Traffic Analysis & Road Diet Study

Inman Street/State Route 40

Cleveland, TN

Prepared For:
City of Cleveland

VOLKERT

July 2019

Traffic Analysis & Road Diet Study

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Cleveland, TN

Prepared For:
City of Cleveland

Prepared by:
Dyan C. Damron, PE, PTP
Volkert, Inc.
302 Innovation Drive
Suite 100
Franklin, TN 37067

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EXECUTIVE SUMMARY

The purpose of this Traffic Analysis and Road Diet Study is to assess the current traffic impacts of a road diet along Inman Street from Keith Street to East Street in Cleveland, Tennessee. The intent of this analysis is to be included in the 2019 BUILD Grant application to be submitted by July 15, 2019. The purpose of this analysis is to meet requirements in Tennessee Department of Transportation (TDOT) Instructional Bulletin No. 18-05 regarding road diets.

To provide data for the traffic analysis, manual traffic counts were conducted and analyzed at the following intersections:

- Intersection of Inman Street & Keith Street (signalized)
- Intersection of Inman Street & Oak Street (unsignalized)
- Intersection of Inman Street & Broad Street (signalized)
- Intersection of Inman Street & Church Street (signalized)
- Intersection of Inman Street & Parker Street (signalized)
- Intersection of Inman Street & Edwards Street (signalized)
- Intersection of Inman Street & Wildwood Avenue (signalized)
- Intersection of Inman Street & Ocoee Street (signalized)
- Inman Street between Oak Street & Broad Street (24-Hour Tube Count)

To determine the current operation of the study intersections, capacity analyses were performed for the existing traffic volumes for the AM and PM peak hours. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual 6th Edition*. The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area.

The results of the capacity analyses for the existing conditions at the study intersections indicate that all the signalized study intersections of Inman Street currently operate at LOS B during both peak hours, with the exception of Keith Street which currently operates at LOS C during the AM peak and LOS D during the PM peak. The northbound approach at the unsignalized intersection of Inman Street and Oak Street currently operates at LOS D during the PM peak hour. However, it should be noted that it is typical for the minor approach to a major route to experience increased delay.

Capacity analyses were performed to determine the impact of the road diet on the study corridor. These capacity analyses were based on taking the existing four-lane cross-section to a three-lane cross-section (one lane in each direction with a turn lane/median). The results of the capacity analyses for the proposed conditions indicate that all the intersections are expected to operate at LOS B or C or better during both peak hours. Due to the current operations of Inman Street and Keith Street, it is assumed that the existing laneage at this intersection will remain. It is the western limit of the study corridor, so the proposed three-lane cross-section would end just east of Keith Street. With the existing laneage, the intersection of Inman Street and Keith Street will continue to operate

at LOS C during the AM peak and LOS D during the PM peak. The northbound approach at the unsignalized intersection of Inman Street and Oak Street will be improved to LOS C during both peak hours. This is due to the fact that vehicles turning from Oak Street onto Inman Street will only have to navigate one lane of traffic in each direction on Oak Street rather than two lanes. This reduces the potential conflicts at this as well as all unsignalized intersections along the study corridor.

The analyses included in this report indicate that the impacts of a road diet along Inman Street from Keith Street to East Street in Cleveland will not significantly affect the signalized intersections, and will only improve the operations at the unsignalized intersections. The volumes as well as vehicular and pedestrian characteristics along Inman Street make this corridor a good candidate for a road diet. Based on the analyses presented in this report, this road diet would not cause traffic currently utilizing Inman Street to be diverted to other routes. As a result, it is recommended that the proposed cross-section, shown in Figure 5 of this report be constructed. This road diet along Inman Street is expected to operate well and be a benefit to both vehicular and pedestrian traffic.

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Traffic Analysis and Road Diet Study is to assess the current traffic impacts of a road diet along Inman Street from Keith Street to East Street in Cleveland, Tennessee. The intent of this analysis is to be included in the 2019 BUILD Grant application to be submitted by July 15, 2019. The purpose of this analysis is to meet requirements in Tennessee Department of Transportation (TDOT) Instructional Bulletin No. 18-05 regarding road diets, included as Appendix A. This bulletin states that a Road Reconfiguration shall maintain the current Level of Service (LOS) without negatively impacting operational safety of the motorist and non-motorized users.

1.2 PROJECT DESCRIPTION

The Inman Street Corridor study segment, from Keith Street to East Street is approximately 1.2 miles in length and begins approximately 2.2 miles east of Interstate 75. Inman Street generally travels in an east-west direction through downtown Cleveland, Tennessee. According to the TDOT functional classification system, Inman Street is classified as a minor arterial. The location of the corridor is shown in Figure 1.

In this study, the current operating characteristics of the corridor are evaluated to justify the proposed improvements presented in the City of Cleveland's Downtown Revitalization Plan.

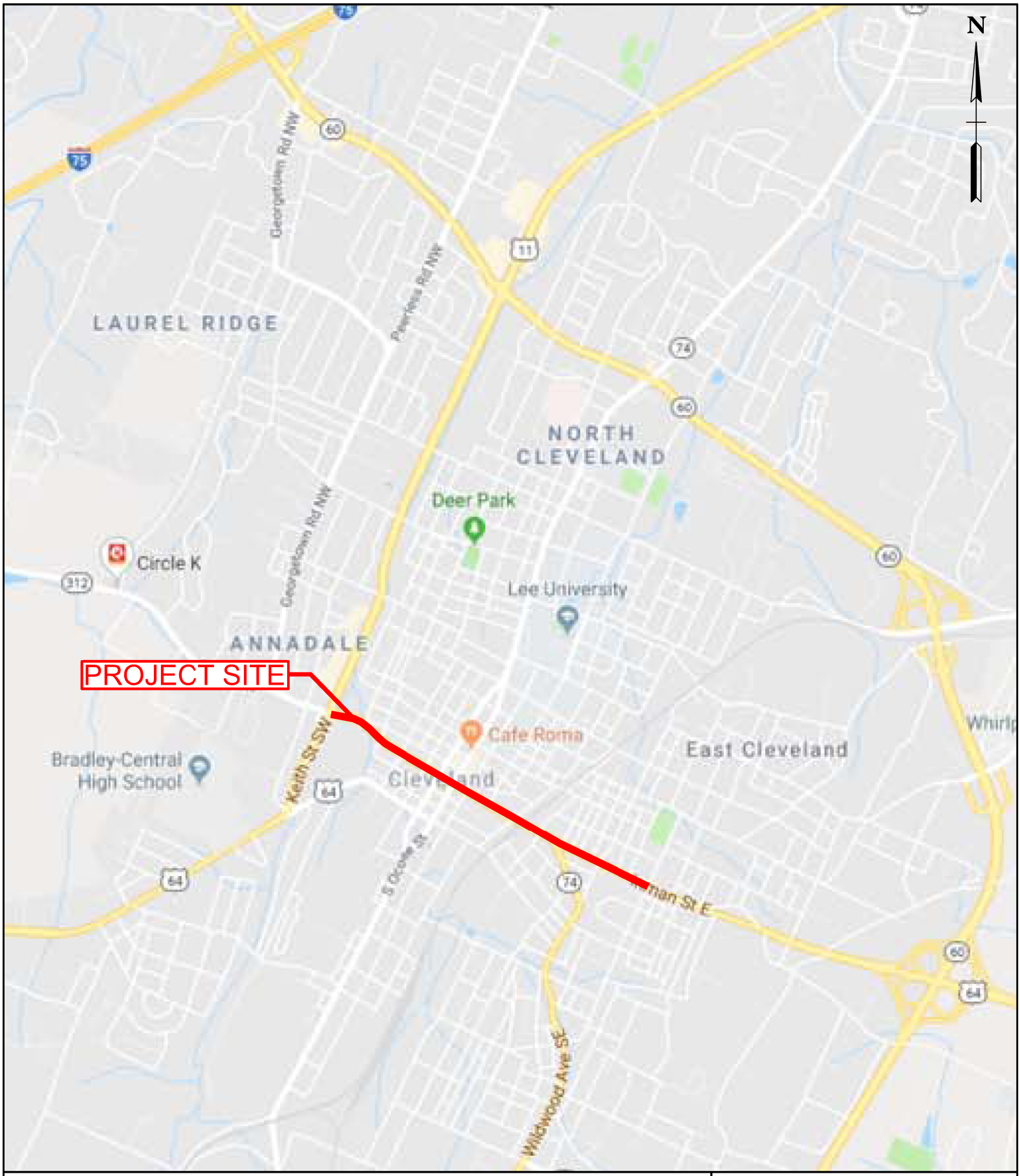

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Figure 1.
Project Location Map

NOT TO SCALE

2.0 EXISTING CONDITIONS

To establish a baseline for analysis, existing conditions within the Inman Street Corridor study area were inventoried. Existing roadways, intersections, bicycle and pedestrian facilities, and public transit have been identified and described as follows.

2.1 EXISTING STREETS AND DESCRIPTIONS

Inman Street/State Route 40 generally travels in an east-west direction and provides a connection between Interstate 75 to the west of the City of Cleveland and Highway 64 Bypass to the east. The posted speed limit along the study section of Inman Street is 30 mph. Based on the TDOT TRIMS data, the 2018 AADT along the Inman Street study corridor varies from 9,900 vehicles per day (vpd) to 15,260 vpd. For the purposes of this report, an additional ADT count was collected along Inman Street between Oak Street and Broad Street. Specifically, the 24-hour count was collected on Thursday, June 6, 2019. The results of the recent 24-hour count indicate the 2019 ADT along Inman Street is approximately 16,070 vpd.

According to the TDOT Road Diet Instructional Bulletin, since the Inman Street corridor has an ADT of greater than 16,000 vpd, a corridor analysis is required.

The study corridor of the Inman Street corridor is bound by Keith Street to the west and East Street to the east. Figure 2 shows the study roadway and the surrounding area. For this study, the Inman Street Corridor has been divided into two segments; Eastern Inman Street and Western Inman Street. The western segment of Inman street is from Keith Street to Wildwood Avenue. The eastern segment is from Wildwood Avenue to East Street.

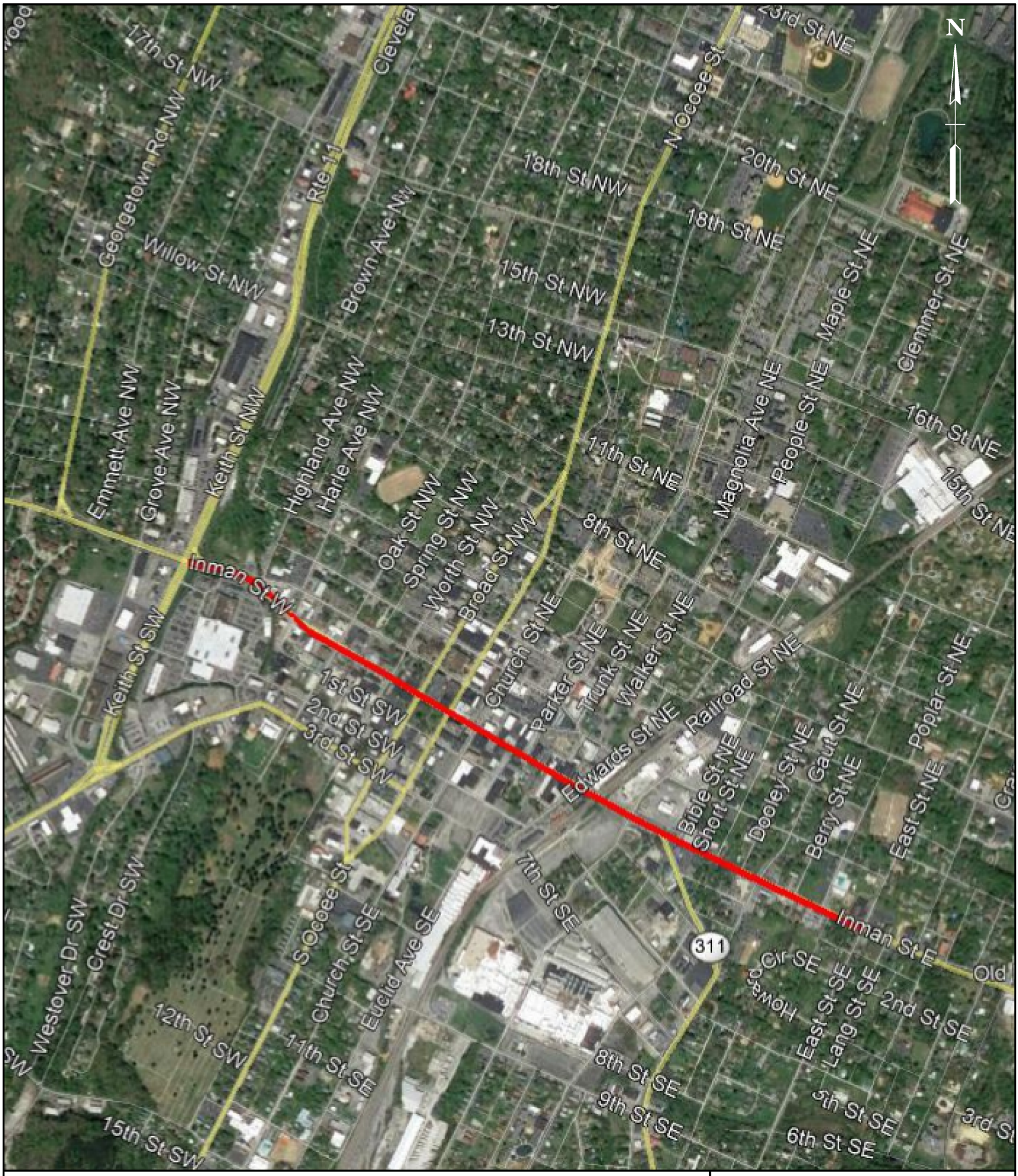

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Figure 2.
Study Corridor

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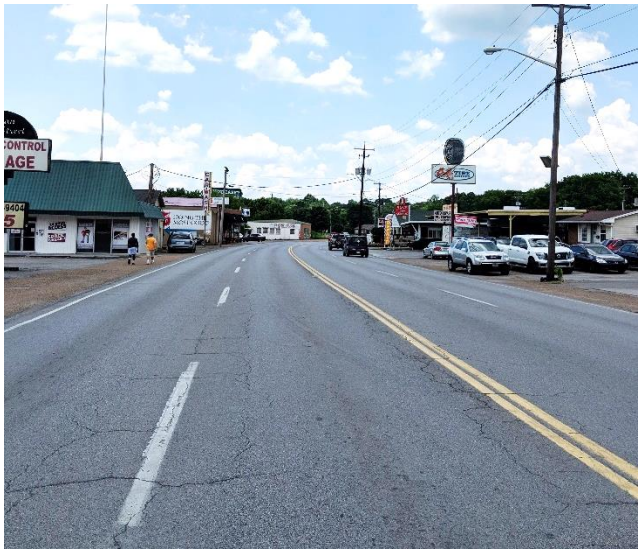
The western segment of the Inman Street Corridor is a four-lane undivided road that generally travels in an east-west direction. Western Inman Street includes two travel lanes in each direction. The vehicle lanes on the western segment of Inman Street are 11 feet wide, with curb and gutter varying along the segment. Along this section of Inman Street, a sidewalk is provided varying along both sides of the road, and pedestrian accommodations are provided at a few of the signalized intersections. There are no bicycle facilities provided along the western segment of Inman Street. Three Cleveland Urban Area Transit System (CUATS) routes – the yellow, orange, and red routes – are provided along this western segment of Inman Street. The photos shown below illustrate the existing cross-section as well as some of the current left turn restrictions/issues, open access, and vehicles parking on the sidewalk.

Eastbound Inman Street at Broad Street

Eastbound Inman Street at Church Street



Westbound Inman Street near Oak Street

Eastbound Inman Street at Parker Street

The eastern segment of the Inman Street Corridor is a three-lane undivided road that includes one travel lane in each direction with a center two-way left-turn lane. The vehicle lanes on the eastern segment of Inman Street are 10 to 12 feet wide, with curb-and-gutter varying along the segment. Along this section of Inman Street, a sidewalk is provided along both sides of the road, although as shown on the photo below, the sidewalk is cluttered with numerous obstructions. Share the road pavement markings for bicycles are provided. The red route of the CUATS is provided along this eastern segment of Inman Street.

Eastbound Inman Street east of Wildwood Avenue

The existing laneage at the intersections along the Inman Street study corridor is illustrated in Figure 3.

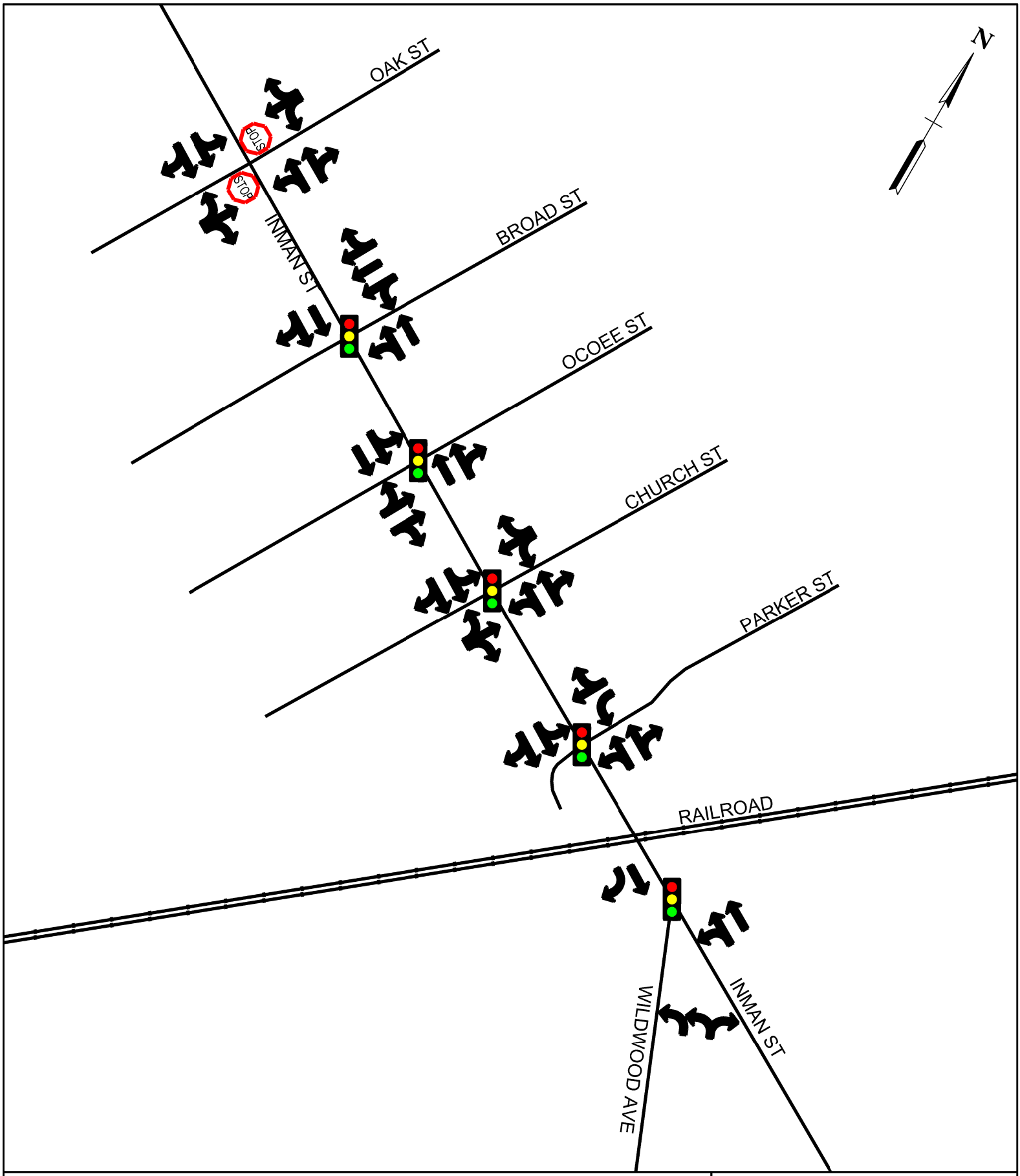


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Figure 3.
Existing Laneage

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2.2 EXISTING TRAFFIC VOLUMES

To provide data for the traffic analysis, manual traffic counts were conducted at the following intersections:

- Intersection of Inman Street & Oak Street (unsignalized)
- Intersection of Inman Street & Broad Street (signalized)
- Intersection of Inman Street & Church Street (signalized)
- Intersection of Inman Street & Parker Street (signalized)
- Intersection of Inman Street & Wildwood Avenue (signalized)
- Intersection of Inman Street & Ocoee Street (signalized)

Specifically, the turning movement traffic counts were collected on Thursday, June 6, 2019 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. From the counts, it was determined that the AM and PM peak hours of traffic flow for the study area occur from 7:45 - 8:45 AM and 4:45 - 5:45 PM, respectively. The existing weekday peak hour traffic volumes are shown in Figure 4.

In addition to the intersections listed above, two additional intersection turning movement counts were obtained from the City of Cleveland:

- Intersection of Inman Street & Keith Street (signalized)
- Intersection of Inman Street & Edwards Street (signalized)

Specifically, the turning movement traffic counts at Keith Street were collected in April 2018 and at Edwards Street in September 2017. While these volumes are not shown in Figure 4, they are included in the corridor analysis to assist with evaluation of the Inman Street Corridor. All existing traffic count data are included in Appendix B.

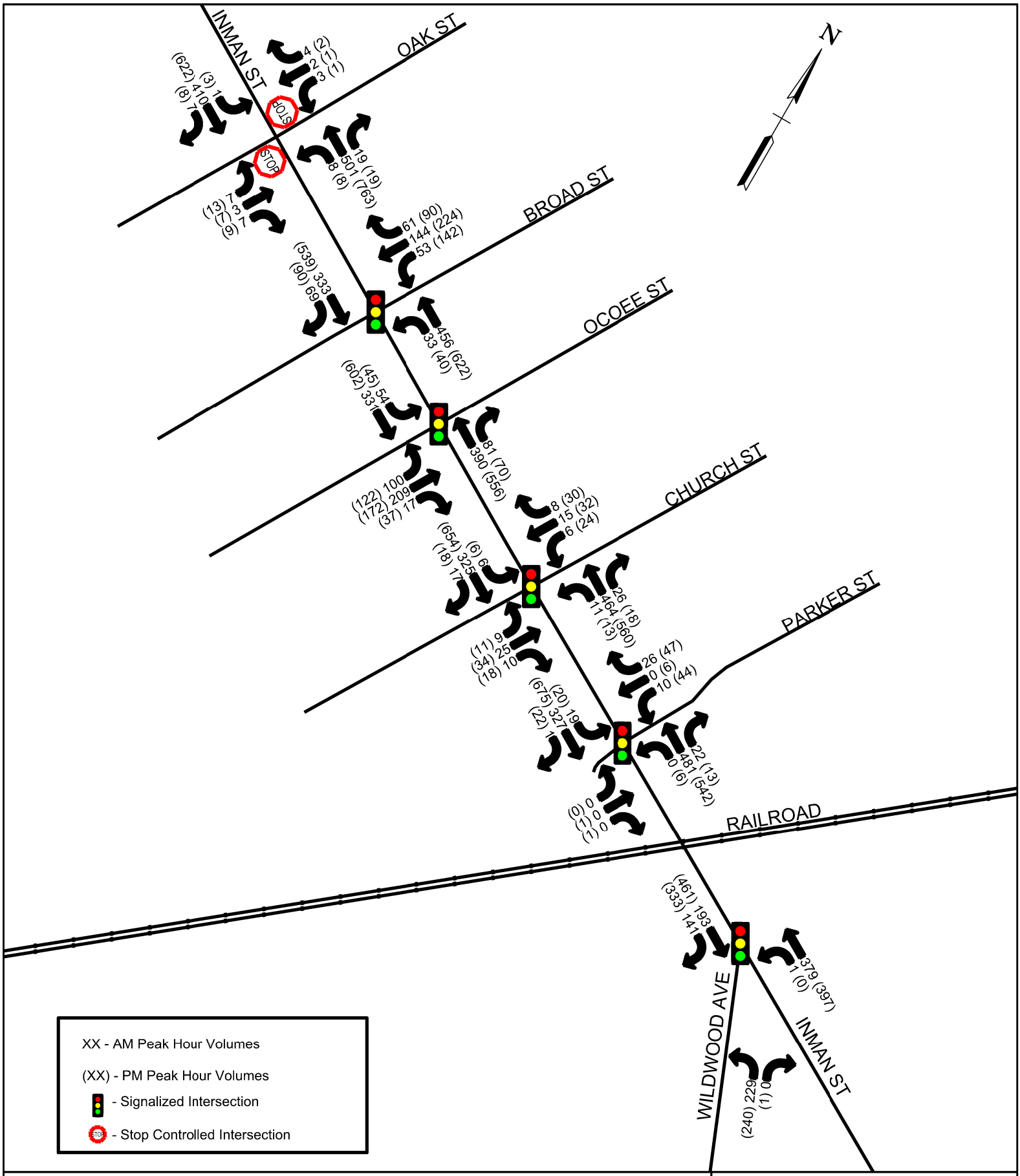

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Figure 4.
Existing Peak Hour Traffic Volumes

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2.3 EXISTING TRAFFIC ANALYSIS

To determine the current operation of the study intersections, capacity analyses were performed for the adjusted existing traffic volumes for the AM and PM peak hours. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual 2010* using HCS 2010 software. The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area. Table 1 presents the descriptions of LOS for signalized intersections. Table 2 presents the descriptions of LOS for unsignalized intersections.

