

From: Roger Stancil
Sent: Tuesday, May 22, 2018 3:21 PM
To: Allen Buansi; Donna Bell; Hongbin Gu; Jeanne Brown; Jess Anderson; Karen Stegman; Town Council; Michael Parker; Nancy Oates; Pam Hemminger; Rachel Schaevitz; Roger Stancil; Ross Tompkins
Cc: Loryn Clark; Ben Hitchings; Amy Harvey; Beth Vazquez; Carolyn Worsley; Catherine Lazorko; Christina Strauch; Dwight Bassett; Flo Miller; Mary Jane Nirdlinger; Rae Buckley; Ralph Karpinos; Ran Northam; Roger Stancil; Sabrina Oliver
Subject: Council Questions: Item 15: Eastowne Rezoning
Attachments: Eastowne TIA Executive Summary.pdf; Eastowne TIA Full Report.pdf

Council Question: Would each floor of the 6-story medical office building have the same square footage? Would there be any step-backs?

Staff Response: *The current design of the building indicates that each floor would have the same square footage with no step-backs. However, we do not have internal construction plans at this time and are basing this assessment off of the site plan and building elevations.*

Council Question: Any traffic impact analysis done or willingness to conduct analysis considering the anticipated construction start for Wegman's in 2019 and the overlap of construction between the two properties?

Staff Response: *We have received a draft traffic impact assessment, which is attached. Our understanding is that the TIA includes the road improvements to be completed by Wegmans, but does not include the potential for overlapping construction. It is important to note that the proposed SUP for the Eastowne project includes a stipulation (#5) that the left turn improvements from Eastowne Drive onto US 15-501 are to be completed by the Wegmans development. However, the stipulation adds that in the event that this does not occur, the responsibility for these improvements shall be constructed as part of the Eastowne development and shall be in place prior to issuance of a Certificate of Occupancy.*

Council Question: The 15-501 corridor, including Eastowne, is undergoing significant development. As regards traffic, I am aware of the corridor study that is ongoing. When will recommendations from this study be available, what legal force will they have, and how will responsibility for roadway improvements, if any, be apportioned among the various properties being developed/redeveloped?

Staff Response: *The Durham-Chapel Hill-Carrboro MPO is leading the 15-501 Corridor Study, which kicked off this spring and is expected to be complete by June/July 2019. The study area extends from Ephesus Church Road in Chapel Hill to University Drive in Durham and will include portions of the roadway network adjacent to 15-501, but the consultants have not finalized the specifics yet. The scope of work includes setting a Corridor Vision and Goals, based on public input. The consultant will then develop a set of performance measures – land use, development, market performance, multimodal connectivity, access, mobility, and safety – based on the vision and goals.*

The consultant will develop strategies/recommendations that consider roadway improvements, pedestrian and bicycle facilities and transit service for the corridor and the surrounding areas within the study area. From what I understand about the process for MPO-led studies/plans, if the Town decides to adopt the study when complete, it will carry the same legal force as our other adopted transportation plans (Mobility and Connectivity Plan, Greenways Plan, etc.). Our adopted transportation plans allow us to require improvements and/or payments-in-lieu from developers when a parcel is developed or changed, and serve as the basis for project development for submittal to the NCDOT Transportation Prioritization Process (SPOT) for funding every two years.

However, if we do not officially adopt the study, it can simply be a guide for project development. I think this distinction is important for the other roads in the study area, not necessarily for 15-501; it is a US highway and any project that might

be implemented will be a NCDOT project, not a Town project. However, if a recommendation for Legion Road, for example, comes out of the study, we could use the study, if adopted, when considering responsibility for roadway improvements.

Council Question: Given that we are being asked to rezone a 48-acre parcel without seeing a master plan for the entire project, what is the maximum buildout for an OI-3? What other things can be done with an OI-3 that can't be done with the current OI-2?

Staff Response: *The parcel being considered for rezoning is a total of 8.41 acres. The floor area ratio for OI-3 is 0.566, so the total potential floor area for the site is 207,348 sq. ft. Please note that this calculation does not consider other potential site restrictions, such as RCD, buffers, or topography. The applicant has indicated that he/she will start engaging the Town and community in a master planning process for the remainder of the 48-acre later this year.*

**UNC HEALTH CARE
EASTOWNE MEDICAL OFFICE BUILDINGS**

DRAFT TRAFFIC IMPACT STUDY

EXECUTIVE SUMMARY



Prepared for:

The Town of Chapel Hill
Public Works Department – Traffic Engineering

Prepared by:

HNTB North Carolina, PC

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April 2018

HNTB

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EXECUTIVE SUMMARY - DRAFT

Project Overview

The redevelopment of the existing UNC Health Care Medical Office Buildings (MOB) complex, located along the US 15-501 (Durham-Chapel Hill Road) and Eastowne Drive, into larger medical office type facilities with a structured parking deck is being proposed in Chapel Hill. The project proposes to demolish five existing buildings with a total size of 127,724 square feet and construct two new buildings on the existing parcel with an approximate 150,000 square foot size each. **Figure ES-1** shows the general location of the site. The project is anticipated to be built in two phases with the first phase fully complete by late 2020 and the second phase complete by 2023. This report analyzes the transportation impacts for the build-out scenarios for the year 2021 (one year after anticipated completion of Phase 1) and the year 2024 (one year after anticipated completion of Phase 2), the no-build scenario for the 2021 and 2024 analysis years, as well as 2018 existing base year traffic conditions.

The proposed site concept plans show several minor transportation network changes from existing conditions, including new access points along Eastowne Drive for each development phase and closure of existing driveways serving existing surface parking lot facilities. **Figures ES-2A and 2B** display the preliminary concept plans of the UNC Healthcare Eastowne MOB development, transportation network changes, and nearby land uses and roadways. The project is expected to provide on-site structured parking with a total of approximately 1,100 spaces in two five story parking decks. This report analyzes and presents the transportation impacts that the UNC Healthcare Eastowne MOB redevelopment will have on the following existing and future intersections in the project study area:

- US 15-501 and Sage Road/Scarlett Drive
- US 15-501 and Eastowne Drive (South) / Service Road
- US 15-501 and Eastowne Drive (North) / Lakeview Drive
- Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway
- Eastowne Drive and Future Parking Deck Driveway Access
- Eastowne Drive and Pinegate Circle / UNC Health Care Driveway
- Eastowne Drive and Dobbins Drive

The impacts of the proposed site at the study area intersections were evaluated during the AM, noon, and PM peak hours of an average weekday.

Existing Conditions

Study Area

The site is located in northeast Chapel Hill along US 15-501 in the Eastowne Business Park. The study area contains three signalized intersections along US 15-501 at Sage Road, Eastowne Drive/Service Road and Eastowne Drive/Lakeview Drive. All future site traffic is expected use a proposed full access site driveway along Eastowne Drive. Internal driveways shown on the preliminary site plan will circulate site traffic to designated structured parking areas. US 15-501 is a major arterial facility providing connectivity between Chapel Hill, Durham and the I-40 corridor. Remaining study area network roadways are either minor arterial/collector facilities or local neighborhood access streets.

Site Traffic Generation

With the addition of new peak hour trips during the weekday AM, noon, and PM peak hours, there are potential site traffic impacts to the study area intersections. **Table ES-1** shows the site trip generation



details, with generation rates taken from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Version 9*. No trip generation study of existing UNC Health Care Eastowne office buildings was conducted.

Table ES-1
Weekday Vehicle Trip Generation Summary

Phase	Scenario	Daily			AM Peak			Noon Peak			PM Peak		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Phase 1	Total	894	894	1788	233	32	265	69	59	128	42	204	246
	Net Additional	514	514	1028	130	18	148	39	38	77	27	133	160
Phase 2	Total	894	894	1788	233	32	265	69	59	128	42	204	246
	Net Additional	780	780	1560	202	27	229	60	52	112	37	182	219
Total Build-Out	Total	1788	1788	3576	466	64	530	138	118	256	84	408	492
	Net Additional	1294	1294	2588	332	45	377	99	90	189	64	315	379

Background Traffic

Background traffic growth for the 2021 and 2024 analysis years is expected to come from two sources - ambient regional traffic growth and specific development-related traffic growth. One Town-approved site (Wegmans Supermarket Redevelopment) in the project study area is expected to contribute to specific background traffic generator growth in both analysis years. All remaining estimated traffic volume increases are assumed to occur due to overall region-wide ambient growth (assumed 1.5 percent per year based on NCDOT/Town provided historic growth data).

Impact Analysis

Peak Hour Intersection Level of Service

Existing traffic operations at all study area intersections are acceptable during all three peak hours analyzed, though several intersections along US 15-501 are at capacity during peak travel periods. The projected ambient and background development traffic growth will increase impacts by 2021 but these will be mitigated by proposed mitigation improvements stemming from the Wegmans Supermarket development. Even with the addition of peak hour Phase 1 site-generated trips to the projected 2021 background traffic volumes, no study area intersections are expected to experience deficient traffic operations in any peak hour. Additional background traffic growth in 2024 will cause further marginal impacts to vehicular delays and LOS and cause the US 15-501/Sage Road intersection to drop to a deficient overall LOS E in the PM peak hour. Additional Phase 2 site traffic will similarly slightly worsen vehicular delays and some individual LOS grades, but none to a deficient level with the exception of the US 15-501/Sage Road intersection in the 2024 PM peak hour. Proposed geometric and signal timing improvements are expected to mitigate anticipated deficient LOS conditions throughout the study area and improve queue storage and safety, as well.

A summary of the traffic operations for each intersection, related to vehicular delays (intersection average as a whole if signalized, critical movement if stop-controlled) and the corresponding Level-of-Service (LOS) is shown in **Table ES-2**.



Table ES-2. Peak Hour Intersection Capacity Analysis Summary

Intersections	Peak Hour	2018 Existing		2021 No-Build Phase 1		2021 Build Phase 1		2021 Mitigated Phase 1		2024 No-Build Phase 2		2024 Build Phase 2		2024 Mitigated Phase 2	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
US 15-501 and Sage Road / Scarlett Drive	AM	D	46.5	D	47.4	D	47.4	N/A	N/A	D	49.9	D	50.7	D	49.0
	NOON	D	42.5	D	40.8	D	40.8	N/A	N/A	D	42.1	D	42.1	D	42.6
	PM	D	52.2	D	50.4	D	50.6	N/A	N/A	E	55.0	E	55.6	D	54.6
US 15-501 and Eastowne Drive (South) / Service Road	AM	B	10.0	B	11.5	B	14.4	N/A	N/A	B	15.2	C	27.2	C	20.1
	NOON	B	14.6	B	12.1	B	13.7	N/A	N/A	B	13.8	B	16.1	B	13.6
	PM	B	16.8	B	11.9	B	16.4	N/A	N/A	B	17.3	C	26.3	C	22.7
US 15-501 and Eastowne Drive (North) / Lakeview Drive	AM	C	26.3	B	17.3	C	17.8	N/A	N/A	B	18.7	B	19.7	B	19.8
	NOON	B	19.8	B	19.1	B	19.5	N/A	N/A	B	19.9	C	20.4	C	20.9
	PM	D	50.5	C	33.4	D	35.0	N/A	N/A	D	37.8	D	41.0	D	44.9
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway#	AM	B	11.6	B	11.7	B	12.6	N/A	N/A	B	13.0	B	13.3	N/A	N/A
	NOON	B	12.0	B	12.1	B	12.3	N/A	N/A	B	12.6	B	12.4	N/A	N/A
	PM	B	11.4	B	11.5	B	12.5	N/A	N/A	B	12.8	B	13.2	N/A	N/A
Eastowne Drive and Future Parking Deck Driveway Access#	AM	N/A	N/A	N/A	N/A	B	10.9	N/A	N/A	B	11.0	B	14.9	C	16.8
	NOON	N/A	N/A	N/A	N/A	A	9.9	N/A	N/A	B	10.0	B	11.2	B	11.6
	PM	N/A	N/A	N/A	N/A	B	11.1	N/A	N/A	B	11.2	C	16.1	B	14.2
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway#	AM	A	9.5	A	9.6	A	9.6	N/A	N/A	A	9.7	B	10.2	N/A	N/A
	NOON	A	9.6	A	9.6	A	9.7	N/A	N/A	A	9.8	B	10.2	N/A	N/A
	PM	A	9.7	A	9.7	A	10.4	N/A	N/A	B	10.5	B	11.8	N/A	N/A
Eastowne Drive and Dobbins Drive#	AM	B	10.1	B	10.2	B	11.0	N/A	N/A	B	11.2	B	12.9	A	9.0
	NOON	A	9.7	A	9.8	A	10.1	N/A	N/A	B	10.2	B	10.8	A	9.2
	PM	A	9.9	A	9.9	A	11.0	N/A	N/A	B	11.2	B	13.0	B	10.2

N/A – Not Applicable or No Improvements Necessary

BOLD/ITALICS – Critical Movement or Overall Intersection Requires Mitigation Per Town TIS Guidelines

- Worst-Case LOS/Delay for Unsignalized/Stop-Controlled Critical Movement



Access Analysis

Vehicular site access is to be accommodated by one proposed full movement access driveway connecting to Eastowne Drive for entry/exit to the proposed structured parking and on-site surface drop-off areas. An additional grass paved access for fire truck is shown connecting to US 15-501 southbound on **Figure ES-2B**. The proposed site concept plan in **Figure ES-2A** indicates the proposed full access connection with Eastowne Drive would move slightly when the Phase 2 parking deck extension is built. Design details related to driveway throat lengths are shown on the Phase 1 site plan and provide over 200 feet of driveway throat length, which should be sufficient based on capacity analysis queue estimates for all exiting stop-controlled movements in Phase 1. No specific plan for Phase 2 is shown, but given additional site-related traffic, a driveway design for two separate exiting lanes with at least 100 feet of storage each is recommended.

Access for pedestrians and bicyclists is limited in the project study area. Sidewalk is present on most study area facilities, but connectivity is impaired due to lack of continuous sidewalk in some areas and adequate crossings of the US 15-501 corridor. Crosswalk and pedestrian signals exist across the US 15-501 intersection with Eastowne Drive (south). Bicycle lanes do exist on Sage Road and Old Sterling Drive, and the cross-section width of Eastowne Drive is does not inhibit bicycling, but there is no bicycling connectivity on or paralleling the US 15-501 corridor.

Signal Warrant Analysis

Based on projected 2021 and 2024 traffic volumes and proposed access plans, no unsignalized intersection in the project study area would warrant the installation of a traffic signal, based on the methodology found in the *2009 Manual on Uniform Traffic Control Devices (MUTCD)*.

Crash Analysis

Data from the NCDOT Traffic Safety Unit was provided for the five-year period 3/1/2013 to 2/28/2018 for the US 15-501 and Eastowne Drive road segments in the vicinity of the proposed site. There were 178 crashes reported along the US 15-501 study area corridor between Sage Road and Eastowne Drive/Lakeview Drive over the five year period, with 17 crashes on Eastowne Drive. The primary crash type was rear end crashes and crashes were primarily clustered near the three signalized intersections. Overall, the number and severity of crashes along US 15-501 in the project study area is similar to state-wide averages for similar US highway facilities.

Other Transportation-Related Analyses

Other transportation-related analyses relevant to the 2001 Town of Chapel Hill Guidelines for the preparation of Traffic Impact Studies were completed as appropriate. The following topics listed in **Table ES-3** are germane to the scope of this study.



Table ES-3. Other Transportation-Related Analyses

Analysis	Comment
Turn Lane Storage Requirements	Storage bay lengths at study area intersections were analyzed using Synchro and HCS 95 th percentile (max) queue length estimates for the 2021 and 2024 Build Scenarios. Recommendations for improvements to storage bays are needed at the US 15-501 and Eastowne Drive/Service Road intersection, based on the analysis results. Storage bay improvements at study area intersections resulting from the Wegmans project will provide additional storage capacity. Future signal reoptimization will need to account for field observations of queues on side streets that may exceed storage bays lengths.
Appropriateness of Acceleration/Deceleration Lanes	The site concept plan shows no specifics related to acceleration/deceleration lanes. Due to the low speed limit on Eastowne Drive (25 mph) and the presence of some on-street parking in the vicinity, no acceleration/deceleration lanes are recommended for site access. Existing intersections along US 15-501 currently have left-turn and right-turn auxiliary deceleration lanes. No other specific acceleration/deceleration lane issues were analyzed in the project study area.
Pedestrian and Bicycle Analysis	Existing pedestrian access and connectivity is limited in the project study area, though sidewalk exists along several roadways on at least one side of the road. Bicycle lanes extend along Sage Road and Old Sterling Drive, and will be extended to Old Durham Road, but no bicycle facilities exist along/parallel to the US 15-501 corridor within the project study area. The site plan shows additional sidewalk developed along site frontage. Additional pedestrian upgrades at the US 15-501 and Eastowne Drive/Service Road intersection are needed to connect this sidewalk to the adjacent side of the corridor to connect to Wegmans / SECU area.
Public Transportation Analysis	Public transportation service to the study area, and to the proposed site is adequate, with bus stops and multiple local and regional bus routes on both Eastowne Drive and US 15-501 proximate to the site. Additional amenities for the existing bus stop on Eastowne Drive at the site are recommended.

Mitigation Measures/Recommendations

Planned Improvements

There is one Town of Chapel Hill / North Carolina Department of Transportation improvement project affecting study area roadway facilities within the analysis year time frame of 2018-2024. NCDOT STIP project EB-4707B is currently beginning construction along Old Durham Road/Old Chapel Hill Road east of the project study area and will include pedestrian and bicycle improvements connecting to the US 15-501 corridor at the Sage Road/Scarlett Drive intersection. The US 15-501 corridor is currently being studied for capacity improvements as part of NCDOT STIP U-5304, but these improvements are not known at this time and were not considered to be complete by the 2021 and 2024 analysis years.

Background Committed Improvements

The redevelopment of the current Performance Motors campus along US 15-501 into a Wegmans Supermarket has been approved by the Town, and the project will include several geometric and signal timing improvements to intersections along the US 15-501 corridor highlighted in **Figure ES-3**.

Applicant Committed Improvements

Based on the preliminary site plans and supporting development information provided, there are no specific transportation-related improvements proposed external to the UNC Health Care Eastowne MOB site. There are several internal improvements including the following:

- Provision of internal roadway circulation to/from parking decks and drop-off areas



- Improvements to internal sidewalk and development of sidewalk/side paths along Eastowne Drive and US 15-501 on site frontage
- Closure of two existing surface parking lot driveways and consolidation of driveway access to a single access point for future proposed structured parking. The access point is expected to move along Eastowne Drive between Phase 1 and Phase 2 of the redevelopment, as an additional extension of the Phase 1 parking deck is built.

Necessary Improvements

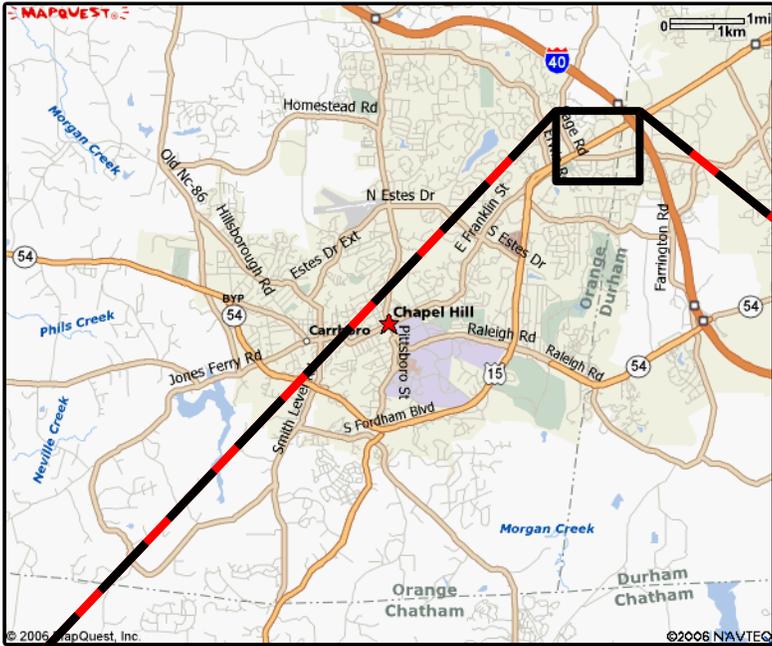
Based on traffic capacity analyses for the 2021 and 2024 design years, and analyses of existing study area turning bay storage lengths and site access, the following improvements are recommended as being necessary for adequate transportation network operations:

2021 Phase 1 Improvements (Figure ES-3)

- 1) To manage projected maximum queue lengths on southbound Eastowne Drive at the US 15-501 signalized intersection, it is recommended that the existing left-turn lane be extended to provide 300 feet of vehicle storage (thus creating a three-lane cross-section on Eastowne Drive at least 300 feet upstream of the traffic signal. This will result in two southbound travel lanes crossing the Dobbins Drive intersection.
- 2) To manage access and improve safety at the Dobbins Drive intersection with Eastowne Drive, “Do Not Block Intersection” signs should be installed on southbound Eastowne Drive.
- 3) A pedestrian crosswalk and pedestrian signal heads should be installed across the southbound approach of the US 15-501 and Eastowne Drive/Service Road signalized intersection. This would provide connectivity between the site and areas across US 15-501, as there is an existing pedestrian signalized crossing in the western quadrant of the intersection.
- 4) Additional bus amenities, such as a bus shelter, should be built at the existing bus stop location along Eastowne Drive directly along site frontage.

2024 Phase 2 Improvements (Figure ES-4)

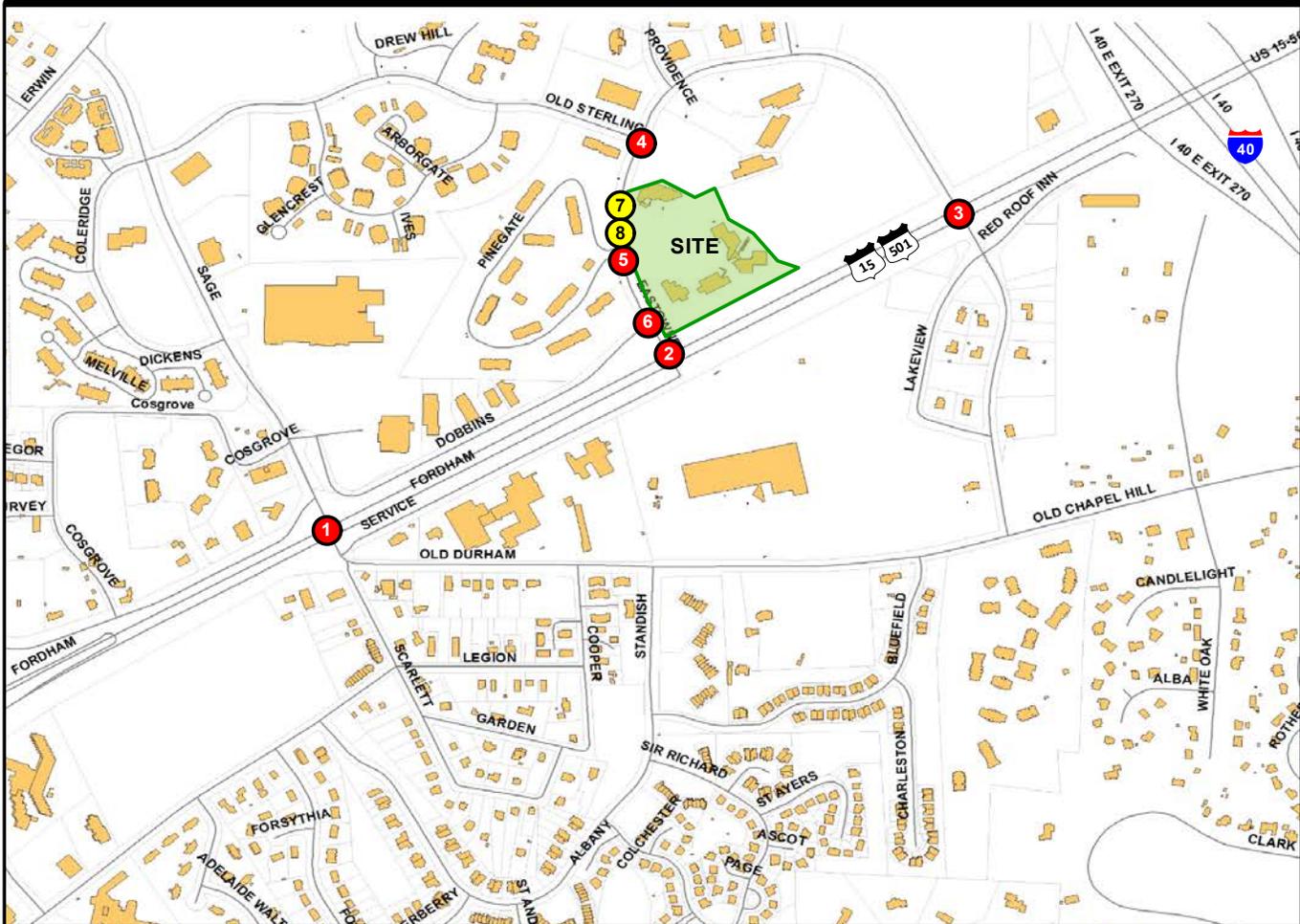
- 1) To manage projected maximum queue lengths on southbound Eastowne Drive at the US 15-501 signalized intersection and provide more optimal signal timings for the intersection, it is recommended that the proposed 2021 Phase 1 laneage configuration be adjusted to create a left-turn/through inner lane and an exclusive right-turn outer lane. A short additional left-turn lane between US 15-501 and Dobbins Drive is also recommended. The signal phasing should be changed to split side street phasing for this proposed laneage configuration, with the new exclusive right-turn lane having overlap phasing with the current eastbound left-turn lane.
- 2) The current eastbound left-turn lane on US 15-501 should be lengthened to provide 400 feet of storage.
- 3) To account for increased traffic volumes and potential vehicular conflicts in the area of Dobbins Drive and Eastowne Drive, the Dobbins Drive approach should be limited to right-turn only, as this approach features very few left-turns currently or projected in the future. Inbound left-turns from Eastowne Drive, which are more frequent, should still be allowed onto westbound Dobbins Drive.
- 4) The US 15-501 study area traffic signals along the corridor should be reoptimized to mitigate the effects of additional Phase 2 site traffic.
- 5) To increase the efficiency of the proposed site driveway and minimize queue spillbacks from the proposed parking decks, particularly in the PM peak hour, separate left-turn and right-turn lanes should be constructed, with at least 100 feet of vehicular storage for left-turning vehicles.



