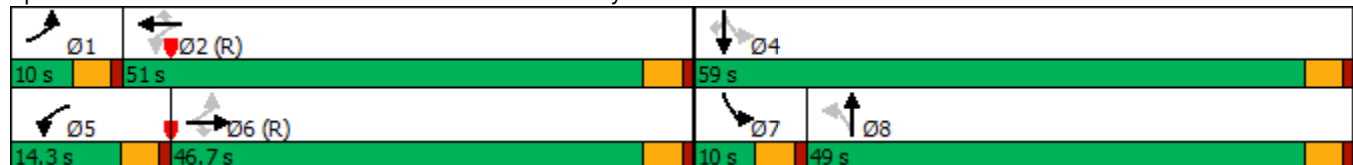
Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy



Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	128	1	64	216	6	89
Future Vol, veh/h	128	1	64	216	6	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	151	1	75	254	7	105
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	152	0	556	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1441	-	496	900
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1441	-	466	900
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	638	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	850	-	-	1441	-	
HCM Lane V/C Ratio	0.131	-	-	0.052	-	
HCM Control Delay (s)	9.9	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	110	16	3	209	24	74	57	6	11	30	17
Future Vol, veh/h	37	110	16	3	209	24	74	57	6	11	30	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	47	141	21	4	268	31	95	73	8	14	38	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	11.5	10.6	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	23%	1%	19%
Vol Thru, %	42%	67%	89%	52%
Vol Right, %	4%	10%	10%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	163	236	58
LT Vol	74	37	3	11
Through Vol	57	110	209	30
RT Vol	6	16	24	17
Lane Flow Rate	176	209	303	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.27	0.349	0.417	0.127
Departure Headway (Hd)	5.534	6.009	4.958	6.164
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	600	729	581
Service Time	3.567	4.037	2.958	4.205
HCM Lane V/C Ratio	0.271	0.348	0.416	0.127
HCM Control Delay	10.6	12.2	11.5	10.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.1	1.6	2.1	0.4

Intersection						
Int Delay, s/veh	23.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	265	136	4	310	301	2
Future Vol, veh/h	265	136	4	310	301	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	315	162	5	369	358	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	477	0	775	396
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	379	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1096	-	364	658
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1096	-	362	658
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	684	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		80.1	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	363	-	-	1096	-	
HCM Lane V/C Ratio	0.994	-	-	0.004	-	
HCM Control Delay (s)	80.1	-	-	8.3	0	
HCM Lane LOS	F	-	-	A	A	
HCM 95th %tile Q(veh)	11.5	-	-	0	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	219	1	3	272	1	3
Future Vol, veh/h	219	1	3	272	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	1	3	296	1	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	239	0	541	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	302	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1328	-	502	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	500	800
Mov Cap-2 Maneuver	-	-	-	-	500	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	748	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		10.2	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	696	-	-	1328	-	
HCM Lane V/C Ratio	0.006	-	-	0.002	-	
HCM Control Delay (s)	10.2	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile O(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘↗	
Traffic Vol, veh/h	206	16	51	258	17	95
Future Vol, veh/h	206	16	51	258	17	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	17	55	280	18	103
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	614	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	455	815
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	436	815
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	656	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.3		11	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	720	-	-	1326	-	
HCM Lane V/C Ratio	0.169	-	-	0.042	-	
HCM Control Delay (s)	11	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile O(veh)	0.6	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	18	20	1086	535	20
Future Vol, veh/h	40	18	20	1086	535	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	20	22	1180	582	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1806	582	604	0	-	0
Stage 1	582	-	-	-	-	-
Stage 2	1224	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	87	513	974	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	513	974	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	62.6	0.2		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	974	-	85	513	-	-
HCM Lane V/C Ratio	0.022	-	0.512	0.038	-	-
HCM Control Delay (s)	8.8	-	85.2	12.3	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	0.1	-	-

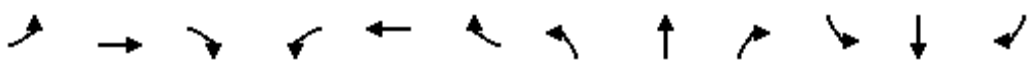
Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	4	0	1106	548	5
Future Vol, veh/h	0	4	0	1106	548	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	1202	596	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	599	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	502	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	502	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 502		-	-		
HCM Lane V/C Ratio	- 0.009		-	-		
HCM Control Delay (s)	- 12.2		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Timings

1: Harbins Rd & W Drowning Creek Rd

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	77	72	91	45	277	64	662	24	285	1006	134
Future Volume (vph)	99	77	72	91	45	277	64	662	24	285	1006	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1747	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.549			0.656			0.070			0.213		
Satd. Flow (perm)	993	1747	0	1222	1863	1583	127	1783	1583	397	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				301			149			104
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		327			248			326			454	
Travel Time (s)		6.4			6.8			4.9			6.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	159	0	99	49	301	67	690	26	310	1048	140
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	32.0		22.5	22.5	22.5	9.5	59.6	59.6	18.4	68.5	68.5
Total Split (%)	8.6%	29.1%		20.5%	20.5%	20.5%	8.6%	54.2%	54.2%	16.7%	62.3%	62.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	23.5	23.5		14.0	14.0	14.0	66.4	60.6	60.6	77.5	69.2	69.2
Actuated g/C Ratio	0.21	0.21		0.13	0.13	0.13	0.60	0.55	0.55	0.70	0.63	0.63
v/c Ratio	0.42	0.39		0.64	0.21	0.65	0.42	0.70	0.03	0.71	0.96	0.14
Control Delay	40.7	29.8		63.3	43.2	11.9	19.5	24.5	0.0	17.3	41.5	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	29.8		63.3	43.2	11.9	19.5	24.5	0.0	17.3	41.5	3.6

Timings

2026 Build PM (No Improvements)

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		E	D	B	B	C	A	B	D	A
Approach Delay		34.1			26.6			23.2			33.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	60	71		67	31	0	13	356	0	72	~788	10
Queue Length 95th (ft)	106	129		121	66	78	44	544	0	137	#1052	37
Internal Link Dist (ft)		247			168			246			374	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	245	466		199	304	510	160	982	938	453	1090	1016
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.34		0.50	0.16	0.59	0.42	0.70	0.03	0.68	0.96	0.14