TABLE 1. SIGNALIZED INTERSECTION LOS DESCRIPTION

LOS	Description	Control Delay (sec/veh)
A	This occurs when progression is exceptionally favorable. Most vehicles travel through the intersection without stopping.	≤ 10
B	This generally occurs when progression is highly favorable. More vehicles stop than for LOS A.	>10 - 20
C	This occurs when progression is favorable. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	This occurs when progression is ineffective or the cycle lengths are long. Many vehicles stop and individual cycle failures are frequent.	>35 - 55
E	This occurs when progression is unfavorable and cycle lengths are long. Individual cycle failures are frequent.	>55 - 80
F	This occurs when progression is very poor and cycle lengths are long. Most cycles fail to clear the queue.	>80.0

Source: *Highway Capacity Manual 2010*

TABLE 2. UNSIGNALIZED INTERSECTION LOS DESCRIPTION

LOS	Description	Control Delay (sec/veh)
A	This occurs when there is minimal or no delay.	≤ 10
B	This occurs when there is minor traffic delay.	>10 - 15
C	This occurs during average traffic delay.	>15 - 25
D	Long traffic delays begin to occur.	>25 - 35
E	This occurs when very long traffic delays occur.	>35 - 50
F	Extreme traffic delays are experienced.	>50.0

Source: *Highway Capacity Manual 2010*

The results of the capacity analyses for the existing conditions at the study intersections are presented in Table 3. As shown, capacity analyses indicate that all the signalized study intersections of Inman Street currently operate at LOS B during both peak hours, with the exception of Keith Street which currently operates at LOS C during the AM peak and LOS D during the PM peak. The northbound approach at the unsignalized intersection of Inman Street and Oak Street currently operates at LOS D during the PM peak hour. However, it should be noted that it is typical for the minor approach to a major route to experience increased delay. Capacity analyses worksheets are included in Appendix B.

TABLE 3. EXISTING PEAK HOUR LOS

Intersection	Critical Movement	Level of Service (Delay in sec/veh)	
		AM Peak Hour	PM Peak Hour
Inman Street & Keith Street	Overall Intersection	C (31.0)	D (37.0)
Inman Street & Oak Street	Northbound Approach	C (15.1)	D (30.1)
	Southbound Approach	C (15.5)	C (23.8)
Inman Street & Broad Street	Overall Intersection	B (10.9)	B (14.0)
Inman Street & Ocoee Street	Overall Intersection	B (15.4)	B (14.9)
Inman Street & Church Street	Overall Intersection	B (12.9)	B (12.5)
Inman Street & Parker Street	Overall Intersection	B (17.8)	B (17.4)
Inman Street & Edwards Street	Overall Intersection	B (13.4)	B (12.1)
Inman Street & Wildwood Avenue	Overall Intersection	B (12.4)	B (11.2)

2.4 PEDESTRIAN DATA COLLECTION

As a part of this study, pedestrian activity and inventory of the existing infrastructure was collected. From the manual traffic counts, it was determined that the majority of the pedestrian activity occurred at the intersections of Oak Street, Broad Street, and Ocoee Street. Field observations indicate that the corridor currently has several intersections that lack ADA compatible curb ramps, although most signals include pedestrian signals and crosswalks.

2.5 CRASH DATA AND ANALYSES

Crash summaries between the year 2016 and 2019 were analyzed along Inman Street from Keith Street to East Street. The total number of motorized and non-motorized incidents recorded during this time period was 173 crashes. Some significant crash findings are as follows:

- The dominant crash types are rear end and angular collisions, which account for 30% (52) and 40% (70) of the total crashes, respectively. Collision with a fixed object accounts for 13% (23) of the crashes.

- Approximately 80.9% of the crashes (140) were classified as property damage crashes. Of the crashes, 2.3% (4) resulted in suspected serious injuries while suspected minor injury crashes resulted in 16.8% (29) of crashes.

- Crashes involving bicycles and/or pedestrians account for approximately 4% (7) of the total number of crashes along the corridor. Various driver and pedestrian factors are attributed to the cause of pedestrian incidents such as vehicle speed, driver distraction, or improper crossing maneuvers. It should be noted that the City of Cleveland has reported citizen pedestrian complaints regarding turning vehicles not yielding to pedestrians.

Crash reports were pulled from TDOT's E-TRIMS database. The detailed crash data can be found in Appendix D.

3.0 ANALYSIS OF ROAD DIET CONCEPT

Capacity analyses were performed to determine the impact of the road diet on the study corridor. These capacity analyses were based on taking the existing four-lane cross-section to a three-lane cross-section (one lane in each direction with a turn lane/median). For the analyses, it was assumed Inman Street will have one travel lane in each direction with a two-way left turn lane/median along the study corridor, and dedicated eastbound and westbound left turn lanes at the study intersections, similar to that shown in the City of Cleveland's 2019 Downtown Revitalization Initiative.

3.1 ROAD DIET TRAFFIC ANALYSIS

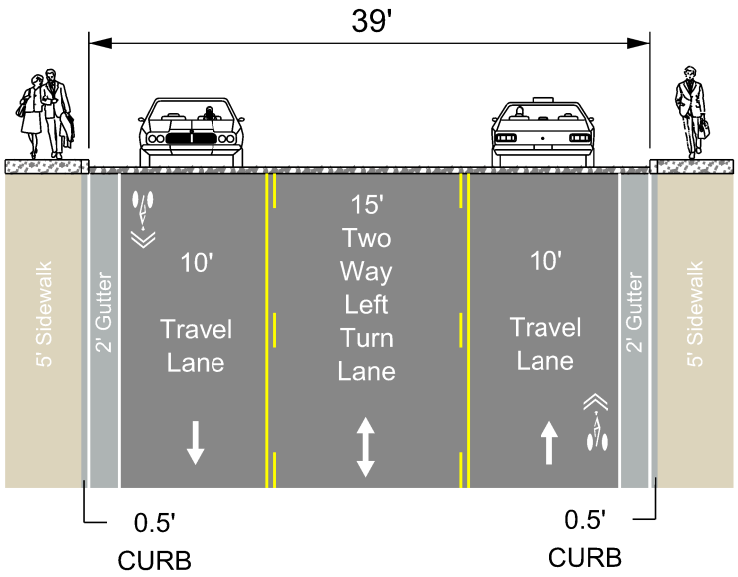
The results of the capacity analyses for the proposed conditions at the study intersections are presented in Table 4. As shown, the capacity analyses indicate that all the intersections are expected to operate at LOS B or C or better during both peak hours. Due to the current operations of Inman Street and Keith Street, it is assumed that the existing laneage at this intersection will remain. It is the western limit of the study corridor, so the proposed three-lane cross-section would end just east of Keith Street. With the existing laneage, the intersection of Inman Street and Keith Street will continue to operate at LOS C during the AM peak and LOS D during the PM peak. The northbound approach at the unsignalized intersection of Inman Street and Oak Street will be improved to LOS C during both peak hours. This is due to the fact the vehicles turning from Oak Street onto Inman Street will only have to navigate one lane of traffic in each direction on Oak Street rather than two lanes. This reduces the potential conflicts at this as well as all unsignalized intersections along the study corridor. The capacity analysis worksheets are included in Appendix C.

TABLE 4. PROPOSED PEAK HOUR LOS

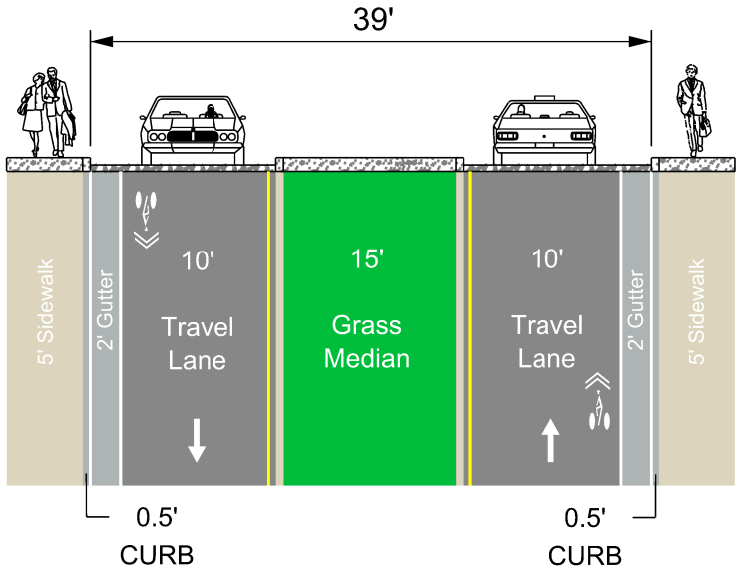
Intersection	Critical Movement	Level of Service (Delay in sec/veh)	
		AM Peak Hour	PM Peak Hour
Inman Street & Keith Street	Overall Intersection	C (31.0)	D (37.0)
Inman Street & Oak Street	Northbound Approach	B (12.8)	C (17.4)
	Southbound Approach	B (13.0)	C (16.4)
Inman Street & Broad Street	Overall Intersection	B (15.6)	B (18.3)
Inman Street & Ocoee Street	Overall Intersection	B (17.5)	B (19.8)
Inman Street & Church Street	Overall Intersection	B (13.3)	B (19.7)
Inman Street & Parker Street	Overall Intersection	C (26.1)	C (22.7)
Inman Street & Edwards Street	Overall Intersection	C (21.2)	C (21.1)
Inman Street & Wildwood Avenue	Overall Intersection	B (13.4)	B (11.9)

4.0 CONCLUSIONS & RECOMMENDATIONS

The analyses included in this report indicate that the impacts of a road diet along Inman Street from Keith Street to East Street in Cleveland will not significantly affect the signalized intersections, and will only improve the operations at the unsignalized intersections. The volumes as well as vehicular and pedestrian characteristics along Inman Street make this corridor a good candidate for a road diet. Based on the analyses presented in this report, this road diet would not cause traffic currently utilizing Inman Street to be diverted to other routes. As a result, it is recommended that the proposed cross-sections, shown in Figure 5 be constructed. This road diet along Inman Street is expected to operate well and be a benefit to both vehicular and pedestrian traffic.



Inman Street
Three Lane w/ Two-Way Left
Turn Lane



Inman Street
Three Lane
w/ Grass Median

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Figure 5.
Proposed Cross-Sections

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Appendix A

TDOT Instructional Bulletin No. 18-05 Regarding Road Diets

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN DIVISION

SUITE 1300, JAMES K. POLK BUILDING, 505 DEADERICK STREET

NASHVILLE, TENNESSEE 37243-3848

(615) 741-2221

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

INSTRUCTIONAL BULLETIN NO. 18-05

REGARDING REVISED SECTIONS 1-400.00 ROAD RECONFIGURATION AND 1-500.00 ROAD DIET

Effective immediately, Section 1-400.00 Road Reconfiguration and Section 1- 500.00 Road Diet have been revised to provide additional guidance on how to evaluate a Road Reconfiguration or Road Diet during rehabilitation, resurfacing, or reconstruction (3R) projects. The Roadway Design Guidelines Section 1 available online does not yet reflect these changes.

1-400.00 ROAD RECONFIGURATION

Road Reconfiguration is a change to the existing roadway that uses striping and reduced travel lane widths to slow operational speeds or uses the available pavement width to improve safety and to accommodate multimodal facilities. Road Reconfiguration provides the opportunity to address existing safety issues or multimodal accommodation in an expedited and cost effective manner. Additional information regarding Multimodal Design can be found in the Roadway Design Guidelines Chapter 9 – Multimodal Design Guidelines.

A Road Reconfiguration shall maintain the current Level of Service (LOS) without negatively impacting operational safety of the motorist and non-motorized users. All road reconfigurations must meet TDOT's minimum roadway design standards or require completion of a design deviation request justifying the reason for the deviation. All deviation requests shall be submitted to HQ Design Division as outlined under section 1-520.00 Plans Distribution and Review Process.

1-500.00 ROAD DIET

A Road Diet is the reduction of vehicular lanes of an existing four or six lane roadway to a three or five lane roadway, while maintaining reasonable Level of Service (LOS), improving operational safety, and/or accommodating non-motorized users to achieve systemic improvements.

Future LOS will be affected by urbanization which may subsequently change the context, capacity, and performance of an existing rural roadway sections. A Road Diet shall maintain a reasonable Level of Service (LOS) without negatively impacting operational safety of the motorist or non-motorized users. Existing Roadway sections serving at LOS D capacity or worse are not good candidates for a road diet. Any LOS reduction should clearly justify the safety benefits and document the process as outlined under section 1-520.00.

A Road Diet request should be accompanied by a traffic engineering study including intersection/corridor analysis (1-510.20) of the existing corridor as indicated in Figure 1-12. A Road Diet request shall be coordinated with local agencies for them to evaluate with agency development plans and receive local support.

1-510.00 ROAD DIET EVALUATION CRITERIA

The following evaluation criterion was developed to assess whether a 3R project may include a Road Diet into the existing project scope.

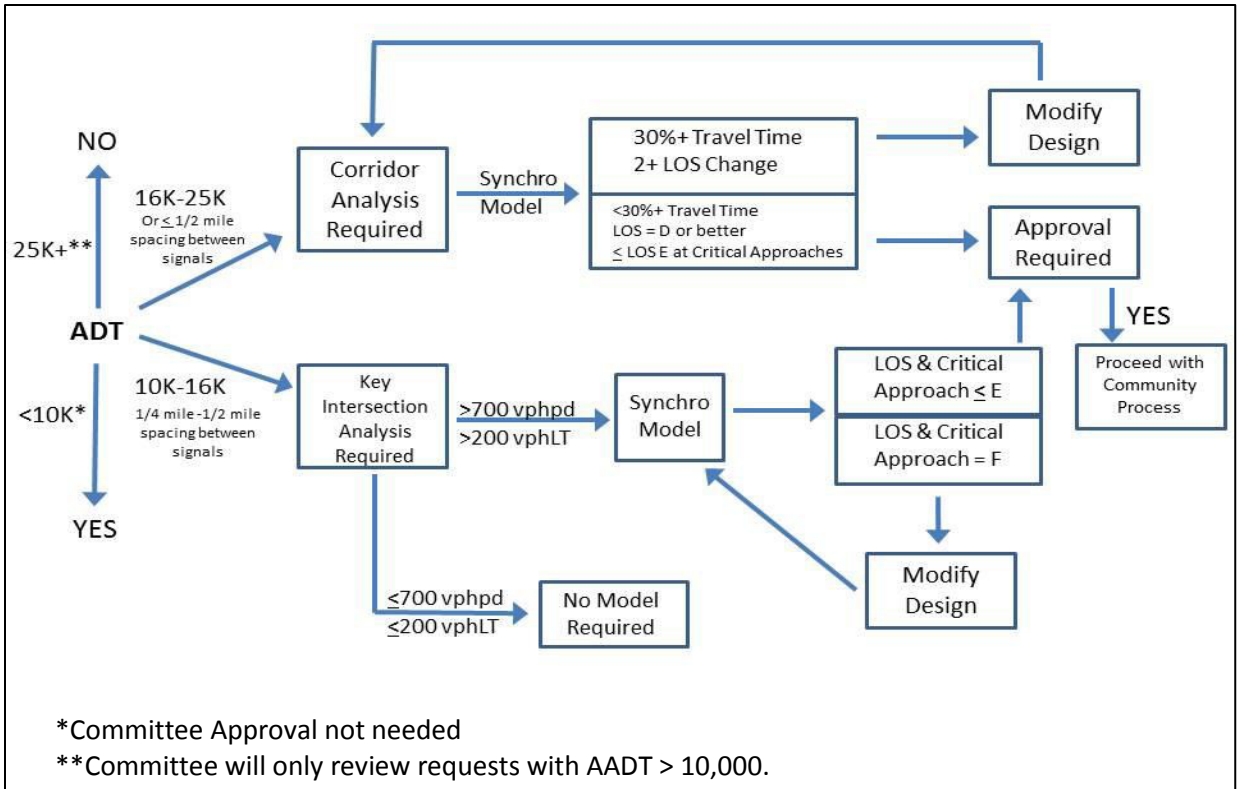
The Road Diet intersection/corridor analysis flow chart (Figure 1-12) and questionnaire (Table 1-4) shall be completed. A Road Diet can be implemented without further evaluation at roadway locations where the current traffic volume is less than 10,000 ADT and all Road Diet questionnaire questions are answered NO; however, a letter from the local agency indicating community support for a proposed Road Diet is required unless an overriding safety justification is established by TDOT.

If AADT is more than 10,000, follow the flow chart to determine if further traffic engineering analysis is needed to evaluate the operational and safety impacts to current traffic conditions. The evaluation results shall be submitted as outlined in section 1-520.00

The maximum threshold for any proposed Road Diet project is 25,000 ADT and/or 1700 veh/hr/ln. Such locations likely will require capital improvements to be deployed to mitigate the impacts to LOS which is beyond the scope of 3R projects. All Road Diet designs must meet TDOT's minimum roadway design standards or require completion of a design deviation request justifying the reason for the deviation. All design deviation requests will be addressed by the H Q Roadway Design Division.

1-510.10 ROAD DIET INTERSECTION/CORRIDOR ANALYSIS

A capacity evaluation should be completed per the following flow chart (Fig. 1-12) for proposed Road Diet projects. As seen in the flow chart, if the ADT is less than 10,000 proceed with Road Diet Questionnaire, no further traffic engineering evaluation is required. ADT's above 10,000 shall follow the flow chart to determine if a Synchro model will be required to evaluate the impacts. The evaluation should use current AADT and a LOS based on the pavement life of the highway section.



*Committee Approval not needed
**Committee will only review requests with AADT > 10,000.

Figure 1-12
Typical 4-to-3 Lane Conversion Evaluation

1-510.20 ROAD DIET QUESTIONNAIRE

Roadway projects identified as a candidate for a Road Diet must be evaluated using the following questionnaire. Any project answering **YES** for any question in the following table (Table 1-4) **will require** further evaluation considering the Road Diet Context Elements listed under section 1-510.30.

	YES	NO
Is the current Average Daily Traffic (ADT) greater than 25,000?		
Is the current posted speed limit greater than 45 MPH?		
Is the highway a diversionary route for an interstate highway?		
Is the existing per hour/per lane peak hour volume greater than 1700?		
Does the facility have a bus route with stops? (4 lanes to 3)		
Are there more than 10 driveways per mile present? (4 lanes to 3)		
Will the existing roadway pavement drainage be affected?		

Table 1-4

If all above questions are answered **NO,** then a road diet may be implemented during resurfacing without further evaluation by the committee.

1-510.30 ROAD DIET CONTEXT ELEMENTS

For projects identified as requiring further evaluation, the reviewers shall consider the following elements:

a) Multimodal needs
b) Project limits vs. corridor
c) Crash frequency or severity linked to:
   1. Lack of turn lanes
   2. Higher than desirable operational speeds
   3. Poor access management
   4. Bus stop locations (4 lanes to 3)
   5. Driveway density (4 lanes to 3)
   6. Increased presence of vulnerable users
d) Community support for alternative modes of transportation accommodation
e) Proximity to freeways
f) Designation as an evacuation route or other emergency use
g) Existing and future land use along the corridor

1-520.00 PLANS DISTRIBUTION AND REVIEW PROCESS

All Road Reconfiguration, Road Diet, and design deviation requests shall be submitted by the Regional Resurfacing Design Supervisor or a requesting agency to TDOT.Design@tn.gov. All information, plan sheets, Road Diet questionnaire, as needed, intersection corridor analysis, as well as all identified and evaluated context elements should be included.

The HQ Roadway Design Division will share the information among a committee represented by TDOT Traffic Operations, HQ Roadway Design, Multimodal, Long Range Planning, and Maintenance Divisions as well as the regional project delivery and regional traffic engineering offices. This committee will identify whether the geometric design criteria, operational safety impacts, and context elements could be mitigated safely within the existing ROW. Providing ample time to complete this review is important. Therefore providing requests in a timely manner is critical. The Designer will receive a response and comments from the committee addressing whether the proposed Road Diet could be implemented within the scope of the project or if a separate project with additional planning would be required. The Designer and/or requestor shall keep all reference materials and correspondence in the project folder.

This Instructional Bulletin voids IB 17-10.