LEGEND

-  = Existing Building Footprint
-  = Existing Study Area Intersection
-  = Proposed Site Driveway
-  = Proposed Site Parcel

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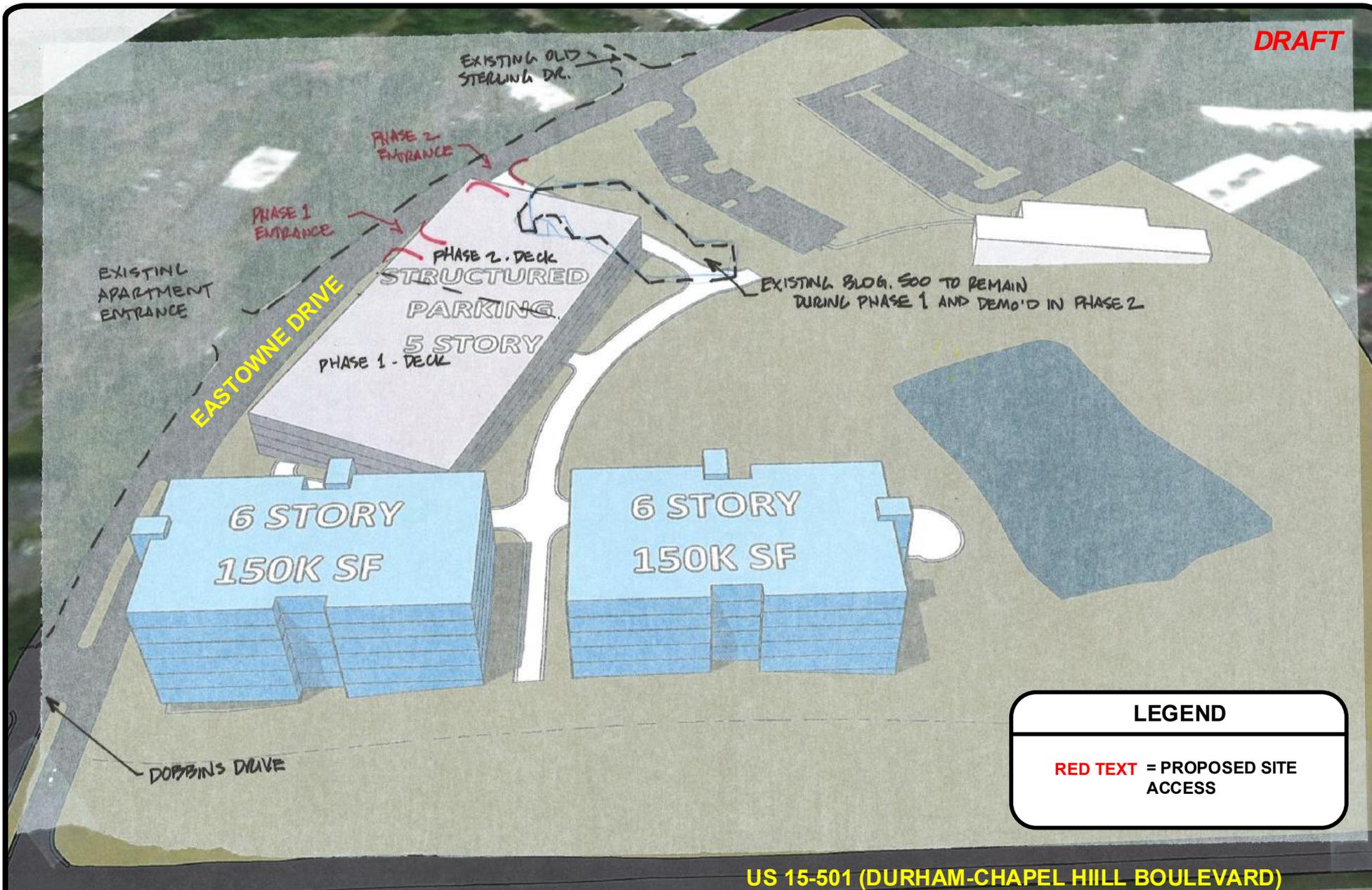
**UNC Health Care Eastowne MOB
Traffic Impact Study**

PROJECT STUDY AREA

DATE: April 2018

FIGURE ES-1

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LEGEND

RED TEXT = PROPOSED SITE ACCESS



NOT TO SCALE

UNC Health Care Eastowne MOB
Traffic Impact Study

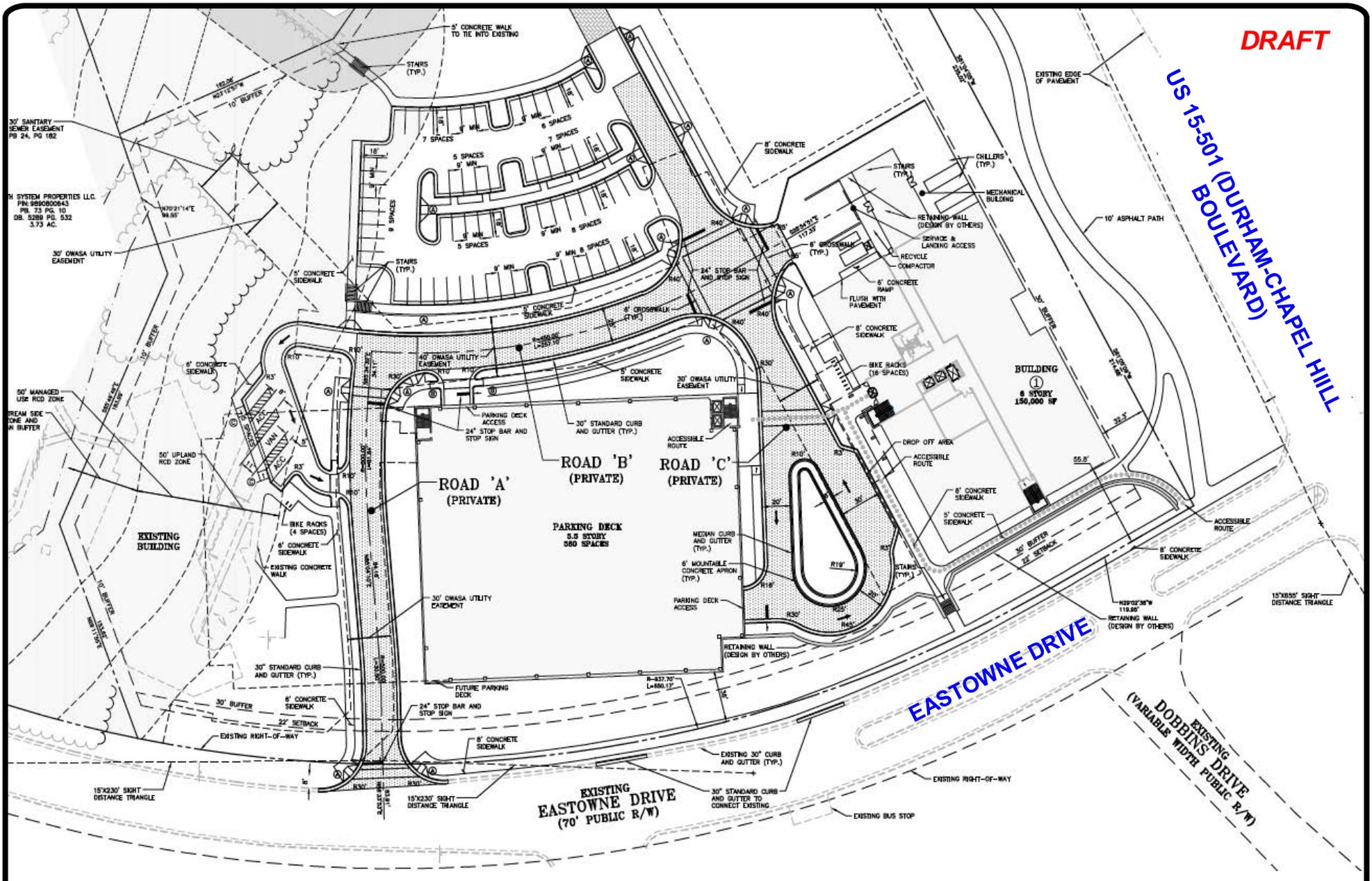
PRELIMINARY SITE PLAN

DATE: April 2018

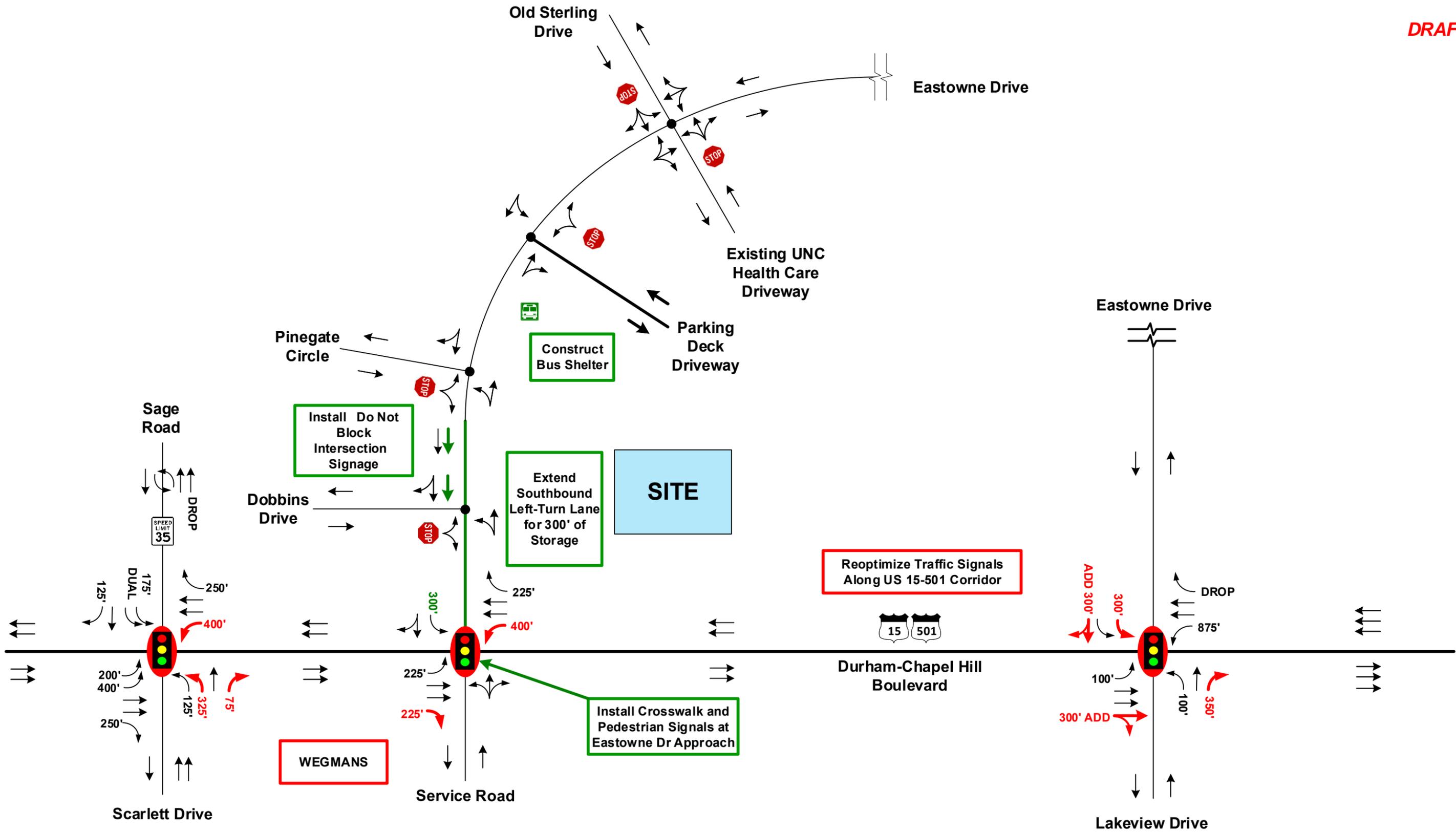
FIGURE ES-2A

DRAFT

US 15-501 (DURHAM-CHAPEL HILL BOULEVARD)



		 NOT TO SCALE	<p style="text-align: center;">UNC Health Care Eastowne MOB Traffic Impact Study</p> <p style="text-align: center;">PRELIMINARY SITE PLAN – PHASE 1</p>	<p>DATE: April 2018</p> <p style="text-align: center;">FIGURE ES-2B</p>
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HNTB

TOWN OF CHAPEL HILL

NOT TO SCALE

LEGEND

 = COMMITTED SIGNAL TIMING & GEOMETRIC IMPROVEMENT

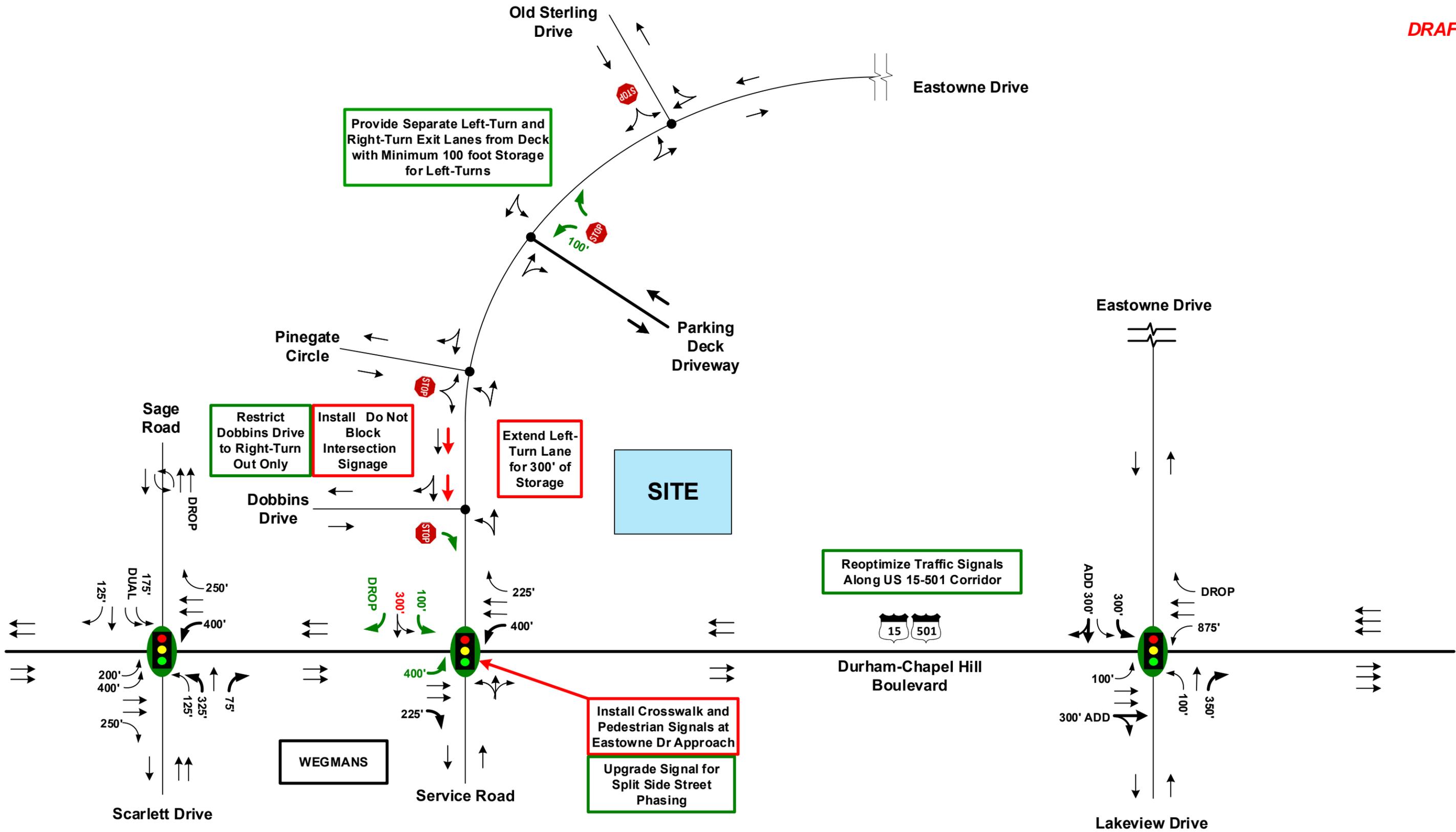
 = NECESSARY IMPROVEMENT

UNC Health Care Eastowne MOB
Traffic Impact Study

2021 PHASE 1 –
COMMITTED AND RECOMMENDED IMPROVEMENTS

DATE: April 2018

FIGURE ES-3



NOT TO SCALE

LEGEND	
	= COMMITTED PHASE 1 SIGNAL TIMING & GEOMETRIC IMPROVEMENT
	= NECESSARY IMPROVEMENT

UNC Health Care Eastowne MOB
Traffic Impact Study

2024 PHASE 2 –
COMMITTED AND RECOMMENDED IMPROVEMENTS

DATE: April 2018

FIGURE ES-4

**UNC HEALTH CARE
EASTOWNE MEDICAL OFFICE BUILDINGS**

DRAFT TRAFFIC IMPACT STUDY



Prepared for:

The Town of Chapel Hill
Public Works Department – Traffic Engineering

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HNTB

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April 2018



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I. EXISTING CONDITIONS

A. Project Overview

The redevelopment of the existing UNC Health Care Medical Office Buildings (MOB) complex, located along the US 15-501 (Durham-Chapel Hill Road) and Eastowne Drive, into larger medical office type facilities with a structured parking deck is being proposed in Chapel Hill. The project proposes to demolish five existing buildings with a total size of 127,724 square feet and construct two new buildings on the existing parcel with an approximate 150,000 square foot size each. **Figure 1** (found in **Appendix A**) shows the general location of the site. The project is anticipated to be built in two phases with the first phase fully complete by late 2020 and the second phase complete by 2024. This report analyzes the transportation impacts for the build-out scenarios for the year 2021 (one year after anticipated completion of Phase 1) and the year 2024 (one year after anticipated completion of Phase 2), the no-build scenario for the 2021 and 2024 analysis years, as well as 2018 existing base year traffic conditions.

The proposed site concept plans show several minor transportation network changes from existing conditions, including new access points along Eastowne Drive for each development phase and closure of existing driveways serving existing surface parking lot facilities. **Figures 2A and 2B** display the preliminary concept plans of the UNC Healthcare Eastowne MOB development, transportation network changes, and nearby land uses and roadways. The project is expected to provide on-site structured parking with a total of approximately 1,100 spaces in two five story parking decks.

B. Site Location and Study Area

This report analyzes and presents the transportation impacts that the UNC Healthcare Eastowne MOB redevelopment will have on the following existing and future intersections in the project study area:

- US 15-501 and Sage Road/Scarlett Drive
- US 15-501 and Eastowne Drive (South) / Service Road
- US 15-501 and Eastowne Drive (North) / Lakeview Drive
- Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway
- Eastowne Drive and Future Parking Deck Driveway Access
- Eastowne Drive and Pinegate Circle / UNC Health Care Driveway
- Eastowne Drive and Dobbins Drive

The impacts of the proposed site at the study area intersections will be evaluated during typical weekday AM, noon, and PM peak hours. The following study is based on background traffic for the existing base year when the project was initiated, 2018, the years following the estimated site phased build out years of 2020 and 2024, as well as the estimated site-generated traffic produced by each phase of the proposed redevelopment.

There are several Town-approved/recently completed development projects within and just outside the immediate project study area that were considered to be fully built-out by 2021 and 2024 that are expected to potentially generate additional background traffic to the project study area. To account for any potential background traffic from these sites and overall regional traffic growth, an area-wide ambient future traffic growth percentage of 1.5 percent per year was applied to existing traffic volumes, based on conservative projections of historical average annual daily traffic (AADT) growth rate data provided by the Town of Chapel Hill and the North Carolina Department of Transportation (NCDOT). Background traffic from the proposed Wegmans Supermarket, located immediately across US 15-501 from the UNC Health Care site was included as a specific background traffic generator.



C. Site Description

The existing UNC Health Care Eastowne site currently contains several medical-office buildings, and on-site surface parking lots. The site borders commercial office and residential development along the Eastowne Drive corridor and primarily commercial development along the US 15-501 corridor. It is located immediately adjacent to the existing SECU property and future Wegmans Supermarket (existing Performance Motors) property across US 15-501.



All vehicular access is proposed to enter and exit the site via a full access site driveway along Eastowne Drive. All parking will be provided on-site, primarily in structured parking spaces, with a total of approximately 1,100 parking spaces in two parking decks for patients and employees. A proposed site concept schematic for the overall redevelopment is shown in **Figure 2A**. A more detailed proposed site plan, shown in **Figure 2B**, shows the location of the local access streets, internal driveway network and adjacent transportation facilities for the first phase of the redevelopment, which will include one parking deck.

D. Existing and Proposed Uses in Vicinity of Site

The land uses and development in the study area along US 15-501 and Eastowne Drive are a mixture of multi-family residential uses, with commercial office development along Eastowne Drive and primarily commercial development along the US 15-501 (Durham-Chapel Hill Boulevard) corridor. The Existing Land Use Plan shown in the 2020 *Town of Chapel Hill Comprehensive Plan* and adopted November 25, 2012, indicates that the existing site is designated as “Office” and remains a similar designation in Future Land Use Plan, that is also a part of the Town Comprehensive Plan, with the designation “Mixed-Use with Office Emphasis”. It also is located in the “US 15-501 North Future Focus Discussion Area”. The site is currently zoned “OI-2”, designated as “Office and Institutional - 2”.