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 29.6

Intersection LOS: C

Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd



Intersection						
Int Delay, s/veh	361.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	210	80	36	1068	1362	235
Future Vol, veh/h	210	80	36	1068	1362	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	0	200	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	11	2	6	3	5	6
Mvmt Flow	226	86	39	1148	1465	253
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2691	-	1465	0	-	0
Stage 1	1465	-	-	-	-	-
Stage 2	1226	-	-	-	-	-
Critical Hdwy	6.51	-	4.16	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	-	2.254	-	-	-
Pot Cap-1 Maneuver	~ 22	0	449	-	-	-
Stage 1	~ 202	0	-	-	-	-
Stage 2	266	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 20	-	449	-	-	-
Mov Cap-2 Maneuver	~ 20	-	-	-	-	-
Stage 1	~ 184	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	5005.4	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	449	-	20	-	-	-
HCM Lane V/C Ratio	0.086	-	11.29	-	-	-
HCM Control Delay (s)	13.8	\$ 5005.4	0	-	-	-
HCM Lane LOS	B	-	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	28.7	-	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	0	755	0	0	0	0	1144	129	126	760	0
Future Volume (vph)	437	0	755	0	0	0	0	1144	129	126	760	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.081		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	147	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			186						133			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	455	0	786	0	0	0	0	1192	134	131	792	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	45.0		45.0					61.0	61.0	14.0	75.0	
Total Split (%)	37.5%		37.5%					50.8%	50.8%	11.7%	62.5%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	46.2		46.2					51.4	51.4	64.8	64.8	
Actuated g/C Ratio	0.38		0.38					0.43	0.43	0.54	0.54	
v/c Ratio	0.71		1.15					0.82	0.19	0.66	0.84	
Control Delay	40.2		109.6					35.4	3.7	40.8	23.4	
Queue Delay	0.9		0.0					0.0	0.0	0.0	0.9	
Total Delay	41.1		109.6					35.4	3.7	40.8	24.3	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		F					D	A	D	C	
Approach Delay		84.5						32.2			26.7	
Approach LOS		F						C			C	
Queue Length 50th (ft)	301		~632					414	0	34	559	
Queue Length 95th (ft)	#486		#909					473	34	117	261	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	639		686					1595	757	204	1027	
Starvation Cap Reductn	0		0					0	0	0	71	
Spillback Cap Reductn	49		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.77		1.15					0.75	0.18	0.64	0.83	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 49.3

Intersection LOS: D

Intersection Capacity Utilization 111.0%

ICU Level of Service H

Analysis Period (min) 15

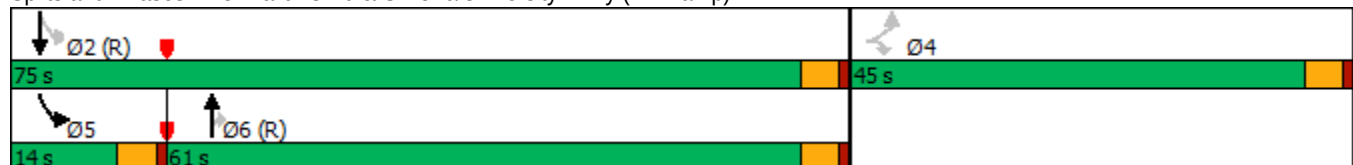
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

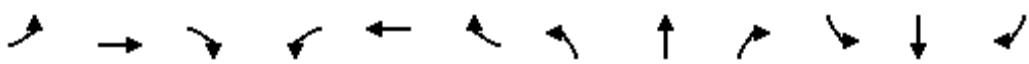


Timings

2026 Build PM (No Improvements)

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	109	1	156	561	926	0	0	774	233
Future Volume (vph)	0	0	0	109	1	156	561	926	0	0	774	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						163						243
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	115	163	584	965	0	0	806	243
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				26.0	26.0	26.0	23.0	94.0			71.0	71.0
Total Split (%)				21.7%	21.7%	21.7%	19.2%	78.3%			59.2%	59.2%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					13.3	13.3	32.0	97.7			61.2	61.2
Actuated g/C Ratio					0.11	0.11	0.27	0.81			0.51	0.51
v/c Ratio					0.61	0.52	0.66	0.67			0.47	0.27
Control Delay					63.4	13.4	36.8	13.8			27.0	6.7
Queue Delay					0.0	0.0	0.0	3.5			0.1	0.0
Total Delay					63.4	13.4	36.8	17.2			27.1	6.7

Timings

2026 Build PM (No Improvements)

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			C	A
Approach Delay					34.1			24.6			22.4	
Approach LOS					C			C			C	
Queue Length 50th (ft)					86	0	218	444			283	30
Queue Length 95th (ft)					143	61	279	418			379	m63
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					307	402	884	1437			1859	956
Starvation Cap Reductn					0	0	0	367			0	0
Spillback Cap Reductn					0	0	0	0			255	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.37	0.41	0.66	0.90			0.50	0.25

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 24.7

Intersection LOS: C

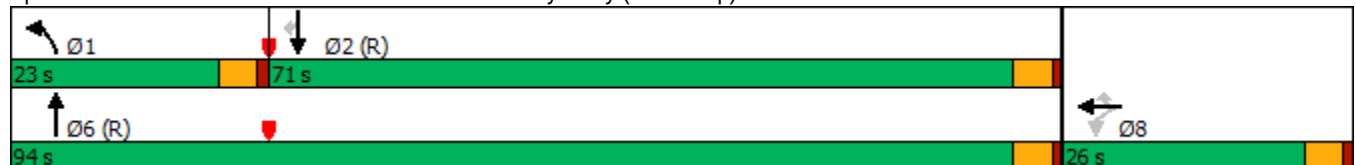
Intersection Capacity Utilization 111.0%

ICU Level of Service H

Analysis Period (min) 15

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

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	3	34	0	64	0	991	34	63	858	0
Future Volume (vph)	4	0	3	34	0	64	0	991	34	63	858	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1471	0	1678	0	1516	0	1733	0	0	1746	0
Flt Permitted		0.972		0.950							0.793	
Satd. Flow (perm)	0	1471	0	1678	0	1516	0	1733	0	0	1389	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55				67		3				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	36	0	67	0	1079	0	0	969	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		5.5		8.1		8.1		103.8			103.8	
Actuated g/C Ratio		0.05		0.07		0.07		0.86			0.86	
v/c Ratio		0.06		0.32		0.41		0.72			0.81	
Control Delay		1.0		60.1		19.9		11.2			25.3	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		1.0		60.1		19.9		11.2			25.3	

Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A		E		B		B			C	
Approach Delay		1.0			33.9			11.2			25.3	
Approach LOS		A			C			B			C	
Queue Length 50th (ft)		0		27		0		270			679	
Queue Length 95th (ft)		0		61		45		1025			m#873	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		267		251		284		1499			1201	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.03		0.14		0.24		0.72			0.81	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 108.7%

ICU Level of Service G

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

		
Ø2 (R)	Ø4	Ø8
75 s	22.5 s	22.5 s
		
Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	404	62	167	254	136	37	789	192	146	712	28
Future Volume (vph)	35	404	62	167	254	136	37	789	192	146	712	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3234	0	1694	1766	1459
Flt Permitted	0.556			0.223			0.131			0.087		
Satd. Flow (perm)	1021	1583	1432	390	1701	1561	223	3234	0	155	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			146			26			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	434	67	180	273	146	40	1054	0	157	766	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	48.0	48.0	13.0	51.4	51.4	44.0	44.0		15.0	59.0	59.0
Total Split (%)	8.0%	40.0%	40.0%	10.8%	42.8%	42.8%	36.7%	36.7%		12.5%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	45.8	40.4	40.4	53.5	48.4	48.4	41.4	41.4		56.8	56.8	56.8
Actuated g/C Ratio	0.38	0.34	0.34	0.45	0.40	0.40	0.34	0.34		0.47	0.47	0.47
v/c Ratio	0.09	0.82	0.12	0.66	0.40	0.20	0.52	0.93		0.74	0.92	0.04
Control Delay	19.1	50.0	2.6	34.0	28.5	4.5	61.4	58.9		45.1	46.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.1	50.0	2.6	34.0	28.5	4.5	61.4	58.9		45.1	46.8	1.6