Jennifer Lloyd

Jennifer Lloyd, PE
Civil Engineering Director
Roadway Design Division

KJL:ARH

March 6, 2018

Appendix B

Traffic Count Data

Cleveland, TN
Classified Turn Movement Count

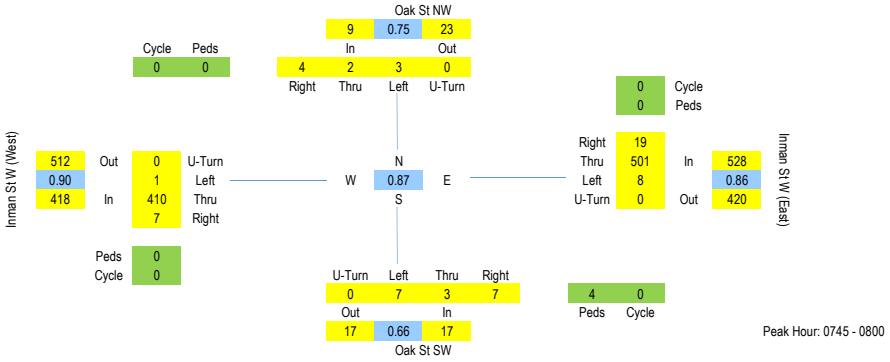
Site 1 of 7
Oak St NW
Inman St W (East)
Oak St SW
Inman St W (West)

Lat/Long
35.160694°, -84.879028°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Southbound						Westbound						Northbound						Eastbound							
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total	Hour
0700 - 0715	0	0	0	0	0	0	0	0	85	1	0	86	0	1	0	0	0	1	0	0	48	1	0	49	136	772
0715 - 0730	0	1	0	3	1	5	0	4	82	1	0	87	0	0	2	0	0	2	0	0	80	0	0	80	174	873
0730 - 0745	0	0	0	1	0	1	0	0	108	2	0	110	0	1	0	0	2	3	0	2	69	2	0	73	187	938
0745 - 0800	0	1	1	0	0	2	0	2	144	8	0	154	0	1	1	4	2	8	0	0	113	3	0	116	280	972
Hourly Total	0	2	1	4	1	**8**	0	6	419	12	0	**437**	0	3	3	4	4	**14**	0	2	310	6	0	**318**	**777**	-
0800 - 0815	0	1	0	2	0	3	0	2	130	4	0	136	0	2	0	1	0	3	0	1	92	2	0	95	237	952
0815 - 0830	0	1	0	0	0	1	0	3	119	4	0	126	0	1	1	0	1	3	0	0	108	1	0	109	239	
0830 - 0845	0	0	1	2	0	3	0	1	108	3	0	112	0	3	1	2	1	7	0	0	97	1	0	98	220	
0845 - 0900	0	0	0	1	0	1	0	0	125	2	0	127	0	1	1	1	2	5	0	1	122	4	0	127	260	
Hourly Total	0	2	1	5	0	**8**	0	6	482	13	0	**501**	0	7	3	4	4	**18**	0	2	419	8	0	**429**	**956**	
Grand Total	0	4	2	9	1	**16**	0	12	901	25	0	**938**	0	10	6	8	8	**32**	0	4	729	14	0	**747**	**1733**	
Approach (%)	0.00	25.00	12.50	56.25	6.25		0.00	1.28	96.06	2.67	0.00		0.00	31.25	18.75	25.00	25.00		0.00	0.54	97.59	1.87	0.00			
Total (%)	0.00	0.23	0.12	0.52	0.06	0.92	0.00	0.69	51.99	1.44	0.00	54.13	0.00	0.58	0.35	0.46	0.46	1.85	0.00	0.23	42.07	0.81	0.00	43.10		
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0		
Cars	0	4	2	9	-	15	0	12	875	25	-	912	0	10	6	8	-	24	0	4	710	14	-	728		
Truck	0	0	0	0	-	0	0	0	26	0	-	26	0	0	0	0	-	0	0	0	19	0	-	19		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	97.11	100.00	-	97.23	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	97.39	100.00	-	97.46		
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	2.89	0.00	-	2.77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	2.61	0.00	-	2.54		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total
0745 - 0800	0	1	1	0	0	2	0	2	144	8	0	154	0	1	1	4	2	8	0	0	113	3	0	116	280
0800 - 0815	0	1	0	2	0	3	0	2	130	4	0	136	0	2	0	1	0	3	0	1	92	2	0	95	237
0815 - 0830	0	1	0	0	0	1	0	3	119	4	0	126	0	1	1	0	1	3	0	0	108	1	0	109	239
0830 - 0845	0	0	1	2	0	3	0	1	108	3	0	112	0	3	1	2	1	7	0	0	97	1	0	98	220
Grand Total	0	3	2	4	0	**9**	0	8	501	19	0	**528**	0	7	3	7	4	**21**	0	1	410	7	0	**418**	**976**
Approach (%)	0.00	33.33	22.22	44.44	0.00		0.00	1.52	94.89	3.60	0.00		0.00	33.33	14.29	33.33	19.05		0.00	0.24	98.09	1.67	0.00		
Total (%)	0.00	0.31	0.20	0.41	0.00	0.92	0.00	0.82	51.33	1.95	0.00	54.10	0.00	0.72	0.31	0.72	0.41	2.15	0.00	0.10	42.01	0.72	0.00	42.83	
PHF	75%						86%						66%						90%						87%
	0%	75%	50%	50%			0%	67%	87%	59%			0%	58%	75%	44%			0%	25%	91%	58%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
Cars	0	3	2	4	0	9	0	8	489	19	0	516	0	7	3	7	4	21	0	1	399	7	0	407	953
Truck	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	4	4	0	0	11	0	0	11	27
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	23.53	0.00	0.00	0.00	0.00	-	0.00	0.41
Cars (%)	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	97.60	100.00	-	97.73	0.00	100.00	100.00	100.00	-	123.53	0.00	100.00	97.32	100.00	-	97.37	97.64
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	2.40	0.00	-	2.27	0.00	0.00	0.00	0.00	-	23.53	0.00	0.00	2.68	0.00	-	2.63	2.77

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total
Grand Total	0	4	4	0	0	**8**	0	8	576	32	0	**616**	0	4	4	16	8	**32**	0	0	452	12	0	**464**	**1120**
Approach (%)	0.00	50.00	50.00	0.00	0.00		0.00	1.30	93.51	5.19	0.00		0.00	12.50	12.50	50.00	25.00		0.00	0.00	97.41	2.59	0.00		
Total (%)	0.00	0.36	0.36	0.00	0.00	0.71	0.00	0.71	51.43	2.86	0.00	55.00	0.00	0.36	0.36	1.43	0.71	2.86	0.00	0.00	40.36	1.07	0.00	41.43	
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Cars	0	4	4	0	-	8	0	8	572	32	-	612	0	4	4	16	-	24	0	0	432	12	-	444	1088
Truck	0	0	0	0	-	0	0	0	4	0	-	4	0	0	0	0	-	0	0	0	20	0	-	20	24
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	100.00	100.00	0.00	-	100.00	0.00	100.00	99.31	100.00	-	99.35	0.00	100.00	100.00	100.00	-	75.00	0.00	0.00	95.58	100.00	-	95.69	97.14
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.69	0.00	-	0.65	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	4.42	0.00	-	4.31	2.14

Cleveland, TN
Classified Turn Movement Count

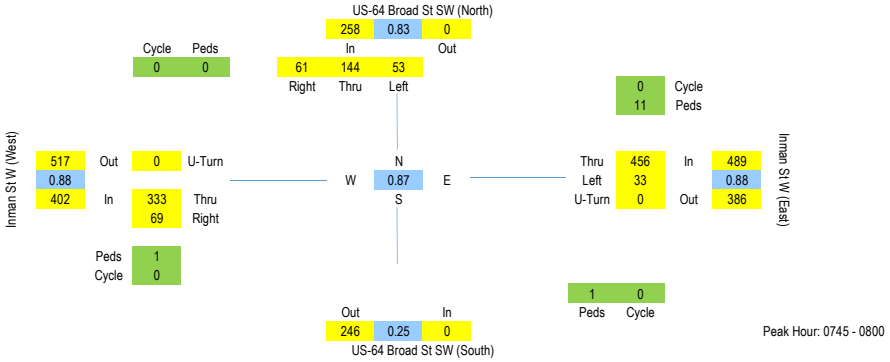
Site 2 of 7
US-64 Broad St SW (North)
Inman St W (East)
US-64 Broad St SW (South)
Inman St W (West)

Lat/Long
35.159616°, -84.876794°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 0745 - 0800

	Southbound					Westbound					Northbound		Eastbound						
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)		Inman St W (West)						
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total	Rolling Hour
0700 - 0715	3	18	10	0	31	0	8	73	0	81	0	0	0	39	9	0	48	160	913
0715 - 0730	12	28	11	0	51	0	5	76	0	81	0	0	0	53	20	0	73	205	1026
0730 - 0745	9	26	10	0	45	0	6	100	0	106	1	1	0	53	9	0	62	214	1104
0745 - 0800	13	48	17	0	78	0	12	130	0	142	0	0	0	94	21	0	115	335	1149
Hourly Total	37	120	48	0	**205**	0	31	379	0	**410**	1	**1**	0	239	59	0	**298**	**914**	-
0800 - 0815	14	26	10	0	50	0	9	127	2	138	1	1	0	70	17	0	87	276	1122
0815 - 0830	16	32	18	0	66	0	8	106	8	122	0	0	0	86	17	1	104	292	
0830 - 0845	10	38	16	0	64	0	4	93	1	98	0	0	0	83	14	0	97	259	
0845 - 0900	15	40	15	0	70	0	12	110	5	127	1	1	0	94	22	1	117	315	
Hourly Total	55	136	59	0	**250**	0	33	436	16	**485**	2	**2**	0	333	70	2	**405**	**1142**	
Grand Total	92	256	107	0	**455**	0	64	815	16	**895**	3	**3**	0	572	129	2	**703**	**2056**	
Approach (%)	20.22	56.26	23.52	0.00		0.00	7.15	91.06	1.79		100.00		0.00	81.37	18.35	0.28			
Total (%)	4.47	12.45	5.20	0.00	22.13	0.00	3.11	39.64	0.78	43.53	0.15	0.15	0.00	27.82	6.27	0.10	34.19		
P/Cycle	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0		
Cars	85	249	106	-	440	0	62	790	-	852	-	0	0	557	125	-	682		
Truck	7	7	1	-	15	0	2	25	-	27	-	0	0	15	4	-	19		
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	92.39	97.27	99.07	-	96.70	0.00	96.88	96.93	-	96.93	-	0.00	0.00	97.38	96.90	-	97.29		
Truck (%)	7.61	2.73	0.93	-	3.30	0.00	3.13	3.07	-	3.07	-	0.00	0.00	2.62	3.10	-	2.71		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound					Westbound					Northbound		Eastbound					
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)		Inman St W (West)					
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total
0745 - 0800	13	48	17	0	78	0	12	130	0	142	0	0	0	94	21	0	115	335
0800 - 0815	14	26	10	0	50	0	9	127	2	138	1	1	0	70	17	0	87	276
0815 - 0830	16	32	18	0	66	0	8	106	8	122	0	0	0	86	17	1	104	292
0830 - 0845	10	38	16	0	64	0	4	93	1	98	0	0	0	83	14	0	97	259
Grand Total	53	144	61	0	**258**	0	33	456	11	**500**	1	**1**	0	333	69	1	**403**	**1162**
Approach (%)	20.54	55.81	23.64	0.00		0.00	6.60	91.20	2.20		100.00		0.00	82.63	17.12	0.25		
Total (%)	4.56	12.39	5.25	0.00	22.20	0.00	2.84	39.24	0.95	43.03	0.09	0.09	0.00	28.66	5.94	0.09	34.68	
PHF	83%					88%					25%		88%					87%
	83%	75%	85%			0%	69%	88%					0%	89%	82%			
P/Cycle	0	0	0	0	0	0	0	0	11	11	1	1	0	0	0	1	1	13
Cars	51	139	61	0	251	0	31	441	11	483	1	1	0	324	66	1	391	1126
Truck	2	5	0	0	7	0	2	15	11	28	1	1	0	9	3	1	13	49
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	2.25	-	0.00	0.00	0.00	0.00	-	0.25	1.12
Cars (%)	96.23	96.53	100.00	-	97.29	0.00	93.94	96.71	-	98.77	-	0.00	0.00	97.30	95.65	-	97.26	96.90
Truck (%)	3.77	3.47	0.00	-	2.71	0.00	6.06	3.29	-	5.73	-	0.00	0.00	2.70	4.35	-	3.23	4.22

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound					Westbound					Northbound			Eastbound					
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)			Inman St W (West)					
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total
Grand Total	52	192	68	0	**312**	0	48	520	0	**568**	0	**0**	0	376	84	0	**460**	**1340**
Approach (%)	16.67	61.54	21.79	0.00		0.00	8.45	91.55	0.00		0.00		0.00	81.74	18.26	0.00		
Total (%)	3.88	14.33	5.07	0.00	23.28	0.00	3.58	38.81	0.00	42.39	0.00	0.00	0.00	28.06	6.27	0.00	34.33	
P/Cycle	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0	0
Cars	48	188	68	-	304	0	44	508	-	552	-	0	0	364	76	-	440	1296
Truck	4	4	0	-	8	0	4	12	-	16	-	0	0	12	8	-	20	44
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	92.31	97.92	100.00	-	97.44	0.00	91.67	97.69	-	97.18	-	0.00	0.00	96.81	90.48	-	95.65	96.72
Truck (%)	7.69	2.08	0.00	-	2.56	0.00	8.33	2.31	-	2.82	-	0.00	0.00	3.19	9.52	-	4.35	3.28

Cleveland, TN
Classified Turn Movement Count

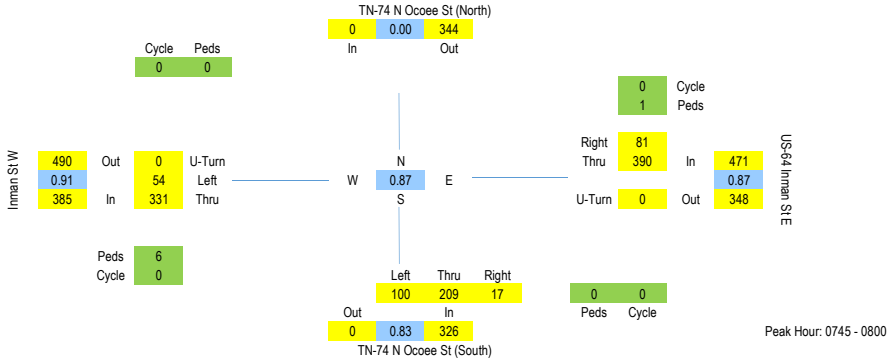
Site 3 of 7
TN-74 N Ocoee St (North)
US-64 Inman St E
TN-74 N Ocoee St (South)
Inman St W

Lat/Long
35.159238°, -84.875978°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Southbound		Westbound					Northbound					Eastbound						
	TN-74 N Ocoee St (North)		US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W						
TIME	Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total	Rolling Hour
0700 - 0715	0	0	0	70	11	0	81	15	30	3	0	48	0	6	37	0	43	172	934
0715 - 0730	0	0	0	66	9	0	75	11	29	9	1	50	0	7	59	1	67	192	1046
0730 - 0745	0	0	0	79	16	0	95	31	42	3	0	76	0	5	57	0	62	233	1150
0745 - 0800	0	0	0	116	19	0	135	23	67	8	0	98	0	25	81	2	108	341	1182
Hourly Total	0	**0**	0	331	55	0	**386**	80	168	23	1	**272**	0	43	234	3	**280**	**938**	-
0800 - 0815	0	0	0	111	16	0	127	24	46	2	0	72	0	11	74	0	85	284	1134
0815 - 0830	0	0	0	90	17	0	107	27	52	5	0	84	0	14	89	2	105	296	
0830 - 0845	0	0	0	73	29	1	103	26	44	2	0	72	0	4	87	2	93	268	
0845 - 0900	0	0	0	93	16	3	112	27	39	7	0	73	0	16	93	0	109	294	
Hourly Total	0	**0**	0	367	78	4	**449**	104	181	16	0	**301**	0	45	343	4	**392**	**1142**	
Grand Total	0	**0**	0	698	133	4	**835**	184	349	39	1	**573**	0	88	577	7	**672**	**2080**	
Approach (%)	0.00		0.00	83.59	15.93	0.48		32.11	60.91	6.81	0.17		0.00	13.10	85.86	1.04			
Total (%)	0.00	0.00	0.00	33.56	6.39	0.19	40.14	8.85	16.78	1.88	0.05	27.55	0.00	4.23	27.74	0.34	32.31		
P/Cycle	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0		
Cars	-	0	0	681	131	-	812	174	343	37	-	554	0	86	557	-	643		
Truck	-	0	0	17	2	-	19	10	6	2	-	18	0	2	20	-	22		
P/Cycle (%)	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	-	0.00	0.00	97.56	98.50	-	97.71	94.57	98.28	94.87	-	96.85	0.00	97.73	96.53	-	96.69		
Truck (%)	-	0.00	0.00	2.44	1.50	-	2.29	5.43	1.72	5.13	-	3.15	0.00	2.27	3.47	-	3.31		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound		Westbound					Northbound					Eastbound					
	TN-74 N Ocoee St (North)		US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W					
TIME	Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total
0745 - 0800	0	0	0	116	19	0	135	23	67	8	0	98	0	25	81	2	108	341
0800 - 0815	0	0	0	111	16	0	127	24	46	2	0	72	0	11	74	0	85	284
0815 - 0830	0	0	0	90	17	0	107	27	52	5	0	84	0	14	89	2	105	296
0830 - 0845	0	0	0	73	29	1	103	26	44	2	0	72	0	4	87	2	93	268
Grand Total	0	**0**	0	390	81	1	**472**	100	209	17	0	**326**	0	54	331	6	**391**	**1189**
Approach (%)	0.00		0.00	82.63	17.16	0.21		30.67	64.11	5.21	0.00		0.00	13.81	84.65	1.53		
Total (%)	0.00	0.00	0.00	32.80	6.81	0.08	39.70	8.41	17.58	1.43	0.00	27.42	0.00	4.54	27.84	0.50	32.88	
PHF	0%		87%					83%					91%					87%
			0%	84%	70%			93%	78%	53%			0%	54%	93%			
P/Cycle	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	6	6	7
Cars	0	0	0	380	80	1	461	95	207	16	0	318	0	54	319	6	379	1158
Truck	0	0	0	10	1	1	12	5	2	1	0	8	0	0	12	6	18	38
P/Cycle (%)	-	0.00	0.00	0.00	0.00	-	0.21	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	1.56	0.59
Cars (%)	-	0.00	0.00	97.44	98.77	-	97.88	95.00	99.04	94.12	-	97.55	0.00	100.00	96.37	-	98.44	97.39
Truck (%)	-	0.00	0.00	2.56	1.23	-	2.55	5.00	0.96	5.88	-	2.45	0.00	0.00	3.63	-	4.68	3.20

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound			Westbound					Northbound					Eastbound					
	TN-74 N Ocoee St (North)			US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W					
TIME		Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total
Grand Total		0	**0**	0	464	76	0	**540**	92	268	32	0	**392**	0	100	324	8	**432**	**1364**
Approach (%)		0.00		0.00	85.93	14.07	0.00		23.47	68.37	8.16	0.00		0.00	23.15	75.00	1.85		
Total (%)		0.00	0.00	0.00	34.02	5.57	0.00	39.59	6.74	19.65	2.35	0.00	28.74	0.00	7.33	23.75	0.59	31.67	
P/Cycle		-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
Cars		-	0	0	460	76	-	536	88	264	32	-	384	0	100	308	-	408	1328
Truck		-	0	0	4	0	-	4	4	4	0	-	8	0	0	16	-	16	28
P/Cycle (%)		-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)		-	0.00	0.00	99.14	100.00	-	99.26	95.65	98.51	100.00	-	97.96	0.00	100.00	95.06	-	94.44	97.36
Truck (%)		-	0.00	0.00	0.86	0.00	-	0.74	4.35	1.49	0.00	-	2.04	0.00	0.00	4.94	-	3.70	2.05

Cleveland, TN
Classified Turn Movement Count

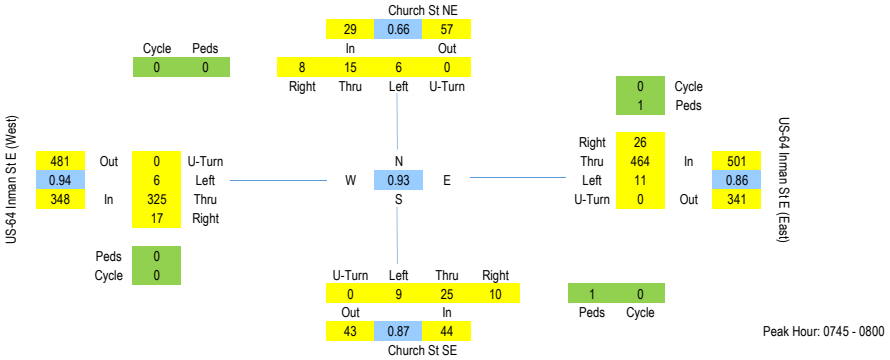
Site 4 of 7
Church St NE
US-64 Inman St E (East)
Church St SE
US-64 Inman St E (West)

Lat/Long
35.158875°, -84.875220°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Southbound						Westbound						Northbound						Eastbound							
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total	Hour
0700 - 0715	0	0	0	2	1	3	0	3	71	2	0	76	0	4	8	1	0	13	0	0	38	1	0	39	131	715
0715 - 0730	0	0	1	2	0	3	0	6	71	1	0	78	0	4	4	1	0	9	0	0	65	2	0	67	157	818
0730 - 0745	0	0	1	2	0	3	0	1	101	1	0	103	0	1	9	2	1	13	0	1	58	2	0	61	180	877
0745 - 0800	0	2	1	1	0	4	0	4	133	9	0	146	0	2	6	2	0	10	0	1	83	5	0	89	249	922
Hourly Total	0	2	3	7	1	**13**	0	14	376	13	0	**403**	0	11	27	6	1	**45**	0	2	244	10	0	**256**	**717**	-
0800 - 0815	0	1	4	2	0	7	0	5	124	8	0	137	0	2	7	3	0	12	0	1	75	1	0	77	233	906
0815 - 0830	0	1	3	3	0	7	0	1	102	4	1	108	0	2	4	3	1	10	0	1	86	6	0	93	218	
0830 - 0845	0	2	7	2	0	11	0	1	105	5	0	111	0	3	8	2	0	13	0	3	81	5	0	89	224	
0845 - 0900	0	8	5	2	1	16	0	2	103	6	0	111	0	3	3	3	0	9	0	0	89	9	0	98	234	
Hourly Total	0	12	19	9	1	**41**	0	9	434	23	1	**467**	0	10	22	11	1	**44**	0	5	331	21	0	**357**	**909**	
Grand Total	0	14	22	16	2	**54**	0	23	810	36	1	**870**	0	21	49	17	2	**89**	0	7	575	31	0	**613**	**1626**	
Approach (%)	0.00	25.93	40.74	29.63	3.70		0.00	2.64	93.10	4.14	0.11		0.00	23.60	55.06	19.10	2.25		0.00	1.14	93.80	5.06	0.00			
Total (%)	0.00	0.86	1.35	0.98	0.12	3.32	0.00	1.41	49.82	2.21	0.06	53.51	0.00	1.29	3.01	1.05	0.12	5.47	0.00	0.43	35.36	1.91	0.00	37.70		
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0		
Cars	0	13	22	16	-	51	0	22	791	34	-	847	0	21	49	16	-	86	0	7	554	30	-	591		
Truck	0	1	0	0	-	1	0	1	19	2	-	22	0	0	0	1	-	1	0	0	21	1	-	22		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	92.86	100.00	100.00	-	98.08	0.00	95.65	97.65	94.44	-	97.47	0.00	100.00	100.00	94.12	-	98.85	0.00	100.00	96.35	96.77	-	96.41		
Truck (%)	0.00	7.14	0.00	0.00	-	1.92	0.00	4.35	2.35	5.56	-	2.53	0.00	0.00	0.00	5.88	-	1.15	0.00	0.00	3.65	3.23	-	3.59		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total
0745 - 0800	0	2	1	1	0	4	0	4	133	9	0	146	0	2	6	2	0	10	0	1	83	5	0	89	249
0800 - 0815	0	1	4	2	0	7	0	5	124	8	0	137	0	2	7	3	0	12	0	1	75	1	0	77	233
0815 - 0830	0	1	3	3	0	7	0	1	102	4	1	108	0	2	4	3	1	10	0	1	86	6	0	93	218
0830 - 0845	0	2	7	2	0	11	0	1	105	5	0	111	0	3	8	2	0	13	0	3	81	5	0	89	224
Grand Total	0	6	15	8	0	**29**	0	11	464	26	1	**502**	0	9	25	10	1	**45**	0	6	325	17	0	**348**	**924**
Approach (%)	0.00	20.69	51.72	27.59	0.00		0.00	2.19	92.43	5.18	0.20		0.00	20.00	55.56	22.22	2.22		0.00	1.72	93.39	4.89	0.00		
Total (%)	0.00	0.65	1.62	0.87	0.00	3.14	0.00	1.19	50.22	2.81	0.11	54.33	0.00	0.97	2.71	1.08	0.11	4.87	0.00	0.65	35.17	1.84	0.00	37.66	
PHF	66%						86%						87%						94%						93%
	0%	75%	54%	67%			0%	55%	87%	72%			0%	75%	78%	83%			0%	50%	94%	71%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2
Cars	0	6	15	8	0	29	0	11	451	25	1	488	0	9	25	9	1	44	0	6	314	16	0	336	897
Truck	0	0	0	0	0	0	0	0	13	1	1	15	0	0	0	1	1	2	0	0	11	1	0	12	29
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.20	0.00	0.00	0.00	0.00	-	2.27	0.00	0.00	0.00	0.00	-	0.00	0.22
Cars (%)	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	97.20	96.15	-	97.41	0.00	100.00	100.00	90.00	-	100.00	0.00	100.00	96.62	94.12	-	96.55	97.08
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	2.80	3.85	-	2.99	0.00	0.00	0.00	10.00	-	4.55	0.00	0.00	3.38	5.88	-	3.45	3.14