E. Existing and Committed Surface Transportation Network

Roadways

The UNC Healthcare Eastowne MOB project study area features the US 15-501 major arterial roadway serving areas throughout the Town of Chapel Hill and points beyond, as well as several minor arterial roadways and smaller collector and local access streets. **Table 1** summarizes pertinent information on the study area roadway facilities. Average Annual Daily Traffic (AADT) data was taken from 2015 AADT mapping produced by the NCDOT Traffic Survey Unit or collected as part of other recent Town and NCDOT planning studies in the area. **Figure 3** shows the existing lane configuration, traffic control, and speed limits for these study area roadways.



Table 1. Existing Study Area Roadways

Road Name	Functional Classification*	Study Area Cross-Section	Recent AADT	Speed Limit	Sidewalk	On-Street Parking
US 15-501 (Fordham Boulevard / Durham – Chapel Hill Boulevard)	Other Freeway	4-6 lane divided	47,000-53,000	45	N	N
Sage Road (SR 1741)	Minor Arterial	3 lane undivided with TWLTL	8,400-14,500	35	Y	N
Old Durham Road / Old Chapel Hill Road (SR 1838) / Scarlett Drive	Minor Arterial	3 lane undivided with TWLTL & 2 lane undivided with auxiliary turn lanes	6,600	35	S	N
Eastowne Drive	Local	2 lane undivided	5,000**	25	Y	Y
Lakeview Drive	Local	2 lane undivided	3,000**	25	S	N
US 15-501 Service Road	Local	2 lane undivided	N/A	25	S	S
Old Sterling Drive	Local	2 lane undivided	N/A	25	Y	N
Pinegate Circle	Local	2 lane undivided	N/A	N/A	Y	Y
Dobbins Drive	Local	2 lane undivided	N/A	25	N	N

TWLTL – Two-Way Center Left-turn Lane S – Some Sidewalk/On-Street Parking Present
 * - NCDOT Urban Functional Classification Map (2018). <https://ncdot.maps.arcgis.com/home/webmap/viewer.html>
 ** - From Recent 2016 48 Hour Volume/Classification Count/13 Hour Turning Movement Count Data

Detailed descriptions of the major study area roadways are as follows:

- **US 15-501** is a major east-west arterial in the project study area that provides regional connectivity between Chapel Hill and Durham. In the study area, US 15-501 is a four-lane median divided facility and features a 45 mph speed limit.
- **Sage Road** is a minor arterial/collector street that provides connectivity to areas north of the US 15-501 corridor in north Chapel Hill. It is a three-lane undivided facility with a two-way center turn lane and buffered bicycle lanes, with a posted speed limit of 35 mph in the study area. On-street parking is not permitted.
- **Scarlett Drive** is a collector street providing access to commercial and residential properties south and west of the existing site. It also provides connection to the Legion Road corridor south of the project study area. Scarlett Drive has a 35 mph posted speed limit with on-street parking allowed and limited sidewalk present.
- **Lakeview Drive** is a two-lane local access street that provides a connection between US 15-501 and Old Chapel Hill Road. It also serves as a connection for the main parking facilities for the SECU Data Center Building. Lakeview Drive has a 25 mph posted speed limit with no sidewalk facilities or on-street parking.
- **US 15-501 Service Road** is a local frontage road facility paralleling the US 15-501 corridor in the project study area. It has a posted speed limit of 25 mph and serves existing commercial development with no sidewalk present.
- **Eastowne Drive** is a two-lane collector street with divided and undivided cross-sections that primarily serves the Eastowne Office Park and several multi-family residential developments adjacent to the



US 15-501 corridor. The street has a 25 mph posted speed limit and has areas for on-street parking. Sidewalk is present on at least one side of the street.

- **Old Sterling Drive** is a local street that provides access to residential, institutional and commercial development north/west of the UNC Health Care Eastowne site. It is a two-lane facility with a posted speed limit of 25 mph. On-street parking is not permitted and bike lanes and sidewalk are present on both sides of the road.
- **Pinegate Circle** is a local street that provides direct access to residential apartments west of the proposed redevelopment. It is a two-lane facility with no posted speed limit. On-street parking is permitted in some areas on this street/internal driveway.

Intersections

Table 2 summarizes all six existing study area intersections, traffic control features, and pedestrian amenities at each. Laneage details and intersection turn bay lengths are also detailed on **Figure 3**.

Table 2. Existing Study Area Intersection Details

Intersection	Traffic Control	Signal Inv #	Signal Phases	Signal Operation	Cross walk	Ped Signals
US 15-501 and Sage Road/Scarlett Drive	Signal	07-0370	8	Coord	No	No
US 15-501 and Eastowne Drive (South) / Service Road	Signal	07-0211	5	Coord	Yes	Yes (1)
US 15-501 and Eastowne Drive (North) / Lakeview Drive	Signal	07-1011	5	Coord	No	No
Eastowne Drive and Old Sterling Drive	Unsig	N/A	N/A	N/A	No	No
Eastowne Drive and Pinegate Circle	Unsig	N/A	N/A	N/A	No	No
Eastowne Drive and Dobbins Drive	Unsig	N/A	N/A	N/A	No	No

Signal – Signalized, Unsig – Unsignalized Coord = Coordinated Signal Operation
 Ped Signals (Number of Approaches Featuring Signals)

Bicycle Routes and Sidewalks

Bicycle facilities (bike lanes) are present in the immediate study area along Sage Road north of US 15-501 with connections to additional bike lanes on Old Sterling Road through to Eastowne Drive. Additional bike lanes are being constructed along Old Durham Road to tie into the Sage Road corridor bike lanes. Pedestrian sidewalk exists along on at least one side of the street for most of the local collector and residential access streets. Crosswalks and pedestrian signals are present across US 15-501 at one quadrant of the Eastowne Drive South intersection. **Figure 4** displays a schematic of existing pedestrian/bicycle facilities in the project study area.

Transit Routes

Current Chapel Hill Transit (CHT) local Routes D, and CL serve the project study area along several major roadways with weekday bus service. Several bus stops, with a range of amenities (shelters, benches), are present in the study area. **Table 3** details the two current CHT routes serving the study area. Most buses run on 20, 30, or 60 minute headways during weekday peak service periods. Weekend Saturday Service is provided on the D Route with 65 minute headways.

Go Triangle provides regional bus service to the immediate study area via the 400 and 405 Routes that run along US 15-501 (Fordham Boulevard) between Chapel Hill and Durham. Service for these routes occurs at 30 minute headways during peak weekday periods. **Figure 5** displays transit routes and bus



stops that currently exist in the project study area. Transit trips that would potentially be generated by the UNC Healthcare Eastowne MOB are discussed in the following sections of this report.

Table 3. Current Study Area Weekday Transit Service

Route	Headways (minutes)			Study Area Stops	Destinations
	AM Peak	PM Peak	Off Peak		
CHT Local Service*					
D**	20-30	20-30	40-50	<ul style="list-style-type: none"> • Lakeview Drive • Sage Road • Eastowne Drive • Old Sterling Drive 	<ul style="list-style-type: none"> • Downtown Chapel Hill / UNC • Eastgate • Culbreth Road/South Chapel Hill
CL	55-60	50-70	N/A	<ul style="list-style-type: none"> • Old Durham Road • Sage Road 	<ul style="list-style-type: none"> • Colony Lake • Eastgate • Downtown Chapel Hill / UNC
GoTriangle*					
400	30	30	60	<ul style="list-style-type: none"> • US 15-501 (Durham-Chapel Hill Road) 	<ul style="list-style-type: none"> • Durham • Patterson Place / New Hope Commons • Downtown Chapel Hill / UNC
405	30	30	N/A		

* - Sources: Chapel Hill Transit 2018 Spring Ride Guide, GoTriangle System Map (Spring 2018)

** - D Route Also Offers Saturday Service on 65 Minute Headways

Recommended/Committed Surface Transportation Improvement Projects

There are several committed/programmed NCDOT STIP projects and private development-related projects that potentially may affect roadway facilities in the study area that are expected to be complete in the near future within the 2021 or 2024 phased project build-out years. They are described below:

NCDOT Projects

A planning study for the US 15-501 corridor (NCDOT STIP U-5304) is currently underway, but no recommendations have been implemented from this study and would be unlikely to be complete by either of the Build-Out Year+1 Scenarios. The study will include corridor-wide improvements to major signalized full access intersections along the corridor. A designated NCDOT project (U-5304F) for the segment of US 15-501 in the project study is currently listed in the NCDOT 2018-2027 STIP, with right-of-way acquisition beginning in 2024 and construction in 2026.

NCDOT STIP project EB-4707B is currently beginning construction along Old Durham Road/Old Chapel Hill Road east of the project study area and will include pedestrian and bicycle improvements connecting to the US 15-501 corridor at the Sage Road/Scarlett Drive intersection. These improvements will enhance and add to existing sidewalks and add bicycle lanes along the corridor along with intersection crossing amenities (signals, actuation) for both pedestrians and bicycles. It is not expected that the proposed improvements will cause significant changes to traffic patterns/operations, other than to improve safety for all transportation modes. Implementation of these improvements is expected over the next several years. The improvements were considered complete for both 2021 and 2024 analysis years.

Private Development Projects

The redevelopment of the existing Performance Motors campus along US 15-501 into a Wegmans Supermarket has been approved by the Town of Chapel Hill and this project was assumed to be complete by the initial UNC Health Care Eastowne MOB Phase 1 redevelopment 2021 analysis year. The *Wegmans Supermarket Traffic Impact Study* (HNTB, 2017) included multiple on-site and off-site



recommended improvements to local study area intersections that were assumed to be complete for all future year analyses in this study.

F. Existing 2018 Base Year Traffic Conditions

Figure 6 shows recent weekday AM, noon, and PM peak hour traffic volumes for the study area intersections. The counts used to determine these volumes were collected in March 2018 for all existing study area intersections during the weekday periods 7:00 - 9:00 AM, 11:30 AM – 1:30 PM, and 4:00 – 6:00 PM. The turning movement count output for all study area intersections is found in **Appendix B**.

Traffic count information shows that traffic flows on US 15-501 (Fordham Boulevard/Durham-Chapel Hill Boulevard) were heavy during all peak count periods, with southbound/westbound flows into downtown Chapel Hill heaviest in the AM peak and northbound/eastbound return flows heaviest in the PM peak. Traffic on the minor arterial and collector street facilities such as Sage Road, and Scarlett Drive was moderate during the AM and PM peak commuting periods, with slightly lower noon peak volumes in comparison. Traffic flows were light to moderate on the remaining study area roadways that function as local access streets.

Volume Balancing

For the intersection capacity analyses, peak hour count data was examined to determine the need for volume balancing along US 15-501 and Eastowne Drive through the entire project study area. There was only a small variability in turning movement counts between intersections along US 15-501, even though some count data had slightly different 15 minute peak time period offsets, so the count volumes along US 15-501 were left as-is, with minor imbalances. Eastowne Drive peak hour count periods were adjusted to match the US 15-501 / Eastowne Drive intersection 60 minute peak count hours and then balanced between US 15-501 and Old Sterling Drive.

Table 4. Traffic Count Information

Traffic Count Location	Period Counted	Peak Hour	Count Date
US 15-501 and Sage Road / Scarlett Drive	AM Peak	7:45 – 8:45 AM	3/20/18
	Noon Peak	12:30 – 1:30 PM	
	PM Peak	5:00 – 6:00 PM	
US 15-501 and Eastowne Drive (South)	AM Peak	7:30 – 8:30 AM	3/20/18
	Noon Peak	12:30 – 1:30 PM	
	PM Peak	5:00 – 6:00 PM	
US 15-501 and Eastowne Drive (North) / Lakeview Drive	AM Peak	7:30 – 8:30 AM	3/20/18
	Noon Peak	12:15 – 1:15 PM	
	PM Peak	4:30 – 5:30 PM	
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway	AM Peak	7:45 – 8:45 AM	3/20/18
	Noon Peak	12:00 – 1:00 PM	
	PM Peak	4:30 – 5:30 PM	
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway	AM Peak	7:45 – 8:45 AM	3/20/18
	Noon Peak	12:30 – 1:30 PM	
	PM Peak	4:30 – 5:30 PM	
Eastowne Drive and Dobbins Drive	AM Peak	7:45 – 8:45 AM	3/20/18
	Noon Peak	12:00 – 1:00 PM	
	PM Peak	4:30 – 5:30 PM	



II. FUTURE BUILD-OUT YEAR+1 CONDITIONS

A. Future Ambient Area-Wide Traffic Growth Estimation

Based on information on average daily traffic collected by the Town of Chapel Hill and the NCDOT, a yearly ambient traffic growth rate of 1.5 percent per year was used for the short-term 2021 and 2024 design year capacity analyses. This rate is based on previous and anticipated growth trends for this area from Town and NCDOT average annual daily traffic (AADT) information from the period 1990-2015. In some cases, AADT's on study area roadways have actually declined over the last 10 years. However, to conservatively account for any background development projects and potential traffic increases in the future, a positive growth rate was selected.

B. Approved Background Development Traffic Estimation

Per information from Town of Chapel Hill staff and information from the Town's Planning and Development Services Development Activity Map (current as of April 2018), several Town-approved developments that are either currently approved, under construction, or are expected to be built out and fully operational by the 2021 and 2024 design analysis years, potentially impact peak hour operations within or just beyond, the specific project study area. The amount of weekday peak hour traffic from the developments is expected to be accounted for in the conservative ambient growth projections, as described previously.

One large development, a proposed Wegmans Supermarket, to be located directly across the US 15-501 corridor from the UNC Health Care site, will redevelop the existing Performance Motors Auto Sales and Service site. The net traffic impact effects from the Wegmans Supermarket, which has been approved by the Town of Chapel Hill, were included in the 2021 and 2024 phased build-out year analyses. Information related to traffic volume development scenarios from the Wegmans Supermarket project can be found in the *Wegmans Supermarket Traffic Impact Study – Service Road Access Technical Memorandum* (HNTB, October 2017). The location of the Wegmans Supermarket background traffic generator is shown in **Figure 7**. **Figure 8** shows the total 2021 analysis year background peak hour traffic volumes resulting from the Wegmans redevelopment. **Appendix C** contains details of the Wegmans site traffic assignments and removal of existing Performance Motors trips in the study area.

Figure 9 shows the estimated 2021 Build-out Year+1 total traffic volume projections on the existing project study area transportation network, including the ambient area-wide growth and specific background traffic volumes without the UNC Health Care Eastowne MOB Phase 1 site redevelopment traffic. **Figure 14** shows the estimated 2024 Build-out Year+1 total traffic volume projections for the Phase 2 redevelopment scenario, without the inclusion of additional Phase 2 redevelopment traffic. This includes Phase 1 site traffic assignment estimates and ambient background traffic growth from 2021 to 2024. No additional specific background traffic generators were included in Phase 2.

C. Proposed Project Traffic

i. Trip Generation

Projected trips for the proposed redevelopment were generated from the *ITE Trip Generation Manual* (Institute of Transportation Engineers, 9th Edition, 2012). Adjustments to trip generation rates (due to internal trips, pass-by trips, transit trips, pedestrian/bicycle trips) were assessed to account for potential reductions in vehicular trips due to these factors. NCDOT recommended procedures for trip generating variables and generation methodology (use of average rates or linear regression equations) were applied to ITE calculations.



Table 5 shows the number of vehicular trips generated by the UNC Healthcare Eastowne MOB redevelopment during the weekday AM, noon, and PM peak hours of adjacent streets, based on the ITE generation methodologies described above. Daily weekday estimates are also provided. A peak hour truck percentage of two percent was estimated for all site-generated traffic.

ii.) Adjustments to Trip Generation Rates

Typically, raw ITE trip generation estimates for daily and peak hour trips have the potential to be adjusted for the following factors to reduce raw trip generation estimates to actual estimated vehicular trips produced by the UNC Healthcare Eastowne MOB redevelopment. The following discussion highlights this process.

a.) Internal Capture

The singular land use proposed for UNC Healthcare Eastowne MOB would not exhibit the potential for internally-captured trips for on-site uses, as ITE internal capture methodologies typically require some combination of residential, office, and/or commercial mixed-use land uses. No modifications or reductions were made to trip generation results to account for internal capture.

b.) Modal Split

The study area is served by two CHT fixed bus routes with frequent existing peak hour service and has limited facilities for pedestrians and bicyclists with limited connectivity to trip generators or attractions in areas of northern Chapel Hill. To be conservative, trip reductions for transit, pedestrians, and bicycles were not made for this analysis, though there is the potential for some trip-making to and from the site by these travel modes. Count observations for pedestrians and bicyclists indicate that these modes only account for a small portion of existing trips in the project study area.

c.) Pass-by Trips

The proposed UNC Healthcare Eastowne MOB redevelopment is a land use type that would not typically generate pass-by trips. No pass-by trip reductions were applied for this study.

d.) Existing Trip Generation

Existing traffic volumes from two UNC Health Care site driveways were collected during each peak hour as part of intersection counts to adjacent minor streets or private driveways, but were not used to determine existing site trip generation. Existing UNC Health Care generated trips were considered to remain on the existing study area network in the trip distribution and assignment process discussed in the next section. Net impacts of additional site trips in each redevelopment phase were added to external study area intersections and total driveway trips (including existing development density and net additional redevelopment density) were included in future peak hour traffic volume estimates at the access point on Eastowne Drive serving the proposed parking decks.

e.) Trip Generation Budget

Current information from the Applicant related to the UNC Healthcare Eastowne MOB project indicates that the project will be built out in two distinct phases. As such, this analysis considers the impacts of each development phase and makes recommendations for transportation system improvements directly related to that phase. Subsequent phases are analyzed with the assumption that the previous phase is complete (along with their recommended transportation system improvements), and additional development will require additional improvements above and beyond what is already assumed to be in place to mitigate previous impacts. All analyses were completed based on the proposed development intensity levels provided by the Applicant. Any deviations from this plan may require an update to this traffic impact study, depending on the estimated trip generation changes made by an update to the plan.



Table 5. Weekday Vehicle Trip Generation Summary
UNC Healthcare Eastowne MOB

Phase	ITE LUC	Description	Density (SF)	Daily			AM Peak			Noon Peak			PM Peak		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
1	710	TOTAL REDEVELOPMENT	150,000	894	894	1,788	233	32	265	69	59	128	42	204	246
		Existing Site Demolition	77,484	380	380	760	103	14	117	30	21	51	15	71	86
		Phase 1 – NET INCREASE	72,516	514	514	1,028	130	18	148	39	38	77	27	133	160

Phase	ITE LUC	Description	Density (SF)	Daily			AM Peak			Noon Peak			PM Peak		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
2	710	TOTAL REDEVELOPMENT	150,000	894	894	1,788	233	32	265	69	59	128	42	204	246
		Existing Site Demolition	24,610	114	114	228	31	5	36	9	7	16	5	22	27
		Phase 2 – NET INCREASE	125,390	780	780	1,560	202	27	229	60	52	112	37	182	219

	Daily			AM Peak			Noon Peak			PM Peak		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Total Redevelopment Driveway Trips	1,788	1,788	3,576	466	64	530	138	118	256	84	408	492
Total Net External Trip Increase	1,294	1,294	2,588	332	45	377	99	90	189	64	315	379



iii.) Trip Distribution

The trip distribution process included two types of trips – existing site trips already on the external study area network and adding new “net” site trips for each construction phase.

- Existing trips from the current UNC Health Care medical office building facilities that are to be demolished were considered to remain on the network for each Build-out year+1 analysis phase and were accounted for as background traffic. Net increases of building square footage were accounted for in the trip generation process and added to the network to account for site traffic impacts in the 2021 and 2024 analysis years.
- Trip distribution for both phases of the UNC Healthcare Eastowne MOB site-related traffic was based on existing daily and peak hour traffic patterns on major study area thoroughfares, and engineering judgment, to determine the directional peak hour characteristics of traffic to and from the site from the major study area thoroughfares. Small portions of local trips to/from lower volume collector and residential streets were estimated for several facilities exhibiting comparably high enough peak hour traffic volumes to warrant a small distribution percentage of site trips. Trips were also distributed based on the “regional” attraction of employment-related trips to a large office complex. Trip distribution percentages for new site trips were assumed not to vary depending on peak period.

The distribution of all redevelopment site trips assumes the proposed site parking deck access improvements shown in **Figure 2A** are completed. **Figure 10** presents the projected trip distribution traffic percentages for the proposed site expansion in the 2021 and 2024 phased analysis years.

iv.) Trip Assignment

Figure 11 shows the corresponding weekday AM, noon, and PM peak hour Phase 1 site traffic volumes distributed on the 2021 study area network. **Figure 15** shows the corresponding traffic volume data for 2024 Phase 2 site traffic. Total volumes into and out of the site correspond to total external vehicular trips generated, based on the trip generation and distribution methodologies developed previously. This results in total redevelopment site trips being shown at the proposed site driveway access point on Eastowne Drive and “net” site trip assignment increases for the remaining study area network intersections. Traffic flows along Eastowne Drive were balanced for future build scenarios, to the extent possible. **Appendix D** shows detailed spreadsheet summations of 2021 and 2024 site trip distributions and assignments using methodologies described above.

D. Future Traffic Forecasts with the Proposed UNC Health Care Redevelopment

Figures 12 and 16 display the 2021 and 2024 Build-out+1 year projected study area AM, noon, and PM peak hour traffic volumes with UNC Health Care Eastowne MOB site traffic added. These traffic volumes represent the aggregate traffic growth over existing traffic volumes for ambient and specific background traffic growth and estimated site traffic assignments for the UNC Healthcare Eastowne MOB site.

Appendix D contains the detailed breakout of all trip distribution estimates, resulting site traffic assignments, new net traffic increases and overall total scenario volume calculations within the UNC Health Care Eastowne MOB study area.



III. IMPACT ANALYSES

A. Peak Hour Intersection Level of Service Analysis

i.) Methodology

Evaluation of traffic operations on suburban arterials and surface streets is most effective through the determination of level of service (LOS) criteria. The concept of level of service correlates qualitative aspects of traffic flow to quantitative terms. This enables transportation professionals to take the qualitative issues, such as congestion and substandard geometrics, and translate them into measurable quantities, such as operating speeds and vehicular delays. The 2010 *Highway Capacity Manual (HCM 2010)* characterizes level of service by letter designations A through F. Level of service A represents ideal low-volume traffic operations, and level of service F represents over-saturated high-volume traffic operations. Level of service is measured differently for various roadway facilities, but in general, level of service letter designations are described by the following in **Table 6**.

The *Synchro Professional Version 9* operations analysis software was used to analyze peak hour conditions at signalized and unsignalized intersections. The minimum acceptable peak hour intersection LOS established for this project is LOS D for signalized intersections or LOS E for critical movements at unsignalized intersections, or no increase in delay for signalized intersections operating below LOS D or unsignalized intersection critical movements operating below LOS E without the inclusion of site traffic.

The following seven conditions were evaluated in this report:

Condition 1 - 2018 Existing Traffic

Condition 2 - 2021 Traffic without Redevelopment Phase 1 Site Traffic (Existing UNC Health Care Campus Remains Open)

Condition 3 - 2021 Traffic with Redevelopment Phase 1 Net Site Traffic Volumes Added

Condition 4 - 2021 Traffic with Redevelopment Phase 1 Net Site Traffic and Necessary Improvements to Mitigate Impacts

Condition 5 - 2024 Traffic without Redevelopment Phase 2 Site Traffic (UNC Health Care MOB Phase 1 Traffic Included)

Condition 6 - 2024 Traffic with Redevelopment Phase 2 Net Site Traffic Volumes Added

Condition 7 - 2024 Traffic with Redevelopment Phase 2 Net Site Traffic and Necessary Improvements to Mitigate Impacts

The results of this analysis are based on the procedures presented in the *HCM 2010* and performed with the corresponding capacity analysis software described previously. The methodology of evaluating each condition for signalized intersections is presented below:

- **Condition 1** – Use current Town of Chapel Hill data for the cycle length, splits and offsets of individual signalized intersections and report LOS and delay values from Synchro.
- **Conditions 2, 3, 5 and 6** – Reoptimize the cycle lengths and splits of individual intersections in Synchro, if existing timing data does not provide adequate overall intersection LOS. Adjust cycle lengths, splits, and offsets, if necessary, if the signal is currently operating in a coordinated system. The optimized signal timing information will be held constant from a No-Build to a Build Condition to provide a means to compare effects of the proposed background traffic growth.