Timings

6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build PM (No Improvements)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	D	A	C	C	A	E	E		D	D	A
Approach Delay		41.9			24.3			59.0			45.1	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	17	314	0	88	163	0	32	452		66	512	0
Queue Length 95th (ft)	36	424	16	#130	228	41	m46	#581		#180	#827	7
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	422	573	579	271	701	730	77	1133		216	837	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.09	0.76	0.12	0.66	0.39	0.20	0.52	0.93		0.73	0.92	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 45.4

Intersection LOS: D

Intersection Capacity Utilization 87.2%

ICU Level of Service E

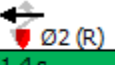
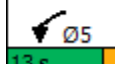
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy

 Ø1		 Ø2 (R)		 Ø4	
9.6 s		51.4 s		59 s	
 Ø5		 Ø6 (R)		 Ø7	
13 s		48 s		15 s	
				 Ø8	
				44 s	

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	8	65	110	5	75
Future Vol, veh/h	127	8	65	110	5	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	149	9	76	129	6	88
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	158	0	435	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1434	-	582	897
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	549	897
Mov Cap-2 Maneuver	-	-	-	-	549	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	727	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.8		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	863	-	-	1434	-	
HCM Lane V/C Ratio	0.109	-	-	0.053	-	
HCM Control Delay (s)	9.7	-	-	7.7	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	126	71	4	111	0	29	18	4	5	29	3
Future Vol, veh/h	8	126	71	4	111	0	29	18	4	5	29	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	10	162	91	5	142	0	37	23	5	6	37	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.2	8.6	8.6	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	4%	3%	14%
Vol Thru, %	35%	61%	97%	78%
Vol Right, %	8%	35%	0%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	205	115	37
LT Vol	29	8	4	5
Through Vol	18	126	111	29
RT Vol	4	71	0	3
Lane Flow Rate	65	263	147	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.373	0.186	0.075
Departure Headway (Hd)	5.074	5.116	4.537	5.673
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	704	790	630
Service Time	3.118	3.148	2.57	3.718
HCM Lane V/C Ratio	0.092	0.374	0.186	0.075
HCM Control Delay	8.6	11.2	8.6	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	1.7	0.7	0.2

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	226	0	147	131	0
Future Vol, veh/h	180	226	0	147	131	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	3	24	0	7	4	0
Mvmt Flow	214	269	0	175	156	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	483	0	524	349
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.1	-	6.44	6.2
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.2	-	3.536	3.3
Pot Cap-1 Maneuver	-	-	1090	-	510	699
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1090	-	510	699
Mov Cap-2 Maneuver	-	-	-	-	510	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	851	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		15.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	510	-	-	1090	-	
HCM Lane V/C Ratio	0.306	-	-	-	-	
HCM Control Delay (s)	15.1	-	-	0	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile O(veh)	1.3	-	-	0	-	

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	199	1	3	174	1	2
Future Vol, veh/h	199	1	3	174	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	1	3	189	1	2
Major/Minor	Minor2		Major2			
Conflicting Flow All	195	189	0	0		
Stage 1	195	-	-	-		
Stage 2	0	-	-	-		
Critical Hdwy	6.52	6.22	4.12	-		
Critical Hdwy Stg 1	5.52	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	4.018	3.318	2.218	-		
Pot Cap-1 Maneuver	700	853	-	-		
Stage 1	739	-	-	-		
Stage 2	-	-	-	-		
Platoon blocked, %						
Mov Cap-1 Maneuver	0	853	-	-		
Mov Cap-2 Maneuver	0	-	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Approach	EB		WB			
HCM Control Delay, s	10.7					
HCM LOS	B					
Minor Lane/Major Mvmt	EBLn1	WBL	WBT			
Capacity (veh/h)	853	-	-			
HCM Lane V/C Ratio	0.255	-	-			
HCM Control Delay (s)	10.7	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	1	-	-			

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	181	20	80	163	14	68
Future Vol, veh/h	181	20	80	163	14	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	197	22	87	177	15	74
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	219	0	548	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1350	-	497	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1350	-	465	844
Mov Cap-2 Maneuver	-	-	-	-	465	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	667	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.6		10.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	741	-	-	1350	-	
HCM Lane V/C Ratio	0.12	-	-	0.064	-	
HCM Control Delay (s)	10.5	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	13	25	682	1094	35
Future Vol, veh/h	27	13	25	682	1094	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	14	27	741	1189	38
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1984	1189	1227	0	-	0
Stage 1	1189	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	67	229	568	-	-	-
Stage 1	289	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	64	229	568	-	-	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	76	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	568	-	64	229	-	-
HCM Lane V/C Ratio	0.048	-	0.459	0.062	-	-
HCM Control Delay (s)	11.7	-	102.1	21.8	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	0.2	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	4	0	707	1101	6
Future Vol, veh/h	0	4	0	707	1101	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	768	1197	7
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	1201	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	225	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	225	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	21.3	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	225	-	-		
HCM Lane V/C Ratio	-	0.019	-	-		
HCM Control Delay (s)	-	21.3	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %tile Q(veh)	-	0.1	-	-		

Timings
1: Harbins Rd & W Drowning Creek Rd

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	76	49	71	31	115	173	957	26	327	473	105
Future Volume (vph)	177	76	49	71	31	115	173	957	26	327	473	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1770	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.555			0.671			0.483			0.046		
Satd. Flow (perm)	1004	1770	0	1250	1863	1583	878	1783	1583	86	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				125			109			109
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		433			237			379			468	
Travel Time (s)		8.4			4.6			5.7			7.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	134	0	77	34	125	180	997	28	355	493	109
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	11.0	33.5		22.5	22.5	22.5	13.2	87.5	87.5	29.0	103.3	103.3
Total Split (%)	7.3%	22.3%		15.0%	15.0%	15.0%	8.8%	58.3%	58.3%	19.3%	68.9%	68.9%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	24.9	24.9		13.9	13.9	13.9	91.6	83.0	83.0	116.1	103.0	103.0
Actuated g/C Ratio	0.17	0.17		0.09	0.09	0.09	0.61	0.55	0.55	0.77	0.69	0.69
v/c Ratio	0.93	0.44		0.67	0.20	0.48	0.31	1.01	0.03	0.92	0.41	0.10
Control Delay	108.2	52.2		91.7	63.7	15.9	8.4	64.7	0.1	75.1	12.2	1.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.2	52.2		91.7	63.7	15.9	8.4	64.7	0.1	75.1	12.2	1.7

Timings

2026 Build AM w/ System Imp

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	D		F	E	B	A	E	A	E	B	A
Approach Delay		84.6			47.5			54.8			34.3	
Approach LOS		F			D			D			C	
Queue Length 50th (ft)	170	103		74	31	0	40	~982	0	292	203	0
Queue Length 95th (ft)	#295	167		130	67	63	68	#1283	0	#532	292	21
Internal Link Dist (ft)		353			157			299			388	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	197	356		150	223	299	590	986	924	387	1189	1100
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.38		0.51	0.15	0.42	0.31	1.01	0.03	0.92	0.41	0.10