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total
Grand Total	0	8	4	4	0	**16**	0	16	532	36	0	**584**	0	8	24	8	0	**40**	0	4	332	20	0	**356**	**996**
Approach (%)	0.00	50.00	25.00	25.00	0.00		0.00	2.74	91.10	6.16	0.00		0.00	20.00	60.00	20.00	0.00		0.00	1.12	93.26	5.62	0.00		
Total (%)	0.00	0.80	0.40	0.40	0.00	1.61	0.00	1.61	53.41	3.61	0.00	58.63	0.00	0.80	2.41	0.80	0.00	4.02	0.00	0.40	33.33	2.01	0.00	35.74	
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Cars	0	8	4	4	-	16	0	16	524	36	-	576	0	8	24	8	-	40	0	4	316	20	-	340	972
Truck	0	0	0	0	-	0	0	0	8	0	-	8	0	0	0	0	-	0	0	0	16	0	-	16	24
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	98.50	100.00	-	98.63	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	95.18	100.00	-	95.51	97.59
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	1.50	0.00	-	1.37	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	4.82	0.00	-	4.49	2.41

Cleveland, TN
Classified Turn Movement Count

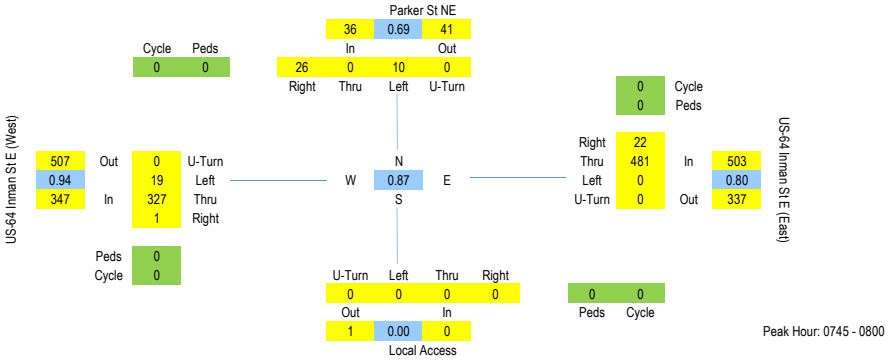
Site 5 of 7
Parker St NE
US-64 Inman St E (East)
Local Access
US-64 Inman St E (West)

Lat/Long
35.158232°, -84.873883°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 0745 - 0800

	Southbound						Westbound						Northbound						Eastbound							
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total	Hour
0700 - 0715	0	1	0	2	1	4	0	0	73	1	0	74	0	0	0	0	0	0	0	5	34	0	0	39	117	668
0715 - 0730	0	0	0	1	0	1	0	0	83	2	0	85	0	0	0	0	0	0	0	5	59	0	0	64	150	775
0730 - 0745	0	2	0	1	0	3	0	0	88	2	0	90	0	0	0	0	1	1	0	3	52	0	0	55	149	828
0745 - 0800	0	1	0	8	0	9	0	0	148	10	0	158	0	0	0	0	0	0	0	5	81	1	0	87	254	886
Hourly Total	0	4	0	12	1	**17**	0	0	392	15	0	**407**	0	0	0	0	1	**1**	0	18	226	1	0	**245**	**670**	-
0800 - 0815	0	4	0	9	0	13	0	0	126	6	0	132	0	0	0	0	0	0	0	1	77	0	0	78	223	857
0815 - 0830	0	1	0	7	0	8	0	0	102	3	0	105	0	0	0	0	0	0	0	9	81	0	0	90	203	
0830 - 0845	0	4	0	2	0	6	0	0	105	3	0	108	0	0	0	0	0	0	0	4	88	0	0	92	206	
0845 - 0900	0	7	0	5	0	12	0	0	113	2	0	115	0	0	0	0	0	0	0	5	90	3	0	98	225	
Hourly Total	0	16	0	23	0	**39**	0	0	446	14	0	**460**	0	0	0	0	0	**0**	0	19	336	3	0	**358**	**857**	
Grand Total	0	20	0	35	1	**56**	0	0	838	29	0	**867**	0	0	0	0	1	**1**	0	37	562	4	0	**603**	**1527**	
Approach (%)	0.00	35.71	0.00	62.50	1.79		0.00	0.00	96.66	3.34	0.00		0.00	0.00	0.00	0.00	100.00		0.00	6.14	93.20	0.66	0.00			
Total (%)	0.00	1.31	0.00	2.29	0.07	3.67	0.00	0.00	54.88	1.90	0.00	56.78	0.00	0.00	0.00	0.00	0.07	0.07	0.00	2.42	36.80	0.26	0.00	39.49		
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0		
Cars	0	19	0	34	-	53	0	0	817	29	-	846	0	0	0	0	-	0	0	36	540	4	-	580		
Truck	0	1	0	1	-	2	0	0	21	0	-	21	0	0	0	0	-	0	0	1	22	0	-	23		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	95.00	0.00	97.14	-	96.36	0.00	0.00	97.49	100.00	-	97.58	0.00	0.00	0.00	0.00	-	0.00	0.00	97.30	96.09	100.00	-	96.19		
Truck (%)	0.00	5.00	0.00	2.86	-	3.64	0.00	0.00	2.51	0.00	-	2.42	0.00	0.00	0.00	0.00	-	0.00	0.00	2.70	3.91	0.00	-	3.81		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total
0745 - 0800	0	1	0	8	0	9	0	0	148	10	0	158	0	0	0	0	0	0	0	5	81	1	0	87	254
0800 - 0815	0	4	0	9	0	13	0	0	126	6	0	132	0	0	0	0	0	0	0	1	77	0	0	78	223
0815 - 0830	0	1	0	7	0	8	0	0	102	3	0	105	0	0	0	0	0	0	0	9	81	0	0	90	203
0830 - 0845	0	4	0	2	0	6	0	0	105	3	0	108	0	0	0	0	0	0	0	4	88	0	0	92	206
Grand Total	0	10	0	26	0	**36**	0	0	481	22	0	**503**	0	0	0	0	0	**0**	0	19	327	1	0	**347**	**886**
Approach (%)	0.00	27.78	0.00	72.22	0.00		0.00	0.00	95.63	4.37	0.00		0.00	0.00	0.00	0.00	0.00		0.00	5.48	94.24	0.29	0.00		
Total (%)	0.00	1.13	0.00	2.93	0.00	4.06	0.00	0.00	54.29	2.48	0.00	56.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14	36.91	0.11	0.00	39.16	
PHF	69%						80%						0%						94%						87%
	0%	63%	0%	72%			0%	0%	81%	55%			0%	0%	0%	0%			0%	53%	93%	25%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars	0	9	0	25	0	34	0	0	470	22	0	492	0	0	0	0	0	0	0	18	314	1	0	333	859
Truck	0	1	0	1	0	2	0	0	11	0	0	11	0	0	0	0	0	0	0	1	13	0	0	14	27
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	90.00	0.00	96.15	-	94.44	0.00	0.00	97.71	100.00	-	97.81	0.00	0.00	0.00	0.00	-	0.00	0.00	94.74	96.02	100.00	-	95.97	96.95
Truck (%)	0.00	10.00	0.00	3.85	-	5.56	0.00	0.00	2.29	0.00	-	2.19	0.00	0.00	0.00	0.00	-	0.00	0.00	5.26	3.98	0.00	-	4.03	3.05

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total
Grand Total	0	4	0	32	0	**36**	0	0	592	40	0	**632**	0	0	0	0	0	**0**	0	20	324	4	0	**348**	**1016**
Approach (%)	0.00	11.11	0.00	88.89	0.00		0.00	0.00	93.67	6.33	0.00		0.00	0.00	0.00	0.00	0.00		0.00	5.75	93.10	1.15	0.00		
Total (%)	0.00	0.39	0.00	3.15	0.00	3.54	0.00	0.00	58.27	3.94	0.00	62.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	31.89	0.39	0.00	34.25	
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Cars	0	4	0	28	-	32	0	0	588	40	-	628	0	0	0	0	-	0	0	20	308	4	-	332	992
Truck	0	0	0	4	-	4	0	0	4	0	-	4	0	0	0	0	-	0	0	0	16	0	-	16	24
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	100.00	0.00	87.50	-	88.89	0.00	0.00	99.32	100.00	-	99.37	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	95.06	100.00	-	95.40	97.64
Truck (%)	0.00	0.00	0.00	12.50	-	11.11	0.00	0.00	0.68	0.00	-	0.63	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	4.94	0.00	-	4.60	2.36

Cleveland, TN
Classified Turn Movement Count

Site 6 of 7

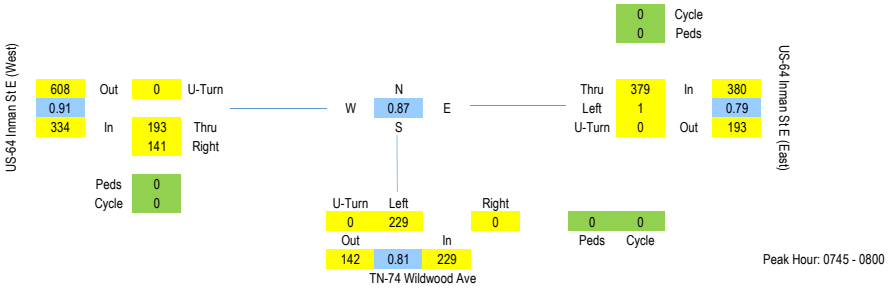
US-64 Inman St E (East)
TN-74 Wildwood Ave
US-64 Inman St E (West)

Lat/Long
35.156509°, -84.870143°

Date
06 June 2019

Weather
Cloudy
74°F

0700 - 0900 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 0745 - 0800

TIME	Westbound US-64 Inman St E (East) U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	Northbound TN-74 Wildwood Ave U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	Eastbound US-64 Inman St E (West) U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total	Rolling Hour
0700 - 0715	0	0	46	0	46	0	33	1	0	34	0	22	16	0	38	118	750
0715 - 0730	0	0	76	0	76	0	28	0	0	28	0	36	22	0	58	162	867
0730 - 0745	0	0	73	0	73	0	59	0	0	59	0	36	30	0	66	198	924
0745 - 0800	0	0	121	0	121	0	71	0	0	71	0	54	26	0	80	272	943
Hourly Total	0	0	316	0	**316**	0	191	1	0	**192**	0	148	94	0	**242**	**750**	-
0800 - 0815	0	0	108	0	108	0	47	0	0	47	0	43	37	0	80	235	907
0815 - 0830	0	1	82	0	83	0	54	0	0	54	0	46	36	0	82	219	
0830 - 0845	0	0	68	0	68	0	57	0	0	57	0	50	42	0	92	217	
0845 - 0900	0	0	85	0	85	0	56	0	0	56	0	48	47	0	95	236	
Hourly Total	0	1	343	0	**344**	0	214	0	0	**214**	0	187	162	0	**349**	**907**	
Grand Total	0	1	659	0	**660**	0	405	1	0	**406**	0	335	256	0	**591**	**1657**	
Approach (%)	0.00	0.15	99.85	0.00		0.00	99.75	0.25	0.00		0.00	56.68	43.32	0.00			
Total (%)	0.00	0.06	39.77	0.00	39.83	0.00	24.44	0.06	0.00	24.50	0.00	20.22	15.45	0.00	35.67		
P/Cycle	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0		
Cars	0	1	644	-	645	0	394	1	-	395	0	322	246	-	568		
Truck	0	0	15	-	15	0	10	0	-	10	0	13	10	-	23		
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.25	0.00	-	0.25	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	100.00	97.72	-	97.73	0.00	97.28	100.00	-	97.29	0.00	96.12	96.09	-	96.11		
Truck (%)	0.00	0.00	2.28	-	2.27	0.00	2.47	0.00	-	2.46	0.00	3.88	3.91	-	3.89		

Peak Rolling Hour Flow Rates
Classification: ALL

TIME	Westbound US-64 Inman St E (East) U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	Northbound TN-74 Wildwood Ave U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	Eastbound US-64 Inman St E (West) U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total
0745 - 0800	0	0	121	0	121	0	71	0	0	71	0	54	26	0	80	272
0800 - 0815	0	0	108	0	108	0	47	0	0	47	0	43	37	0	80	235
0815 - 0830	0	1	82	0	83	0	54	0	0	54	0	46	36	0	82	219
0830 - 0845	0	0	68	0	68	0	57	0	0	57	0	50	42	0	92	217
Grand Total	0	1	379	0	**380**	0	229	0	0	**229**	0	193	141	0	**334**	**943**
Approach (%)	0.00	0.26	99.74	0.00		0.00	100.00	0.00	0.00		0.00	57.78	42.22	0.00		
Total (%)	0.00	0.11	40.19	0.00	40.30	0.00	24.28	0.00	0.00	24.28	0.00	20.47	14.95	0.00	35.42	
PHF	79%					81%					91%					87%
	0%	25%	78%			0%	81%	0%			0%	89%	84%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars	0	1	372	0	373	0	226	0	0	226	0	183	135	0	318	917
Truck	0	0	7	0	7	0	3	0	0	3	0	10	6	0	16	26
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	100.00	98.15	-	98.16	0.00	98.69	0.00	-	98.69	0.00	94.82	95.74	-	95.21	97.24
Truck (%)	0.00	0.00	1.85	-	1.84	0.00	1.31	0.00	-	1.31	0.00	5.18	4.26	-	4.79	2.76

Peak Rolling 15min Flow Rates
Classification: ALL

	Westbound					Northbound					Eastbound					
	US-64 Inman St E (East)					TN-74 Wildwood Ave					US-64 Inman St E (West)					
TIME	U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total
Grand Total	0	0	484	0	**484**	0	284	0	0	**284**	0	216	104	0	**320**	**1088**
Approach (%)	0.00	0.00	100.00	0.00		0.00	100.00	0.00	0.00		0.00	67.50	32.50	0.00		
Total (%)	0.00	0.00	44.49	0.00	44.49	0.00	26.10	0.00	0.00	26.10	0.00	19.85	9.56	0.00	29.41	
P/Cycle	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
Cars	0	0	476	-	476	0	284	0	-	284	0	192	104	-	296	1056
Truck	0	0	8	-	8	0	0	0	-	0	0	24	0	-	24	32
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	0.00	98.35	-	98.35	0.00	100.00	0.00	-	100.00	0.00	88.89	100.00	-	92.50	97.06
Truck (%)	0.00	0.00	1.65	-	1.65	0.00	0.00	0.00	-	0.00	0.00	11.11	0.00	-	7.50	2.94

Cleveland, TN
Classified Turn Movement Count

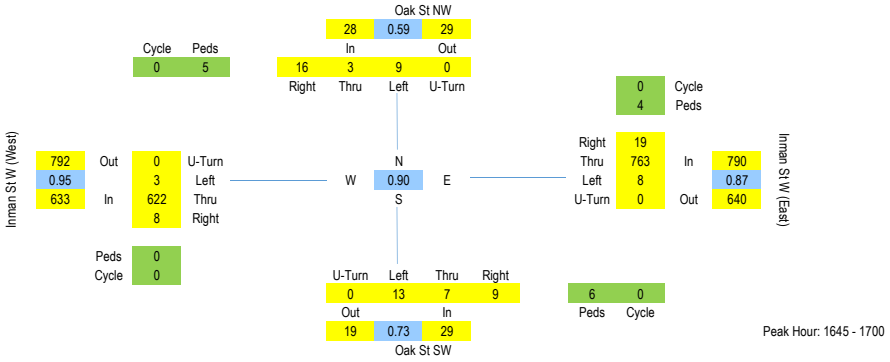
Site 1 of 7
Oak St NW
Inman St W (East)
Oak St SW
Inman St W (West)

Lat/Long
35.160694°, -84.879028°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 1645 - 1700

	Southbound						Westbound						Northbound						Eastbound							
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total	Hour
1600 - 1615	0	1	2	3	0	6	0	0	187	2	0	189	0	2	0	2	0	4	0	0	142	3	0	145	344	1379
1615 - 1630	0	2	2	5	0	9	0	1	164	1	0	166	0	4	1	0	0	5	0	1	143	4	1	149	329	1446
1630 - 1645	0	0	0	4	1	5	0	3	204	3	1	211	0	4	0	5	4	13	0	1	135	3	0	139	368	1473
1645 - 1700	0	0	0	4	0	4	0	2	170	8	0	180	0	5	2	4	1	12	0	1	145	4	0	150	346	1480
Hourly Total	0	3	4	16	1	**24**	0	6	725	14	1	**746**	0	15	3	11	5	**34**	0	3	565	14	1	**583**	**1387**	-
1700 - 1715	0	3	2	4	1	10	0	4	218	4	1	227	0	6	2	2	1	11	0	1	163	2	0	166	414	1451
1715 - 1730	0	5	0	6	3	14	0	0	182	4	3	189	0	1	3	3	3	10	0	0	150	1	0	151	364	
1730 - 1745	0	1	1	2	1	5	0	2	193	3	0	198	0	1	0	0	1	2	0	1	164	1	0	166	371	
1745 - 1800	0	2	1	0	0	3	0	2	147	2	0	151	0	4	0	2	0	6	0	2	152	2	0	156	316	
Hourly Total	0	11	4	12	5	**32**	0	8	740	13	4	**765**	0	12	5	7	5	**29**	0	4	629	6	0	**639**	**1465**	
Grand Total	0	14	8	28	6	**56**	0	14	1465	27	5	**1511**	0	27	8	18	10	**63**	0	7	1194	20	1	**1222**	**2852**	
Approach (%)	0.00	25.00	14.29	50.00	10.71		0.00	0.93	96.96	1.79	0.33		0.00	42.86	12.70	28.57	15.87		0.00	0.57	97.71	1.64	0.08			
Total (%)	0.00	0.49	0.28	0.98	0.21	1.96	0.00	0.49	51.37	0.95	0.18	52.98	0.00	0.95	0.28	0.63	0.35	2.21	0.00	0.25	41.87	0.70	0.04	42.85		
P/Cycle	0	0	0	0	-	0	0	0	2	0	-	2	0	2	0	0	-	2	0	0	0	0	-	0		
Cars	0	13	8	28	-	49	0	14	1445	26	-	1485	0	25	8	18	-	51	0	7	1178	20	-	1205		
Truck	0	1	0	0	-	1	0	0	18	1	-	19	0	0	0	0	-	0	0	0	16	0	-	16		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.14	0.00	-	0.13	0.00	7.41	0.00	0.00	-	3.77	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	92.86	100.00	100.00	-	98.00	0.00	100.00	98.63	96.30	-	98.61	0.00	92.59	100.00	100.00	-	96.23	0.00	100.00	98.66	100.00	-	98.69		
Truck (%)	0.00	7.14	0.00	0.00	-	2.00	0.00	0.00	1.23	3.70	-	1.26	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	1.34	0.00	-	1.31		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total
1645 - 1700	0	0	0	4	0	4	0	2	170	8	0	180	0	5	2	4	1	12	0	1	145	4	0	150	346
1700 - 1715	0	3	2	4	1	10	0	4	218	4	1	227	0	6	2	2	1	11	0	1	163	2	0	166	414
1715 - 1730	0	5	0	6	3	14	0	0	182	4	3	189	0	1	3	3	3	10	0	0	150	1	0	151	364
1730 - 1745	0	1	1	2	1	5	0	2	193	3	0	198	0	1	0	0	1	2	0	1	164	1	0	166	371
Grand Total	0	9	3	16	5	**33**	0	8	763	19	4	**794**	0	13	7	9	6	**35**	0	3	622	8	0	**633**	**1495**
Approach (%)	0.00	27.27	9.09	48.48	15.15		0.00	1.01	96.10	2.39	0.50		0.00	37.14	20.00	25.71	17.14		0.00	0.47	98.26	1.26	0.00		
Total (%)	0.00	0.60	0.20	1.07	0.33	2.21	0.00	0.54	51.04	1.27	0.27	53.11	0.00	0.87	0.47	0.60	0.40	2.34	0.00	0.20	41.61	0.54	0.00	42.34	
PHF	59%						87%						73%						95%						90%
	0%	45%	38%	67%			0%	50%	88%	59%			0%	54%	58%	56%			0%	75%	95%	50%			
P/Cycle	0	0	0	0	5	5	0	0	2	0	4	6	0	0	0	0	6	6	0	0	0	0	0	0	17
Cars	0	9	3	16	5	33	0	8	752	18	4	782	0	13	7	9	6	35	0	3	615	8	0	626	1476
Truck	0	0	0	0	5	5	0	0	9	1	4	14	0	0	0	0	6	6	0	0	7	0	0	7	32
P/Cycle (%)	0.00	0.00	0.00	0.00	-	17.86	0.00	0.00	0.26	0.00	-	0.76	0.00	0.00	0.00	0.00	-	20.69	0.00	0.00	0.00	0.00	-	0.00	1.14
Cars (%)	0.00	100.00	100.00	100.00	-	117.86	0.00	100.00	98.56	94.74	-	98.99	0.00	100.00	100.00	100.00	-	120.69	0.00	100.00	98.87	100.00	-	98.89	98.73
Truck (%)	0.00	0.00	0.00	0.00	-	17.86	0.00	0.00	1.18	5.26	-	1.77	0.00	0.00	0.00	0.00	-	20.69	0.00	0.00	1.13	0.00	-	1.11	2.14

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Oak St NW						Inman St W (East)						Oak St SW						Inman St W (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	1.1	1.2	1.3	1.4	1a	Total	1.5	1.6	1.7	1.8	1b	Total	1.9	1.10	1.11	1.12	1c	Total	1.13	1.14	1.15	1.16	1d	Total	Total
Grand Total	0	12	8	16	4	**40**	0	16	872	16	4	**908**	0	24	8	8	4	**44**	0	4	652	8	0	**664**	**1656**
Approach (%)	0.00	30.00	20.00	40.00	10.00		0.00	1.76	96.04	1.76	0.44		0.00	54.55	18.18	18.18	9.09		0.00	0.60	98.19	1.20	0.00		
Total (%)	0.00	0.72	0.48	0.97	0.24	2.42	0.00	0.97	52.66	0.97	0.24	54.83	0.00	1.45	0.48	0.48	0.24	2.66	0.00	0.24	39.37	0.48	0.00	40.10	
P/Cycle	0	0	0	0	-	0	0	0	8	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	8
Cars	0	12	8	16	-	36	0	16	856	16	-	888	0	24	8	8	-	40	0	4	648	8	-	660	1624
Truck	0	0	0	0	-	0	0	0	8	0	-	8	0	0	0	0	-	0	0	0	4	0	-	4	12
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.92	0.00	-	0.88	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.48
Cars (%)	0.00	100.00	100.00	100.00	-	90.00	0.00	100.00	98.17	100.00	-	97.80	0.00	100.00	100.00	100.00	-	90.91	0.00	100.00	99.39	100.00	-	99.40	98.07
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.92	0.00	-	0.88	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.61	0.00	-	0.60	0.72

Cleveland, TN
Classified Turn Movement Count

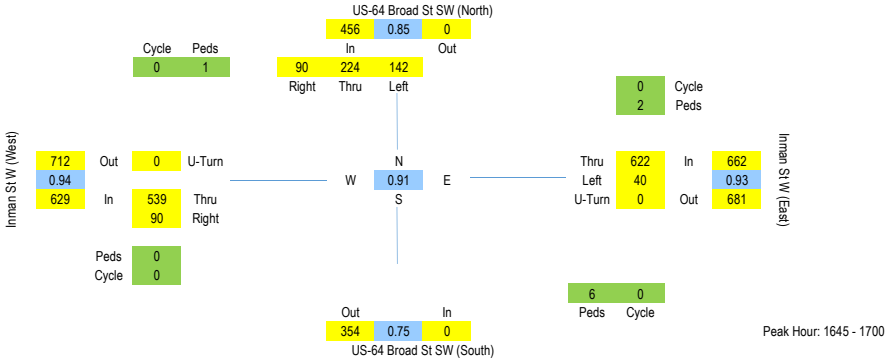
Site 2 of 7
US-64 Broad St SW (North)
Inman St W (East)
US-64 Broad St SW (South)
Inman St W (West)