Table 6. Level of Service (LOS) Characteristics

Level of Service Description	Per Vehicle Delay at Signal	Per Vehicle Delay at Stop Sign
LOS A > Free flow > Freedom to select desired speed and to maneuver is extremely high > General level of comfort and convenience for motorists is excellent	< 10.0 sec	< 10.0 sec
LOS B > Stable flow > Other vehicles in the traffic stream become noticeable > Reduction in freedom to maneuver from LOS A	10.0 – 20.0 sec	10.0 – 15.0 sec
LOS C > Stable flow > Maneuverability and operating speed are significantly affected by other vehicles > General level of comfort and convenience declines noticeably	20.0 – 35.0 sec	15.0 – 25.0 sec
LOS D > High density but stable flow > Speed/freedom to maneuver are very restricted > General level of comfort / convenience is poor > Small increases in traffic will generally cause operational problems	35.0 – 55.0 sec	25.0 – 35.0 sec
LOS E > Unstable flow > Speed reduced to lower but relatively uniform value > Volumes at or near capacity level > Comfort and convenience are extremely poor > Small flow increases or minor traffic stream disturbances will cause breakdowns	55.0 – 80.0 sec	35.0 – 50.0 sec
LOS F > Forced or breakdown flow > Volumes exceed roadway capacity > Formation of unstable queues > Stoppages for long periods of time because of traffic congestion	> 80.0 sec	> 50.0 sec

Condition 2 traffic volume, geometric improvements and proposed signal phasing changes from the Wegmans project necessitated a retiming of individual traffic signals along the US 15-501 corridor. These changes were held constant through the subsequent conditions.

- **Condition 4 and 7** – Optimize coordinated traffic signals for effects of proposed improvements by the Applicant and/or recommended mitigation strategies that change existing/committed changes to lane geometrics. Evaluate the potential for different signal phasing schemes (left-turn lag phases, for example). Retain existing split minimums and any pedestrian timing values. Recommendations, if warranted, will be made to obtain at least LOS D for the intersection as a whole.

The net effect of this process is that direct comparisons, by movement, of delay and LOS between each of the seven conditions are impossible because splits and cycle lengths can and do change between conditions. The pertinent statistic of this analysis is the *overall intersection level of service and delay*. Improvements to deficient intersections in Conditions 3 and 6 were made by first attempting to adjust signal operations via changes in cycle lengths, splits and/or with acceptable adjustments to signal phasing. If that did not produce satisfactory results for all intersections,



geometric improvements to improve intersection capacity were considered for the deficient intersections. Conditions 4 and 7 assume any proposed geometric and signalized control changes were implemented in the network and that the entire US 15-501 corridor would be retimed to account for these changes. **Appendix E** contains the Synchro output for all seven conditions (where applicable).

The existing and future study area unsignalized intersections were analyzed within the Synchro software tool, using the HCM 2010 two-way stop-control reports. Their results were evaluated on a per-movement basis, since HCM methodologies do not produce an overall intersection level of service for unsignalized intersections. Thus, intersections with deficient (LOS F) movements in Conditions 2 and 3 would need to be evaluated for improvements in Condition 4. This methodology differs from signalized intersections, where one or more movements at an intersection may be deficient in Conditions 2 and 3, but as long as the overall intersection level of service does not fall below LOS D, no intersection improvements are deemed necessary. The same methodology was applied for Phase 2 scenarios in Conditions 5-7. **Appendix F** contains the Synchro unsignalized output for all unsignalized intersections under study.

ii.) 2018 Base Year Existing Conditions Results

Table 7 presents the results for the 2018 base year traffic conditions as compiled from field data. The table lists LOS and delay values for those movements that are in existence at this time. It also only lists data for individual movements and approaches encountering delay at the stop-controlled intersection (which does not have an overall intersection delay value produced by HCS and HCM methodologies).

Currently, all study area signalized intersections operate at acceptable overall levels of service for the analyzed 2018 AM, noon, and PM peak hours, though several are near or at capacity in at least one peak hour. At all US 15-501 intersections, most minor side street movements and approaches operate at LOS E or F, due to coordinated signal timing operations along the US 15-501 mainline.

All unsignalized intersections have critical movement LOS and delays (typically a stop-controlled minor street approach movement) that are an acceptable LOS A-E.

iii.) 2021 Phase 1 No-Build Scenario (Condition 2) Results

Table 8 presents the results for the 2021 Build-out+1 analysis year estimated traffic conditions without the impacts of site-related traffic. This analysis includes the application of the 1.5 percent per year ambient growth factor to existing 2018 traffic volumes in addition to the net background traffic changes expected due to the adjacent redevelopment of Performance Motors into a Wegmans Supermarket.

During Condition 2 - 2021 Without Site Traffic, all study area intersections are expected to operate at acceptable levels of service for all analyzed peak hours, with the assumption that all proposed improvements recommended for the Wegmans development are implemented on study area intersections. For the Condition 2 analysis, existing 2018 signal timings and system operations were updated for these proposed improvements.



Table 7. Capacity Analysis Results for Study Area Intersections - Condition 1 – 2018 Existing Peak Hour Traffic

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
US 15-501 and Sage Road / Scarlett Drive													
Overall	D	D	D	46.5	42.5	52.2							
Eastbound	D	D	D	45.0	40.3	51.0	LT	F	F	F	99.6	98.2	96.7
							THRU	D	C	D	35.1	28.9	46.5
							RT	A	A	A	6.0	5.7	6.2
Westbound	C	C	D	26.1	24.0	37.2	LT	E	E	F	71.6	79.7	81.7
							THRU	C	C	D	23.8	22.2	38.9
							RT	A	A	A	5.6	4.4	6.9
Northbound	F	F	F	100.3	97.7	103.9	LT	F	F	F	102.8	103.9	114.5
							THRU-RT	F	F	F	97.4	91.2	88.7
Southbound	F	E	E	93.8	76.1	78.3	LT	F	F	F	99.1	85.6	83.5
							THRU	F	F	F	115.9	84.6	94.9
							RT	E	E	E	58.2	58.1	56.8
US 15-501 and Eastowne Drive (south) / Service Road													
Overall	B	B	B	10.0	14.6	16.8							
Eastbound	A	A	A	4.9	8.4	8.3	LT	E	F	F	69.6	115.4	96.8
							THRU	A	A	A	1.8	3.2	7.0
							RT	A	A	A	1.0	3.3	6.2
Westbound	A	A	B	6.2	8.6	11.6	LT	F	E	E	121.9	75.3	68.4
							THRU	A	A	B	3.9	7.3	10.9
							RT	A	A	A	2.2	6.0	8.3
Northbound	E	F	F	77.8	88.1	83.5	LT-TH-RT	E	F	F	77.8	88.1	83.5
Southbound	F	F	F	102.5	104.7	125.5	LT	F	F	F	111.3	101.7	156.5
							THRU-RT	F	F	F	92.4	106.5	98.2
US 15-501 and Eastowne Drive (north) / Lakeview Drive													
Overall	C	B	D	26.3	19.8	50.5							
Eastbound	B	B	D	15.0	10.5	37.8	LT	E	F	F	80.0	100.6	92.6
							THRU-RT	B	A	D	14.6	9.0	37.7
Westbound	C	B	D	20.9	15.9	38.2	LT	F	E	F	104.2	79.1	80.2
							THRU	B	B	D	20.0	14.1	38.4
							RT	A	A	B	9.4	8.8	17.5
Northbound	F	E	D	94.0	67.3	48.0	LT	E	E	D	63.4	61.4	41.1
							THRU-RT	F	E	D	97.7	68.5	48.6
Southbound	F	F	F	196.3	103.2	171.9	LT	F	F	F	212.5	112.8	189.8
							THRU-RT	E	E	D	61.2	63.8	42.0
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	11.6	12.0	11.4	LT-TH-RT	B	B	B	11.6	12.0	11.4
Westbound	A	A	A	9.6	9.6	9.6	LT-TH-RT	A	A	A	9.6	9.6	9.6
Northbound	A	A	A	1.4	1.2	3.7	LT	A	A	A	7.6	7.7	8.0
Southbound	A	A	A	0.6	0.1	0.0	LT	A	A	A	7.4	7.4	7.3
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	A	A	A	9.4	9.5	9.3	LT-TH-RT	A	A	A	9.4	9.5	9.3
Westbound	A	A	A	9.5	9.6	9.7	LT-TH-RT	A	A	A	9.5	9.6	9.7
Northbound	A	A	A	1.5	2.5	4.1	LT	A	A	A	7.4	7.5	7.7
Southbound	A	A	A	0.8	0.3	0.1	LT	A	A	A	7.5	7.4	7.3
Eastowne Drive and Dobbins Drive													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	A	A	10.1	9.7	9.9	LT-RT	B	A	A	10.1	9.7	9.9
Northbound	A	A	A	2.2	2.3	2.1	LT	A	A	A	7.6	7.6	7.8

BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



Table 8. Capacity Analysis Results for Study Area Intersections - Condition 2 – 2021 Peak Hour Traffic Without Site Phase 1

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)			
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM	
US 15-501 and Sage Road / Scarlett Drive														
Overall	D	D	D	47.4	40.8	50.4								
Eastbound	D	D	D	43.0	39.1	46.2	LT	<i>F</i>	<i>F</i>	<i>F</i>	<i>99.1</i>	<i>90.9</i>	<i>97.2</i>	
							THRU	C	C	D	33.7	30.4	42.6	
							RT	B	B	A	11.8	10.7	9.6	
Westbound	C	C	C	29.7	21.4	31.2	<i>LT</i>	<i>E</i>	<i>E</i>	<i>F</i>	<i>79.3</i>	<i>70.8</i>	<i>110.6</i>	
							THRU	C	B	C	27.2	19.1	28.3	
							RT	A	A	A	3.2	3.5	4.2	
Northbound	<i>F</i>	<i>F</i>	<i>F</i>	<i>97.4</i>	<i>84.4</i>	<i>98.8</i>	<i>LT</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>98.3</i>	<i>88.6</i>	<i>106.5</i>	
							THRU	<i>F</i>	<i>F</i>	<i>F</i>	<i>107.6</i>	<i>89.2</i>	<i>95.2</i>	
							<i>RT</i>	D	D	E	52.8	53.4	61.2	
Southbound	<i>F</i>	<i>E</i>	<i>F</i>	<i>91.0</i>	<i>74.1</i>	<i>84.2</i>	LT	<i>F</i>	<i>F</i>	<i>F</i>	<i>101.1</i>	<i>85.5</i>	<i>83.4</i>	
							THRU	<i>F</i>	<i>F</i>	<i>F</i>	<i>114.2</i>	<i>95.8</i>	<i>128.1</i>	
							RT	D	D	D	43.0	43.9	44.2	
US 15-501 and Eastowne Drive (south) / Service Road														
Overall	B	B	B	11.5	12.1	11.9								
Eastbound	A	A	A	6.4	6.4	4.5	LT	<i>F</i>	<i>F</i>	<i>F</i>	<i>110.7</i>	<i>105.0</i>	<i>85.7</i>	
							THRU	A	A	A	1.3	1.4	3.3	
							<i>RT</i>	A	A	A	0.3	0.8	1.3	
Westbound	A	A	A	8.8	8.8	9.3	<i>LT</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>83.7</i>	<i>86.1</i>	<i>92.7</i>	
							THRU	A	A	A	6.4	5.0	4.3	
							RT	A	A	A	4.2	3.9	3.2	
Northbound	<i>E</i>	<i>E</i>	<i>E</i>	<i>71.8</i>	<i>72.2</i>	<i>71.9</i>	LT-TH-RT	<i>E</i>	<i>E</i>	<i>E</i>	<i>71.8</i>	<i>72.2</i>	<i>71.9</i>	
Southbound	<i>F</i>	<i>F</i>	<i>F</i>	<i>102.0</i>	<i>100.7</i>	<i>107.3</i>	LT	<i>F</i>	<i>F</i>	<i>F</i>	<i>110.4</i>	<i>89.5</i>	<i>109.2</i>	
							THRU-RT	<i>F</i>	<i>F</i>	<i>F</i>	<i>92.2</i>	<i>107.2</i>	<i>105.6</i>	
US 15-501 and Eastowne Drive (north) / Lakeview Drive														
Overall	B	B	C	17.3	19.1	33.4								
Eastbound	A	A	C	4.1	4.4	22.0	LT	<i>E</i>	<i>E</i>	<i>E</i>	<i>68.4</i>	<i>72.8</i>	<i>72.4</i>	
							THRU-RT	A	A	C	3.8	3.1	21.9	
Westbound	B	B	C	14.9	16.5	21.5	LT	<i>E</i>	<i>F</i>	<i>E</i>	<i>71.7</i>	<i>88.1</i>	<i>64.4</i>	
							THRU	B	B	C	15.0	14.9	20.8	
							RT	A	A	A	6.2	8.5	9.1	
Northbound	<i>F</i>	<i>F</i>	<i>F</i>	<i>87.3</i>	<i>96.2</i>	<i>94.8</i>	LT	<i>F</i>	<i>F</i>	<i>E</i>	<i>82.8</i>	<i>90.3</i>	<i>74.1</i>	
							THRU	<i>F</i>	<i>F</i>	<i>F</i>	<i>95.7</i>	<i>89.9</i>	<i>92.5</i>	
							<i>RT</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>86.8</i>	<i>98.5</i>	<i>97.3</i>	
Southbound	<i>F</i>	<i>F</i>	<i>F</i>	<i>98.7</i>	<i>84.4</i>	<i>91.3</i>	LT	<i>F</i>	<i>F</i>	<i>F</i>	<i>100.2</i>	<i>83.7</i>	<i>91.4</i>	
							<i>THRU-RT</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>88.1</i>	<i>86.8</i>	<i>90.8</i>	

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)			
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM	
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	B	B	B	11.7	12.1	11.5	LT-TH-RT	B	B	B	11.7	12.1	11.5	
Westbound	A	A	A	9.7	9.6	9.6	LT-TH-RT	A	A	A	9.7	9.6	9.6	
Northbound	A	A	A	1.3	1.0	3.8	LT	A	A	A	7.6	7.7	8.1	
Southbound	A	A	A	0.5	0.1	0.0	LT	A	A	A	7.4	7.4	7.3	
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	A	A	A	9.4	9.5	9.4	LT-TH-RT	A	A	A	9.4	9.5	9.4	
Westbound	A	A	A	9.6	9.6	9.7	LT-TH-RT	A	A	A	9.6	9.6	9.7	
Northbound	A	A	A	1.5	2.6	4.3	LT	A	A	A	7.4	7.5	7.7	
Southbound	A	A	A	0.8	0.3	0.1	LT	A	A	A	7.5	7.4	7.3	
Eastowne Drive and Dobbins Drive														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	B	A	A	10.2	9.8	9.9	LT-RT	B	A	A	10.2	9.8	9.9	
Northbound	A	A	A	2.2	2.5	2.2	LT	A	A	A	7.7	7.6	7.8	

BLUE – New or Modified Movement Included in Background Improvements

BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



The following improvements were required as part of the Wegmans Traffic Impact Study to meet Town and/or NCDOT operational standards and thresholds to mitigate the effects of site-related traffic.

- Provision of additional northbound left-turn lane for Old Durham Road with 125 feet of storage and additional upstream laneage/storage at the US 15-501 / Sage Road intersection. Provision for a new northbound right-turn auxiliary lane/pocket for Old Durham Road at the same location. Extension of westbound left-turn lane at this intersection
- Construction of a non-traversable median along Old Durham Road from the US 15-501 intersection to extend 325 feet upstream and limit turning movements to/from Scarlett Drive.
- Provision of southbound dual left-turn lanes and a new through/right-turn lane add lane, a new northbound right-turn lane and an extension of the existing eastbound outer through/right-turn lane at the US 15-501 / Eastowne Drive – Lakeview Drive intersection to address capacity issues at this location.
- Allowance of Wegmans site traffic to enter the site from the Service Road, but exiting traffic only can use Old Durham Road. Extension of US 15-501 left-turn and right-turn lanes for entering Wegman’s traffic on the Service Road.
- Signal reoptimization of the US 15-501 corridor within the project study area to adjust signal cycle/split/offset values to account for peak hour traffic volume changes due to Wegmans site-related traffic.

iv.) 2021 Build Scenario (Condition 3) Results

Table 9 presents results for 2021 Build-out+1 year estimated traffic conditions, including impacts of Phase 1 MOB site-related expansion net traffic increases. This scenario assumes no changes to external study area intersection geometrics, with the exception of the proposed site driveway along Eastowne Drive and closure of existing site driveway opposite Pinegate Circle. It was assumed for the 2021 Build Scenario that signal timings along the US 15-501 corridor would be held constant from Condition 2.

In general, the proposed impacts in the Phase 1 Build Scenario cause a minor degradations of overall traffic operations along the US 15-501 corridor, but no overall LOS/delay intersection deficiencies are expected. Unsignalized intersections, including the new site driveway location, are expected to operate acceptably in all 2021 peak hours as shown in **Table 9**.



Table 9. Capacity Analysis Results for Study Area Intersections - Condition 3 – 2021 Peak Hour Traffic With Site Phase 1

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)			
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM	
US 15-501 and Sage Road / Scarlett Drive														
Overall	D	D	D	47.4	40.8	50.6								
Eastbound	D	D	D	43.7	39.2	46.7	LT	F	F	F	99.1	90.9	97.2	
							THRU	C	C	D	34.9	30.7	43.2	
							RT	B	B	A	11.8	10.7	9.6	
Westbound	C	C	C	29.0	21.3	31.8	LT	E	E	F	78.1	70.8	111.9	
							THRU	C	B	C	26.6	19.0	28.8	
							RT	A	A	A	3.1	3.5	4.2	
Northbound	F	F	F	96.7	84.2	98.8	LT	F	F	F	98.2	88.6	106.5	
							THRU	F	F	F	107.6	89.2	95.2	
							RT	D	D	E	53.1	53.7	61.3	
Southbound	F	E	F	91.1	74.1	84.2	LT	F	F	F	101.3	85.5	83.4	
							THRU	F	F	F	114.2	95.8	128.1	
							RT	D	D	D	43.0	43.9	44.2	
US 15-501 and Eastowne Drive (south) / Service Road														
Overall	B	B	B	14.4	13.7	16.4								
Eastbound	B	A	A	11.5	8.1	8.0	LT	F	F	F	141.0	109.9	89.8	
							THRU	A	A	A	1.5	1.9	6.4	
							RT	A	A	A	0.3	1.1	1.9	
Westbound	A	A	B	9.6	9.0	10.3	LT	E	F	F	76.5	82.0	92.2	
							THRU	A	A	A	7.5	5.5	5.4	
							RT	A	A	A	4.8	4.4	4.1	
Northbound	E	E	E	70.5	69.7	65	LT-TH-RT	E	E	E	70.5	69.7	65.0	
Southbound	F	F	F	101.7	99.4	105.7	LT	F	F	F	110.2	88.0	101.9	
							THRU-RT	F	F	F	92.1	106.2	108.7	
US 15-501 and Eastowne Drive (north) / Lakeview Drive														
Overall	B	B	C	17.8	19.5	35.0								
Eastbound	A	A	C	4.1	4.4	22.5	LT	E	E	E	67.7	72.5	69.2	
							THRU-RT	A	A	C	3.8	3.2	22.4	
Westbound	B	B	C	15.4	16.7	22.0	LT	E	F	E	71.7	88.1	64.4	
							THRU	B	B	C	15.7	15.2	21.4	
							RT	A	A	A	6.5	8.7	9.2	
Northbound	F	F	F	87.6	96.6	94.9	LT	F	F	E	84.3	92.8	75.3	
							THRU	F	F	F	96.3	89.9	92.5	
							RT	F	F	F	86.8	98.4	97.3	
Southbound	F	F	F	100.9	85.0	98.1	LT	F	F	F	102.5	84.7	99.4	
							THRU-RT	F	F	F	88.1	86.2	88.9	

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)			
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM	
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	B	B	B	12.6	12.3	12.5	LT-TH-RT	B	B	B	12.6	12.3	12.5	
Westbound	A	A	B	9.8	9.7	10.2	LT-TH-RT	A	A	B	9.8	9.7	10.2	
Northbound	A	A	A	1.7	1.1	1.9	LT	A	A	A	7.8	7.7	8.1	
Southbound	A	A	A	0.4	0.1	0.0	LT	A	A	A	7.4	7.4	7.4	
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	A	A	B	9.6	9.7	10.4	LT-RT	A	A	B	9.6	9.7	10.4	
Westbound	DRIVEWAY CLOSED													
Northbound	A	A	A	0.8	2.1	3.6	LT	A	A	A	7.4	7.6	8.0	
Southbound	N/A	N/A	N/A	N/A	N/A	N/A	LT	N/A	N/A	N/A	N/A	N/A	N/A	
Eastowne Drive and Parking Deck Driveway														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Westbound	B	A	B	10.9	9.9	11.1	LT-RT	B	A	B	10.9	9.9	11.1	
Southbound	A	A	A	5.6	1.5	0.7	LT	A	A	A	8.0	7.5	7.4	
Eastowne Drive and Dobbins Drive														
Overall	N/A	N/A	N/A	N/A	N/A	N/A								
Eastbound	B	B	B	11.0	10.1	11.0	LT-RT	B	B	B	11.0	10.1	11.0	
Northbound	A	A	A	1.4	2.1	1.9	LT	A	A	A	7.7	7.7	8.2	

BLUE – New or Modified Movement Included in Background Improvements
 BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



v.) 2021 Phase 1 Mitigation Scenario (Condition 4) Results

Based on 2021 future year capacity analysis results in the previous sections, no study area intersections were analyzed for mitigation improvements directly related to capacity analysis results. The intersection of US 15-501 and Eastowne Drive (South) / Service Road was analyzed for improvements due to queue issues and safety-related/design issues related to the Eastowne MOB site. No additional peak hour capacity analyses were conducted for Condition 4.

vi.) 2024 Phase 2 No-Build Scenario (Condition 5) Results

Table 10 presents the results for the 2024 Build-out+1 analysis year estimated traffic conditions without the impacts of site-related traffic for Phase 2 of the UNC Health Care MOB project. This analysis includes the application of the 1.5 percent per year ambient growth factor to existing 2018 traffic volumes in addition to the net background traffic changes expected due to the adjacent redevelopment of Performance Motors into a Wegmans Supermarket and inclusion of the Phase 1 site traffic and assumptions made in Condition 3. Mitigation recommendations made in Condition 4 that apply to queue storage improvements for Eastowne Drive upstream of the US 15-501 intersection were accounted for in this analysis. Signal timings were held constant from 2021 Condition 3 data/assumptions.

During Condition 5 - 2021 Without Phase 2 Site Traffic, most study area intersections are expected to operate at acceptable levels of service for all analyzed peak hours, with the exception of US 15-501 and Sage Road / Scarlett Drive, which falls to an overall LOS E in the 2021 PM peak hour. For unsignalized intersection individual movement delays marginally increase but not to deficient levels.

vii.) 2024 Phase 2 Build Scenario (Condition 6) Results

Table 11 presents results for 2024 Build-out+1 year estimated traffic conditions, including impacts of Phase 2 site-related expansion net traffic increases. This scenario assumes no changes to external study area intersection geometrics, with the exception of changes to the proposed site driveway access point along Eastowne Drive and removal of an existing site driveway connection opposite Old Sterling Drive. It was assumed for the 2024 Phase 2 Build Scenario that signal timings along the US 15-501 corridor would be held constant from 2024 No-Build Scenarios to allow comparison of site-related traffic impacts.

As shown in **Table 11**, additional marginal increases are expected throughout the study area with the additional Phase 2 site traffic. No new intersections or critical stop-controlled movements are expected to experience deficient LOS in any peak hour. Some substantial delay increases (and corresponding queue length issues) are expected at the US 15-501 intersection with Eastowne Drive / Service Road and are addressed in Condition 7.