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 50.4

Intersection LOS: D

Intersection Capacity Utilization 97.5%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd

 Ø1	 Ø2 (R)	 Ø4
29 s	87.5 s	33.5 s
 Ø5	 Ø6 (R)	 Ø7
13.2 s	103.3 s	11 s
		22.5 s

Timings
2: Harbins Rd & Alcovy Rd

2026 Build AM w/ System Imp

09/30/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	237	49	56	1243	877	197
Future Volume (vph)	237	49	56	1243	877	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	200	125			0
Storage Lanes	1	1	1			1
Taper Length (ft)	0		90			
Satd. Flow (prot)	1572	1531	1646	1783	1749	1473
Flt Permitted	0.950		0.225			
Satd. Flow (perm)	1572	1531	390	1783	1749	1473
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		53				212
Link Speed (mph)	35			45	45	
Link Distance (ft)	376			932	359	
Travel Time (s)	7.3			14.1	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	2%	6%	3%	5%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	255	53	60	1337	943	212
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	96.0	96.0	96.0	96.0
Total Split (%)	20.0%	20.0%	80.0%	80.0%	80.0%	80.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	19.5	19.5	91.5	91.5	91.5	91.5
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.76	0.76
v/c Ratio	1.00	0.18	0.20	0.98	0.71	0.18
Control Delay	107.1	13.1	5.9	35.6	12.3	1.1
Queue Delay	50.9	0.0	0.0	20.3	1.5	0.5
Total Delay	157.9	13.1	5.9	55.9	13.8	1.6

Timings
2: Harbins Rd & Alcovy Rd

2026 Build AM w/ System Imp
09/30/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	F	B	A	E	B	A
Approach Delay	133.0			53.7	11.6	
Approach LOS	F			D	B	
Queue Length 50th (ft)	200	0	11	838	418	13
Queue Length 95th (ft)	#373	37	26	#1320	601	m6
Internal Link Dist (ft)	296			852	279	
Turn Bay Length (ft)		200	125			
Base Capacity (vph)	255	293	297	1359	1333	1173
Starvation Cap Reductn	0	0	0	0	212	620
Spillback Cap Reductn	166	0	0	89	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.87	0.18	0.20	1.05	0.84	0.38

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 45.2

Intersection LOS: D

Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Harbins Rd & Alcovy Rd



Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	206	0	540	0	0	0	0	1359	121	91	533	0
Future Volume (vph)	206	0	540	0	0	0	0	1359	121	91	533	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.106		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	193	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			359						116			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	0	563	0	0	0	0	1416	126	95	555	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	38.0		38.0					67.0	67.0	15.0	82.0	
Total Split (%)	31.7%		31.7%					55.8%	55.8%	12.5%	68.3%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	26.2		26.2					72.4	72.4	84.8	84.8	
Actuated g/C Ratio	0.22		0.22					0.60	0.60	0.71	0.71	
v/c Ratio	0.59		0.93					0.69	0.14	0.40	0.45	
Control Delay	47.7		39.0					19.2	3.6	12.8	4.9	
Queue Delay	0.4		1.7					21.2	0.0	0.0	0.2	
Total Delay	48.0		40.7					40.4	3.6	12.8	5.1	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		D					D	A	B	A	
Approach Delay		42.8						37.4			6.2	
Approach LOS		D						D			A	
Queue Length 50th (ft)	145		170					361	6	1	177	
Queue Length 95th (ft)	215		#369					m438	m5	41	181	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	463		673					2045	926	270	1236	
Starvation Cap Reductn	0		0					670	0	0	165	
Spillback Cap Reductn	47		33					42	0	0	165	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.52		0.88					1.03	0.14	0.35	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 32.0

Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)



Timings
4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	130	3	153	711	852	0	0	503	262
Future Volume (vph)	0	0	0	130	3	153	711	852	0	0	503	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1717	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						159						273
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	138	159	741	888	0	0	524	273
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				27.0	27.0	27.0	35.0	93.0			58.0	58.0
Total Split (%)				22.5%	22.5%	22.5%	29.2%	77.5%			48.3%	48.3%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					14.9	14.9	32.1	96.1			59.5	59.5
Actuated g/C Ratio					0.12	0.12	0.27	0.80			0.50	0.50
v/c Ratio					0.65	0.49	0.83	0.63			0.32	0.30
Control Delay					63.5	12.2	43.9	13.5			22.3	9.5
Queue Delay					0.0	0.0	0.0	1.9			0.0	0.0
Total Delay					63.5	12.2	43.9	15.4			22.3	9.5

Timings

2026 Build AM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
LOS					E	B	D	B			C	A
Approach Delay					36.0			28.4			17.9	
Approach LOS					D			C			B	
Queue Length 50th (ft)					103	0	285	273			106	15
Queue Length 95th (ft)					164	60	352	598			250	151
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					321	410	919	1414			1691	907
Starvation Cap Reductn					0	0	0	357			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.43	0.39	0.81	0.84			0.31	0.30

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 26.2

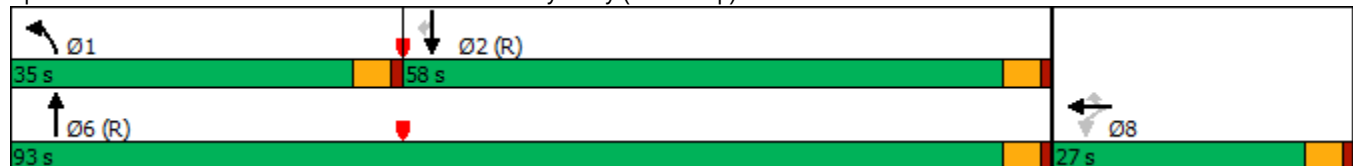
Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	28	0	118	0	946	12	19	674	0
Future Volume (vph)	4	0	0	28	0	118	0	946	12	19	674	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1396	0	1678	0	1516	0	1743	0	0	1758	0
Flt Permitted		0.950		0.950							0.962	
Satd. Flow (perm)	0	1396	0	1678	0	1516	0	1743	0	0	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124		1				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	29	0	124	0	1009	0	0	729	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		6.0		8.0		8.0		100.7			100.7	
Actuated g/C Ratio		0.05		0.07		0.07		0.84			0.84	
v/c Ratio		0.06		0.26		0.57		0.69			0.51	
Control Delay		55.8		57.9		19.8		8.7			9.9	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		55.8		57.9		19.8		8.7			9.9	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		E		E		B		A			A	
Approach Delay		55.8			27.0			8.7			9.9	
Approach LOS		E			C			A			A	
Queue Length 50th (ft)		3		22		0		170			102	
Queue Length 95th (ft)		15		52		58		960			593	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		209		251		332		1463			1421	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.02		0.12		0.37		0.69			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build AM w/ System Imp