Lat/Long
35.159616°, -84.876794°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 1645 - 1700

	Southbound					Westbound					Northbound		Eastbound						
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)		Inman St W (West)						
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total	Rolling Hour
1600 - 1615	34	56	21	0	111	0	10	150	0	160	0	0	0	128	18	0	146	417	1622
1615 - 1630	36	36	23	1	96	0	5	128	0	133	0	0	0	131	21	0	152	381	1685
1630 - 1645	31	60	26	0	117	0	7	165	2	174	3	3	0	111	17	0	128	422	1733
1645 - 1700	38	47	16	0	101	0	14	149	1	164	2	2	0	121	23	0	144	411	1747
Hourly Total	139	199	86	1	**425**	0	36	592	3	**631**	5	**5**	0	491	79	0	**570**	**1631**	-
1700 - 1715	40	67	27	0	134	0	13	166	0	179	1	1	0	142	25	0	167	481	1719
1715 - 1730	30	59	22	1	112	0	6	155	1	162	2	2	0	130	26	0	156	432	
1730 - 1745	34	51	25	0	110	0	7	152	0	159	1	1	0	146	16	0	162	432	
1745 - 1800	37	36	11	0	84	0	10	134	0	144	1	1	0	135	17	0	152	381	
Hourly Total	141	213	85	1	**440**	0	36	607	1	**644**	5	**5**	0	553	84	0	**637**	**1726**	
Grand Total	280	412	171	2	**865**	0	72	1199	4	**1275**	10	**10**	0	1044	163	0	**1207**	**3357**	
Approach (%)	32.37	47.63	19.77	0.23		0.00	5.65	94.04	0.31		100.00		0.00	86.50	13.50	0.00			
Total (%)	8.34	12.27	5.09	0.06	25.77	0.00	2.14	35.72	0.12	37.98	0.30	0.30	0.00	31.10	4.86	0.00	35.95		
P/Cycle	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0		
Cars	280	408	170	-	858	0	71	1183	-	1254	-	0	0	1030	160	-	1190		
Truck	0	4	1	-	5	0	1	16	-	17	-	0	0	14	3	-	17		
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	100.00	99.03	99.42	-	99.42	0.00	98.61	98.67	-	98.66	-	0.00	0.00	98.66	98.16	-	98.59		
Truck (%)	0.00	0.97	0.58	-	0.58	0.00	1.39	1.33	-	1.34	-	0.00	0.00	1.34	1.84	-	1.41		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound					Westbound					Northbound		Eastbound					
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)		Inman St W (West)					
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total
1645 - 1700	38	47	16	0	101	0	14	149	1	164	2	2	0	121	23	0	144	411
1700 - 1715	40	67	27	0	134	0	13	166	0	179	1	1	0	142	25	0	167	481
1715 - 1730	30	59	22	1	112	0	6	155	1	162	2	2	0	130	26	0	156	432
1730 - 1745	34	51	25	0	110	0	7	152	0	159	1	1	0	146	16	0	162	432
Grand Total	142	224	90	1	**457**	0	40	622	2	**664**	6	**6**	0	539	90	0	**629**	**1756**
Approach (%)	31.07	49.02	19.69	0.22		0.00	6.02	93.67	0.30		100.00		0.00	85.69	14.31	0.00		
Total (%)	8.09	12.76	5.13	0.06	26.03	0.00	2.28	35.42	0.11	37.81	0.34	0.34	0.00	30.69	5.13	0.00	35.82	
PHF	85%					93%					75%		94%					91%
	89%	84%	83%			0%	71%	94%					0%	92%	87%			
P/Cycle	0	0	0	1	1	0	0	0	2	2	6	6	0	0	0	0	0	9
Cars	142	222	89	1	454	0	40	616	2	658	6	6	0	533	89	0	622	1740
Truck	0	2	1	1	4	0	0	6	2	8	6	6	0	6	1	0	7	25
P/Cycle (%)	0.00	0.00	0.00	-	0.22	0.00	0.00	0.00	-	0.30	-	0.00	0.00	0.00	0.00	-	0.00	0.51
Cars (%)	100.00	99.11	98.89	-	99.56	0.00	100.00	99.04	-	99.40	-	0.00	0.00	98.89	98.89	-	98.89	99.09
Truck (%)	0.00	0.89	1.11	-	0.88	0.00	0.00	0.96	-	1.21	-	0.00	0.00	1.11	1.11	-	1.11	1.42

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound					Westbound					Northbound			Eastbound					
	US-64 Broad St SW (North)					Inman St W (East)					US-64 Broad St SW (South)			Inman St W (West)					
TIME	Left 2.1	Thru 2.2	Right 2.3	Peds 2a	App Total	U-Turn 2.4	Left 2.5	Thru 2.6	Peds 2b	App Total	Peds 2c	App Total	U-Turn 2.7	Thru 2.8	Right 2.9	Peds 2d	App Total	Int Total
Grand Total	160	268	108	0	**536**	0	52	664	0	**716**	4	**4**	0	568	100	0	**668**	**1924**
Approach (%)	29.85	50.00	20.15	0.00		0.00	7.26	92.74	0.00		100.00		0.00	85.03	14.97	0.00		
Total (%)	8.32	13.93	5.61	0.00	27.86	0.00	2.70	34.51	0.00	37.21	0.21	0.21	0.00	29.52	5.20	0.00	34.72	
P/Cycle	0	0	0	-	0	0	0	0	-	0	-	0	0	0	0	-	0	0
Cars	160	268	104	-	532	0	52	660	-	712	-	0	0	564	100	-	664	1908
Truck	0	0	4	-	4	0	0	4	-	4	-	0	0	4	0	-	4	12
P/Cycle (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	100.00	100.00	96.30	-	99.25	0.00	100.00	99.40	-	99.44	-	0.00	0.00	99.30	100.00	-	99.40	99.17
Truck (%)	0.00	0.00	3.70	-	0.75	0.00	0.00	0.60	-	0.56	-	0.00	0.00	0.70	0.00	-	0.60	0.62

Cleveland, TN
Classified Turn Movement Count

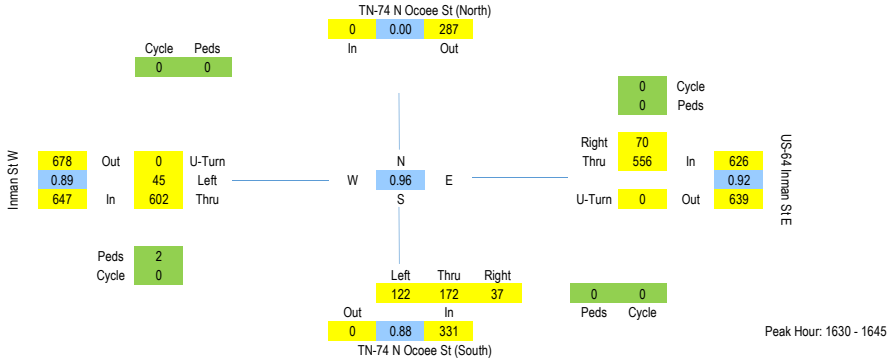
Site 3 of 7
TN-74 N Ocoee St (North)
US-64 Inman St E
TN-74 N Ocoee St (South)
Inman St W

Lat/Long
35.159238°, -84.875978°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Southbound		Westbound					Northbound					Eastbound						
	TN-74 N Ocoee St (North)		US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W						
TIME	Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total	Rolling Hour
1600 - 1615	0	0	0	118	19	0	137	34	42	15	0	91	0	22	145	1	168	396	1578
1615 - 1630	0	0	0	113	25	0	138	28	43	10	0	81	0	10	157	1	168	387	1599
1630 - 1645	0	0	0	146	24	0	170	35	52	7	0	94	0	8	136	0	144	408	1604
1645 - 1700	0	0	0	126	16	0	142	33	41	13	0	87	0	15	145	1	161	390	1577
Hourly Total	0	**0**	0	503	84	0	**587**	130	178	45	0	**353**	0	55	583	3	**641**	**1581**	-
1700 - 1715	0	0	0	146	14	0	160	28	39	8	0	75	0	12	169	1	182	417	1571
1715 - 1730	0	0	0	138	16	0	154	26	40	9	0	75	0	10	152	0	162	391	
1730 - 1745	0	0	0	133	10	1	144	24	30	8	0	62	0	8	168	0	176	382	
1745 - 1800	0	0	0	108	28	4	140	31	32	12	1	76	0	19	153	1	173	389	
Hourly Total	0	**0**	0	525	68	5	**598**	109	141	37	1	**288**	0	49	642	2	**693**	**1579**	
Grand Total	0	**0**	0	1028	152	5	**1185**	239	319	82	1	**641**	0	104	1225	5	**1334**	**3160**	
Approach (%)	0.00		0.00	86.75	12.83	0.42		37.29	49.77	12.79	0.16		0.00	7.80	91.83	0.37			
Total (%)	0.00	0.00	0.00	32.53	4.81	0.16	37.50	7.56	10.09	2.59	0.03	20.28	0.00	3.29	38.77	0.16	42.22		
P/Cycle	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0		
Cars	-	0	0	1012	152	-	1164	238	316	81	-	635	0	104	1211	-	1315		
Truck	-	0	0	16	0	-	16	1	3	1	-	5	0	0	14	-	14		
P/Cycle (%)	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	-	0.00	0.00	98.44	100.00	-	98.64	99.58	99.06	98.78	-	99.22	0.00	100.00	98.86	-	98.95		
Truck (%)	-	0.00	0.00	1.56	0.00	-	1.36	0.42	0.94	1.22	-	0.78	0.00	0.00	1.14	-	1.05		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound		Westbound					Northbound					Eastbound					
	TN-74 N Ocoee St (North)		US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W					
TIME	Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total
1630 - 1645	0	0	0	146	24	0	170	35	52	7	0	94	0	8	136	0	144	408
1645 - 1700	0	0	0	126	16	0	142	33	41	13	0	87	0	15	145	1	161	390
1700 - 1715	0	0	0	146	14	0	160	28	39	8	0	75	0	12	169	1	182	417
1715 - 1730	0	0	0	138	16	0	154	26	40	9	0	75	0	10	152	0	162	391
Grand Total	0	**0**	0	556	70	0	**626**	122	172	37	0	**331**	0	45	602	2	**649**	**1606**
Approach (%)	0.00		0.00	88.82	11.18	0.00		36.86	51.96	11.18	0.00		0.00	6.93	92.76	0.31		
Total (%)	0.00	0.00	0.00	34.62	4.36	0.00	38.98	7.60	10.71	2.30	0.00	20.61	0.00	2.80	37.48	0.12	40.41	
PHF	0%		92%					88%					89%					96%
			0%	95%	73%			87%	83%	71%			0%	75%	89%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Cars	0	0	0	548	70	0	618	121	170	36	0	327	0	45	595	2	642	1587
Truck	0	0	0	8	0	0	8	1	2	1	0	4	0	0	7	2	9	21
P/Cycle (%)	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.31	0.12
Cars (%)	-	0.00	0.00	98.56	100.00	-	98.72	99.18	98.84	97.30	-	98.79	0.00	100.00	98.84	-	99.23	98.82
Truck (%)	-	0.00	0.00	1.44	0.00	-	1.28	0.82	1.16	2.70	-	1.21	0.00	0.00	1.16	-	1.39	1.31

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound			Westbound					Northbound					Eastbound					
	TN-74 N Ocoee St (North)			US-64 Inman St E					TN-74 N Ocoee St (South)					Inman St W					
TIME		Peds 3a	App Total	U-Turn 3.1	Thru 3.2	Right 3.3	Peds 3b	App Total	Left 3.4	Thru 3.5	Right 3.6	Peds 3c	App Total	U-Turn 3.7	Left 3.8	Thru 3.9	Peds 3d	App Total	Int Total
Grand Total		0	**0**	0	584	56	0	**640**	112	156	32	0	**300**	0	48	676	4	**728**	**1668**
Approach (%)		0.00		0.00	91.25	8.75	0.00		37.33	52.00	10.67	0.00		0.00	6.59	92.86	0.55		
Total (%)		0.00	0.00	0.00	35.01	3.36	0.00	38.37	6.71	9.35	1.92	0.00	17.99	0.00	2.88	40.53	0.24	43.65	
P/Cycle		-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
Cars		-	0	0	576	56	-	632	112	152	32	-	296	0	48	672	-	720	1648
Truck		-	0	0	8	0	-	8	0	4	0	-	4	0	0	4	-	4	16
P/Cycle (%)		-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)		-	0.00	0.00	98.63	100.00	-	98.75	100.00	97.44	100.00	-	98.67	0.00	100.00	99.41	-	98.90	98.80
Truck (%)		-	0.00	0.00	1.37	0.00	-	1.25	0.00	2.56	0.00	-	1.33	0.00	0.00	0.59	-	0.55	0.96

Cleveland, TN
Classified Turn Movement Count

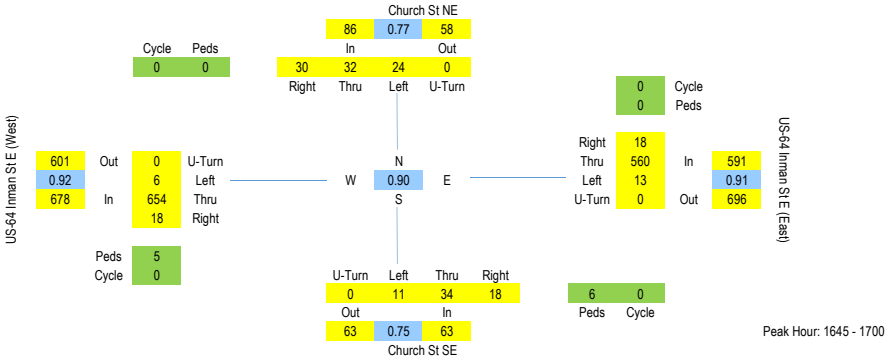
Site 4 of 7
Church St NE
US-64 Inman St E (East)
Church St SE
US-64 Inman St E (West)

Lat/Long
35.158875°, -84.875220°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



Peak Hour: 1645 - 1700

	Southbound						Westbound						Northbound						Eastbound							
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total	Hour
1600 - 1615	0	6	2	6	0	14	0	3	145	3	0	151	0	5	8	6	0	19	0	2	149	5	0	156	340	1348
1615 - 1630	0	5	8	7	0	20	0	3	121	4	0	128	0	6	6	7	1	20	0	1	159	2	0	162	330	1400
1630 - 1645	0	5	8	9	1	23	0	4	158	9	0	171	0	4	5	7	0	16	0	1	138	3	0	142	352	1408
1645 - 1700	0	7	7	4	0	18	0	1	139	2	0	142	0	1	9	3	0	13	0	5	144	6	0	155	328	1418
Hourly Total	0	23	25	26	1	**75**	0	11	563	18	0	**592**	0	16	28	23	1	**68**	0	9	590	16	0	**615**	**1350**	-
1700 - 1715	0	8	12	8	0	28	0	2	154	6	0	162	0	2	11	7	3	23	0	0	180	2	0	182	395	1418
1715 - 1730	0	8	6	9	0	23	0	3	128	4	0	135	0	6	8	4	2	20	0	1	155	5	0	161	339	
1730 - 1745	0	1	7	9	0	17	0	7	139	6	0	152	0	2	6	4	1	13	0	0	175	5	5	185	367	
1745 - 1800	0	3	5	3	0	11	0	4	134	2	0	140	0	0	7	3	0	10	0	2	163	2	1	168	329	
Hourly Total	0	20	30	29	0	**79**	0	16	555	18	0	**589**	0	10	32	18	6	**66**	0	3	673	14	6	**696**	**1430**	
Grand Total	0	43	55	55	1	**154**	0	27	1118	36	0	**1181**	0	26	60	41	7	**134**	0	12	1263	30	6	**1311**	**2780**	
Approach (%)	0.00	27.92	35.71	35.71	0.65		0.00	2.29	94.67	3.05	0.00		0.00	19.40	44.78	30.60	5.22		0.00	0.92	96.34	2.29	0.46			
Total (%)	0.00	1.55	1.98	1.98	0.04	5.54	0.00	0.97	40.22	1.29	0.00	42.48	0.00	0.94	2.16	1.47	0.25	4.82	0.00	0.43	45.43	1.08	0.22	47.16		
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0		
Cars	0	41	55	54	-	150	0	27	1104	35	-	1166	0	25	60	40	-	125	0	12	1248	30	-	1290		
Truck	0	2	0	1	-	3	0	0	14	1	-	15	0	1	0	1	-	2	0	0	15	0	-	15		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	95.35	100.00	98.18	-	98.04	0.00	100.00	98.75	97.22	-	98.73	0.00	96.15	100.00	97.56	-	98.43	0.00	100.00	98.81	100.00	-	98.85		
Truck (%)	0.00	4.65	0.00	1.82	-	1.96	0.00	0.00	1.25	2.78	-	1.27	0.00	3.85	0.00	2.44	-	1.57	0.00	0.00	1.19	0.00	-	1.15		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total
1645 - 1700	0	7	7	4	0	18	0	1	139	2	0	142	0	1	9	3	0	13	0	5	144	6	0	155	328
1700 - 1715	0	8	12	8	0	28	0	2	154	6	0	162	0	2	11	7	3	23	0	0	180	2	0	182	395
1715 - 1730	0	8	6	9	0	23	0	3	128	4	0	135	0	6	8	4	2	20	0	1	155	5	0	161	339
1730 - 1745	0	1	7	9	0	17	0	7	139	6	0	152	0	2	6	4	1	13	0	0	175	5	5	185	367
Grand Total	0	24	32	30	0	**86**	0	13	560	18	0	**591**	0	11	34	18	6	**69**	0	6	654	18	5	**683**	**1429**
Approach (%)	0.00	27.91	37.21	34.88	0.00		0.00	2.20	94.75	3.05	0.00		0.00	15.94	49.28	26.09	8.70		0.00	0.88	95.75	2.64	0.73		
Total (%)	0.00	1.68	2.24	2.10	0.00	6.02	0.00	0.91	39.19	1.26	0.00	41.36	0.00	0.77	2.38	1.26	0.42	4.83	0.00	0.42	45.77	1.26	0.35	47.80	
PHF	77%						91%						75%						92%						90%
	0%	75%	67%	83%			0%	46%	91%	75%			0%	46%	77%	64%			0%	30%	91%	75%			
P/Cycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	5	5	11
Cars	0	23	32	29	0	84	0	13	554	17	0	584	0	11	34	18	6	69	0	6	648	18	5	677	1414
Truck	0	1	0	1	0	2	0	0	6	1	0	7	0	0	0	0	6	6	0	0	6	0	5	11	26
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	9.52	0.00	0.00	0.00	0.00	-	0.74	0.77
Cars (%)	0.00	95.83	100.00	96.67	-	97.67	0.00	100.00	98.93	94.44	-	98.82	0.00	100.00	100.00	100.00	-	109.52	0.00	100.00	99.08	100.00	-	99.85	98.95
Truck (%)	0.00	4.17	0.00	3.33	-	2.33	0.00	0.00	1.07	5.56	-	1.18	0.00	0.00	0.00	0.00	-	9.52	0.00	0.00	0.92	0.00	-	1.62	1.82

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Church St NE						US-64 Inman St E (East)						Church St SE						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	4.1	4.2	4.3	4.4	4a	Total	4.5	4.6	4.7	4.8	4b	Total	4.9	4.10	4.11	4.12	4c	Total	4.13	4.14	4.15	4.16	4d	Total	Total
Grand Total	0	32	48	32	0	**112**	0	8	616	24	0	**648**	0	8	44	28	12	**92**	0	0	720	8	0	**728**	**1580**
Approach (%)	0.00	28.57	42.86	28.57	0.00		0.00	1.23	95.06	3.70	0.00		0.00	8.70	47.83	30.43	13.04		0.00	0.00	98.90	1.10	0.00		
Total (%)	0.00	2.03	3.04	2.03	0.00	7.09	0.00	0.51	38.99	1.52	0.00	41.01	0.00	0.51	2.78	1.77	0.76	5.82	0.00	0.00	45.57	0.51	0.00	46.08	
P/Cycle	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Cars	0	28	48	32	-	108	0	8	612	20	-	640	0	8	44	28	-	80	0	0	716	8	-	724	1552
Truck	0	4	0	0	-	4	0	0	4	4	-	8	0	0	0	0	-	0	0	0	4	0	-	4	16
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00
Cars (%)	0.00	87.50	100.00	100.00	-	96.43	0.00	100.00	99.35	83.33	-	98.77	0.00	100.00	100.00	100.00	-	86.96	0.00	0.00	99.44	100.00	-	99.45	98.23
Truck (%)	0.00	12.50	0.00	0.00	-	3.57	0.00	0.00	0.65	16.67	-	1.23	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.56	0.00	-	0.55	1.01

Cleveland, TN
Classified Turn Movement Count

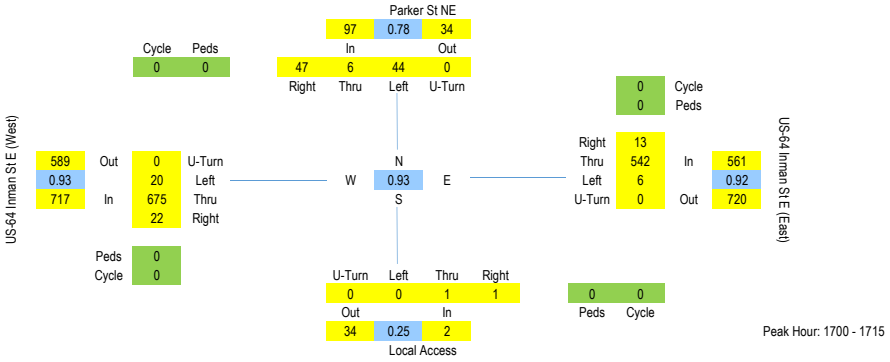
Site 5 of 7
Parker St NE
US-64 Inman St E (East)
Local Access
US-64 Inman St E (West)

Lat/Long
35.158232°, -84.873883°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Southbound						Westbound						Northbound						Eastbound							
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)							
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int	Rolling
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total	Hour
1600 - 1615	0	2	0	9	0	11	0	0	152	5	0	157	0	0	0	0	1	1	0	2	153	1	0	156	325	1271
1615 - 1630	0	4	0	10	0	14	0	0	110	5	0	115	0	0	0	0	2	2	0	2	161	0	0	163	294	1319
1630 - 1645	0	15	0	10	3	28	0	0	160	5	0	165	0	1	0	0	0	1	0	7	151	1	0	159	353	1341
1645 - 1700	0	6	0	11	0	17	0	0	133	7	0	140	0	0	0	1	0	1	0	2	145	0	0	147	305	1351
Hourly Total	0	27	0	40	3	**70**	0	0	555	22	0	**577**	0	1	0	1	3	**5**	0	13	610	2	0	**625**	**1277**	-
1700 - 1715	0	13	0	14	0	27	0	3	147	3	0	153	0	0	0	0	0	0	0	2	189	1	0	192	372	1377
1715 - 1730	0	8	1	11	0	20	0	0	121	2	0	123	0	0	0	0	0	0	0	3	165	3	0	171	314	
1730 - 1745	0	15	2	14	0	31	0	0	140	3	0	143	0	0	1	1	0	2	0	5	171	8	0	184	360	
1745 - 1800	0	8	3	8	0	19	0	3	134	5	0	142	0	0	0	0	0	0	0	10	150	10	0	170	331	
Hourly Total	0	44	6	47	0	**97**	0	6	542	13	0	**561**	0	0	1	1	0	**2**	0	20	675	22	0	**717**	**1377**	
Grand Total	0	71	6	87	3	**167**	0	6	1097	35	0	**1138**	0	1	1	2	3	**7**	0	33	1285	24	0	**1342**	**2654**	
Approach (%)	0.00	42.51	3.59	52.10	1.80		0.00	0.53	96.40	3.08	0.00		0.00	14.29	14.29	28.57	42.86		0.00	2.46	95.75	1.79	0.00			
Total (%)	0.00	2.68	0.23	3.28	0.11	6.29	0.00	0.23	41.33	1.32	0.00	42.88	0.00	0.04	0.04	0.08	0.11	0.26	0.00	1.24	48.42	0.90	0.00	50.57		
P/Cycle	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0		
Cars	0	67	6	84	-	157	0	4	1085	33	-	1122	0	1	1	2	-	4	0	33	1267	24	-	1324		
Truck	0	4	0	3	-	7	0	0	12	2	-	14	0	0	0	0	-	0	0	0	18	0	-	18		
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	33.33	0.00	0.00	-	0.18	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	94.37	100.00	96.55	-	95.73	0.00	66.67	98.91	94.29	-	98.59	0.00	100.00	100.00	100.00	-	100.00	0.00	100.00	98.60	100.00	-	98.66		
Truck (%)	0.00	5.63	0.00	3.45	-	4.27	0.00	0.00	1.09	5.71	-	1.23	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	1.40	0.00	-	1.34		