Table 10. Capacity Analysis Results for Study Area Intersections Condition 5 – 2024 Peak Hour Traffic Without Site Phase 2

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
US 15-501 and Sage Road / Scarlett Drive													
Overall	D	D	E	49.9	42.1	55.0							
Eastbound	D	D	D	46.1	40.6	52.1	LT	F	F	F	102.8	92.2	100.4
							THRU	D	C	D	37.3	32.3	50.1
							RT	B	B	A	12.0	11.0	9.8
Westbound	C	C	D	31.7	22.9	35.1	LT	E	E	F	79.4	72.2	120.5
							THRU	C	C	C	29.6	20.9	32.0
							RT	A	A	A	3.2	3.8	4.5
Northbound	F	F	F	100.0	84.9	104.3	LT	F	F	F	102.1	89.7	114.2
							THRU	F	F	F	110.8	89.5	96.6
							RT	D	D	E	53.2	53.6	61.4
Southbound	F	E	F	93.5	74.5	87.3	LT	F	F	F	104.8	86.2	84.9
							THRU	F	F	F	116.5	96.6	136.3
							RT	D	D	D	43.0	43.7	44.9
US 15-501 and Eastowne Drive (south) / Service Road													
Overall	B	B	B	15.2	13.8	17.3							
Eastbound	B	A	A	12.1	8.2	9.9	LT	F	F	F	145.5	108.7	88.0
							THRU	A	A	A	1.7	2.1	8.4
							RT	A	A	A	0.5	1.1	2.0
Westbound	B	A	B	10.5	9.2	10.5	LT	E	F	F	75.5	80.9	92.0
							THRU	A	A	A	8.6	5.7	5.6
							RT	A	A	A	5.0	4.5	4.2
Northbound	E	E	E	69.8	69.0	64.3	LT-TH-RT	E	E	E	69.8	69.0	64.3
Southbound	F	F	F	101.3	99.4	105.3	LT	F	F	F	109.9	87.9	101.8
							THRU-RT	F	F	F	91.4	106.3	108.2
US 15-501 and Eastowne Drive (north) / Lakeview Drive													
Overall	B	B	D	18.7	19.9	37.8							
Eastbound	A	A	C	4.2	4.4	26.7	LT	E	E	E	65.8	71.4	72.0
							THRU-RT	A	A	C	3.9	3.2	26.6
Westbound	B	B	C	17.0	17.5	24.1	LT	E	F	E	71.1	87.4	64.2
							THRU	B	B	C	17.7	16.1	23.8
							RT	A	A	A	6.7	8.8	9.5
Northbound	F	F	F	87.9	97.5	97.8	LT	F	F	E	83.2	93.4	75.9
							THRU	F	F	F	96.9	90.4	92.9
							RT	F	F	F	87.3	99.5	100.7
Southbound	F	F	F	102.3	85.5	98.1	LT	F	F	F	104.0	85.3	99.5
							THRU-RT	F	F	F	88.1	86.3	87.4

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	13.0	12.6	12.8	LT-TH-RT	B	B	B	13.0	12.6	12.8
Westbound	A	A	B	9.8	9.8	10.3	LT-TH-RT	A	A	B	9.8	9.8	10.3
Northbound	A	A	A	1.7	1.1	2.0	LT	A	A	A	7.8	7.7	8.2
Southbound	A	A	A	0.4	0.1	0.0	LT	A	A	A	7.4	7.4	7.4
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	A	A	B	9.7	9.8	10.5	LT-RT	A	A	B	9.7	9.8	10.5
Westbound	DRIVEWAY CLOSED												
Northbound	A	A	A	0.8	2.1	3.6	LT	A	A	A	7.4	7.6	8.1
Southbound	N/A	N/A	N/A	N/A	N/A	N/A	LT	N/A	N/A	N/A	N/A	N/A	N/A
Eastowne Drive and Parking Deck Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Westbound	B	B	B	11.0	10.0	11.2	LT-RT	B	B	B	11.0	10.0	11.2
Southbound	A	A	A	5.0	1.5	0.7	LT	A	A	A	8.0	7.5	7.4
Eastowne Drive and Dobbins Drive													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	11.2	10.2	11.2	LT-RT	B	B	B	11.2	10.2	11.2
Northbound	A	A	A	1.4	2.1	1.9	LT	A	A	A	7.7	7.8	8.2

BLUE – New or Modified Movement Included in Background Improvements

BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



Table 11. Capacity Analysis Results for Study Area Intersections Condition 6 – 2024 Peak Hour Traffic With Site Phase 2

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
US 15-501 and Sage Road / Scarlett Drive													
Overall	D	D	E	50.7	42.1	55.6							
Eastbound	D	D	D	47.8	40.8	53.0	LT	F	F	F	102.8	92.2	100.4
							THRU	D	C	D	40.0	32.8	51.4
							RT	B	B	A	12.0	11.0	9.8
Westbound	C	C	D	31.9	22.7	36.2	LT	E	E	F	79.5	71.8	120.5
							THRU	C	C	C	29.9	20.6	33.3
							RT	A	A	A	3.2	3.7	4.4
Northbound	F	F	F	98.9	84.8	104.2	LT	F	F	F	101.9	89.7	114.2
							THRU	F	F	F	110.8	89.5	96.6
							RT	D	D	E	53.8	53.7	61.5
Southbound	F	E	F	93.7	74.6	87.3	LT	F	F	F	105.3	86.3	84.9
							THRU	F	F	F	116.5	96.6	136.3
							RT	D	D	D	43.0	43.7	44.9
US 15-501 and Eastowne Drive (south) / Service Road													
Overall	C	B	C	27.2	16.1	26.3							
Eastbound	D	B	B	37.7	10.9	15.1	LT	F	F	F	333.9	114.3	95.9
							THRU	A	A	B	1.9	3.2	13.1
							RT	A	A	A	0.7	1.5	2.3
Westbound	B	A	B	11.3	9.7	11.3	LT	E	E	F	74.4	77.1	83.9
							THRU	A	A	A	9.6	6.5	7.1
							RT	A	A	A	5.5	5.0	4.8
Northbound	E	E	E	68.3	66.0	63.4	LT-TH-RT	E	E	E	68.2	66.0	63.4
Southbound	F	F	F	101.6	97.7	137.7	LT	F	F	F	109.6	86.2	120.2
							THRU-RT	F	F	F	93.2	104.8	151.0
US 15-501 and Eastowne Drive (north) / Lakeview Drive													
Overall	B	C	D	19.7	20.4	41.0							
Eastbound	A	A	C	4.7	4.4	27.3	LT	E	E	E	65.4	71.0	69.8
							THRU-RT	A	A	C	4.4	3.2	27.2
Westbound	B	B	C	17.9	17.6	25.1	LT	E	F	E	71.1	87.4	64.6
							THRU	B	B	C	19.0	16.4	24.9
							RT	A	A	A	7.3	9.0	9.8
Northbound	F	F	F	88.2	97.1	103.4	LT	F	F	E	83.7	91.2	75.3
							THRU	F	F	F	98.8	90.8	92.9
							RT	F	F	F	87.3	99.5	107.5
Southbound	F	F	F	106.6	87.0	112.3	LT	F	F	F	108.7	87.2	115.5
							THRU-RT	F	F	F	88.1	86.2	85.7

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
Eastowne Drive and Old Sterling Drive / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	13.3	12.4	13.2	LT-TH-RT	B	B	B	13.3	12.4	13.2
Westbound	DRIVEWAY CLOSED												
Northbound	A	A	A	1.8	1.1	1.5	LT	A	A	A	8.1	7.8	8.2
Southbound	N/A	N/A	N/A	N/A	N/A	N/A	LT	N/A	N/A	N/A	N/A	N/A	N/A
Eastowne Drive and Pinegate Circle / UNC Health Care Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	10.2	10.2	11.8	LT-RT	B	B	B	10.2	10.2	11.8
Westbound	DRIVEWAY CLOSED												
Northbound	A	A	A	0.5	1.6	3.1	LT	A	A	A	7.5	7.7	8.5
Southbound	N/A	N/A	N/A	N/A	N/A	N/A	LT	N/A	N/A	N/A	N/A	N/A	N/A
Eastowne Drive and Parking Deck Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Westbound	B	B	C	14.9	11.2	16.1	LT-RT	B	B	C	14.9	11.2	16.1
Southbound	A	A	A	7.2	2.5	1.4	LT	A	A	A	8.9	7.6	7.5
Eastowne Drive and Dobbins Drive													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	B	B	B	12.9	10.8	13.0	LT-RT	B	B	B	12.9	10.8	13.0
Northbound	A	A	A	0.9	1.7	1.7	LT	A	A	A	7.8	7.9	8.8

BLUE – New or Modified Movement Included in Background Improvements
 BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



viii.) 2024 Phase 2 Mitigation Scenario (Condition 7) Results

Based on 2024 future year capacity analysis results in the previous sections, several study area intersections were analyzed for mitigation improvements directly related to capacity analysis results, queue issues, or safety-related and design issues related to the UNC Health Care Eastowne MOB Phase 2 impacts.

Table 12 presents the results of the mitigation scenario peak hour capacity analyses at these locations and highlighted in blue in the table. Changes implemented at these locations should have cumulative beneficial effects on upstream/downstream intersections along the US 15-501 corridor. Results in **Table 12** indicate that the changes have overall operational at each intersection compared to results in Condition 6, and have beneficial effects on reducing estimated queues for the approaches/movements impacted by these changes.

Table 12. Capacity Analysis Results for Study Area Intersections
Condition 7 – 2024 Peak Hour Traffic With Site Phase 2 and Mitigation Improvements

Intersection & Approaches	LOS			Average Vehicular Delay (seconds/vehicle)			Movement	LOS			Average Vehicular Delay (seconds/vehicle)		
	AM	Noon	PM	AM	Noon	PM		AM	Noon	PM	AM	Noon	PM
US 15-501 and Eastowne Drive (south) / Service Road													
Overall	C	B	C	20.7	13.8	22.7							
Eastbound	B	A	A	15.4	7.9	9.6	LT	F	F	E	121.9	87.9	74.0
							THRU	A	A	A	2.5	1.9	8.0
							RT	A	A	A	2.2	1.3	2.2
Westbound	B	A	B	18.1	9.9	13.2	LT	F	F	F	86.4	84.0	137.2
							THRU	B	A	A	16.7	6.4	5.9
							RT	A	A	A	5.0	3.1	3.6
Northbound	F	F	F	84.8	85.7	89.8	LT-TH-RT	F	F	F	84.8	85.7	89.8
Southbound	F	F	F	83.3	81.5	118.1	LT	F	F	F	103.6	101.6	104.2
							LT-THRU	F	F	F	102.4	101.3	105.2
							THRU-RT	E	E	F	59.9	68.3	129.7
Eastowne Drive and Parking Deck Driveway													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Westbound	B	B	C	14.3	10.7	12.5	LT	C	B	B	16.8	11.6	14.2
							RT	A	A	A	9.6	9.0	9.2
Southbound	A	A	A	7.2	2.5	1.4	LT	A	A	A	8.9	7.6	7.5
Eastowne Drive and Dobbins Drive													
Overall	N/A	N/A	N/A	N/A	N/A	N/A							
Eastbound	A	A	B	9.0	9.2	10.2	RT	A	A	B	9.0	9.2	10.2
Northbound	A	A	A	0.9	1.7	1.7	LT	A	A	A	7.8	7.9	8.8

BLUE – New and/or Modified Intersections

BOLD/ITALICS – Movement or Overall Intersection is over capacity as defined by Town of Chapel Hill TIS Standards



B.) Planning-Level Daily Arterial Volume/Capacity (V/C) Analysis

A planning-level daily arterial capacity analysis was conducted for existing 2018 base year and 2040 long range future conditions. Data for this analysis was taken from a recent approved version of the Triangle Regional Travel Demand Model (TRM Version 5.0) and traffic count data collected for other recent traffic studies in Chapel Hill along with recurring AADT counts made by the NCDOT Traffic Survey Unit. Daily volume/capacity link analyses are more applicable to long range future conditions. In most cases, study area traffic operations are better explained by peak hour intersection LOS methodologies when current and short range data are available.

The TRM data includes forecasts for the year 2040, which is the forecast year for most currently approved MPO Long Range Transportation Plans (LRTPs), as well as a calibrated 2010 base year model. Information from the TRM was used to determine default daily link capacities for the 2010 base year TRM roadway network and the 2040 future TRM roadway network, along with future daily traffic assignments in 2040. The TRM model data includes estimated peak hour link capacities for roadway facilities in the study area. These capacities account for existing roadway characteristics (number of lanes, operating speeds, access control, presence of traffic signals) and were extrapolated to a daily capacity estimation by applying a factor of 10 to the link capacity estimate, which is general assumption used in traffic forecasting activities accounting for the likelihood that 10 percent of daily traffic/capacity is found within the highest weekday peak hour.

As shown in **Table 13**, most of the lower volume minor arterial and collector roadways in the study vicinity operate with daily V/C ratios below 0.90 with the 2016 traffic count information or 2015 AADT and 2010 base year TRM daily estimated capacities. When V/C ratios reach the range of 0.90 to 1.00, noticeable congestion may occur on a roadway link as it approaches its threshold capacity. If demand volumes exceed threshold capacity (V/C > 1.0), significant congestion may occur during peak travel periods. As shown in the table, most the US 15-501 corridor is above the 0.90 v/c threshold and several segments are above 1.0, indicating congested conditions through multiple durations during an average weekday.

Table 13.
2018 Base Year Daily Volume/Capacity Analysis for Selected Study Area Road Segments

Roadway Facility	Segment Limit		2015 NCDOT AADT (vpd)	2016 Field AADT (vpd)	2010 Capacity (vpd)	V/C Ratio
	From	To				
US 15-501 (Durham-Chapel Hill Boulevard)	Erwin Road/Europa Dr	Sage Road/Scarlett Dr	43,000	52,700	51,800	1.02
	Sage Road/Scarlett Dr	Eastowne Dr/Service Rd	--	46,900	51,800	0.91
	Eastowne Dr/Service Rd	Eastowne Dr/Lakeview Dr	--	46,800	51,800	0.90
	Eastowne Dr/Lakeview Dr	I-40	42,000	52,700	51,800	1.02
Sage Road	US 15-501	Coleridge Drive	--	14,500	21,400	0.68
Scarlett Drive	US 15-501	Old Durham Road	--	8,300	21,400	0.39
Eastowne Drive	US 15-501	Dobbins Drive	--	4,000	14,500	0.28
Eastowne Drive	US 15-501	Providence Drive	--	5,200	14,500	0.36
Lakeview Drive	US 15-501	Old Chapel Hill Road	--	3,100	17,300	0.18
Service Road	US 15-501	Performance Motors	--	3,100	14,500	0.21

vpd = vehicles per day -- = Data Not Available

Data Sources: 2015 AADT Counts from NCDOT Traffic Survey Group and 2016 Field Count Data Extrapolated to AADT
 Daily capacity data from the TRM Version 5 – 2010 Base Year Peak Hour Link Capacity X 10 Factor



Table 14 displays a daily v/c comparison between future year 2040 No-Build and Build Scenarios. The No-Build scenario was developed by assuming the projected levels of TRM daily traffic assignment growth to and from the traffic analysis zone (TAZ) area that includes the UNC Health Care Eastowne MOB site would remain unchanged for the 2040 analysis year. Growth is expected to occur within this TAZ, but it was assumed it would not be specifically related to the UNC Health Care MOB site.

Conservatively adding 2040 projected UNC Health Care MOB Phase 1 and 2 daily site trips (from trip generation data in **Table 5**) to study area roadways was done through application of site trip distribution percentages assumed for the peak hours to the anticipated net daily trip generation data.

Both 2040 No-Build and Build Scenarios consider the impacts of long-range capacity improvement projects that were developed in MPO long-range transportation plans and were coded into the 2040 TRM model. In addition to those projects coded in the model, the analysis in **Table 14** also accounts for the NCDOT STIP U-5304 project upgrade to capacity along US 15-501. It was assumed that this project would, for planning and modeling purposes in this daily capacity analysis, be a six-lane cross-section with improved access management and signal timing efficiency.

As shown in **Table 14**, the TRM daily assignment data predicts small to moderate (1 to 3 percent) daily traffic volume increases on most study area facilities, thus marginally increasing daily V/C ratios for the 2040 roadway network. More substantial daily traffic growth is expected for the Eastowne Drive loop. The effects of long-range capacity improvements to the US 15-501 corridor mitigate some of the 2040 No-Build and Build Scenario traffic demand increases, allowing the daily v/c for the facility to be less than 2018 conditions for many of the corridor segments. However, with no planned capacity improvement projects for all minor arterial/collector streets in the project study area, background traffic growth increases, and impacts of UNC Health Care MOB site traffic, result in daily v/c values in excess of 1.0 for the entire Old Durham/Old Chapel Hill Road corridor and Lakeview Drive. Some of these issues result from traffic growth in the Wegmans traffic analysis zone (including SECU property) along with the adjacent traffic analysis zone to the north/east, which is the area around the proposed Gateway LRT station and potential property development related to that station.

No additional changes to the TRM have been made for any recommendations for mitigation improvements related to the UNC Health Care Eastowne MOB TIS, although it is important to acknowledge that, long-term improvements may be necessary for minor arterial and collector roadways adjacent to the proposed site due to the collective effect of projected long-term development and redevelopment of parcels adjacent to the UNC Health Care site along with traffic growth impacts of the UNC Health Care site itself.



Table 14. 2040 Daily No-Build/Build Volume/Capacity Analysis for Selected Study Area Road Segments

Roadway Facility	Segment Limit		2040 Assignment		2040 Capacity (vpd)	V/C Ratio		% Change
	From	To	No-Build	Build		No-Build	Build	
			(vpd)	(vpd)				
US 15-501 (Fordham Boulevard - Durham/Chapel Hill Boulevard)	Erwin Road/Europa Drive	Sage Road/Scarlett Drive	55,000	55,900	77,800	0.71	0.72	1.6%
	Sage Road/Scarlett Drive	Eastowne Dr/Service Rd	48,200	49,200	77,800	0.62	0.63	2.1%
	Eastowne Dr/Service Rd	Eastowne Dr/Lakeview Dr	56,300	57,000	77,800	0.72	0.73	1.2%
	Eastowne Dr/Lakeview Dr	I-40	73,600	75,000	77,800	0.95	0.96	1.9%
Sage Road	US 15-501	Coleridge Drive	15,800	15,800	21,400	0.74	0.74	0.0%
Scarlett Drive	US 15-501	Old Durham Road	23,400	23,400	21,400	1.09	1.09	0.0%
Eastowne Drive (South)	US 15-501	Dobbins Drive	8,300	10,000	14,500	0.57	0.69	20.5%
Eastowne Drive (North)	US 15-501	Providence Drive	3,900	4,700	14,500	0.27	0.32	20.5%
Lakeview Drive	US 15-501	Old Chapel Hill Road	17,400	17,500	17,300	1.01	1.01	0.6%
Service Road	US 15-501	Performance Motors	3,100	3100	14,500	0.21	0.21	0.0%

vpd = vehicles per day **GREEN** = Links With Capacity Improvements Compared To 2010 Base Year TRM Network

Data Sources: Daily No-Build Assignment and capacity data from the 2040 TRM Model – Build Assignments Calculated from Daily Site Trip Distribution Estimates and Net Daily Traffic Increases for UNC Health Care Eastowne MOB Development – Phases 1 and 2



C. Access Analysis

Vehicular site access is to be accommodated by one proposed full movement access driveway connecting to Eastowne Drive for entry/exit to the proposed structured parking and on-site surface drop-off areas. An additional grass paved access for fire truck is shown connecting to US 15-501 southbound on **Figure 2B**. The proposed site concept plan in **Figure 2A** indicates the proposed full access connection with Eastowne Drive would move slightly when the Phase 2 parking deck extension is built. Design details related to driveway throat lengths are shown on the Phase 1 site plan and provide over 200 feet of driveway throat length, which should be sufficient based on capacity analysis queue estimates for all exiting stop-controlled movements in Phase 1. No specific plan for Phase 2 is shown, but given additional site-related traffic, a driveway design for two separate exiting lanes with at least 100 feet of storage each is recommended.

Driveway distances along Eastowne Drive from its intersection with the proposed site driveway connections to existing public street facilities (Old Sterling Drive and Dobbins Drive) are approximately 400 feet or more between the proposed driveway and adjacent streets and are acceptable, based on recommendations of 100 foot minimum corner clearance as set forth in the 2003 *NCDOT Policy on Street and Driveway Access to North Carolina Highways*. No existing intersection separation distances are shorter than the 400 foot minimum intersection spacing along collector streets specified in the 2005 *Town of Chapel Hill Design Manual*. The proposed spacing between the proposed street access connection along Eastowne Drive and local existing driveways is greater the recommended 100 feet along collector streets found in Table 4-A-1 in the Town Design Manual.

Access for pedestrians and bicyclists is limited in the project study area. Sidewalk is present on most study area facilities, but connectivity is impaired due to lack of continuous sidewalk in some areas and adequate crossings of the US 15-501 corridor. Crosswalk and pedestrian signals exist across the US 15-501 intersection with Eastowne Drive (south). Bicycle lanes do exist on Sage Road and Old Sterling Drive, and the cross-section width of Eastowne Drive is does not inhibit bicycling, but there is no bicycling connectivity on or paralleling the US 15-501 corridor.

D. Signal Warrant Analysis

Based on projected 2021 and 2024 traffic volumes, operational LOS/delay results, and current/proposed access plans, no unsignalized intersections would warrant the installation of a traffic signal, based on the methodology found in the 2009 *Manual on Uniform Traffic Control Devices (MUTCD)*.

E. Sight Distance Analysis

In general, sight distance issues entering/exiting the existing and proposed UNC Healthcare Eastowne MOB driveways should be minimal. For the access point Eastowne Drive, visibility should be adequate as no significant vertical curvature is currently present. Some horizontal curvature exists, but with low existing posted speeds, this also should not pose a safety problem.

F. Crash Analysis

Data from the NCDOT Traffic Safety Unit was extracted from the TEAAS crash database software for the five year period 3/1/2013 to 2/28/2018 for the project study area. This information included crash segment data along US 15-501 and Eastowne Drive and crash reports for the Eastowne Drive/Service Road intersection with US 15-501 adjacent to the site, as well as two minor street intersections along Eastowne Drive near the site. Raw intersection and corridor segment crash data is located in **Appendix G** and results are shown in **Tables 15, 16, and 17**.



US 15-501 Corridor

Table 15 presents a comparison between the US 15-501 corridor study area crash rates and the latest North Carolina statewide rates for the period 2013-2015 (compiled by NCDOT Traffic Safety Unit). Overall, the crash rate along US 15-501 in the project study area between Sage Road and Eastowne Drive/Lakeview Drive was similar to statewide averages for similar facilities for all crash characteristic categories. Rear-end crashes were by far the most common crash type – with 138 of the 178 crashes reported along the 0.71 mile segment being rear-end crashes. The statistics are indicative of a corridor with high peak periods of congestion throughout the day. Spatial and directional distribution of crashes along the corridor is markedly even, with highest numbers at intersection locations, but considerable numbers of crashes between intersections, as well.

Table 15. Study Area Crash Rate Comparison – US 15-501 Corridor

Statistic	Crashes Per 100 Million Vehicle Miles	
	US 15-501	NC Statewide Average
	Sage Road to Eastowne Drive / Lakeview Drive	Urban Four-Lane Divided US Route (No Access Control)
Total Crash Rate	327.82	305.77
Fatal Crash Rate	0.00	0.99
Non-Fatal (Injury) Crash Rate	114.18	89.52
Night Crash Rate	60.78	67.54
Wet Crash Rate	42.36	55.88

Eastowne Drive Corridor

Table 16 presents a comparison between the 0.23 mile Eastowne Drive corridor study area crash rates and the latest North Carolina statewide rates for the period 2013-2015 (compiled by NCDOT Traffic Safety Unit). Overall, the crash rate along Eastowne Drive in the project study area was higher than statewide averages for similar facilities for all characteristic categories by a high margin. Primary crash types of the 17 crashes reported were angle and left-turn crashes, most occurring at the approach to the US 15-501 signalized intersection.