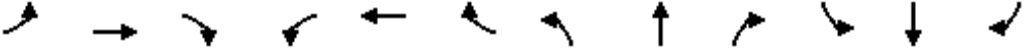
09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	158	31	175	384	63	86	793	169	31	481	30
Future Volume (vph)	13	158	31	175	384	63	86	793	169	31	481	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3246	0	1694	1766	1459
Flt Permitted	0.430			0.542			0.322			0.084		
Satd. Flow (perm)	790	1583	1432	948	1701	1561	548	3246	0	150	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			95			24			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	170	33	188	413	68	92	1035	0	33	517	32
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	10.0	46.7	46.7	14.3	51.0	51.0	49.0	49.0		10.0	59.0	59.0
Total Split (%)	8.3%	38.9%	38.9%	11.9%	42.5%	42.5%	40.8%	40.8%		8.3%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	51.2	45.4	45.4	60.5	56.4	56.4	43.3	43.3		50.4	50.4	50.4
Actuated g/C Ratio	0.43	0.38	0.38	0.50	0.47	0.47	0.36	0.36		0.42	0.42	0.42
v/c Ratio	0.04	0.28	0.06	0.35	0.52	0.09	0.47	0.87		0.22	0.70	0.05
Control Delay	19.1	30.4	0.2	20.8	28.8	2.4	38.2	43.1		20.9	33.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.1	30.4	0.2	20.8	28.8	2.4	38.2	43.1		20.9	33.2	1.9

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build AM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	C	C	A	D	D		C	C	A
Approach Delay		25.1			23.8			42.7			30.8	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	6	104	0	88	227	0	58	350		13	290	0
Queue Length 95th (ft)	18	157	0	139	376	16	m102	514		32	414	8
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	383	639	635	543	823	804	207	1241		150	831	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.04	0.27	0.05	0.35	0.50	0.08	0.44	0.83		0.22	0.62	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 33.7

Intersection LOS: C

Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy

 Ø1		 Ø2 (R)		 Ø4	
10 s		51 s		59 s	
 Ø5		 Ø6 (R)		 Ø7	
14.3 s		46.7 s		10 s	
				49 s	

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	128	1	64	216	6	89
Future Vol, veh/h	128	1	64	216	6	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	151	1	75	254	7	105
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	152	0	556	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1441	-	496	900
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1441	-	466	900
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	638	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	850	-	-	1441	-	
HCM Lane V/C Ratio	0.131	-	-	0.052	-	
HCM Control Delay (s)	9.9	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	110	16	3	209	24	74	57	6	11	30	17
Future Vol, veh/h	37	110	16	3	209	24	74	57	6	11	30	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	47	141	21	4	268	31	95	73	8	14	38	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	11.5	10.6	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	23%	1%	19%
Vol Thru, %	42%	67%	89%	52%
Vol Right, %	4%	10%	10%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	163	236	58
LT Vol	74	37	3	11
Through Vol	57	110	209	30
RT Vol	6	16	24	17
Lane Flow Rate	176	209	303	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.27	0.349	0.417	0.127
Departure Headway (Hd)	5.534	6.009	4.958	6.164
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	600	729	581
Service Time	3.567	4.037	2.958	4.205
HCM Lane V/C Ratio	0.271	0.348	0.416	0.127
HCM Control Delay	10.6	12.2	11.5	10.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.1	1.6	2.1	0.4

Intersection			
Intersection Delay, s/veh	7.8		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	477	374	360
Demand Flow Rate, veh/h	525	400	374
Vehicles Circulating, veh/h	5	372	324
Vehicles Exiting, veh/h	767	326	206
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.6	9.2	7.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	525	400	374
Cap Entry Lane, veh/h	1373	944	992
Entry HV Adj Factor	0.908	0.935	0.963
Flow Entry, veh/h	477	374	360
Cap Entry, veh/h	1246	883	954
V/C Ratio	0.382	0.424	0.377
Control Delay, s/veh	6.6	9.2	7.9
LOS	A	A	A
95th %tile Queue, veh	2	2	2

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	219	1	3	272	1	3
Future Vol, veh/h	219	1	3	272	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	1	3	296	1	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	239	0	541	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	302	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1328	-	502	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	500	800
Mov Cap-2 Maneuver	-	-	-	-	500	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	748	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	696	-	-	1328	-	
HCM Lane V/C Ratio	0.006	-	-	0.002	-	
HCM Control Delay (s)	10.2	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↘↗	
Traffic Vol, veh/h	206	16	51	258	17	95
Future Vol, veh/h	206	16	51	258	17	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	17	55	280	18	103
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	614	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	455	815
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	436	815
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	656	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.3		11	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	720	-	-	1326	-	
HCM Lane V/C Ratio	0.169	-	-	0.042	-	
HCM Control Delay (s)	11	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	18	20	1086	535	20
Future Vol, veh/h	40	18	20	1086	535	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	20	22	1180	582	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1806	582	604	0	-	0
Stage 1	582	-	-	-	-	-
Stage 2	1224	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	87	513	974	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	513	974	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	62.6	0.2		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	974	-	85	513	-	-
HCM Lane V/C Ratio	0.022	-	0.512	0.038	-	-
HCM Control Delay (s)	8.8	-	85.2	12.3	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	4	0	1106	548	5
Future Vol, veh/h	0	4	0	1106	548	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	1202	596	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	599	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	502	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	502	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 502		-	-		
HCM Lane V/C Ratio	- 0.009		-	-		
HCM Control Delay (s)	- 12.2		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Timings
1: Harbins Rd & W Drowning Creek Rd

2026 Build PM w/ System Imp

09/30/2022

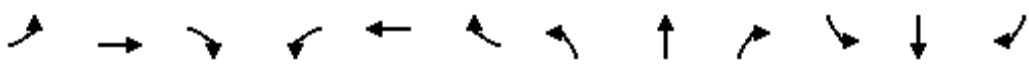
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	77	72	91	45	277	64	662	24	285	1006	134
Future Volume (vph)	99	77	72	91	45	277	64	662	24	285	1006	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	12	12	11	11	12	12	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	150		150	235		175	235		175
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	50			25			100			100		
Satd. Flow (prot)	1719	1747	0	1770	1863	1583	1728	1783	1583	1770	1733	1553
Flt Permitted	0.549			0.656			0.070			0.213		
Satd. Flow (perm)	993	1747	0	1222	1863	1583	127	1783	1583	397	1733	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				301			149			104
Link Speed (mph)		35			25			45			45	
Link Distance (ft)		327			248			326			454	
Travel Time (s)		6.4			6.8			4.9			6.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	2%	0%	2%	2%	2%	1%	3%	2%	2%	6%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	159	0	99	49	301	67	690	26	310	1048	140
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	32.0		22.5	22.5	22.5	9.5	59.6	59.6	18.4	68.5	68.5
Total Split (%)	8.6%	29.1%		20.5%	20.5%	20.5%	8.6%	54.2%	54.2%	16.7%	62.3%	62.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effect Green (s)	23.5	23.5		14.0	14.0	14.0	66.4	60.6	60.6	77.5	69.2	69.2
Actuated g/C Ratio	0.21	0.21		0.13	0.13	0.13	0.60	0.55	0.55	0.70	0.63	0.63
v/c Ratio	0.42	0.39		0.64	0.21	0.65	0.42	0.70	0.03	0.71	0.96	0.14
Control Delay	40.7	29.8		63.3	43.2	11.9	19.5	24.5	0.0	14.0	27.7	6.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	29.8		63.3	43.2	11.9	19.5	24.5	0.0	14.0	27.7	6.2