Peak Rolling Hour Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total
1700 - 1715	0	13	0	14	0	27	0	3	147	3	0	153	0	0	0	0	0	0	0	2	189	1	0	192	372
1715 - 1730	0	8	1	11	0	20	0	0	121	2	0	123	0	0	0	0	0	0	0	3	165	3	0	171	314
1730 - 1745	0	15	2	14	0	31	0	0	140	3	0	143	0	0	1	1	0	2	0	5	171	8	0	184	360
1745 - 1800	0	8	3	8	0	19	0	3	134	5	0	142	0	0	0	0	0	0	0	10	150	10	0	170	331
Grand Total	0	44	6	47	0	**97**	0	6	542	13	0	**561**	0	0	1	1	0	**2**	0	20	675	22	0	**717**	**1377**
Approach (%)	0.00	45.36	6.19	48.45	0.00		0.00	1.07	96.61	2.32	0.00		0.00	0.00	50.00	50.00	0.00		0.00	2.79	94.14	3.07	0.00		
Total (%)	0.00	3.20	0.44	3.41	0.00	7.04	0.00	0.44	39.36	0.94	0.00	40.74	0.00	0.00	0.07	0.07	0.00	0.15	0.00	1.45	49.02	1.60	0.00	52.07	
PHF	78%						92%						25%						93%						93%
	0%	73%	50%	84%			0%	50%	92%	65%			0%	0%	25%	25%			0%	50%	89%	55%			
P/Cycle	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Cars	0	40	6	45	0	91	0	4	538	13	0	555	0	0	1	1	0	2	0	20	670	22	0	712	1360
Truck	0	4	0	2	0	6	0	0	4	0	0	4	0	0	0	0	0	0	0	0	5	0	0	5	15
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	33.33	0.00	0.00	-	0.36	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.15
Cars (%)	0.00	90.91	100.00	95.74	-	93.81	0.00	66.67	99.26	100.00	-	98.93	0.00	0.00	100.00	100.00	-	100.00	0.00	100.00	99.26	100.00	-	99.30	98.77
Truck (%)	0.00	9.09	0.00	4.26	-	6.19	0.00	0.00	0.74	0.00	-	0.71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.74	0.00	-	0.70	1.09

Peak Rolling 15min Flow Rates
Classification: ALL

	Southbound						Westbound						Northbound						Eastbound						
	Parker St NE						US-64 Inman St E (East)						Local Access						US-64 Inman St E (West)						
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	Int
TIME	5.1	5.2	5.3	5.4	5a	Total	5.5	5.6	5.7	5.8	5b	Total	5.9	5.10	5.11	5.12	5c	Total	5.13	5.14	5.15	5.16	5d	Total	Total
Grand Total	0	52	0	56	0	**108**	0	12	588	12	0	**612**	0	0	0	0	0	**0**	0	8	756	4	0	**768**	**1488**
Approach (%)	0.00	48.15	0.00	51.85	0.00		0.00	1.96	96.08	1.96	0.00		0.00	0.00	0.00	0.00	0.00		0.00	1.04	98.44	0.52	0.00		
Total (%)	0.00	3.49	0.00	3.76	0.00	7.26	0.00	0.81	39.52	0.81	0.00	41.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	50.81	0.27	0.00	51.61	
P/Cycle	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	4
Cars	0	52	0	56	-	108	0	8	584	12	-	604	0	0	0	0	-	0	0	8	748	4	-	760	1472
Truck	0	0	0	0	-	0	0	0	4	0	-	4	0	0	0	0	-	0	0	0	8	0	-	8	12
P/Cycle (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	33.33	0.00	0.00	-	0.65	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.27
Cars (%)	0.00	100.00	0.00	100.00	-	100.00	0.00	66.67	99.32	100.00	-	98.69	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	98.94	100.00	-	98.96	98.92
Truck (%)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.68	0.00	-	0.65	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	1.06	0.00	-	1.04	0.81

Cleveland, TN
Classified Turn Movement Count

Site 6 of 7

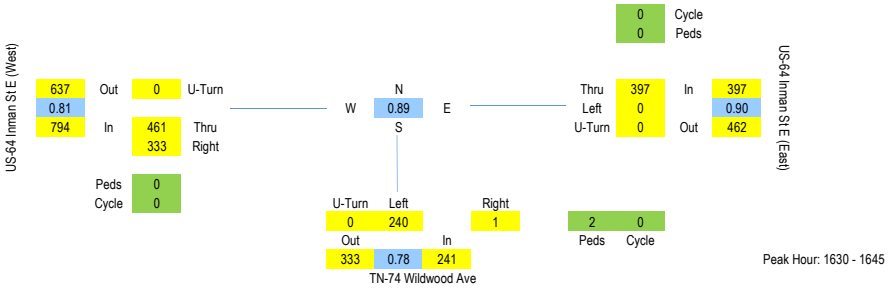
US-64 Inman St E (East)
TN-74 Wildwood Ave
US-64 Inman St E (West)

Lat/Long
35.156509°, -84.870143°

Date
06 June 2019

Weather
Cloudy
74°F

1600 - 1800 (Weekday 2h Session) (06-06-2019)
Classification: ALL



	Westbound					Northbound					Eastbound						
	US-64 Inman St E (East)					TN-74 Wildwood Ave					US-64 Inman St E (West)						
TIME	U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total	Rolling Hour
1600 - 1615	0	0	102	0	102	0	62	0	0	62	0	98	72	0	170	334	1351
1615 - 1630	0	0	83	0	83	0	48	1	0	49	0	101	74	0	175	307	1417
1630 - 1645	0	0	110	0	110	0	78	0	0	78	0	108	87	0	195	383	1432
1645 - 1700	0	0	104	0	104	0	52	0	0	52	0	97	74	0	171	327	1393
Hourly Total	0	0	399	0	**399**	0	240	1	0	**241**	0	404	307	0	**711**	**1351**	-
1700 - 1715	0	0	99	0	99	0	55	0	1	56	0	150	96	0	246	401	1391
1715 - 1730	0	0	84	0	84	0	55	1	1	57	0	106	76	0	182	323	
1730 - 1745	0	0	98	0	98	0	55	0	0	55	0	108	83	0	191	344	
1745 - 1800	0	0	99	0	99	0	53	1	0	54	0	89	83	0	172	325	
Hourly Total	0	0	380	0	**380**	0	218	2	2	**222**	0	453	338	0	**791**	**1393**	
Grand Total	0	0	779	0	**779**	0	458	3	2	**463**	0	857	645	0	**1502**	**2744**	
Approach (%)	0.00	0.00	100.00	0.00		0.00	98.92	0.65	0.43		0.00	57.06	42.94	0.00			
Total (%)	0.00	0.00	28.39	0.00	28.39	0.00	16.69	0.11	0.07	16.87	0.00	31.23	23.51	0.00	54.74		
P/Cycle	0	0	4	-	4	0	0	0	-	0	0	0	0	-	0		
Cars	0	0	760	-	760	0	457	3	-	460	0	843	635	-	1478		
Truck	0	0	15	-	15	0	1	0	-	1	0	14	10	-	24		
P/Cycle (%)	0.00	0.00	0.51	-	0.51	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00		
Cars (%)	0.00	0.00	97.56	-	97.56	0.00	99.78	100.00	-	99.78	0.00	98.37	98.45	-	98.40		
Truck (%)	0.00	0.00	1.93	-	1.93	0.00	0.22	0.00	-	0.22	0.00	1.63	1.55	-	1.60		

Peak Rolling Hour Flow Rates
Classification: ALL

	Westbound					Northbound					Eastbound					
	US-64 Inman St E (East)					TN-74 Wildwood Ave					US-64 Inman St E (West)					
TIME	U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total
1630 - 1645	0	0	110	0	110	0	78	0	0	78	0	108	87	0	195	383
1645 - 1700	0	0	104	0	104	0	52	0	0	52	0	97	74	0	171	327
1700 - 1715	0	0	99	0	99	0	55	0	1	56	0	150	96	0	246	401
1715 - 1730	0	0	84	0	84	0	55	1	1	57	0	106	76	0	182	323
Grand Total	0	0	397	0	**397**	0	240	1	2	**243**	0	461	333	0	**794**	**1434**
Approach (%)	0.00	0.00	100.00	0.00		0.00	98.77	0.41	0.82		0.00	58.06	41.94	0.00		
Total (%)	0.00	0.00	27.68	0.00	27.68	0.00	16.74	0.07	0.14	16.95	0.00	32.15	23.22	0.00	55.37	
PHF	90%					78%					81%					89%
	0%	0%	90%			0%	77%	25%			0%	77%	87%			
P/Cycle	0	0	3	0	3	0	0	0	2	2	0	0	0	0	0	5
Cars	0	0	390	0	390	0	240	1	2	243	0	452	330	0	782	1415
Truck	0	0	4	0	4	0	0	0	2	2	0	9	3	0	12	18
P/Cycle (%)	0.00	0.00	0.76	-	0.76	0.00	0.00	0.00	-	0.83	0.00	0.00	0.00	-	0.00	0.35
Cars (%)	0.00	0.00	98.24	-	98.24	0.00	100.00	100.00	-	100.83	0.00	98.05	99.10	-	98.49	98.68
Truck (%)	0.00	0.00	1.01	-	1.01	0.00	0.00	0.00	-	0.83	0.00	1.95	0.90	-	1.51	1.26

Peak Rolling 15min Flow Rates
Classification: ALL

	Westbound					Northbound					Eastbound					
	US-64 Inman St E (East)					TN-74 Wildwood Ave					US-64 Inman St E (West)					
TIME	U-Turn 6.1	Left 6.2	Thru 6.3	Peds 6b	App Total	U-Turn 6.4	Left 6.5	Right 6.6	Peds 6c	App Total	U-Turn 6.7	Thru 6.8	Right 6.9	Peds 6d	App Total	Int Total
Grand Total	0	0	396	0	**396**	0	220	0	4	**224**	0	600	384	0	**984**	**1604**
Approach (%)	0.00	0.00	100.00	0.00		0.00	98.21	0.00	1.79		0.00	60.98	39.02	0.00		
Total (%)	0.00	0.00	24.69	0.00	24.69	0.00	13.72	0.00	0.25	13.97	0.00	37.41	23.94	0.00	61.35	
P/Cycle	0	0	4	-	4	0	0	0	-	0	0	0	0	-	0	4
Cars	0	0	392	-	392	0	220	0	-	220	0	596	380	-	976	1588
Truck	0	0	0	-	0	0	0	0	-	0	0	4	4	-	8	8
P/Cycle (%)	0.00	0.00	1.01	-	1.01	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.25
Cars (%)	0.00	0.00	98.99	-	98.99	0.00	100.00	0.00	-	98.21	0.00	99.33	98.96	-	99.19	99.00
Truck (%)	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.67	1.04	-	0.81	0.50

Leg	Harrison Pike EB					Inman St WB					Keith St northbound					Keith St southbound						
Direction	Eastbound					Westbound					Northbound					Southbound						
Start Time	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	**Int Total**
2018-04-19 07:15:00	15	97	11	0	**123**	23	62	43	0	**128**	31	101	16	0	**148**	32	78	19	0	**129**	**528**
2018-04-19 07:30:00	62	109	21	0	**192**	55	76	46	0	**177**	28	93	27	0	**148**	35	74	22	0	**131**	**648**
2018-04-19 07:45:00	52	133	12	0	**197**	47	103	67	0	**217**	30	119	28	0	**177**	61	118	48	0	**227**	**818**
2018-04-19 08:00:00	36	133	13	0	**182**	43	97	52	0	**192**	25	90	26	0	**141**	53	92	24	0	**169**	**684**
Grand Total	165	472	57	0	**694**	168	338	208	0	**714**	114	403	97	0	**614**	181	362	113	0	**656**	**2678**
% Approach	23.8%	68.0%	8.2%	0.0%		23.5%	47.3%	29.1%	0.0%		18.6%	65.6%	15.8%	0.0%		27.6%	55.2%	17.2%	0.0%		
% Total	6.2%	17.6%	2.1%	0.0%	**25.9%**	6.3%	12.6%	7.8%	0.0%	**26.7%**	4.3%	15.0%	3.6%	0.0%	**22.9%**	6.8%	13.5%	4.2%	0.0%	**24.5%**	
PHF (7:15 AM - 8:15 AM)	0.665	0.887	0.679	0	**0.881**	0.764	0.82	0.776	0	**0.823**	0.919	0.847	0.866	0	**0.867**	0.742	0.767	0.589	0	**0.722**	**0.818**
Lights and Motorcycles	158	463	54	0	**675**	164	332	203	0	**699**	106	382	94	0	**582**	175	355	112	0	**642**	**2598**
% Lights and Motorcycles	95.8%	98.1%	94.7%	0.0%	**97.3%**	97.6%	98.2%	97.6%	0.0%	**97.9%**	93.0%	94.8%	96.9%	0.0%	**94.8%**	96.7%	98.1%	99.1%	0.0%	**97.9%**	**97.0%**
Heavy	7	9	3	0	**19**	4	6	5	0	**15**	8	21	3	0	**32**	6	7	1	0	**14**	**80**
% Heavy	4.2%	1.9%	5.3%	0.0%	**2.7%**	2.4%	1.8%	2.4%	0.0%	**2.1%**	7.0%	5.2%	3.1%	0.0%	**5.2%**	3.3%	1.9%	0.9%	0.0%	**2.1%**	**3.0%**

Leg	Harrison Pike EB					Inman St WB					Keith St northbound					Keith St southbound						
Direction	Eastbound					Westbound					Northbound					Southbound						
Start Time	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	Left	Thru	Right	U-Turn	**App Total**	**Int Total**
2018-04-19 15:30:00	45	127	14	0	**186**	47	134	90	0	**271**	55	140	22	0	**217**	73	102	38	0	**213**	**887**
2018-04-19 15:45:00	70	135	8	0	**213**	27	97	80	0	**204**	67	153	22	0	**242**	79	109	40	0	**228**	**887**
2018-04-19 16:00:00	42	95	15	0	**152**	30	98	61	0	**189**	45	150	31	1	**227**	76	107	40	0	**223**	**791**
2018-04-19 16:15:00	31	93	12	0	**136**	31	89	79	0	**199**	42	131	22	0	**195**	72	137	44	0	**253**	**783**
Grand Total	188	450	49	0	**687**	135	418	310	0	**863**	209	574	97	1	**881**	300	455	162	0	**917**	**3348**
% Approach	27.4%	65.5%	7.1%	0.0%		15.6%	48.4%	35.9%	0.0%		23.7%	65.2%	11.0%	0.1%		32.7%	49.6%	17.7%	0.0%		
% Total	5.6%	13.4%	1.5%	0.0%	**20.5%**	4.0%	12.5%	9.3%	0.0%	**25.8%**	6.2%	17.1%	2.9%	0.0%	**26.3%**	9.0%	13.6%	4.8%	0.0%	**27.4%**	
PHF (3:30 PM - 4:30 PM)	0.671	0.833	0.817	0	**0.806**	0.718	0.78	0.861	0	**0.796**	0.78	0.938	0.782	0.25	**0.91**	0.949	0.83	0.92	0	**0.906**	**0.944**
Lights and Motorcycles	184	443	48	0	**675**	131	413	300	0	**844**	201	558	93	1	**853**	297	441	160	0	**898**	**3270**
% Lights and Motorcycles	97.9%	98.4%	98.0%	0.0%	**98.3%**	97.0%	98.8%	96.8%	0.0%	**97.8%**	96.2%	97.2%	95.9%	100.0%	**96.8%**	99.0%	96.9%	98.8%	0.0%	**97.9%**	**97.7%**
Heavy	4	7	1	0	**12**	4	5	10	0	**19**	8	16	4	0	**28**	3	14	2	0	**19**	**78**
% Heavy	2.1%	1.6%	2.0%	0.0%	**1.7%**	3.0%	1.2%	3.2%	0.0%	**2.2%**	3.8%	2.8%	4.1%	0.0%	**3.2%**	1.0%	3.1%	1.2%	0.0%	**2.1%**	**2.3%**

Leg	West							East							South							North							
Direction	Eastbound							Westbound							Northbound							Southbound							
Start Time	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	**Int Total**
2016-09-07 07:30:00	1	73	3	0	**77**	0	0	28	195	17	0	**240**	0	0	1	1	6	0	**8**	1	1	6	2	1	0	**9**	0	0	**334**
2016-09-07 07:45:00	2	97	2	0	**101**	0	0	31	237	28	0	**296**	0	0	4	6	7	0	**17**	1	1	7	8	2	0	**17**	0	0	**431**
2016-09-07 08:00:00	0	102	0	0	**102**	0	0	19	160	19	0	**198**	0	0	1	3	15	0	**19**	0	0	12	3	1	0	**16**	0	0	**335**
2016-09-07 08:15:00	0	83	1	0	**84**	0	0	13	144	26	0	**183**	0	0	1	1	9	0	**11**	0	0	6	5	3	0	**14**	0	0	**292**
Grand Total	3	355	6	0	**364**	0	0	91	736	90	0	**917**	0	0	7	11	37	0	**55**	2	2	31	18	7	0	**56**	0	0	**1392**
% Approach	0.8%	97.5%	1.6%	0.0%				9.9%	80.3%	9.8%	0.0%				12.7%	20.0%	67.3%	0.0%				55.4%	32.1%	12.5%	0.0%				
% Total	0.2%	25.5%	0.4%	0.0%	**26.1%**			6.5%	52.9%	6.5%	0.0%	**65.9%**			0.5%	0.8%	2.7%	0.0%	**4.0%**			2.2%	1.3%	0.5%	0.0%	**4.0%**			
PHF (Sep 07 2016 7:30AM - 8:30 AM)	0.375	0.87	0.5	0	**0.892**			0.734	0.776	0.804	0	**0.774**			0.438	0.458	0.617	0	**0.724**			0.646	0.563	0.583	0	**0.824**			**0.807**
Lights and Motorcycles	3	348	2	0	**353**			86	721	89	0	**896**			4	10	34	0	**48**			31	16	6	0	**53**			**1350**
% Lights and Motorcycles	100.0%	98.0%	33.3%	0.0%	**97.0%**			94.5%	98.0%	98.9%	0.0%	**97.7%**			57.1%	90.9%	91.9%	0.0%	**87.3%**			100.0%	88.9%	85.7%	0.0%	**94.6%**			**97.0%**
Heavy	0	7	4	0	**11**			5	15	1	0	**21**			3	1	3	0	**7**			0	2	1	0	**3**			**42**
% Heavy	0.0%	2.0%	66.7%	0.0%	**3.0%**			5.5%	2.0%	1.1%	0.0%	**2.3%**			42.9%	9.1%	8.1%	0.0%	**12.7%**			0.0%	11.1%	14.3%	0.0%	**5.4%**			**3.0%**
Bicycles on Road	0	0	0	0	**0**			0	0	0	0	**0**			0	0	0	0	**0**			0	0	0	0	**0**			**0**
% Bicycles on Road	0.0%	0.0%	0.0%	0.0%	**0.0%**			0.0%	0.0%	0.0%	0.0%	**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						2	2						0	0	
% Pedestrians						0.0%	0.0%						0.0%	0.0%						100.0%	100.0%						0.0%	0.0%	

Leg	West							East							South							North						
Direction	Eastbound							Westbound							Northbound							Southbound						
Start Time	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	Left	Thru	Right	U-Turn	**App Total**	Peds CW	Peds CCW	**Int Total**
2016-09-07 16:15:00	5	161	3	0	**169**	0	0	10	129	10	0	**149**	0	0	3	6	16	0	**25**	0	0	15	4	1	0	**20**	0	0	**363**
2016-09-07 16:30:00	0	174	0	0	**174**	0	0	4	171	17	0	**192**	0	0	5	1	24	0	**30**	0	0	21	7	1	0	**29**	0	0	**425**
2016-09-07 16:45:00	0	161	3	0	**164**	0	0	2	125	9	0	**136**	0	0	1	5	16	0	**22**	0	0	16	2	3	0	**21**	0	0	**343**
2016-09-07 17:00:00	3	239	1	0	**243**	0	0	9	117	17	0	**143**	0	0	6	4	26	0	**36**	0	0	13	4	2	0	**19**	0	0	**441**
Grand Total	8	735	7	0	**750**	0	0	25	542	53	0	**620**	0	0	15	16	82	0	**113**	0	0	65	17	7	0	**89**	0	0	**1572**
% Approach	1.1%	98.0%	0.9%	0.0%				4.0%	87.4%	8.5%	0.0%				13.3%	14.2%	72.6%	0.0%				73.0%	19.1%	7.9%	0.0%				
% Total	0.5%	46.8%	0.4%	0.0%	**47.7%**			1.6%	34.5%	3.4%	0.0%	**39.4%**			1.0%	1.0%	5.2%	0.0%	**7.2%**			4.1%	1.1%	0.4%	0.0%	**5.7%**			
PHF (Sep 07 2016 4:15PM - 5:15 PM)	0.4	0.769	0.583	0	**0.772**			0.625	0.792	0.779	0	**0.807**			0.625	0.667	0.788	0	**0.785**			0.774	0.607	0.583	0	**0.767**			**0.891**
Lights and Motorcycles	8	730	4	0	**742**			21	537	53	0	**611**			11	15	79	0	**105**			65	14	7	0	**86**			**1544**
% Lights and Motorcycles	100.0%	99.3%	57.1%	0.0%	**98.9%**			84.0%	99.1%	100.0%	0.0%	**98.5%**			73.3%	93.8%	96.3%	0.0%	**92.9%**			100.0%	82.4%	100.0%	0.0%	**96.6%**			**98.2%**
Heavy	0	5	3	0	**8**			4	5	0	0	**9**			4	1	3	0	**8**			0	3	0	0	**3**			**28**
% Heavy	0.0%	0.7%	42.9%	0.0%	**1.1%**			16.0%	0.9%	0.0%	0.0%	**1.5%**			26.7%	6.3%	3.7%	0.0%	**7.1%**			0.0%	17.6%	0.0%	0.0%	**3.4%**			**1.8%**
Bicycles on Road	0	0	0	0	**0**			0	0	0	0	**0**			0	0	0	0	**0**			0	0	0	0	**0**			**0**
% Bicycles on Road	0.0%	0.0%	0.0%	0.0%	**0.0%**			0.0%	0.0%	0.0%	0.0%	**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						0	0						0	0	
% Pedestrians						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%	

SR 040	
Station # 066	
Year	**AADT**
2017	13,308
2016	16,147
2015	16,057
2014	14,769
2013	15,558
2012	17,931
2011	17,969
2010	15,913

Route 4390	
Station # 073	
Year	**AADT**
2017	16,320
2016	15,492
2015	15,551
2014	15,670
2013	14,732
2012	15,220
2011	15,267
2010	13,937