Table 16. Study Area Crash Rate Comparison – Eastowne Drive Corridor

Statistic	Crashes Per 100 Million Vehicle Miles	
	Eastowne Drive	NC Statewide Average
	US 15-501 to Old Sterling Drive	Urban Two-Lane Undivided Secondary Route
Total Crash Rate	998.93	247.39
Fatal Crash Rate	0.00	1.18
Non-Fatal (Injury) Crash Rate	470.08	76.16
Night Crash Rate	176.28	65.51
Wet Crash Rate	58.76	46.04



Study Area Intersections

In addition to the crash comparison for the US 15-501 project study corridor, individual intersection crash data in the vicinity of the proposed site for the same five year period was provided by NCDOT and results are shown in **Table 17**. The crash data also reveals that though there are far less total crashes at the minor street intersections along Eastowne Drive, the intersection crash rates with the US 15-501 signalized intersection with Eastowne Drive/Service Road are much closer in magnitude.

Table 17. Study Area Intersection Crash Summary

Intersection	Number of Total Crashes	Crashes Per 100 Million Vehicles Entered
Eastowne Drive & Old Sterling Drive	2	27.38
Eastowne Drive & Dobbins Drive	3	41.07
US 15-501 & Eastowne Drive/Service Road	45	56.01

G. Other Transportation-Related Analyses

Other transportation-related analyses relevant to the 2001 Town of Chapel Hill Guidelines for the preparation of Traffic Impact Studies were completed, as appropriate. The topics listed in **Table 18** are germane to the scope of this study.

H. Special Analysis/Issues Related to Project

Based on discussions with Town of Chapel Hill staff, there are no special issues or analyses beyond the ones already discussed for this proposed project.



Table 18. Other Transportation-Related Analyses

Analysis	Comment
Turn Lane Storage Requirements	Storage bay lengths at study area intersections were analyzed using Synchro and HCS 95 th percentile (max) queue length estimates for the 2021 and 2024 Build Scenarios. No unsignalized intersection is expected to have excessive peak hour queues or conditions that exceed existing turn lane storage. Recommendations to improve turn lane storage were made for the US 15-501 and Eastowne Drive/Service Road intersection – as this location will have the highest degree of site traffic impact. Storage issues not due to site-related traffic impacts are not easily correctable at other upstream/downstream intersections, given the high traffic volumes along the US 15-501 corridor.
Appropriateness of Acceleration/Deceleration Lanes	The site concept plan shows no specifics related to acceleration/deceleration lanes. Due to the low speed limit on Eastowne Drive (25 mph) and the presence of some on-street parking in the vicinity, no acceleration/deceleration lanes are recommended for site access. Existing intersections along US 15-501 currently have left-turn and right-turn auxiliary deceleration lanes. No other specific acceleration/deceleration lane issues were analyzed in the project study area.
Pedestrian and Bicycle Analysis	Existing pedestrian access and connectivity is limited in the project study area, though sidewalk exists along several roadways on at least one side of the road. Bicycle lanes extend along Sage Road and Old Sterling Drive, and will be extended to Old Durham Road, but no bicycle facilities exist along/parallel to the US 15-501 corridor within the project study area. The site plan shows additional sidewalk developed along site frontage. Additional pedestrian upgrades at the US 15-501 and Eastowne Drive/Service Road intersection are needed to connect this sidewalk to the adjacent side of the corridor to connect to Wegmans / SECU area.
Public Transportation Analysis	Public transportation service to the study area, and to the proposed site is adequate, with bus stops and multiple local and regional bus routes on both Eastowne Drive and US 15-501 proximate to the site. Additional amenities for the existing bus stop on Eastowne Drive at the site are recommended.



IV. MITIGATION MEASURES/RECOMMENDATIONS

A. Planned Improvements

There is one Town of Chapel Hill / North Carolina Department of Transportation improvement project affecting study area roadway facilities within the analysis year time frame of 2018-2024. NCDOT STIP project EB-4707B is currently beginning construction along Old Durham Road/Old Chapel Hill Road east of the project study area and will include pedestrian and bicycle improvements connecting to the US 15-501 corridor at the Sage Road/Scarlett Drive intersection. The US 15-501 corridor is currently being studied for capacity improvements as part of NCDOT STIP U-5304, but these improvements are not known at this time and were not considered to be complete by the 2021 and 2024 analysis years.

B. Background Committed Improvements

The redevelopment of the current Performance Motors campus along US 15-501 into a Wegmans Supermarket has been approved by the Town, and the project will include several geometric and signal timing improvements to intersections along the US 15-501 corridor highlighted in **Figure 13**.

C. Applicant Committed Improvements

Based on the preliminary site plans and supporting development information provided, there are no specific transportation-related improvements proposed external to the UNC Health Care Eastowne MOB site. There are several internal improvements including the following:

- Provision of internal roadway circulation to/from parking decks and drop-off areas
- Improvements to internal sidewalk and development of sidewalk/side paths along Eastowne Drive and US 15-501 on site frontage
- Closure of two existing surface parking lot driveways and consolidation of driveway access to a single access point for future proposed structured parking. The access point is expected to move along Eastowne Drive between Phase 1 and Phase 2 of the redevelopment, as an additional extension of the Phase 1 parking deck is built.

D. Necessary Improvements

Based on traffic capacity analyses for the 2021 and 2024 design years, and analyses of existing study area turning bay storage lengths and site access, the following improvements are recommended as being necessary for adequate transportation network operations:

2021 Phase 1 Improvements (Figure 13)

- 1) To manage projected maximum queue lengths on southbound Eastowne Drive at the US 15-501 signalized intersection, it is recommended that the existing left-turn lane be extended to provide 300 feet of vehicle storage (thus creating a three-lane cross-section on Eastowne Drive at least 300 feet upstream of the traffic signal. This will result in two southbound travel lanes crossing the Dobbins Drive intersection.
- 2) To manage access and improve safety at the Dobbins Drive intersection with Eastowne Drive, "Do Not Block Intersection" signs should be installed on southbound Eastowne Drive.
- 3) A pedestrian crosswalk and pedestrian signal heads should be installed across the southbound approach of the US 15-501 and Eastowne Drive/Service Road signalized intersection. This would provide connectivity between the site and areas across US 15-501, as there is an existing pedestrian signalized crossing in the western quadrant of the intersection.

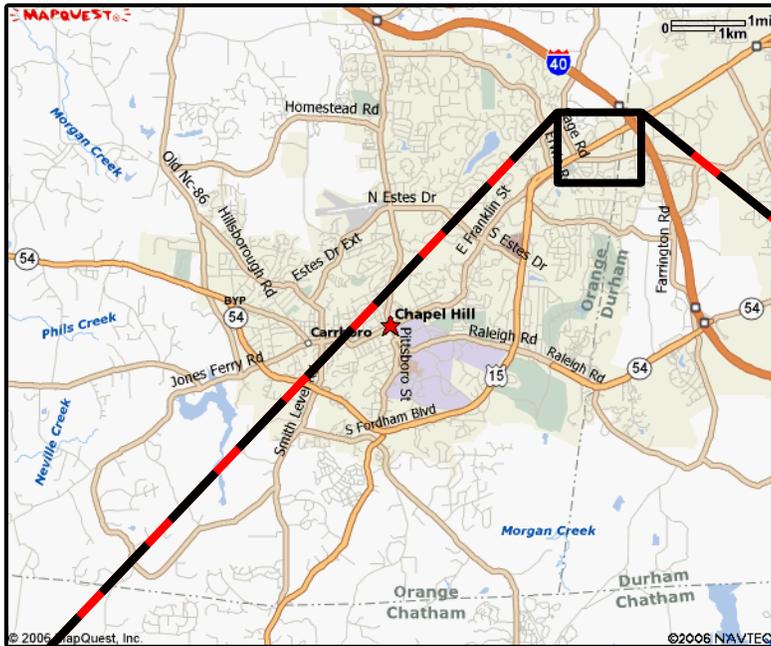


- 4) Additional bus amenities, such as a bus shelter, should be built at the existing bus stop location along Eastowne Drive directly along site frontage.

2024 Phase 2 Improvements (Figure 17)

- 1) To manage projected maximum queue lengths on southbound Eastowne Drive at the US 15-501 signalized intersection and provide more optimal signal timings for the intersection, it is recommended that the proposed 2021 Phase 1 laneage configuration be adjusted to create a left-turn/through inner lane and an exclusive right-turn outer lane. A short additional left-turn lane between US 15-501 and Dobbins Drive is also recommended. The signal phasing should be changed to split side street phasing for this proposed laneage configuration, with the new exclusive right-turn lane having overlap phasing with the current eastbound left-turn lane.
- 2) The current eastbound left-turn lane on US 15-501 should be lengthened to provide 400 feet of storage.
- 3) To account for increased traffic volumes and potential vehicular conflicts in the area of Dobbins Drive and Eastowne Drive, the Dobbins Drive approach should be limited to right-turn only, as this approach features very few left-turns currently or projected in the future. Inbound left-turns from Eastowne Drive, which are more frequent, should still be allowed onto westbound Dobbins Drive.
- 4) The US 15-501 study area traffic signals along the corridor should be reoptimized to mitigate the effects of additional Phase 2 site traffic.
- 5) To increase the efficiency of the proposed site driveway and minimize queue spillbacks from the proposed parking decks, particularly in the PM peak hour, separate left-turn and right-turn lanes should be constructed, with at least 100 feet of vehicular storage for left-turning vehicles.

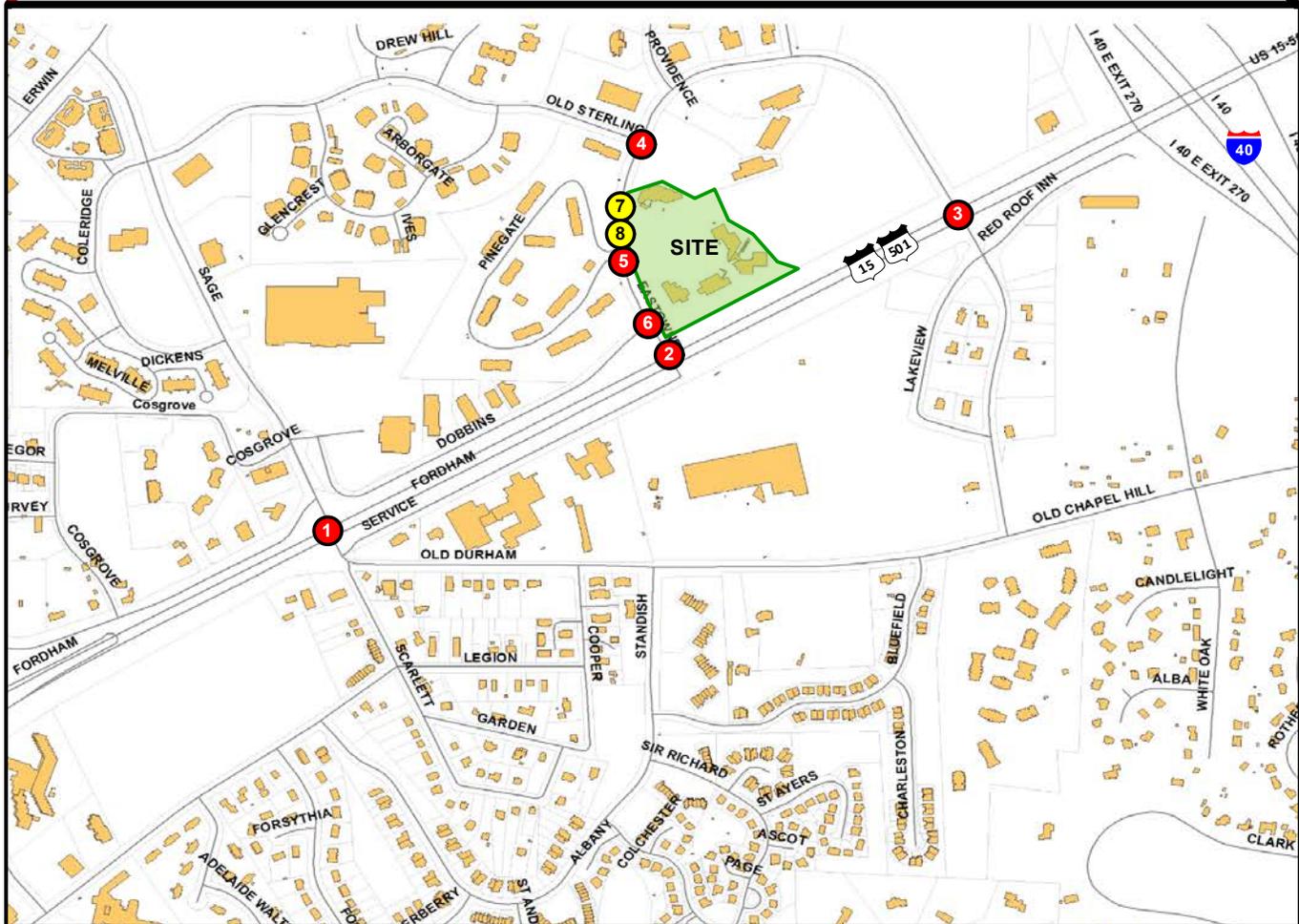
Appendix A – Figures



LEGEND

- = Existing Building Footprint
- = Existing Study Area Intersection
- = Proposed Site Driveway
- = Proposed Site Parcel

DRAFT



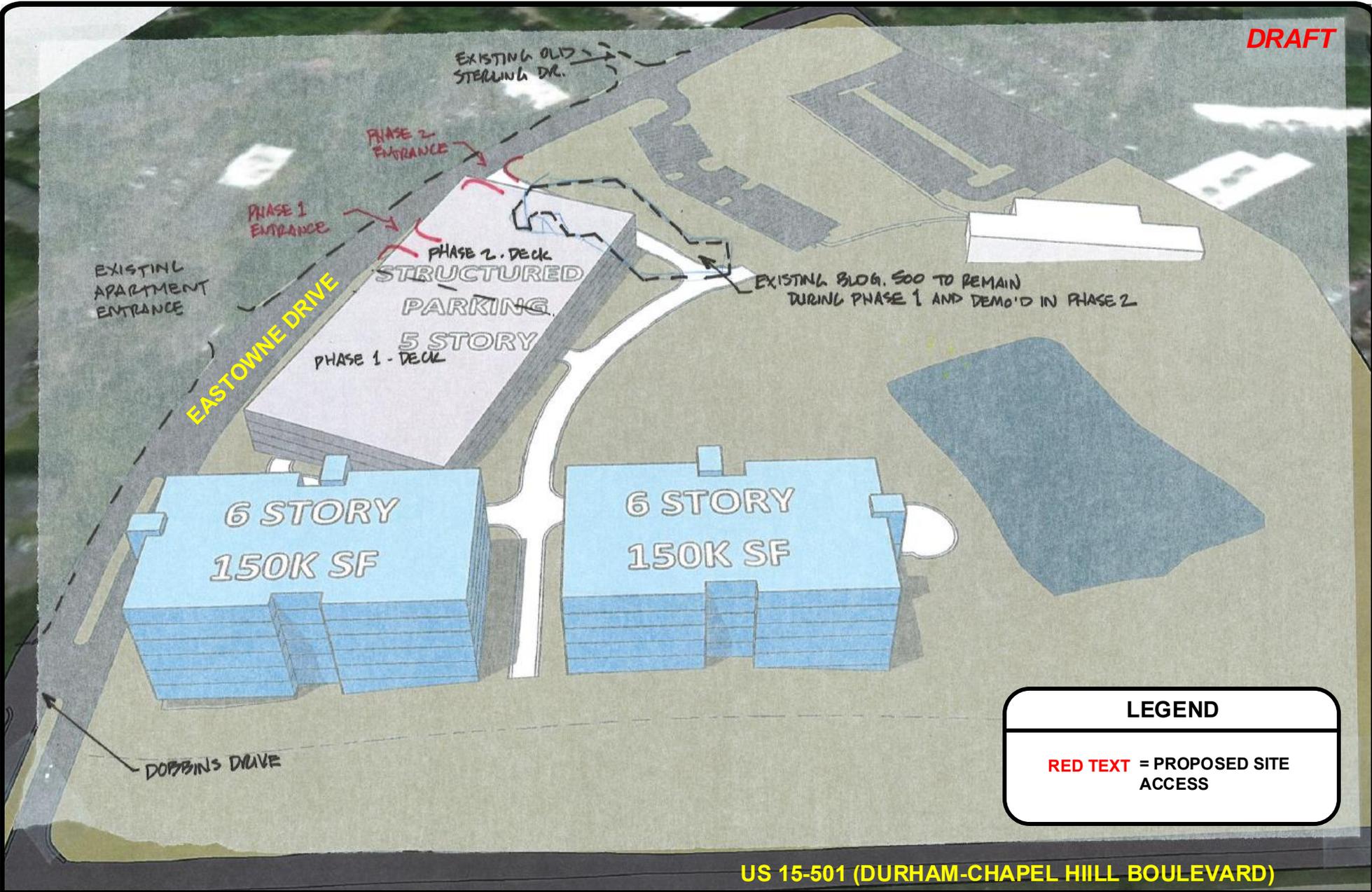
UNC Health Care Eastowne MOB Traffic Impact Study

PROJECT STUDY AREA

DATE: April 2018

FIGURE 1

DRAFT



LEGEND

RED TEXT = PROPOSED SITE ACCESS

HNTB



NOT TO SCALE

UNC Health Care Eastowne MOB
Traffic Impact Study

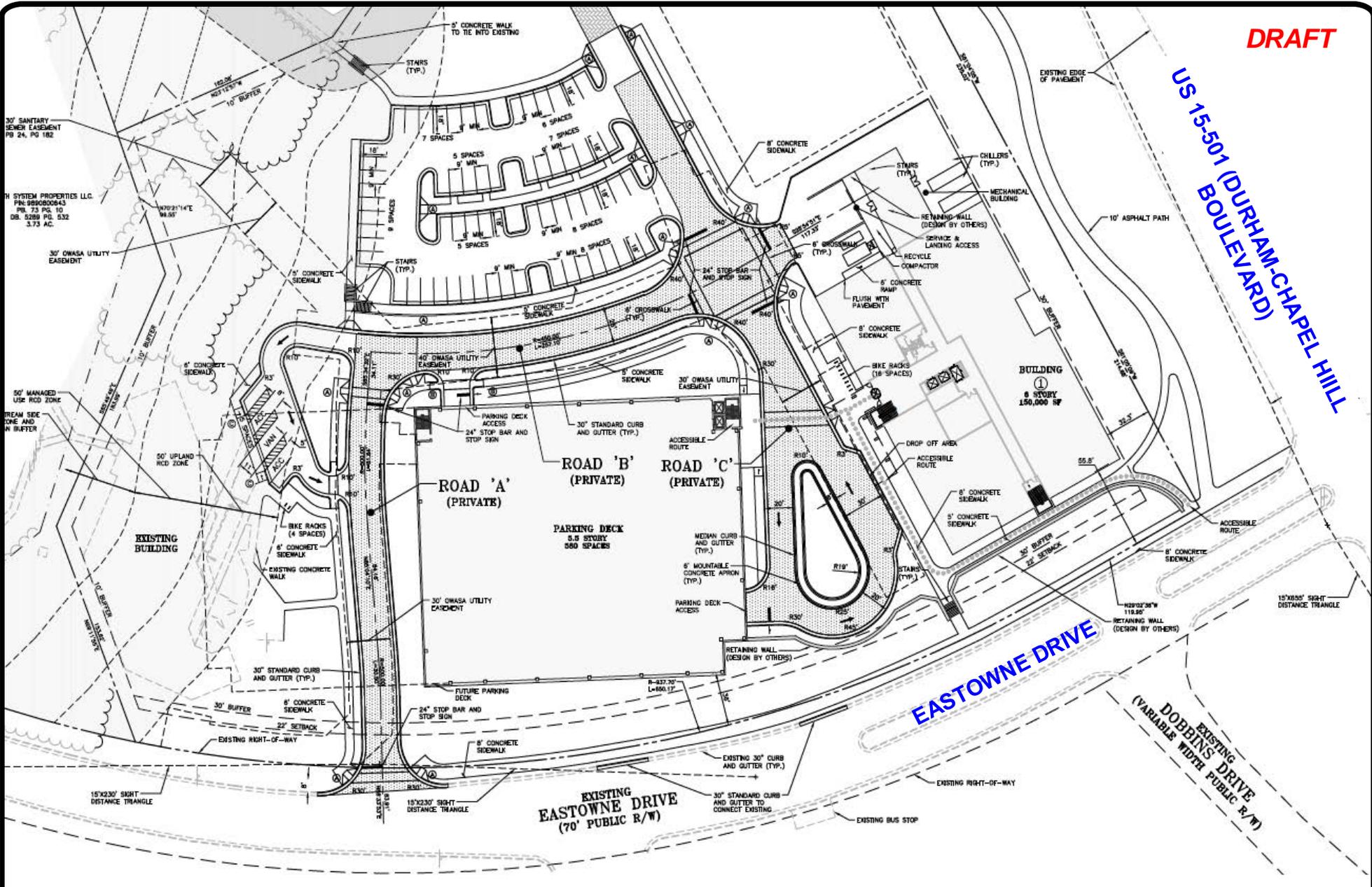
DATE: April 2018

PRELIMINARY SITE PLAN

FIGURE 2A

DRAFT

US 15-501 (DURHAM-CHAPEL HILL BOULEVARD)