Timings

2026 Build PM w/ System Imp

1: Harbins Rd & W Drowning Creek Rd

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		E	D	B	B	C	A	B	C	A
Approach Delay		34.1			26.6			23.2			22.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	60	71		67	31	0	13	356	0	103	~686	22
Queue Length 95th (ft)	106	129		121	66	78	44	544	0	m99	m476	m20
Internal Link Dist (ft)		247			168			246			374	
Turn Bay Length (ft)	160			150		150	235		175	235		175
Base Capacity (vph)	245	466		199	304	510	160	982	938	453	1090	1016
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.34		0.50	0.16	0.59	0.42	0.70	0.03	0.68	0.96	0.14

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 24.5

Intersection LOS: C

Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Harbins Rd & W Drowning Creek Rd



Timings
2: Harbins Rd & Alcovy Rd

2026 Build PM w/ System Imp

09/30/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	80	36	1068	1362	235
Future Volume (vph)	210	80	36	1068	1362	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	200	125			0
Storage Lanes	1	1	1			1
Taper Length (ft)	0		90			
Satd. Flow (prot)	1572	1531	1646	1783	1749	1473
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	1572	1531	83	1783	1749	1473
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		82				253
Link Speed (mph)	35			45	45	
Link Distance (ft)	376			945	359	
Travel Time (s)	7.3			14.3	5.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	2%	6%	3%	5%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	86	39	1148	1465	253
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	87.5	87.5	87.5	87.5
Total Split (%)	20.5%	20.5%	79.5%	79.5%	79.5%	79.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	17.5	17.5	83.5	83.5	83.5	83.5
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.76	0.76
v/c Ratio	0.90	0.28	0.63	0.85	1.10	0.21
Control Delay	83.1	12.2	44.4	11.8	74.8	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.6
Total Delay	83.1	12.2	44.4	11.8	75.1	1.5

Timings
2: Harbins Rd & Alcovy Rd

2026 Build PM w/ System Imp
09/30/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	F	B	D	B	E	A
Approach Delay	63.6			12.8	64.3	
Approach LOS	E			B	E	
Queue Length 50th (ft)	158	2	4	141	~1186	0
Queue Length 95th (ft)	#297	46	m#48	242	#1448	17
Internal Link Dist (ft)	296			865	279	
Turn Bay Length (ft)		200	125			
Base Capacity (vph)	257	319	62	1353	1327	1179
Starvation Cap Reductn	0	0	0	0	104	602
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.27	0.63	0.85	1.20	0.44

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

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

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 45.2

Intersection LOS: D

Intersection Capacity Utilization 90.8%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

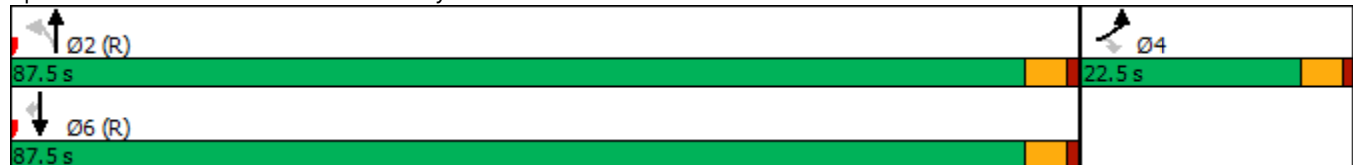
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Harbins Rd & Alcovy Rd



Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	0	755	0	0	0	0	1144	129	126	760	0
Future Volume (vph)	437	0	755	0	0	0	0	1144	129	126	760	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		250	0		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1662	0	1487	0	0	0	0	3388	1459	1728	1749	0
Flt Permitted	0.950									0.081		
Satd. Flow (perm)	1662	0	1487	0	0	0	0	3388	1459	147	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			186						133			
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1566			1235			359			542	
Travel Time (s)		16.4			13.0			5.4			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	5%	0%	0%	0%	0%	3%	7%	1%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	455	0	786	0	0	0	0	1192	134	131	792	0
Turn Type	Perm		Perm					NA	Perm	pm+pt	NA	
Protected Phases								6		5	2	
Permitted Phases	4		4						6	2		
Detector Phase	4		4					6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0		5.0					5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5					22.5	22.5	9.5	22.5	
Total Split (s)	45.0		45.0					61.0	61.0	14.0	75.0	
Total Split (%)	37.5%		37.5%					50.8%	50.8%	11.7%	62.5%	
Yellow Time (s)	3.5		3.5					3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5					4.5	4.5	4.5	4.5	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None		None					C-Min	C-Min	None	C-Min	
Act Effect Green (s)	46.2		46.2					51.4	51.4	64.8	64.8	
Actuated g/C Ratio	0.38		0.38					0.43	0.43	0.54	0.54	
v/c Ratio	0.71		1.15					0.82	0.19	0.66	0.84	
Control Delay	40.2		109.6					35.4	3.7	40.8	23.4	
Queue Delay	0.9		0.0					49.0	0.0	0.0	0.9	
Total Delay	41.1		109.6					84.4	3.7	40.8	24.3	

Timings
3: Harbins Rd & SR 316/University Pkwy (EB Ramp)

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D		F					F	A	D	C	
Approach Delay		84.5						76.3			26.7	
Approach LOS		F						E			C	
Queue Length 50th (ft)	301		~632					414	0	34	559	
Queue Length 95th (ft)	#486		#909					473	34	117	261	
Internal Link Dist (ft)		1486			1155			279			462	
Turn Bay Length (ft)									250			
Base Capacity (vph)	639		686					1595	757	204	1027	
Starvation Cap Reductn	0		0					531	0	0	71	
Spillback Cap Reductn	49		0					0	0	0	0	
Storage Cap Reductn	0		0					0	0	0	0	
Reduced v/c Ratio	0.77		1.15					1.12	0.18	0.64	0.83	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 66.1

Intersection LOS: E

Intersection Capacity Utilization 111.0%

ICU Level of Service H

Analysis Period (min) 15

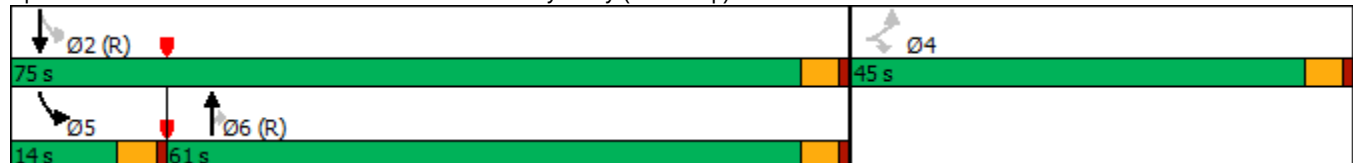
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