Traffic Report

Bradley County (6) - Route: 04390, Special Case: 0-None , Log Mile 0 to 0.42

COUNTY: BRADLEY

ROUTE	SC	CO SQ	BEG LOG MILE	END LOG MILE	YR OF TRAFFIC	ANNUAL AVERAGE DAILY TRAFFIC	PEAK HOUR %	DESIGN HOUR VOLUME	DIRECT DIST %	% PASS CARS	% SINGLE UNIT TRUCKS	% MULTI UNIT TRUCKS	CYCLE COUNTS STATION NBR	CYCLE COUNTS STATION COUNTY	CLASS COUNTS STATION NBR	CLASS COUNTS STATION COUNTY	IS CLASS COUNT?
04390	0	1	0.000	0.420	2018	14980	9	11	65	99	1	0	73	6	152C	6	NO

This report was generated by E-TRIMS

Traffic Report

Bradley County (6) - Route: SR040, Special Case: 0-None , Log Mile 0.68 to 1.4

COUNTY: BRADLEY

ROUTE	SC	CO SQ	BEG LOG MILE	END LOG MILE	YR OF TRAFFIC	ANNUAL AVERAGE DAILY TRAFFIC	PEAK HOUR %	DESIGN HOUR VOLUME	DIRECT DIST %	% PASS CARS	% SINGLE UNIT TRUCKS	% MULTI UNIT TRUCKS	CYCLE COUNTS STATION NBR	CYCLE COUNTS STATION COUNTY	CLASS COUNTS STATION NBR	CLASS COUNTS STATION COUNTY	IS CLASS COUNT?
SR040	0	1	0.540	0.680	2018	5250	10	12	100	93	4	3	156	6	057C	6	NO
SR040	0	1	0.680	1.050	2018	15260	9	11	65	98	1	1	66	6	057C	6	NO
SR040	0	1	1.050	2.400	2018	9900	9	11	65	97	2	1	109	6	057C	6	NO

This report was generated by E-TRIMS

Appendix C

Capacity Analysis

Existing Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	472	57	168	338	208	114	403	97	181	362	113
Future Volume (vph)	165	472	57	168	338	208	114	403	97	181	362	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3482		1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3482		1770	3539	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	513	62	183	367	226	124	438	105	197	393	123
RTOR Reduction (vph)	0	12	0	0	0	176	0	0	77	0	0	83
Lane Group Flow (vph)	179	563	0	183	367	50	124	438	28	197	393	40
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	9.4	16.6		9.4	16.6	16.6	6.8	20.3	20.3	10.7	24.2	24.2
Effective Green, g (s)	9.4	16.6		9.4	16.6	16.6	6.8	20.3	20.3	10.7	24.2	24.2
Actuated g/C Ratio	0.13	0.22		0.13	0.22	0.22	0.09	0.27	0.27	0.14	0.32	0.32
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	221	770		221	783	350	160	957	428	252	1141	510
v/s Ratio Prot	0.10	c0.16		c0.10	0.10		0.07	c0.12		c0.11	c0.11	
v/s Ratio Perm						0.03			0.02			0.03
v/c Ratio	0.81	0.73		0.83	0.47	0.14	0.78	0.46	0.07	0.78	0.34	0.08
Uniform Delay, d1	31.9	27.1		32.0	25.4	23.5	33.4	22.8	20.3	31.0	19.4	17.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.3	3.6		21.8	0.4	0.2	20.6	1.6	0.3	14.5	0.8	0.3
Delay (s)	51.2	30.7		53.8	25.8	23.7	53.9	24.3	20.6	45.6	20.2	17.9
Level of Service	D	C		D	C	C	D	C	C	D	C	B
Approach Delay (s)		35.6			31.8			29.3			26.8	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	450	49	135	418	310	209	574	97	300	455	162
Future Volume (vph)	188	450	49	135	418	310	209	574	97	300	455	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3487		1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3487		1770	3539	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	489	53	147	454	337	227	624	105	326	495	176
RTOR Reduction (vph)	0	9	0	0	0	274	0	0	78	0	0	123
Lane Group Flow (vph)	204	533	0	147	454	63	227	624	27	326	495	53
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	12.9	19.3		10.4	16.8	16.8	15.4	23.0	23.0	19.3	26.9	26.9
Effective Green, g (s)	12.9	19.3		10.4	16.8	16.8	15.4	23.0	23.0	19.3	26.9	26.9
Actuated g/C Ratio	0.14	0.21		0.12	0.19	0.19	0.17	0.26	0.26	0.21	0.30	0.30
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	253	747		204	660	295	302	904	404	379	1057	473
v/s Ratio Prot	c0.12	c0.15		0.08	0.13		0.13	c0.18		c0.18	c0.14	
v/s Ratio Perm						0.04			0.02			0.03
v/c Ratio	0.81	0.71		0.72	0.69	0.21	0.75	0.69	0.07	0.86	0.47	0.11
Uniform Delay, d1	37.3	32.8		38.4	34.2	31.0	35.5	30.3	25.4	34.1	25.7	22.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.9	3.2		11.8	3.0	0.4	10.1	4.3	0.3	17.7	1.5	0.5
Delay (s)	54.2	36.0		50.2	37.1	31.4	45.6	34.6	25.7	51.7	27.2	23.4
Level of Service	D	D		D	D	C	D	C	C	D	C	C
Approach Delay (s)		41.0			37.1			36.2			34.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	410	7	8	501	19	7	3	7	3	2	4
Future Volume (Veh/h)	1	410	7	8	501	19	7	3	7	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		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
Hourly flow rate (vph)	1	446	8	9	545	21	8	3	8	3	2	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					783							
pX, platoon unblocked												
vC, conflicting volume	566			454			748	1036	227	808	1030	283
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	566			454			748	1036	227	808	1030	283
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	99	99	99	99	99
cM capacity (veh/h)	1002			1103			295	228	776	265	230	714

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	224	231	282	294	19	9
Volume Left	1	0	9	0	8	3
Volume Right	0	8	0	21	8	4
cSH	1002	1700	1103	1700	376	351
Volume to Capacity	0.00	0.14	0.01	0.17	0.05	0.03
Queue Length 95th (ft)	0	0	1	0	4	2
Control Delay (s)	0.0	0.0	0.3	0.0	15.1	15.5
Lane LOS	A		A		C	C
Approach Delay (s)	0.0		0.2		15.1	15.5
Approach LOS					C	C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	622	8	8	763	19	13	7	9	9	3	16
Future Volume (Veh/h)	3	622	8	8	763	19	13	7	9	9	3	16
Sign Control		Free			Free			Stop			Stop	
Grade		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
Hourly flow rate (vph)	3	676	9	9	829	21	14	8	10	10	3	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					783							
pX, platoon unblocked												
vC, conflicting volume	850			685			1138	1554	342	1216	1548	425
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	850			685			1138	1554	342	1216	1548	425
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			90	93	98	92	97	97
cM capacity (veh/h)	784			904			147	110	653	126	111	578

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	341	347	424	436	32	30
Volume Left	3	0	9	0	14	10
Volume Right	0	9	0	21	10	17
cSH	784	1700	904	1700	175	221
Volume to Capacity	0.00	0.20	0.01	0.26	0.18	0.14
Queue Length 95th (ft)	0	0	1	0	16	12
Control Delay (s)	0.1	0.0	0.3	0.0	30.1	23.8
Lane LOS	A		A		D	C
Approach Delay (s)	0.1		0.2		30.1	23.8
Approach LOS					D	C

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	333	69	33	456	0	0	0	0	53	144	61
Future Volume (vph)	0	333	69	33	456	0	0	0	0	53	144	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		0.95			0.95						0.91	
Frt		0.97			1.00						0.96	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		3448			3527						4856	
Flt Permitted		1.00			0.90						0.99	
Satd. Flow (perm)		3448			3186						4856	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	362	75	36	496	0	0	0	0	58	157	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	29	0
Lane Group Flow (vph)	0	437	0	0	532	0	0	0	0	0	252	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		15.1			15.1						30.9	
Effective Green, g (s)		15.1			15.1						30.9	
Actuated g/C Ratio		0.27			0.27						0.56	
Clearance Time (s)		4.5			4.5						4.5	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		946			874						2728	
v/s Ratio Prot		0.13										
v/s Ratio Perm					c0.17						0.05	
v/c Ratio		0.46			0.61						0.09	
Uniform Delay, d1		16.6			17.4						5.6	
Progression Factor		1.00			0.43						1.00	
Incremental Delay, d2		0.4			1.1						0.1	
Delay (s)		16.9			8.7						5.6	
Level of Service		B			A						A	
Approach Delay (s)		16.9			8.7			0.0			5.6	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	539	90	40	622	0	0	0	0	143	224	90
Future Volume (vph)	0	539	90	40	622	0	0	0	0	143	224	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		0.95			0.95						0.91	
Frt		0.98			1.00						0.97	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		3463			3529						4859	
Flt Permitted		1.00			0.88						0.98	
Satd. Flow (perm)		3463			3121						4859	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	586	98	43	676	0	0	0	0	155	243	98
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	50	0
Lane Group Flow (vph)	0	684	0	0	719	0	0	0	0	0	446	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		19.0			19.0						27.0	
Effective Green, g (s)		19.0			19.0						27.0	
Actuated g/C Ratio		0.35			0.35						0.49	
Clearance Time (s)		4.5			4.5						4.5	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1196			1078						2385	
v/s Ratio Prot		0.20										
v/s Ratio Perm					c0.23						0.09	
v/c Ratio		0.57			0.67						0.19	
Uniform Delay, d1		14.7			15.3						7.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.7			1.6						0.2	
Delay (s)		15.3			16.9						8.0	
Level of Service		B			B						A	
Approach Delay (s)		15.3			16.9			0.0			8.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	331	0	0	390	81	100	209	17	0	0	0
Future Volume (vph)	54	331	0	0	390	81	100	209	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5				
Lane Util. Factor		0.95			0.95			0.95				
Frt		1.00			0.97			0.99				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		3514			3448			3459				
Flt Permitted		0.79			1.00			0.98				
Satd. Flow (perm)		2796			3448			3459				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	360	0	0	424	88	109	227	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	419	0	0	512	0	0	349	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	7	4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		13.9			13.9			32.1				
Effective Green, g (s)		13.9			13.9			32.1				
Actuated g/C Ratio		0.25			0.25			0.58				
Clearance Time (s)		4.5			4.5			4.5				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		706			871			2018				
v/s Ratio Prot					0.15							
v/s Ratio Perm		c0.15						0.10				
v/c Ratio		0.59			0.59			0.17				
Uniform Delay, d1		18.1			18.0			5.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.3			1.0			0.2				
Delay (s)		19.4			19.1			5.5				
Level of Service		B			B			A				
Approach Delay (s)		19.4			19.1			5.5			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	602	0	0	556	70	122	172	37	0	0	0
Future Volume (vph)	45	602	0	0	556	70	122	172	37	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5				
Lane Util. Factor		0.95			0.95			0.95				
Frt		1.00			0.98			0.98				
Flt Protected		1.00			1.00			0.98				
Satd. Flow (prot)		3527			3480			3417				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		3064			3480			3417				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	654	0	0	604	76	133	187	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	703	0	0	680	0	0	347	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	7	4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		18.2			18.2			27.3				
Effective Green, g (s)		18.2			18.2			27.3				
Actuated g/C Ratio		0.33			0.33			0.50				
Clearance Time (s)		4.5			4.5			4.5				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1023			1162			1711				
v/s Ratio Prot					0.20							
v/s Ratio Perm		c0.23						0.10				
v/c Ratio		0.69			0.59			0.20				
Uniform Delay, d1		15.7			15.0			7.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.9			0.8			0.3				
Delay (s)		17.6			15.8			7.8				
Level of Service		B			B			A				
Approach Delay (s)		17.6			15.8			7.8			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	325	17	11	464	26	9	25	10	6	15	8
Future Volume (vph)	6	325	17	11	464	26	9	25	10	6	15	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		0.99			0.99			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		3511			3508			1787			1773	
Flt Permitted		0.94			0.94			0.97			0.97	
Satd. Flow (perm)		3313			3312			1746			1733	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	353	18	12	504	28	10	27	11	7	16	9
RTOR Reduction (vph)	0	9	0	0	10	0	0	5	0	0	4	0
Lane Group Flow (vph)	0	369	0	0	534	0	0	43	0	0	28	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.3			13.3			22.7			22.7	
Effective Green, g (s)		13.3			13.3			22.7			22.7	
Actuated g/C Ratio		0.30			0.30			0.50			0.50	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		979			978			880			874	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.16			c0.02			0.02	
v/c Ratio		0.38			0.55			0.05			0.03	
Uniform Delay, d1		12.6			13.3			5.7			5.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.6			0.1			0.1	
Delay (s)		12.8			13.9			5.8			5.7	
Level of Service		B			B			A			A	
Approach Delay (s)		12.8			13.9			5.8			5.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	654	18	13	560	18	11	34	18	24	32	30
Future Volume (vph)	6	654	18	13	560	18	11	34	18	24	32	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			0.96			0.95	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		3523			3519			1774			1750	
Flt Permitted		0.95			0.93			0.96			0.93	
Satd. Flow (perm)		3342			3289			1723			1657	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	711	20	14	609	20	12	37	20	26	35	33
RTOR Reduction (vph)	0	5	0	0	5	0	0	11	0	0	18	0
Lane Group Flow (vph)	0	733	0	0	638	0	0	58	0	0	76	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.5			15.5			20.5			20.5	
Effective Green, g (s)		15.5			15.5			20.5			20.5	
Actuated g/C Ratio		0.34			0.34			0.46			0.46	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1151			1132			784			754	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.19			0.03			c0.05	
v/c Ratio		0.64			0.56			0.07			0.10	
Uniform Delay, d1		12.4			12.0			6.9			7.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.2			0.6			0.2			0.3	
Delay (s)		13.6			12.6			7.1			7.3	
Level of Service		B			B			A			A	
Approach Delay (s)		13.6			12.6			7.1			7.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	327	1	0	481	22	0	0	0	10	0	26
Future Volume (vph)	19	327	1	0	481	22	0	0	0	10	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5					4.5	4.5	
Lane Util. Factor		0.95			0.95					1.00	1.00	
Frt		1.00			0.99					1.00	0.85	
Flt Protected		1.00			1.00					0.95	1.00	
Satd. Flow (prot)		3528			3516					1770	1583	
Flt Permitted		0.91			1.00					0.65	1.00	
Satd. Flow (perm)		3213			3516					1204	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	355	1	0	523	24	0	0	0	11	0	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	377	0	0	547	0	0	0	0	11	28	0
Turn Type	Perm	NA			NA					pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		14.3			14.3					31.7	31.7	
Effective Green, g (s)		14.3			14.3					31.7	31.7	
Actuated g/C Ratio		0.26			0.26					0.58	0.58	
Clearance Time (s)		4.5			4.5					4.5	4.5	
Vehicle Extension (s)		3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)		835			914					704	912	
v/s Ratio Prot					c0.16					0.00	c0.02	
v/s Ratio Perm		0.12								0.01		
v/c Ratio		0.45			0.60					0.02	0.03	
Uniform Delay, d1		17.1			17.8					5.2	5.0	
Progression Factor		1.00			1.00					1.00	1.00	
Incremental Delay, d2		0.4			1.1					0.0	0.1	
Delay (s)		17.5			18.9					5.2	5.1	
Level of Service		B			B					A	A	
Approach Delay (s)		17.5			18.9			0.0			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	675	22	6	542	13	0	1	1	44	6	47
Future Volume (vph)	20	675	22	6	542	13	0	1	1	44	6	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5		4.5	4.5	
Lane Util. Factor		0.95			0.95			1.00		1.00	1.00	
Frt		1.00			1.00			0.93		1.00	0.87	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3518			3525			1737		1770	1617	
Flt Permitted		0.93			0.94			1.00		0.63	1.00	
Satd. Flow (perm)		3271			3333			1737		1170	1617	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	734	24	7	589	14	0	1	1	48	7	51
RTOR Reduction (vph)	0	4	0	0	0	0	0	1	0	0	25	0
Lane Group Flow (vph)	0	776	0	0	610	0	0	1	0	48	33	0
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.5			17.5			22.0		28.5	28.5	
Effective Green, g (s)		17.5			17.5			22.0		28.5	28.5	
Actuated g/C Ratio		0.32			0.32			0.40		0.52	0.52	
Clearance Time (s)		4.5			4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		1040			1060			694		628	837	
v/s Ratio Prot								0.00		c0.00	0.02	
v/s Ratio Perm		c0.24			0.18					c0.04		
v/c Ratio		0.75			0.58			0.00		0.08	0.04	
Uniform Delay, d1		16.8			15.6			9.9		6.8	6.5	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		3.0			0.8			0.0		0.1	0.1	
Delay (s)		19.7			16.4			9.9		6.8	6.6	
Level of Service		B			B			A		A	A	
Approach Delay (s)		19.7			16.4			9.9			6.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	355	6	91	736	90	7	11	37	31	18	7
Future Volume (vph)	3	355	6	91	736	90	7	11	37	31	18	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.99			0.91			0.98	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3528			3470			1684			1781	
Flt Permitted		0.95			0.86			0.98			0.87	
Satd. Flow (perm)		3348			3011			1653			1591	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	386	7	99	800	98	8	12	40	34	20	8
RTOR Reduction (vph)	0	3	0	0	17	0	0	24	0	0	5	0
Lane Group Flow (vph)	0	393	0	0	980	0	0	36	0	0	57	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.1			21.1			19.9			19.9	
Effective Green, g (s)		21.1			21.1			19.9			19.9	
Actuated g/C Ratio		0.42			0.42			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1412			1270			657			633	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.33			0.02			c0.04	
v/c Ratio		0.28			0.77			0.05			0.09	
Uniform Delay, d1		9.5			12.4			9.3			9.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			3.0			0.2			0.3	
Delay (s)		9.6			15.3			9.4			9.7	
Level of Service		A			B			A			A	
Approach Delay (s)		9.6			15.3			9.4			9.7	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	735	7	25	542	53	15	16	82	65	17	7
Future Volume (vph)	8	735	7	25	542	53	15	16	82	65	17	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.99			0.90			0.99	
Flt Protected		1.00			1.00			0.99			0.96	
Satd. Flow (prot)		3532			3487			1668			1777	
Flt Permitted		0.95			0.90			0.97			0.77	
Satd. Flow (perm)		3344			3161			1625			1421	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	799	8	27	589	58	16	17	89	71	18	8
RTOR Reduction (vph)	0	2	0	0	16	0	0	43	0	0	5	0
Lane Group Flow (vph)	0	814	0	0	658	0	0	79	0	0	92	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.5			16.5			19.5			19.5	
Effective Green, g (s)		16.5			16.5			19.5			19.5	
Actuated g/C Ratio		0.37			0.37			0.43			0.43	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1226			1159			704			615	
v/s Ratio Prot												
v/s Ratio Perm		c0.24			0.21			0.05			c0.07	
v/c Ratio		0.66			0.57			0.11			0.15	
Uniform Delay, d1		11.9			11.4			7.6			7.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.4			0.6			0.3			0.5	
Delay (s)		13.3			12.0			7.9			8.2	
Level of Service		B			B			A			A	
Approach Delay (s)		13.3			12.0			7.9			8.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	193	141	1	379	229	0
Future Volume (vph)	193	141	1	379	229	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		0.95	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1863	1583		3539	1770	
Flt Permitted	1.00	1.00		0.95	0.95	
Satd. Flow (perm)	1863	1583		3378	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	153	1	412	249	0
RTOR Reduction (vph)	0	115	0	0	0	0
Lane Group Flow (vph)	210	38	0	413	249	0
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	11.3	11.3		11.3	24.7	
Effective Green, g (s)	11.3	11.3		11.3	24.7	
Actuated g/C Ratio	0.25	0.25		0.25	0.55	
Clearance Time (s)	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	467	397		848	971	
v/s Ratio Prot	0.11				c0.14	
v/s Ratio Perm		0.02		c0.12		
v/c Ratio	0.45	0.10		0.49	0.26	
Uniform Delay, d1	14.2	12.9		14.4	5.3	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.1		0.4	0.6	
Delay (s)	14.9	13.0		14.8	6.0	
Level of Service	B	B		B	A	
Approach Delay (s)	14.1			14.8	6.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	461	333	0	379	240	0
Future Volume (vph)	461	333	0	379	240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		0.95	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1863	1583		3539	1770	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1863	1583		3539	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	501	362	0	412	261	0
RTOR Reduction (vph)	0	220	0	0	0	0
Lane Group Flow (vph)	501	142	0	412	261	0
Turn Type	NA	Perm		NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	17.6	17.6		17.6	18.4	
Effective Green, g (s)	17.6	17.6		17.6	18.4	
Actuated g/C Ratio	0.39	0.39		0.39	0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	728	619		1384	723	
v/s Ratio Prot	c0.27			0.12	c0.15	
v/s Ratio Perm		0.09				
v/c Ratio	0.69	0.23		0.30	0.36	
Uniform Delay, d1	11.4	9.2		9.4	9.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.2		0.1	1.4	
Delay (s)	14.1	9.4		9.6	10.6	
Level of Service	B	A		A	B	
Approach Delay (s)	12.1			9.6	10.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Projected Capacity Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	472	57	168	338	208	114	403	97	181	362	113
Future Volume (vph)	165	472	57	168	338	208	114	403	97	181	362	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3482		1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3482		1770	3539	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	513	62	183	367	226	124	438	105	197	393	123
RTOR Reduction (vph)	0	12	0	0	0	176	0	0	77	0	0	83
Lane Group Flow (vph)	179	563	0	183	367	50	124	438	28	197	393	40
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	9.4	16.6		9.4	16.6	16.6	6.8	20.3	20.3	10.7	24.2	24.2
Effective Green, g (s)	9.4	16.6		9.4	16.6	16.6	6.8	20.3	20.3	10.7	24.2	24.2
Actuated g/C Ratio	0.13	0.22		0.13	0.22	0.22	0.09	0.27	0.27	0.14	0.32	0.32
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	221	770		221	783	350	160	957	428	252	1141	510
v/s Ratio Prot	0.10	c0.16		c0.10	0.10		0.07	c0.12		c0.11	c0.11	
v/s Ratio Perm						0.03			0.02			0.03
v/c Ratio	0.81	0.73		0.83	0.47	0.14	0.78	0.46	0.07	0.78	0.34	0.08
Uniform Delay, d1	31.9	27.1		32.0	25.4	23.5	33.4	22.8	20.3	31.0	19.4	17.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.3	3.6		21.8	0.4	0.2	20.6	1.6	0.3	14.5	0.8	0.3
Delay (s)	51.2	30.7		53.8	25.8	23.7	53.9	24.3	20.6	45.6	20.2	17.9
Level of Service	D	C		D	C	C	D	C	C	D	C	B
Approach Delay (s)		35.6			31.8			29.3			26.8	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	450	49	135	418	310	209	574	97	300	455	162
Future Volume (vph)	188	450	49	135	418	310	209	574	97	300	455	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3487		1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3487		1770	3539	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	489	53	147	454	337	227	624	105	326	495	176
RTOR Reduction (vph)	0	9	0	0	0	274	0	0	78	0	0	123
Lane Group Flow (vph)	204	533	0	147	454	63	227	624	27	326	495	53
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	12.9	19.3		10.4	16.8	16.8	15.4	23.0	23.0	19.3	26.9	26.9
Effective Green, g (s)	12.9	19.3		10.4	16.8	16.8	15.4	23.0	23.0	19.3	26.9	26.9
Actuated g/C Ratio	0.14	0.21		0.12	0.19	0.19	0.17	0.26	0.26	0.21	0.30	0.30
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	253	747		204	660	295	302	904	404	379	1057	473
v/s Ratio Prot	c0.12	c0.15		0.08	0.13		0.13	c0.18		c0.18	c0.14	
v/s Ratio Perm						0.04			0.02			0.03
v/c Ratio	0.81	0.71		0.72	0.69	0.21	0.75	0.69	0.07	0.86	0.47	0.11
Uniform Delay, d1	37.3	32.8		38.4	34.2	31.0	35.5	30.3	25.4	34.1	25.7	22.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.9	3.2		11.8	3.0	0.4	10.1	4.3	0.3	17.7	1.5	0.5
Delay (s)	54.2	36.0		50.2	37.1	31.4	45.6	34.6	25.7	51.7	27.2	23.4
Level of Service	D	D		D	D	C	D	C	C	D	C	C
Approach Delay (s)		41.0			37.1			36.2			34.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	410	7	8	501	19	7	3	7	3	2	4
Future Volume (Veh/h)	1	410	7	8	501	19	7	3	7	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		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
Hourly flow rate (vph)	1	446	8	9	545	21	8	3	8	3	2	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					783							
pX, platoon unblocked												
vC, conflicting volume	566			454			1020	1036	450	1031	1030	556
vC1, stage 1 conf vol							452	452		574	574	
vC2, stage 2 conf vol							568	584		458	456	
vCu, unblocked vol	566			454			1020	1036	450	1031	1030	556
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	99	99	99	100	99
cM capacity (veh/h)	1006			1107			416	416	609	410	417	531