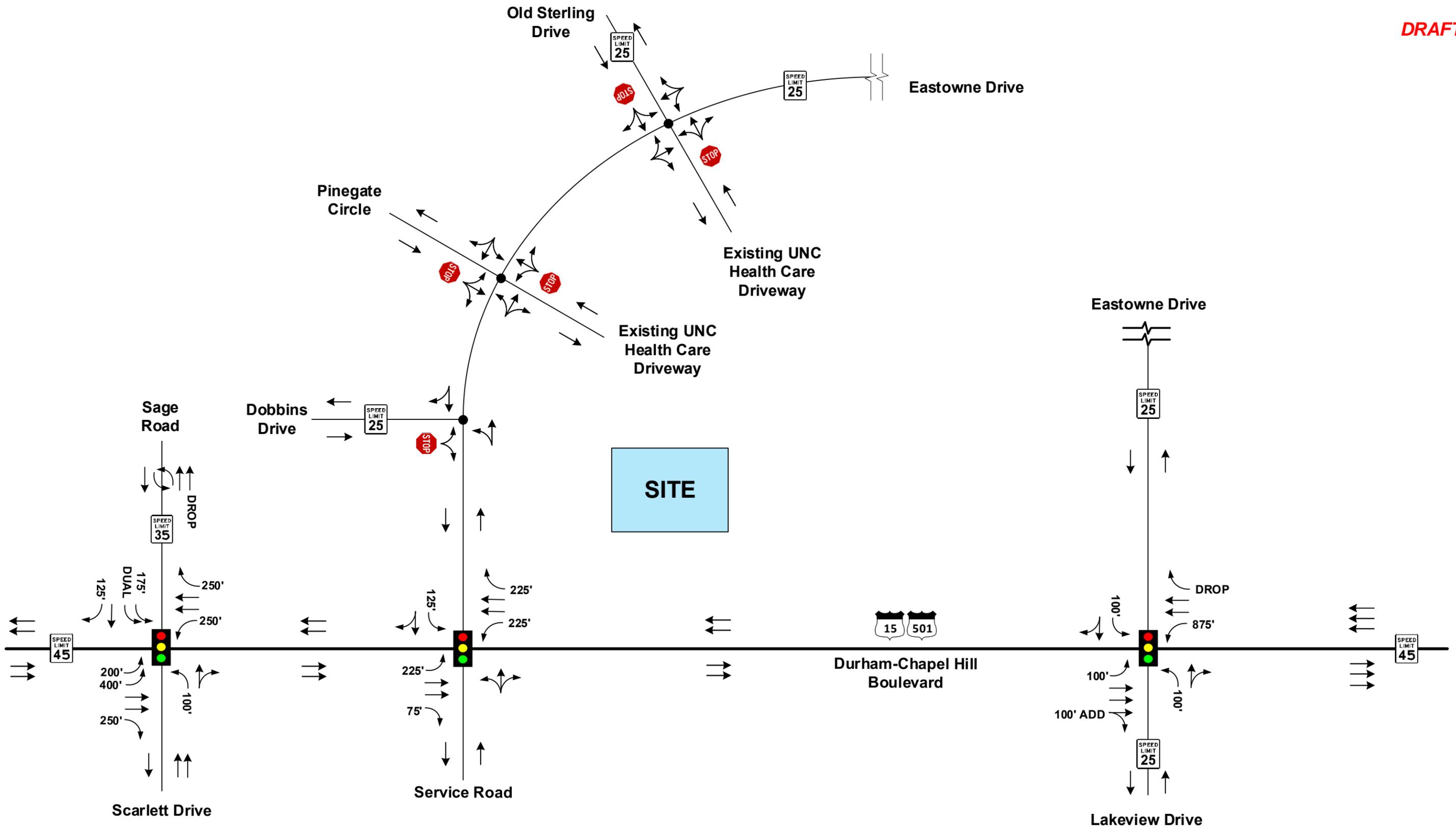
NOT TO SCALE

UNC Health Care Eastowne MOB
Traffic Impact Study

PRELIMINARY SITE PLAN – PHASE 1

DATE: April 2018

FIGURE 2B



HNTB

TOWN OF
CHAPEL HILL

NOT TO
SCALE

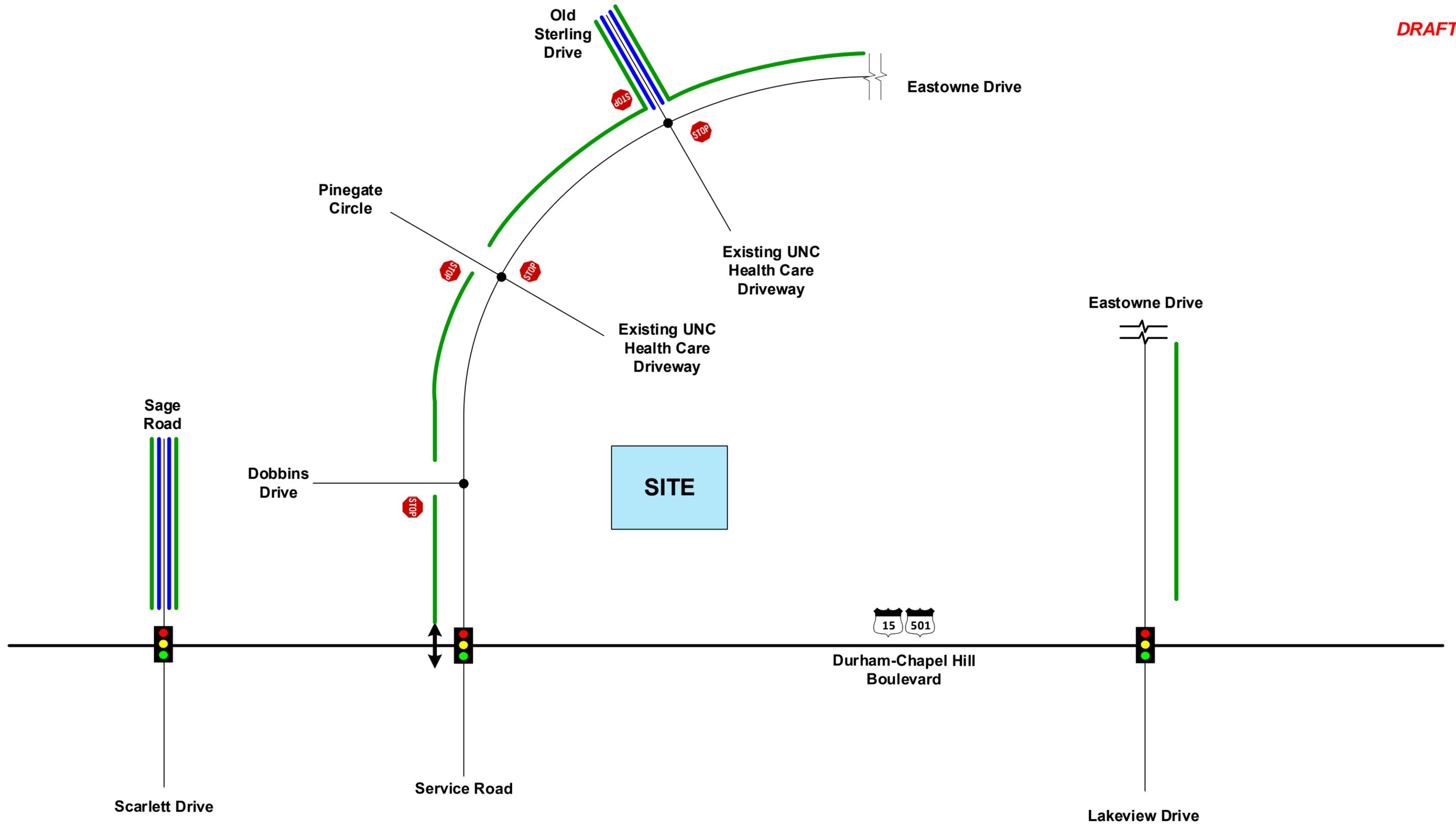
LEGEND	
Geometric, Speed Limits and Traffic Control As Shown	
XXX	Storage Bay Length
CTL	Continuous Turn Lane

**UNC Health Care Eastowne MOB
Traffic Impact Study**

EXISTING LANEAGE AND GEOMETRICS

DATE: April 2018

FIGURE 3



NOT TO SCALE

LEGEND

- Bike Lanes
- Sidewalks

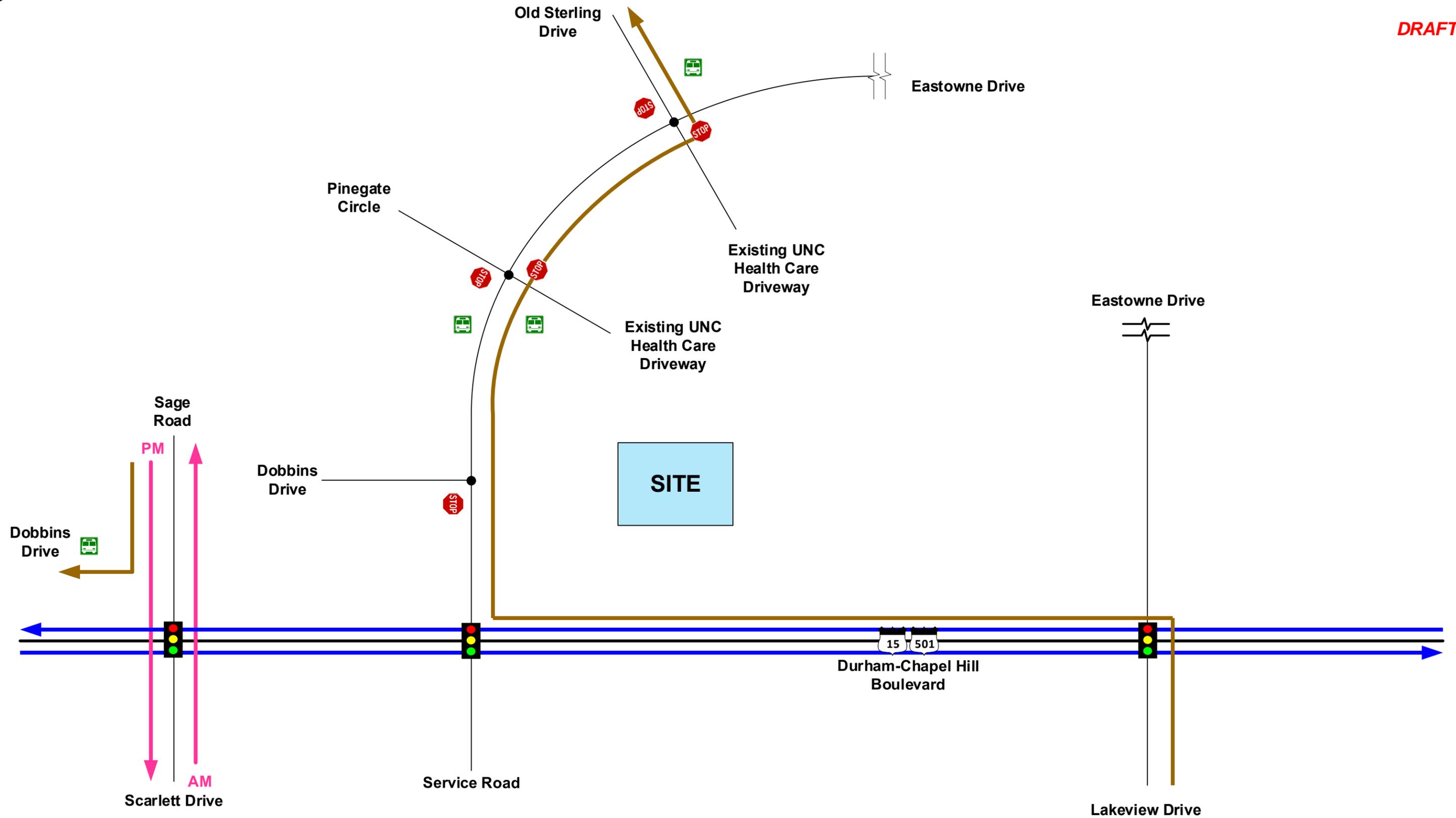
Crosswalks with pedestrian signal heads

UNC Health Care Eastowne MOB
Traffic Impact Study

STUDY AREA PEDESTRIAN AND BICYCLE FACILITIES

DATE: April 2018

FIGURE 4



HNTB

NOT TO SCALE

LEGEND

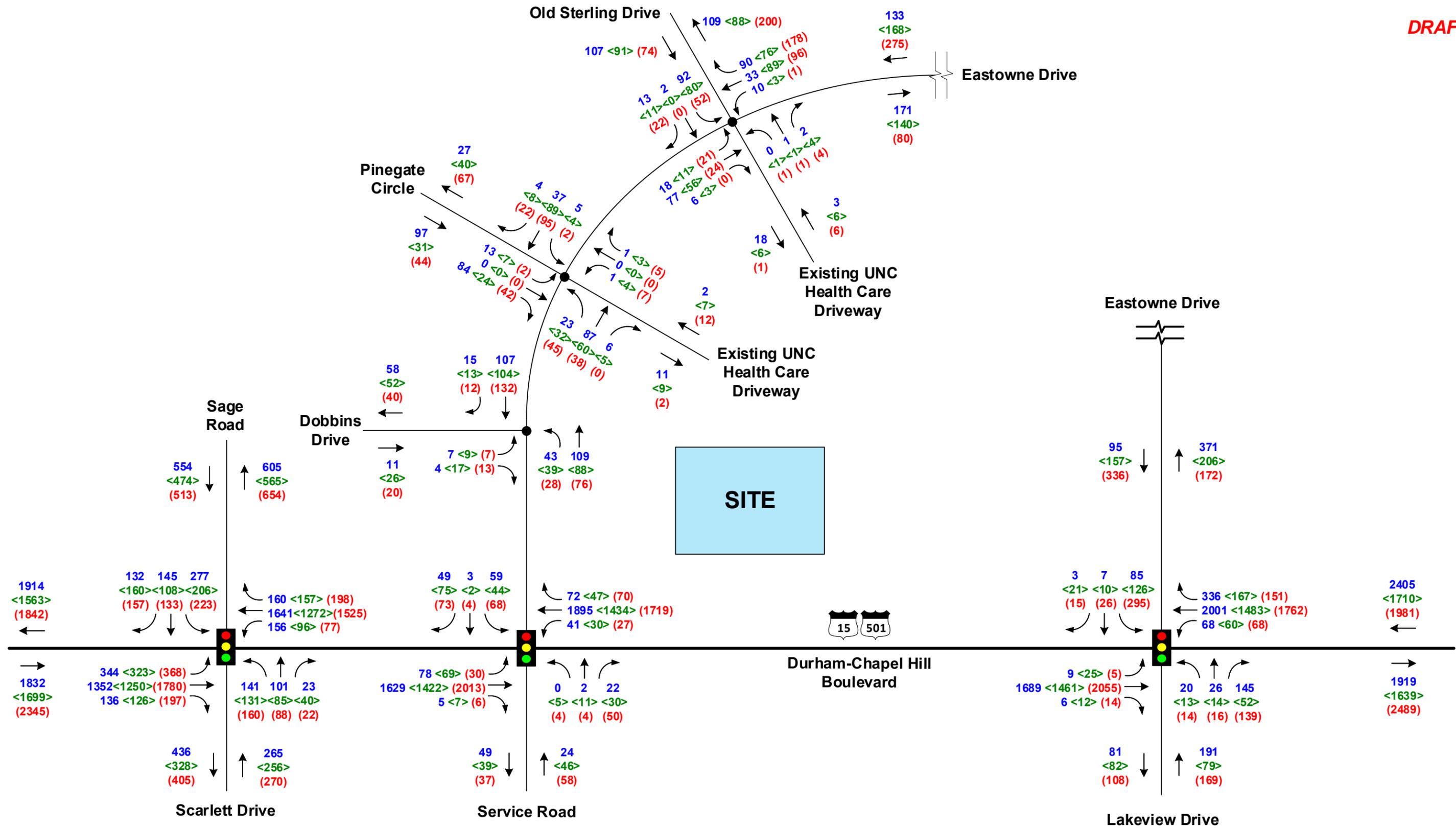
- = D ROUTE
- = CL ROUTE
- = 400 405 Go Triangle ROUTE
- = Bus Stop

UNC Health Care Eastowne MOB
Traffic Impact Study

STUDY AREA TRANSIT ROUTES AND STOPS

DATE: April 2018

FIGURE 5



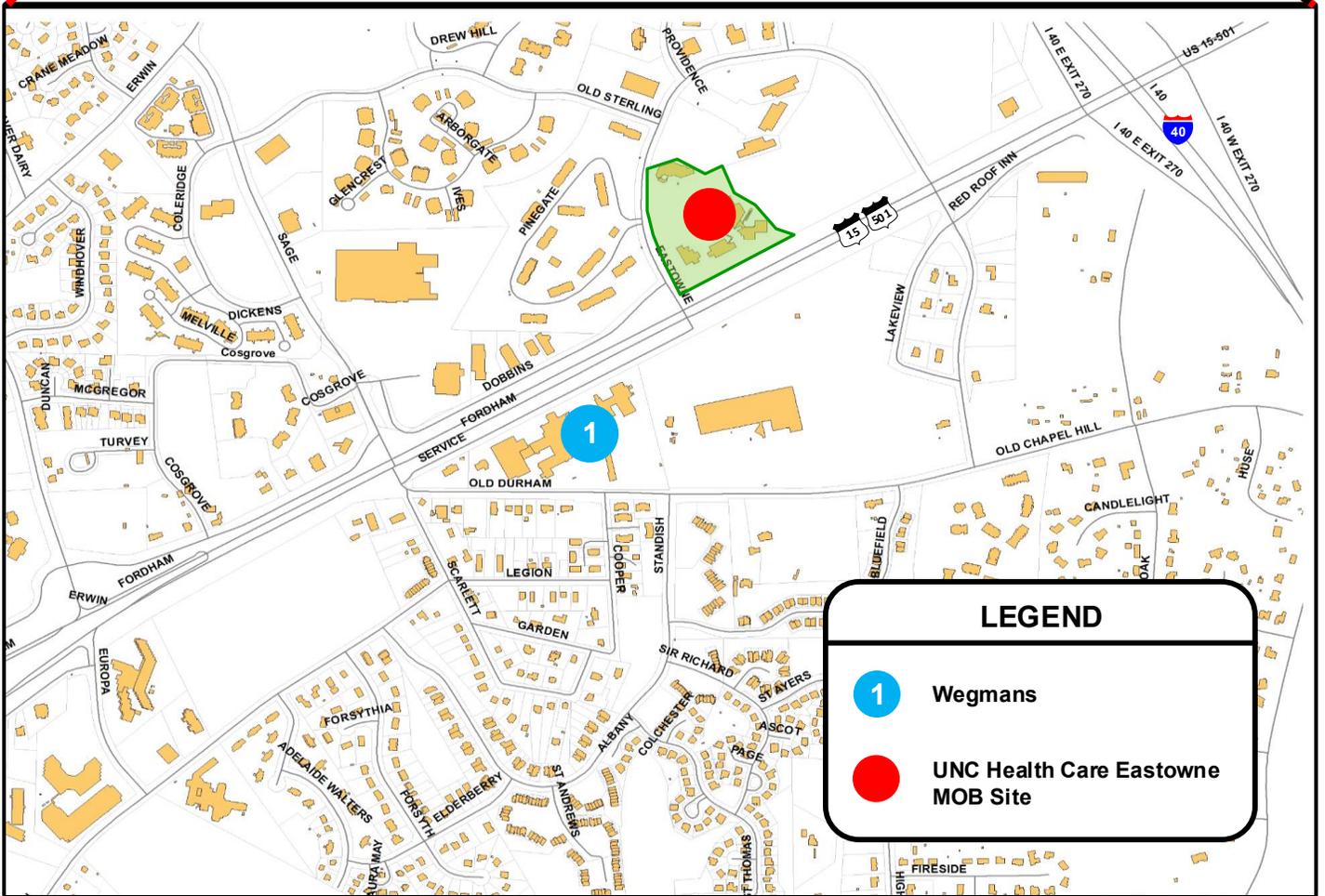
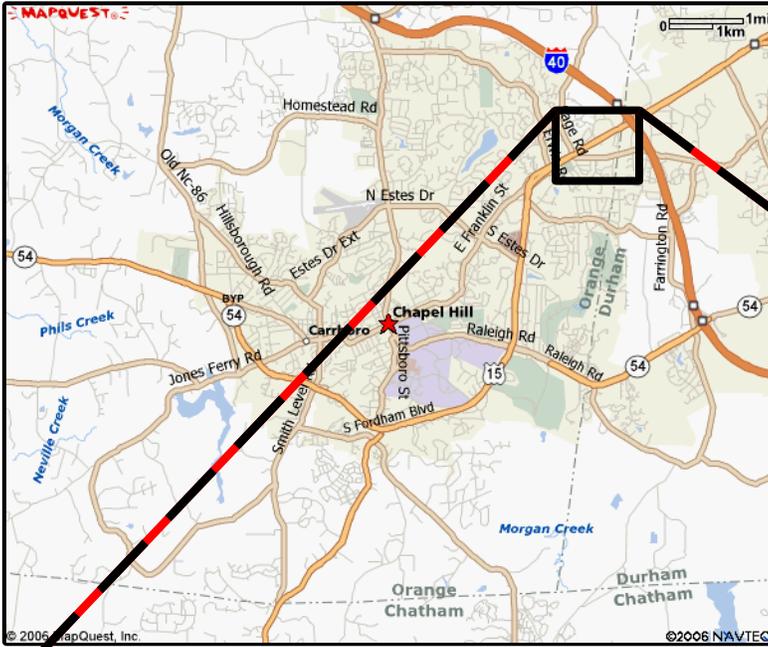
NOT TO SCALE

LEGEND
 XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
 Traffic Impact Study
 2018 EXISTING PEAK HOUR TRAFFIC VOLUMES

DATE: April 2018
FIGURE 6

DRAFT



LEGEND

- Wegmans
- UNC Health Care Eastowne MOB Site

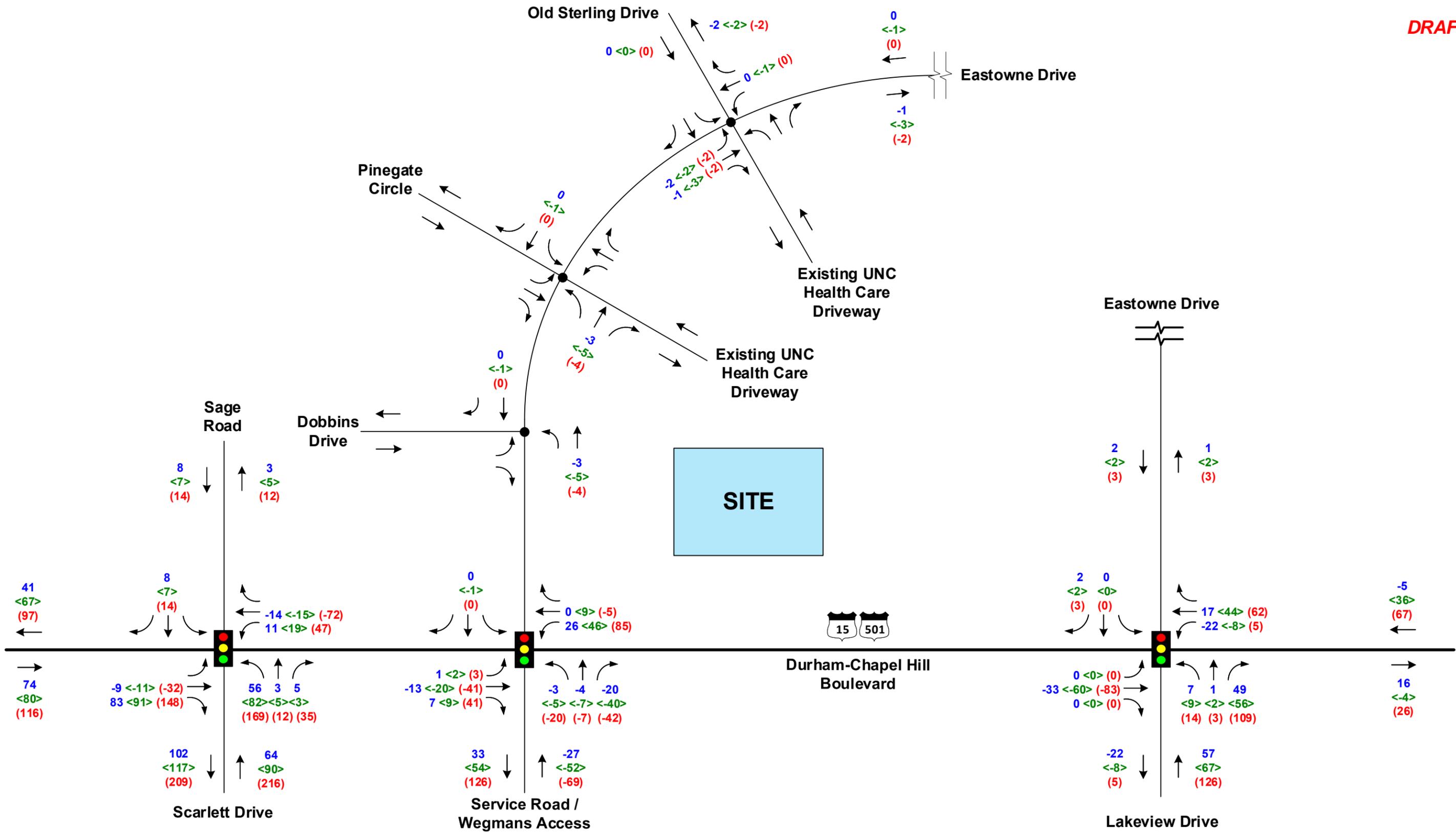


**UNC Health Care Eastowne MOB
Traffic Impact Study**

DATE: April 2018

**2021 PHASE 1
BACKGROUND DEVELOPMENT LOCATIONS**

FIGURE 7



LEGEND

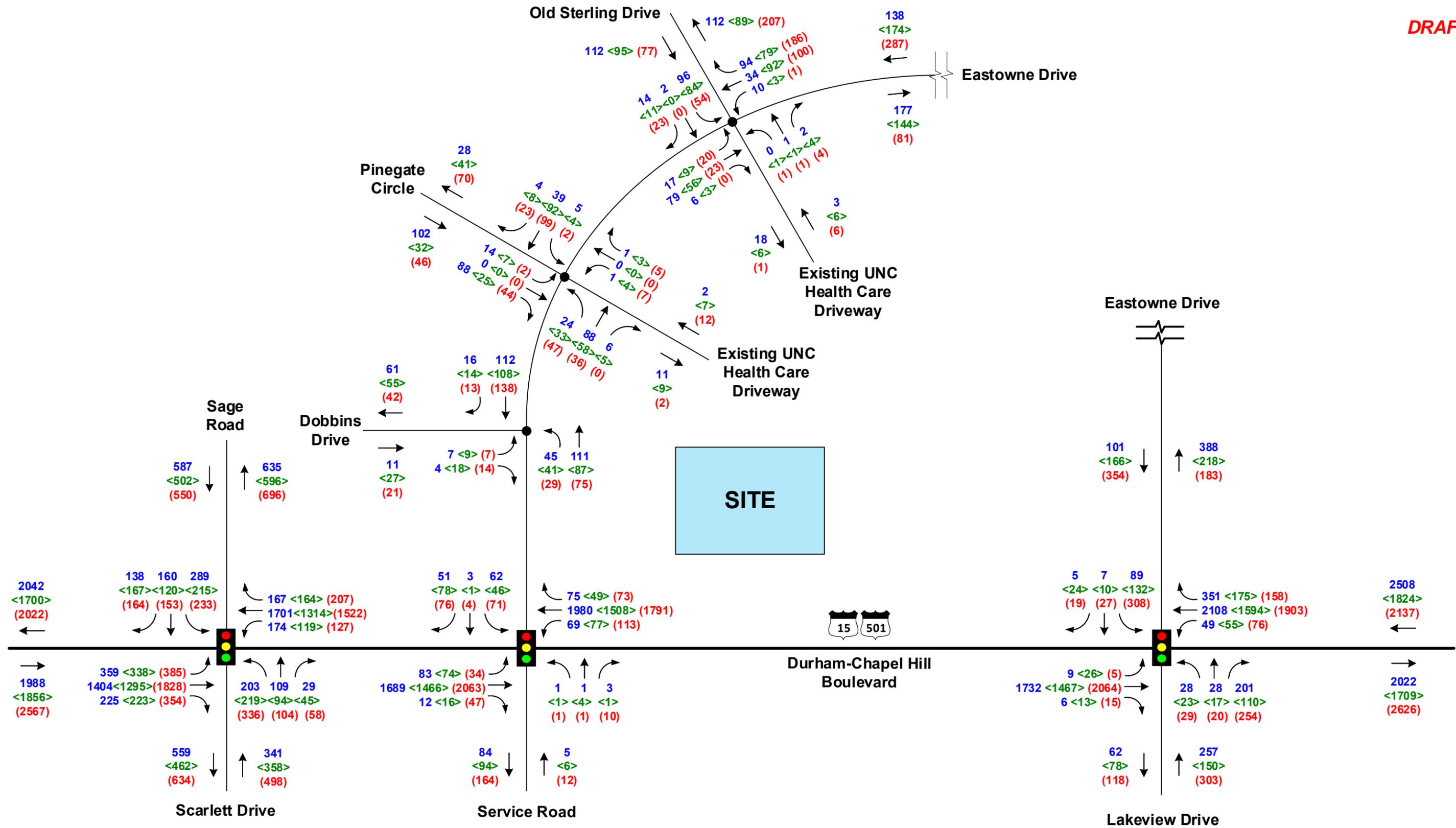
XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
Traffic Impact Study