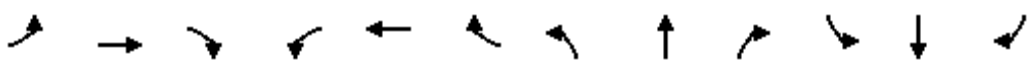
Splits and Phases: 3: Harbins Rd & SR 316/University Pkwy (EB Ramp)



Timings
4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶	↶	↶↶	↶			↶↶	↶
Traffic Volume (vph)	0	0	0	109	1	156	561	926	0	0	774	233
Future Volume (vph)	0	0	0	109	1	156	561	926	0	0	774	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	400		0	0		300
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1716	1501	3319	1766	0	0	3355	1531
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						163						243
Link Speed (mph)		65			65			45			45	
Link Distance (ft)		1302			1547			542			482	
Travel Time (s)		13.7			16.2			8.2			7.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	2%	0%	4%	2%	4%	0%	0%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	115	163	584	965	0	0	806	243
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					8		1	6			2	
Permitted Phases				8		8						2
Detector Phase				8	8	8	1	6			2	2
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	5.0			5.0	5.0
Minimum Split (s)				22.5	22.5	22.5	9.5	22.5			22.5	22.5
Total Split (s)				26.0	26.0	26.0	23.0	94.0			71.0	71.0
Total Split (%)				21.7%	21.7%	21.7%	19.2%	78.3%			59.2%	59.2%
Yellow Time (s)				3.5	3.5	3.5	3.5	3.5			3.5	3.5
All-Red Time (s)				1.0	1.0	1.0	1.0	1.0			1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None	None	None	C-Min			C-Min	C-Min
Act Effect Green (s)					13.3	13.3	32.0	97.7			61.2	61.2
Actuated g/C Ratio					0.11	0.11	0.27	0.81			0.51	0.51
v/c Ratio					0.61	0.52	0.66	0.67			0.47	0.27
Control Delay					63.4	13.4	36.8	13.8			27.0	6.7
Queue Delay					0.0	0.0	0.0	3.5			0.1	0.0
Total Delay					63.4	13.4	36.8	17.2			27.1	6.7

Timings

2026 Build PM w/ System Imp

4: Harbins Rd & SR 316/University Pkwy (WB Ramp)

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E	B	D	B			C	A
Approach Delay					34.1			24.6			22.4	
Approach LOS					C			C			C	
Queue Length 50th (ft)					86	0	218	444			283	30
Queue Length 95th (ft)					143	61	279	418			379	m63
Internal Link Dist (ft)		1222			1467			462			402	
Turn Bay Length (ft)							400					300
Base Capacity (vph)					307	402	884	1437			1859	956
Starvation Cap Reductn					0	0	0	367			0	0
Spillback Cap Reductn					0	0	0	0			255	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.37	0.41	0.66	0.90			0.50	0.25

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 24.7

Intersection LOS: C

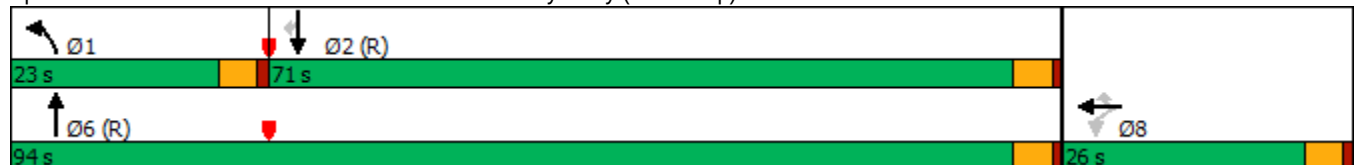
Intersection Capacity Utilization 111.0%

ICU Level of Service H

Analysis Period (min) 15

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

Splits and Phases: 4: Harbins Rd & SR 316/University Pkwy (WB Ramp)



Timings
5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	3	34	0	64	0	991	34	63	858	0
Future Volume (vph)	4	0	3	34	0	64	0	991	34	63	858	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1471	0	1678	0	1516	0	1733	0	0	1746	0
Flt Permitted		0.972		0.950							0.793	
Satd. Flow (perm)	0	1471	0	1678	0	1516	0	1733	0	0	1389	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55				67		3				
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		432			503			1511			1229	
Travel Time (s)		11.8			9.8			22.9			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	25%	0%	0%	4%	0%	3%	0%	5%	18%	17%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	36	0	67	0	1079	0	0	969	0
Turn Type	Split	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	4	4		8				2			6	
Permitted Phases						8				6		
Detector Phase	4	4		8		8		2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0		5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5		22.5		22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5		22.5		75.0		75.0	75.0	
Total Split (%)	18.8%	18.8%		18.8%		18.8%		62.5%		62.5%	62.5%	
Yellow Time (s)	3.5	3.5		3.5		3.5		3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0		1.0		1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0			0.0	
Total Lost Time (s)		4.5		4.5		4.5		4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None		None		C-Max		C-Max	C-Max	
Act Effect Green (s)		5.5		8.1		8.1		103.8			103.8	
Actuated g/C Ratio		0.05		0.07		0.07		0.86			0.86	
v/c Ratio		0.06		0.32		0.41		0.72			0.81	
Control Delay		1.0		60.1		19.9		11.2			25.3	
Queue Delay		0.0		0.0		0.0		0.0			0.0	
Total Delay		1.0		60.1		19.9		11.2			25.3	

Timings

5: Harbins Rd & Sanjo St/Tanner Rd

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A		E		B		B			C	
Approach Delay		1.0			33.9			11.2			25.3	
Approach LOS		A			C			B			C	
Queue Length 50th (ft)		0		27		0		270			679	
Queue Length 95th (ft)		0		61		45		1025			m#873	
Internal Link Dist (ft)		352			423			1431			1149	
Turn Bay Length (ft)				100								
Base Capacity (vph)		267		251		284		1499			1201	
Starvation Cap Reductn		0		0		0		0			0	
Spillback Cap Reductn		0		0		0		0			0	
Storage Cap Reductn		0		0		0		0			0	
Reduced v/c Ratio		0.03		0.14		0.24		0.72			0.81	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 108.7%

ICU Level of Service G

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Harbins Rd & Sanjo St/Tanner Rd