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	1	454	9	566	19	9
Volume Left	1	0	9	0	8	3
Volume Right	0	8	0	21	8	4
cSH	1006	1700	1107	1700	480	458
Volume to Capacity	0.00	0.27	0.01	0.33	0.04	0.02
Queue Length 95th (ft)	0	0	1	0	3	2
Control Delay (s)	8.6	0.0	8.3	0.0	12.8	13.0
Lane LOS	A		A		B	B
Approach Delay (s)	0.0		0.1		12.8	13.0
Approach LOS					B	B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	622	8	8	763	19	13	7	9	1	1	2
Future Volume (Veh/h)	3	622	8	8	763	19	13	7	9	1	1	2
Sign Control		Free			Free			Stop			Stop	
Grade		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
Hourly flow rate (vph)	3	676	9	9	829	21	14	8	10	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)					783							
pX, platoon unblocked												
vC, conflicting volume	850			685			1536	1554	680	1554	1548	840
vC1, stage 1 conf vol							686	686		858	858	
vC2, stage 2 conf vol							850	868		696	691	
vCu, unblocked vol	850			685			1536	1554	680	1554	1548	840
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			95	97	98	100	100	99
cM capacity (veh/h)	788			908			279	294	451	271	295	365

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	3	685	9	850	32	4
Volume Left	3	0	9	0	14	1
Volume Right	0	9	0	21	10	2
cSH	788	1700	908	1700	321	319
Volume to Capacity	0.00	0.40	0.01	0.50	0.10	0.01
Queue Length 95th (ft)	0	0	1	0	8	1
Control Delay (s)	9.6	0.0	9.0	0.0	17.4	16.4
Lane LOS	A		A		C	C
Approach Delay (s)	0.0		0.1		17.4	16.4
Approach LOS					C	C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	333	69	33	456	0	0	0	0	53	144	61
Future Volume (vph)	0	333	69	33	456	0	0	0	0	53	144	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5						4.5	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.98		1.00	1.00						0.96	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		1820		1770	1863						4856	
Flt Permitted		1.00		0.23	1.00						0.99	
Satd. Flow (perm)		1820		434	1863						4856	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	362	75	36	496	0	0	0	0	58	157	66
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	40	0
Lane Group Flow (vph)	0	437	0	36	496	0	0	0	0	0	241	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		17.6		24.1	24.1						21.9	
Effective Green, g (s)		17.6		24.1	24.1						21.9	
Actuated g/C Ratio		0.32		0.44	0.44						0.40	
Clearance Time (s)		4.5		4.5	4.5						4.5	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		582		238	816						1933	
v/s Ratio Prot		c0.24		0.01	c0.27							
v/s Ratio Perm				0.06							0.05	
v/c Ratio		0.75		0.15	0.61						0.12	
Uniform Delay, d1		16.7		10.2	11.8						10.5	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		5.4		0.3	1.3						0.1	
Delay (s)		22.2		10.5	13.1						10.6	
Level of Service		C		B	B						B	
Approach Delay (s)		22.2			12.9			0.0			10.6	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	539	90	40	622	0	0	0	0	142	224	90
Future Volume (vph)	0	539	90	40	622	0	0	0	0	142	224	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5						4.5	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.98		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.98	
Satd. Flow (prot)		1827		1770	1863						4859	
Flt Permitted		1.00		0.13	1.00						0.98	
Satd. Flow (perm)		1827		248	1863						4859	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	586	98	43	676	0	0	0	0	154	243	98
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	67	0
Lane Group Flow (vph)	0	684	0	43	676	0	0	0	0	0	428	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		25.6		32.1	32.1						18.9	
Effective Green, g (s)		25.6		32.1	32.1						18.9	
Actuated g/C Ratio		0.43		0.54	0.54						0.31	
Clearance Time (s)		4.5		4.5	4.5						4.5	
Vehicle Extension (s)		3.0		3.0	3.0						3.0	
Lane Grp Cap (vph)		779		183	996						1530	
v/s Ratio Prot		c0.37		0.01	c0.36							
v/s Ratio Perm				0.12							0.09	
v/c Ratio		0.88		0.23	0.68						0.28	
Uniform Delay, d1		15.8		10.6	10.2						15.4	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		11.0		0.7	1.9						0.5	
Delay (s)		26.7		11.2	12.0						15.9	
Level of Service		C		B	B						B	
Approach Delay (s)		26.7			12.0			0.0			15.9	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	331	0	0	390	81	100	209	17	0	0	0
Future Volume (vph)	54	331	0	0	390	81	100	209	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			0.95				
Frt	1.00	1.00			0.98			0.99				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1770	1863			1820			3459				
Flt Permitted	0.18	1.00			1.00			0.98				
Satd. Flow (perm)	340	1863			1820			3459				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	360	0	0	424	88	109	227	18	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	59	360	0	0	512	0	0	348	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	7	4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	28.3	28.3			20.8			22.7				
Effective Green, g (s)	28.3	28.3			20.8			22.7				
Actuated g/C Ratio	0.47	0.47			0.35			0.38				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	231	878			630			1308				
v/s Ratio Prot	0.01	c0.19			c0.28							
v/s Ratio Perm	0.11							0.10				
v/c Ratio	0.26	0.41			0.81			0.27				
Uniform Delay, d1	10.8	10.4			17.8			12.9				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	0.6	0.3			7.9			0.5				
Delay (s)	11.4	10.7			25.7			13.4				
Level of Service	B	B			C			B				
Approach Delay (s)		10.8			25.7			13.4			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	602	0	0	556	70	122	172	37	0	0	0
Future Volume (vph)	45	602	0	0	556	70	122	172	37	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			0.95				
Frt	1.00	1.00			0.98			0.98				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1770	1863			1835			3417				
Flt Permitted	0.14	1.00			1.00			0.98				
Satd. Flow (perm)	260	1863			1835			3417				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	654	0	0	604	76	133	187	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	49	654	0	0	680	0	0	345	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	7	4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	30.8	30.8			24.2			20.2				
Effective Green, g (s)	30.8	30.8			24.2			20.2				
Actuated g/C Ratio	0.51	0.51			0.40			0.34				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	186	956			740			1150				
v/s Ratio Prot	0.01	c0.35			c0.37							
v/s Ratio Perm	0.13							0.10				
v/c Ratio	0.26	0.68			0.92			0.30				
Uniform Delay, d1	11.4	11.0			17.0			14.7				
Progression Factor	1.03	0.67			1.00			1.00				
Incremental Delay, d2	0.5	1.3			16.3			0.7				
Delay (s)	12.3	8.7			33.3			15.4				
Level of Service	B	A			C			B				
Approach Delay (s)		8.9			33.3			15.4			0.0	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	325	17	11	464	26	9	25	10	6	15	8
Future Volume (vph)	6	325	17	11	464	26	9	25	10	6	15	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	1849		1770	1848			1787			1773	
Flt Permitted	0.28	1.00		0.46	1.00			0.96			0.96	
Satd. Flow (perm)	519	1849		855	1848			1739			1726	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	353	18	12	504	28	10	27	11	7	16	9
RTOR Reduction (vph)	0	4	0	0	4	0	0	6	0	0	5	0
Lane Group Flow (vph)	7	367	0	12	528	0	0	42	0	0	27	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.5	17.5		17.5	17.5			18.5			18.5	
Effective Green, g (s)	17.5	17.5		17.5	17.5			18.5			18.5	
Actuated g/C Ratio	0.39	0.39		0.39	0.39			0.41			0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	201	719		332	718			714			709	
v/s Ratio Prot		0.20			c0.29							
v/s Ratio Perm	0.01			0.01				c0.02			0.02	
v/c Ratio	0.03	0.51		0.04	0.74			0.06			0.04	
Uniform Delay, d1	8.5	10.5		8.5	11.8			8.0			7.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.6		0.0	3.9			0.2			0.0	
Delay (s)	8.6	11.1		8.6	15.7			8.1			7.9	
Level of Service	A	B		A	B			A			A	
Approach Delay (s)		11.0			15.5			8.1			7.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	654	18	13	560	18	11	34	18	24	32	30
Future Volume (vph)	6	654	18	13	560	18	11	34	18	24	32	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.96			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	1855		1770	1854			1774			1750	
Flt Permitted	0.23	1.00		0.14	1.00			0.96			0.93	
Satd. Flow (perm)	423	1855		264	1854			1715			1642	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	711	20	14	609	20	12	37	20	26	35	33
RTOR Reduction (vph)	0	2	0	0	2	0	0	14	0	0	23	0
Lane Group Flow (vph)	7	729	0	14	627	0	0	55	0	0	71	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.3	30.3		31.3	30.3			20.2			20.2	
Effective Green, g (s)	31.3	30.3		31.3	30.3			20.2			20.2	
Actuated g/C Ratio	0.48	0.47		0.48	0.47			0.31			0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	224	864		150	864			532			510	
v/s Ratio Prot	0.00	c0.39		c0.00	0.34							
v/s Ratio Perm	0.01			0.04				0.03			c0.04	
v/c Ratio	0.03	0.84		0.09	0.73			0.10			0.14	
Uniform Delay, d1	10.3	15.3		11.7	14.0			16.0			16.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	7.6		0.3	3.1			0.4			0.6	
Delay (s)	10.4	22.9		12.0	17.1			16.3			16.7	
Level of Service	B	C		B	B			B			B	
Approach Delay (s)		22.7			17.0			16.3			16.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	327	1	0	481	22	0	0	0	10	0	26
Future Volume (vph)	19	327	1	0	481	22	0	0	0	10	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5					4.5	4.5	
Lane Util. Factor	1.00	1.00			1.00					1.00	1.00	
Frt	1.00	1.00			0.99					1.00	0.85	
Flt Protected	0.95	1.00			1.00					0.95	1.00	
Satd. Flow (prot)	1770	1862			1850					1770	1583	
Flt Permitted	0.14	1.00			1.00					0.64	1.00	
Satd. Flow (perm)	265	1862			1850					1198	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	355	1	0	523	24	0	0	0	11	0	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	21	356	0	0	547	0	0	0	0	11	12	0
Turn Type	pm+pt	NA		pm+pt	NA					pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.1	30.1			23.6					30.9	30.9	
Effective Green, g (s)	30.1	30.1			23.6					30.9	30.9	
Actuated g/C Ratio	0.43	0.43			0.34					0.44	0.44	
Clearance Time (s)	4.5	4.5			4.5					4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	156	800			623					537	698	
v/s Ratio Prot	0.00	c0.19			c0.30					0.00	c0.01	
v/s Ratio Perm	0.05									c0.01		
v/c Ratio	0.13	0.45			0.88					0.02	0.02	
Uniform Delay, d1	14.5	14.1			21.8					11.1	11.0	
Progression Factor	1.00	1.00			1.00					1.00	1.00	
Incremental Delay, d2	0.4	0.4			13.3					0.0	0.0	
Delay (s)	14.9	14.5			35.1					11.1	11.1	
Level of Service	B	B			D					B	B	
Approach Delay (s)		14.5			35.1			0.0			11.1	
Approach LOS		B			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	675	22	6	542	13	0	1	1	44	6	47
Future Volume (vph)	20	675	22	6	542	13	0	1	1	44	6	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.93		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)	1770	1854		1770	1856			1737		1770	1617	
Flt Permitted	0.23	1.00		0.13	1.00			1.00		0.61	1.00	
Satd. Flow (perm)	431	1854		235	1856			1737		1145	1617	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	734	24	7	589	14	0	1	1	48	7	51
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	34	0
Lane Group Flow (vph)	22	756	0	7	603	0	0	1	0	48	24	0
Turn Type	pm+pt	NA		pm+pt	NA			NA		pm+pt	NA	
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.3	38.3		38.3	37.3			19.5		27.2	27.2	
Effective Green, g (s)	40.3	38.3		38.3	37.3			19.5		27.2	27.2	
Actuated g/C Ratio	0.50	0.48		0.48	0.47			0.24		0.34	0.34	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	250	887		131	865			423		414	549	
v/s Ratio Prot	c0.00	c0.41		0.00	0.32			0.00		c0.00	0.02	
v/s Ratio Perm	0.04			0.02						c0.03		
v/c Ratio	0.09	0.85		0.05	0.70			0.00		0.12	0.04	
Uniform Delay, d1	12.1	18.4		14.8	16.9			22.9		18.0	17.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	0.2	8.0		0.2	2.5			0.0		0.1	0.2	
Delay (s)	12.2	26.3		15.0	19.3			22.9		18.2	17.8	
Level of Service	B	C		B	B			C		B	B	
Approach Delay (s)		25.9			19.3			22.9			18.0	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	3	355	6	91	736	90	7	11	37	31	18	7
Future Volume (vph)	3	355	6	91	736	90	7	11	37	31	18	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.98			0.91			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	
Satd. Flow (prot)	1770	1858		1770	1832			1684			1781	
Flt Permitted	0.10	1.00		0.41	1.00			0.97			0.85	
Satd. Flow (perm)	184	1858		764	1832			1649			1562	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	386	7	99	800	98	8	12	40	34	20	8
RTOR Reduction (vph)	0	1	0	0	5	0	0	29	0	0	6	0
Lane Group Flow (vph)	3	392	0	99	893	0	0	31	0	0	56	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.4	40.4		48.0	43.7			21.8			21.8	
Effective Green, g (s)	41.4	40.4		48.0	43.7			21.8			21.8	
Actuated g/C Ratio	0.52	0.50		0.60	0.55			0.27			0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	115	938		512	1000			449			425	
v/s Ratio Prot	0.00	0.21		c0.01	c0.49							
v/s Ratio Perm	0.01			0.11				0.02			c0.04	
v/c Ratio	0.03	0.42		0.19	0.89			0.07			0.13	
Uniform Delay, d1	14.4	12.4		7.5	16.1			21.6			22.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	0.3		0.2	10.2			0.3			0.6	
Delay (s)	14.5	12.7		7.6	26.2			21.9			22.6	
Level of Service	B	B		A	C			C			C	
Approach Delay (s)		12.7			24.4			21.9			22.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	735	7	25	542	53	15	16	82	65	17	7
Future Volume (vph)	8	735	7	25	542	53	15	16	82	65	17	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.99			0.90			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	
Satd. Flow (prot)	1770	1860		1770	1838			1668			1777	
Flt Permitted	0.25	1.00		0.11	1.00			0.96			0.74	
Satd. Flow (perm)	463	1860		211	1838			1619			1371	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	799	8	27	589	58	16	17	89	71	18	8
RTOR Reduction (vph)	0	1	0	0	4	0	0	63	0	0	4	0
Lane Group Flow (vph)	9	806	0	27	643	0	0	59	0	0	93	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.3	34.3		37.3	35.3			20.2			20.2	
Effective Green, g (s)	35.3	34.3		37.3	35.3			20.2			20.2	
Actuated g/C Ratio	0.50	0.49		0.53	0.50			0.29			0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	252	911		156	926			467			395	
v/s Ratio Prot	0.00	c0.43		c0.00	0.35							
v/s Ratio Perm	0.02			0.09				0.04			c0.07	
v/c Ratio	0.04	0.89		0.17	0.69			0.13			0.23	
Uniform Delay, d1	10.1	16.1		12.6	13.2			18.4			19.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.1	10.3		0.5	2.3			0.6			1.4	
Delay (s)	10.1	26.4		13.1	15.5			18.9			20.4	
Level of Service	B	C		B	B			B			C	
Approach Delay (s)		26.2			15.4			18.9			20.4	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	193	141	1	379	229	0
Future Volume (vph)	193	141	1	379	229	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1863	1583		1863	1770	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1863	1583		1862	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	153	1	412	249	0
RTOR Reduction (vph)	0	103	0	0	0	0
Lane Group Flow (vph)	210	50	0	413	249	0
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4	8			
Actuated Green, G (s)	16.5	16.5		16.5	24.5	
Effective Green, g (s)	16.5	16.5		16.5	24.5	
Actuated g/C Ratio	0.33	0.33		0.33	0.49	
Clearance Time (s)	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	614	522		614	867	
v/s Ratio Prot	0.11				c0.14	
v/s Ratio Perm		0.03		c0.22		
v/c Ratio	0.34	0.10		0.67	0.29	
Uniform Delay, d1	12.7	11.6		14.4	7.6	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		2.9	0.8	
Delay (s)	13.0	11.7		17.3	8.4	
Level of Service	B	B		B	A	
Approach Delay (s)	12.4			17.3	8.4	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	461	333	0	397	240	1
Future Volume (vph)	461	333	0	397	240	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1863	1583		1863	1773	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1863	1583		1863	1773	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	501	362	0	432	261	1
RTOR Reduction (vph)	0	220	0	0	1	0
Lane Group Flow (vph)	501	142	0	432	261	0
Turn Type	NA	Perm		NA	Prot	
Protected Phases	4			8	2	
Permitted Phases		4				
Actuated Green, G (s)	17.6	17.6		17.6	18.4	
Effective Green, g (s)	17.6	17.6		17.6	18.4	
Actuated g/C Ratio	0.39	0.39		0.39	0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	728	619		728	724	
v/s Ratio Prot	c0.27			0.23	c0.15	
v/s Ratio Perm		0.09				
v/c Ratio	0.69	0.23		0.59	0.36	
Uniform Delay, d1	11.4	9.2		10.9	9.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.2		1.3	1.4	
Delay (s)	14.1	9.4		12.2	10.6	
Level of Service	B	A		B	B	
Approach Delay (s)	12.1			12.2	10.6	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Appendix D

TDOT Crash Data

Crash Summary Report

County: BRADLEY **Route:** 04390 **Spcl Cse:** 0-NONE **Cnty Seq:** 1

Log Miles: 0.000 to 0.420 - Crash Dates: 6/1/2016 to 5/31/2019
Vehicle Filter: None - Other Factors Filter: None

Statistics

Fatal Crashes:	0
Total Killed:	0
Incap Injury Crashes:	1
Total Incap Injuries:	1
Other Injury Crashes:	9
Total Other Injuries:	11
Prop Damage Crashes:	30
Total Crashes:	**40**

Crash Location

Along Roadway:	23
At Intersection:	17
Railroad Crossing:	0
Bridge:	0
Underpass:	0
Ramp:	0
Private Property:	0
Other:	0

Crashes Involving

Pedestrians:	0
Hazardous Cargo:	0
Work / Constr Zones:	0
Fixed Objects:	4
Single Unit Trucks	0
Tractor - Trailer Trucks:	0
Bicycles:	1
Motorcycles:	1
Lane Departures:	4
Distracted Drivers:	2

Road Conditions

Ice:	0
Snow or Slush:	0
Sand, Mud, Dirt or Oil:	0
Wet:	11
Dry:	29

First Harmful Event

Pedestrian:	0
Pedalcycle:	1
Railway Train:	0
Deer (Animal):	0
Other Animal:	0
Motor Vehicle in Transport:	35
Motor Vehicle in Transport in Other Roadway:	0
Parked Motor Vehicle:	0
Other Type Non-Motorist:	0
Fixed Object:	4
Other Object (Not Fixed):	0
Non Collision:	0
Overturn:	0
Jackknife:	0
Cross Median:	0
Ran Off Road:	0

Manner of Collision

Rear End:	18
Head On:	2
Rear-to-Side / Rear:	0
Angle:	11
Sideswipe Same Dir:	2
Sideswipe Opp Dir:	1
Unknown:	1

Light Conditions

Dawn:	1
Daylight:	36
Dusk:	0
Dark / Lighted:	3
Dark / Not Lighted:	0
Not Indicated:	0

Weather Conditions

No Adverse Conditions:	29
Rain:	10
Sleet and Hail:	0
Snow:	0
Foggy:	0
Smog, Smoke:	0
Crosswind:	1

Fixed Objects

Boulder:	0	Other Barrier:	0	Ditch:	0
Building:	0	Highway Traffic Sign Post	0	Embankment:	2
Impact Attenuator:	0	Overhead Sign Support:	0	Fence:	0
Overhead Structure:	0	Luminaire/Light Support:	0	Wall:	0
Bridge Pier/Abutment/End:	0	Traffic Signal Support:	0	Mail Box:	0
Bridge Rail:	0	Utility Pole:	2	Shrubbery:	0
Guardrail:	0	Other Post, Pole Supports:	0	Tree:	0
Cable Barrier:	0	Culvert:	0	Fire Hydrant:	0
		Curb:	0	Other Fixed Object:	0

This report was generated by E-TRIMS

Crash Summary Report

County: BRADLEY **Route:** SR040 **Spcl Cse:** 0-NONE **Cnty Seq:** 1

Log Miles: 0.680 to 1.400 - Crash Dates: 6/1/2016 to 5/31/2019
Vehicle Filter: None - Other Factors Filter: None

Statistics

Fatal Crashes:	0
Total Killed:	0
Incap Injury Crashes:	3
Total Incap Injuries:	3
Other Injury Crashes:	20
Total Other Injuries:	25
Prop Damage Crashes:	110
Total Crashes:	**133**

Crash Location

Along Roadway:	35
At Intersection:	98
Railroad Crossing:	0
Bridge:	0
Underpass:	0
Ramp:	0
Private Property:	0
Other:	0

Crashes Involving

Pedestrians:	4
Hazardous Cargo:	0
Work / Constr Zones:	0
Fixed Objects:	19
Single Unit Trucks	12
Tractor - Trailer Trucks:	4
Bicycles:	2
Motorcycles:	2
Lane Departures:	10
Distracted Drivers:	6

Road Conditions

Ice:	0
Snow or Slush:	0
Sand, Mud, Dirt or Oil:	0
Wet:	19
Dry:	113

First Harmful Event

Pedestrian:	4
Pedalcycle:	2
Railway Train:	0
Deer (Animal):	0
Other Animal:	0
Motor Vehicle in Transport:	104
Motor Vehicle in Transport in Other Roadway:	0
Parked Motor Vehicle:	3
Other Type Non-Motorist:	0
Fixed Object:	19
Other Object (Not Fixed):	0
Non Collision:	0
Overturn:	0
Jackknife:	0
Cross Median:	0
Ran Off Road:	0

Manner of Collision

Rear End:	34
Head On:	2
Rear-to-Side / Rear:	0
Angle:	59
Sideswipe Same Dir:	8
Sideswipe Opp Dir:	1
Unknown:	3

Light Conditions

Dawn:	0
Daylight:	114
Dusk:	1
Dark / Lighted:	17
Dark / Not Lighted:	0
Not Indicated:	0

Weather Conditions

No Adverse Conditions:	118
Rain:	14
Sleet and Hail:	0
Snow:	0
Foggy:	0
Smog, Smoke:	0
Crosswind:	0

Fixed Objects

Boulder:	0	Other Barrier:	0	Ditch:	0
Building:	3	Highway Traffic Sign Post	0	Embankment:	0
Impact Attenuator:	0	Overhead Sign Support:	0	Fence:	0
Overhead Structure:	11	Luminaire/Light Support:	1	Wall:	0
Bridge Pier/Abutment/End:	1	Traffic Signal Support:	0	Mail Box:	0
Bridge Rail:	0	Utility Pole:	2	Shrubbery:	0
Guardrail:	1	Other Post, Pole Supports:	0	Tree:	0
Cable Barrier:	0	Culvert:	0	Fire Hydrant:	0
		Curb:	0	Other Fixed Object:	0

This report was generated by E-TRIMS