 Ø2 (R)	 Ø4	 Ø8
75 s	22.5 s	22.5 s
 Ø6 (R)		
75 s		

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	404	62	167	254	136	37	789	192	146	712	28
Future Volume (vph)	35	404	62	167	254	136	37	789	192	146	712	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		150	250		200	250		350	250		270
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			60			25			25		
Satd. Flow (prot)	1745	1583	1432	1662	1701	1561	1616	3234	0	1694	1766	1459
Flt Permitted	0.556			0.223			0.131			0.087		
Satd. Flow (perm)	1021	1583	1432	390	1701	1561	223	3234	0	155	1766	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			95			146			26			55
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1048			1262			1229			1038	
Travel Time (s)		20.4			24.6			18.6			15.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	9%	5%	8%	0%	8%	4%	8%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	434	67	180	273	146	40	1054	0	157	766	30
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8			4		4
Detector Phase	1	6	6	5	2	2	8	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	48.0	48.0	13.0	51.4	51.4	44.0	44.0		15.0	59.0	59.0
Total Split (%)	8.0%	40.0%	40.0%	10.8%	42.8%	42.8%	36.7%	36.7%		12.5%	49.2%	49.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	Min	Min		None	Min	Min
Act Effect Green (s)	45.8	40.4	40.4	53.5	48.4	48.4	41.4	41.4		56.8	56.8	56.8
Actuated g/C Ratio	0.38	0.34	0.34	0.45	0.40	0.40	0.34	0.34		0.47	0.47	0.47
v/c Ratio	0.09	0.82	0.12	0.66	0.40	0.20	0.52	0.93		0.74	0.92	0.04
Control Delay	19.1	50.0	2.6	34.0	28.5	4.5	61.4	58.9		45.1	46.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.1	50.0	2.6	34.0	28.5	4.5	61.4	58.9		45.1	46.8	1.6

Timings
6: Harbins Rd & US 29/SR 8/Winder Hwy

2026 Build PM w/ System Imp

09/30/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	D	A	C	C	A	E	E		D	D	A
Approach Delay		41.9			24.3			59.0			45.1	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	17	314	0	88	163	0	32	452		66	512	0
Queue Length 95th (ft)	36	424	16	#130	228	41	m46	#581		#180	#827	7
Internal Link Dist (ft)		968			1182			1149			958	
Turn Bay Length (ft)	400		150	250		200	250			250		270
Base Capacity (vph)	422	573	579	271	701	730	77	1133		216	837	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.09	0.76	0.12	0.66	0.39	0.20	0.52	0.93		0.73	0.92	0.04

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 45.4

Intersection LOS: D

Intersection Capacity Utilization 87.2%

ICU Level of Service E

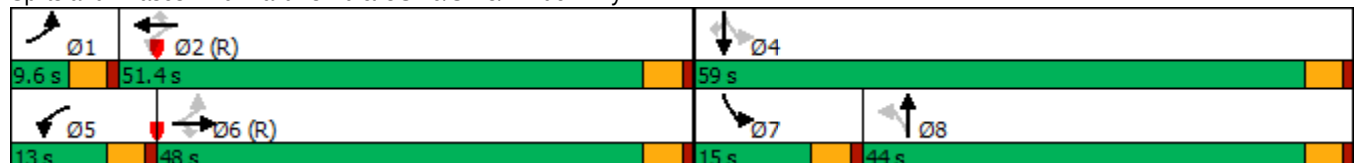
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Harbins Rd & US 29/SR 8/Winder Hwy



Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	8	65	110	5	75
Future Vol, veh/h	127	8	65	110	5	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	149	9	76	129	6	88
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	158	0	435	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	281	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1434	-	582	897
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	549	897
Mov Cap-2 Maneuver	-	-	-	-	549	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	727	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.8		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	863	-	-	1434	-	
HCM Lane V/C Ratio	0.109	-	-	0.053	-	
HCM Control Delay (s)	9.7	-	-	7.7	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-	

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	126	71	4	111	0	29	18	4	5	29	3
Future Vol, veh/h	8	126	71	4	111	0	29	18	4	5	29	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	56	0	7	0	1	5	1	14	0	40	33	38
Mvmt Flow	10	162	91	5	142	0	37	23	5	6	37	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.2	8.6	8.6	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	4%	3%	14%
Vol Thru, %	35%	61%	97%	78%
Vol Right, %	8%	35%	0%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	205	115	37
LT Vol	29	8	4	5
Through Vol	18	126	111	29
RT Vol	4	71	0	3
Lane Flow Rate	65	263	147	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.373	0.186	0.075
Departure Headway (Hd)	5.074	5.116	4.537	5.673
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	704	790	630
Service Time	3.118	3.148	2.57	3.718
HCM Lane V/C Ratio	0.092	0.374	0.186	0.075
HCM Control Delay	8.6	11.2	8.6	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	1.7	0.7	0.2

Intersection			
Intersection Delay, s/veh	6.1		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	483	175	156
Demand Flow Rate, veh/h	554	187	162
Vehicles Circulating, veh/h	0	162	220
Vehicles Exiting, veh/h	349	220	334
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.0	4.7	4.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	554	187	162
Cap Entry Lane, veh/h	1380	1170	1103
Entry HV Adj Factor	0.871	0.935	0.963
Flow Entry, veh/h	483	175	156
Cap Entry, veh/h	1202	1093	1062
V/C Ratio	0.401	0.160	0.147
Control Delay, s/veh	7.0	4.7	4.7
LOS	A	A	A
95th %tile Queue, veh	2	1	1

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	199	1	3	174	1	2
Future Vol, veh/h	199	1	3	174	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	1	3	189	1	2
Major/Minor	Minor2		Major2			
Conflicting Flow All	195	189	0	0		
Stage 1	195	-	-	-		
Stage 2	0	-	-	-		
Critical Hdwy	6.52	6.22	4.12	-		
Critical Hdwy Stg 1	5.52	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	4.018	3.318	2.218	-		
Pot Cap-1 Maneuver	700	853	-	-		
Stage 1	739	-	-	-		
Stage 2	-	-	-	-		
Platoon blocked, %						
Mov Cap-1 Maneuver	0	853	-	-		
Mov Cap-2 Maneuver	0	-	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Approach	EB		WB			
HCM Control Delay, s	10.7					
HCM LOS	B					
Minor Lane/Major Mvmt	EBLn1	WBL	WBT			
Capacity (veh/h)	853	-	-			
HCM Lane V/C Ratio	0.255	-	-			
HCM Control Delay (s)	10.7	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	1	-	-			

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↘	
Traffic Vol, veh/h	181	20	80	163	14	68
Future Vol, veh/h	181	20	80	163	14	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	197	22	87	177	15	74
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	219	0	548	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1350	-	497	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1350	-	465	844
Mov Cap-2 Maneuver	-	-	-	-	465	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	667	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.6		10.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	741	-	-	1350	-	
HCM Lane V/C Ratio	0.12	-	-	0.064	-	
HCM Control Delay (s)	10.5	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile O(veh)	0.4	-	-	0.2	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	13	25	682	1094	35
Future Vol, veh/h	27	13	25	682	1094	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	14	27	741	1189	38
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1984	1189	1227	0	-	0
Stage 1	1189	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	67	229	568	-	-	-
Stage 1	289	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	64	229	568	-	-	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	76	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	568	-	64	229	-	-
HCM Lane V/C Ratio	0.048	-	0.459	0.062	-	-
HCM Control Delay (s)	11.7	-	102.1	21.8	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	0.2	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	4	0	707	1101	6
Future Vol, veh/h	0	4	0	707	1101	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	768	1197	7
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	- 1201	-	0	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	- 6.22	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	- 3.318	-	-	-	-	-
Pot Cap-1 Maneuver	0 225	0	-	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	- 225	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	21.3	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	225	-	-		
HCM Lane V/C Ratio	-	0.019	-	-		
HCM Control Delay (s)	-	21.3	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %tile Q(veh)	-	0.1	-	-		