2021 PHASE 1 TOTAL BACKGROUND GENERATOR
PEAK HOUR TRAFFIC VOLUMES

DATE: April 2018

FIGURE 8

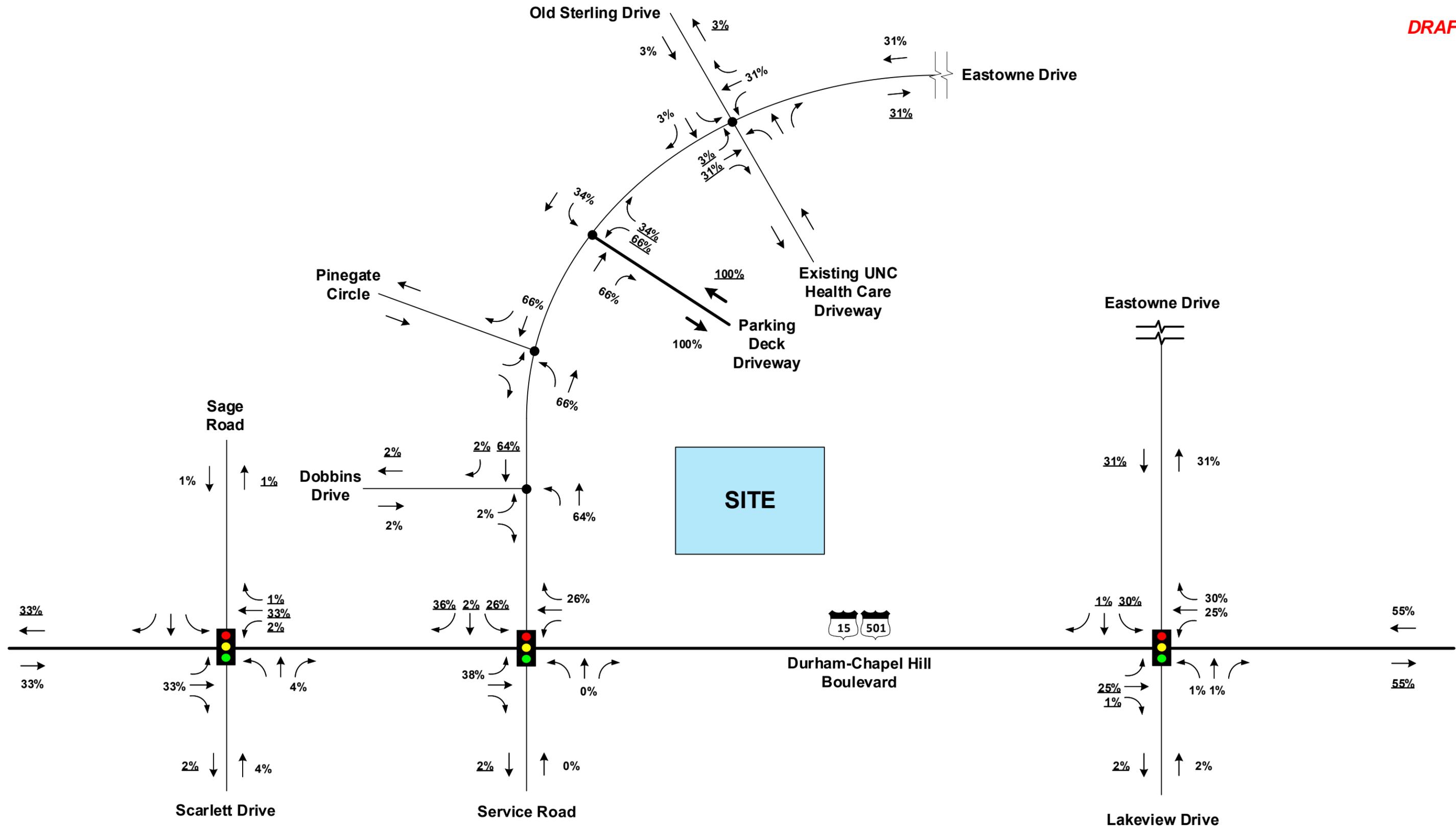


NOT TO SCALE

LEGEND
 XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
 Traffic Impact Study
 2021 PHASE 1 PEAK HOUR TRAFFIC VOLUMES
 WITHOUT SITE

DATE: April 2018
FIGURE 9



HNTB

NOT TO SCALE

LEGEND

XX% = Site Trip Distribution Percentage Entering
 XX% = Site Trip Distribution Percentage Exiting

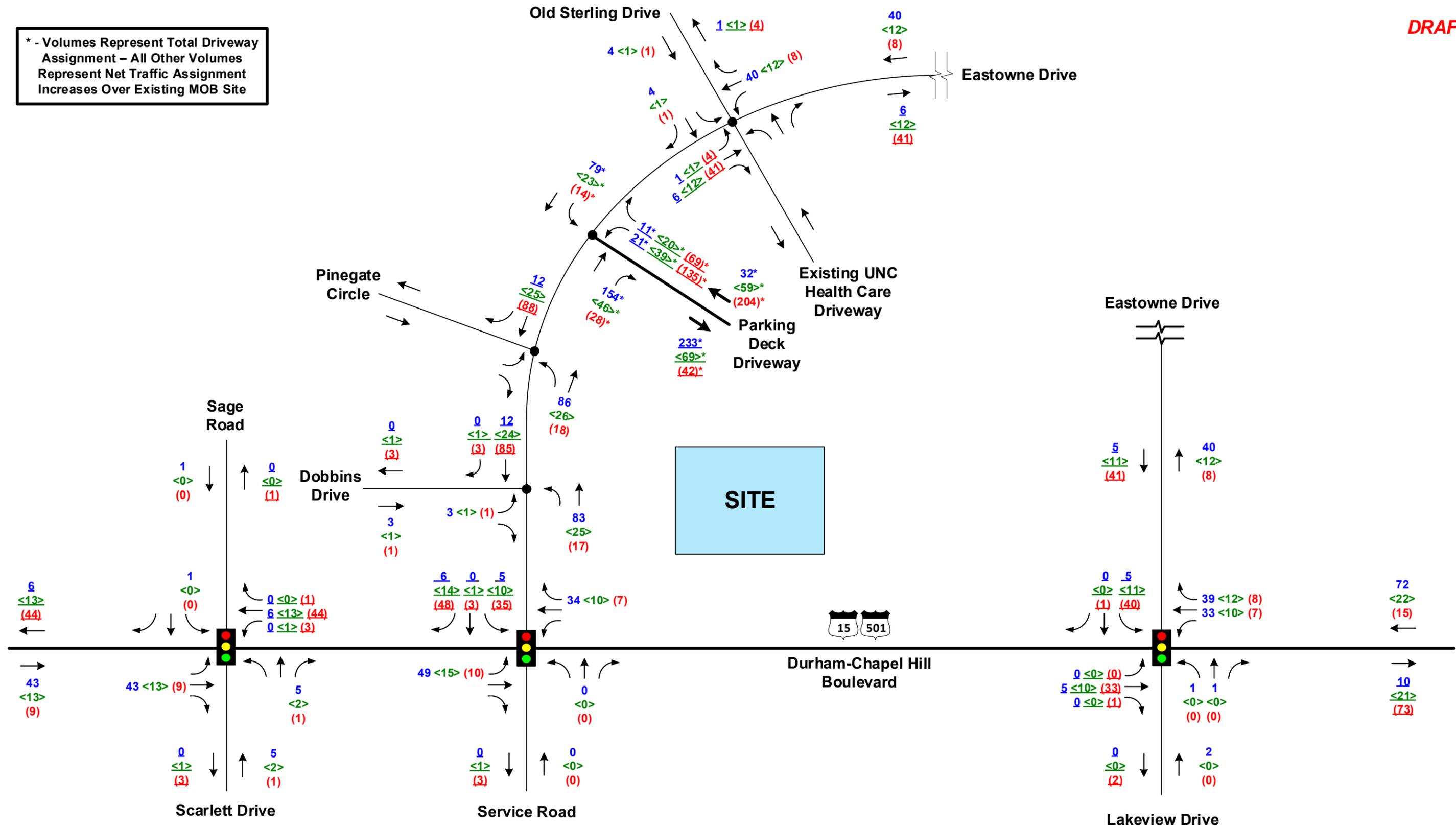
**UNC Health Care Eastowne MOB
 Traffic Impact Study**

**PHASE 1 AND 2
 SITE TRIP DISTRIBUTION PERCENTAGES**

DATE: April 2018

FIGURE 10

* - Volumes Represent Total Driveway Assignment - All Other Volumes Represent Net Traffic Assignment Increases Over Existing MOB Site



HNTB | **TOWN OF CHAPEL HILL**

NOT TO SCALE

LEGEND

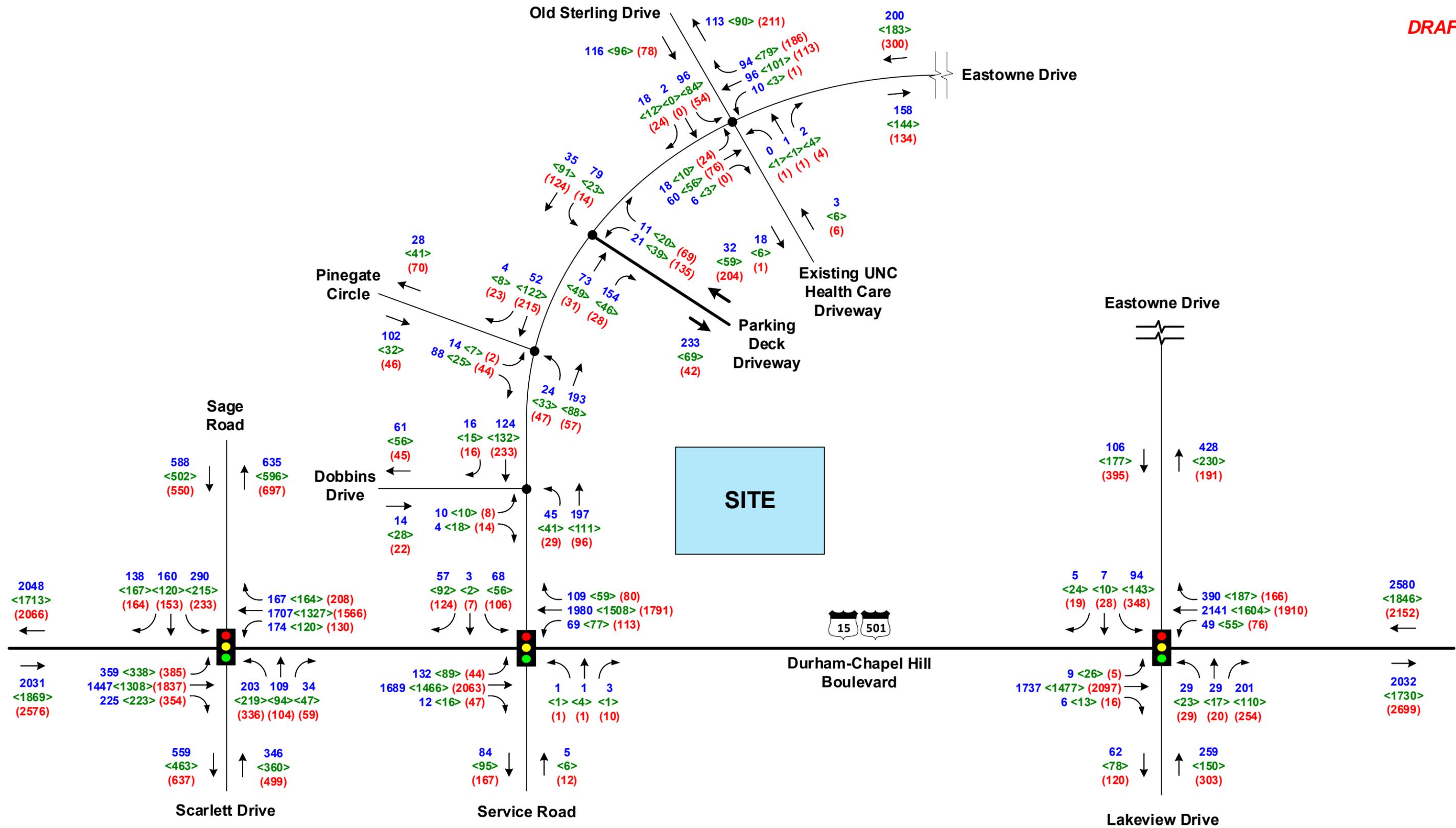
XX / XX = AM Peak Hour Enter / Exit
 <XX> / <XX> = Noon Peak Hour Enter / Exit
 (XX) / (XX) = PM Peak Hour Enter / Exit

UNC Health Care Eastowne MOB
 Traffic Impact Study

2021 PHASE 1 PEAK HOUR SITE TRAFFIC ASSIGNMENT

DATE: April 2018

FIGURE 11

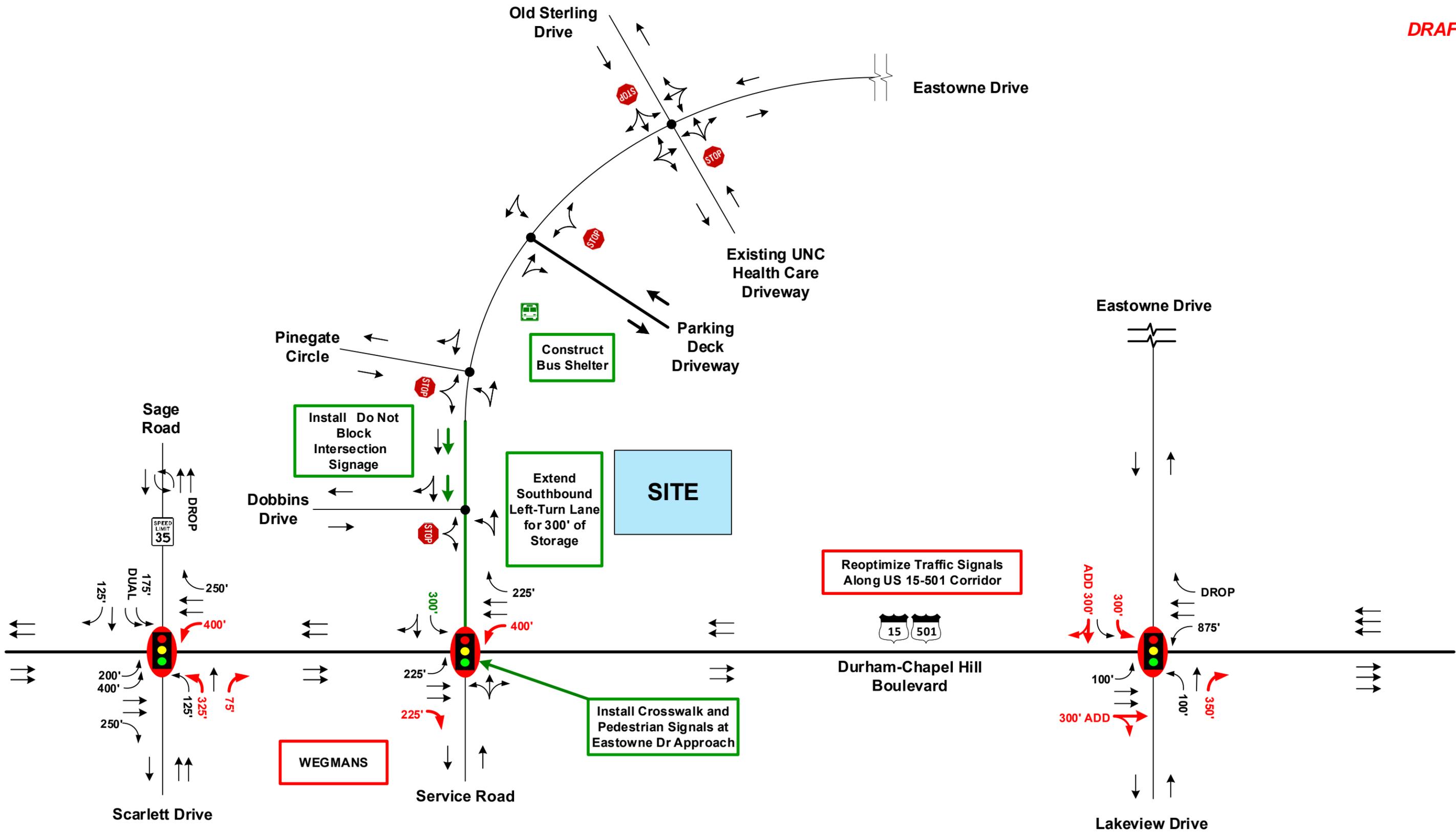


NOT TO SCALE

LEGEND
 XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
 Traffic Impact Study
 2021 PHASE 1 PEAK HOUR TRAFFIC VOLUMES
 WITH PHASE 1 SITE

DATE: April 2018
FIGURE 12



HNTB

TOWN OF CHAPEL HILL

NOT TO SCALE

LEGEND

= COMMITTED SIGNAL TIMING & GEOMETRIC IMPROVEMENT

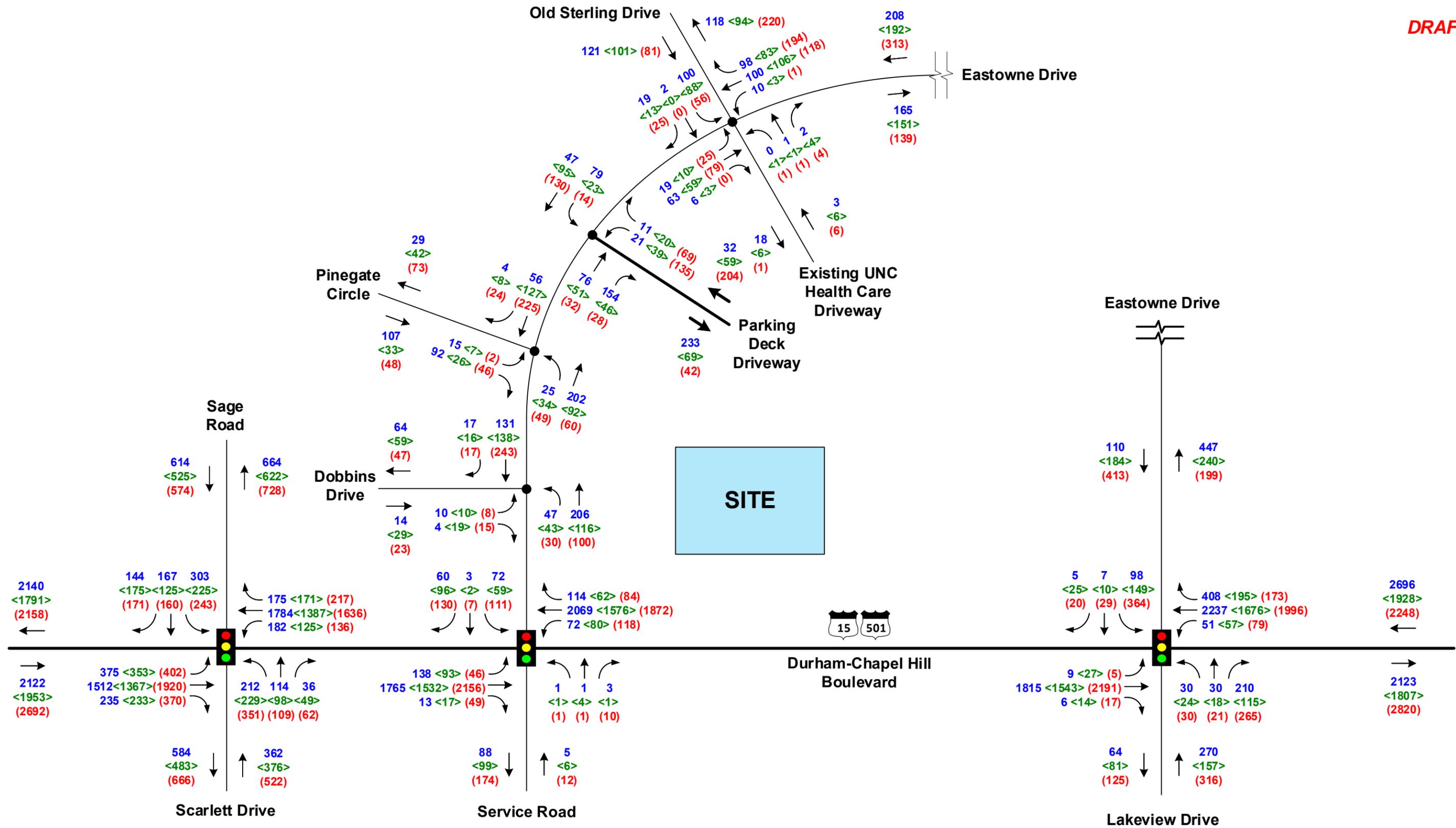
= NECESSARY IMPROVEMENT

UNC Health Care Eastowne MOB
Traffic Impact Study

2021 PHASE 1 –
COMMITTED AND RECOMMENDED IMPROVEMENTS

DATE: April 2018

FIGURE 13



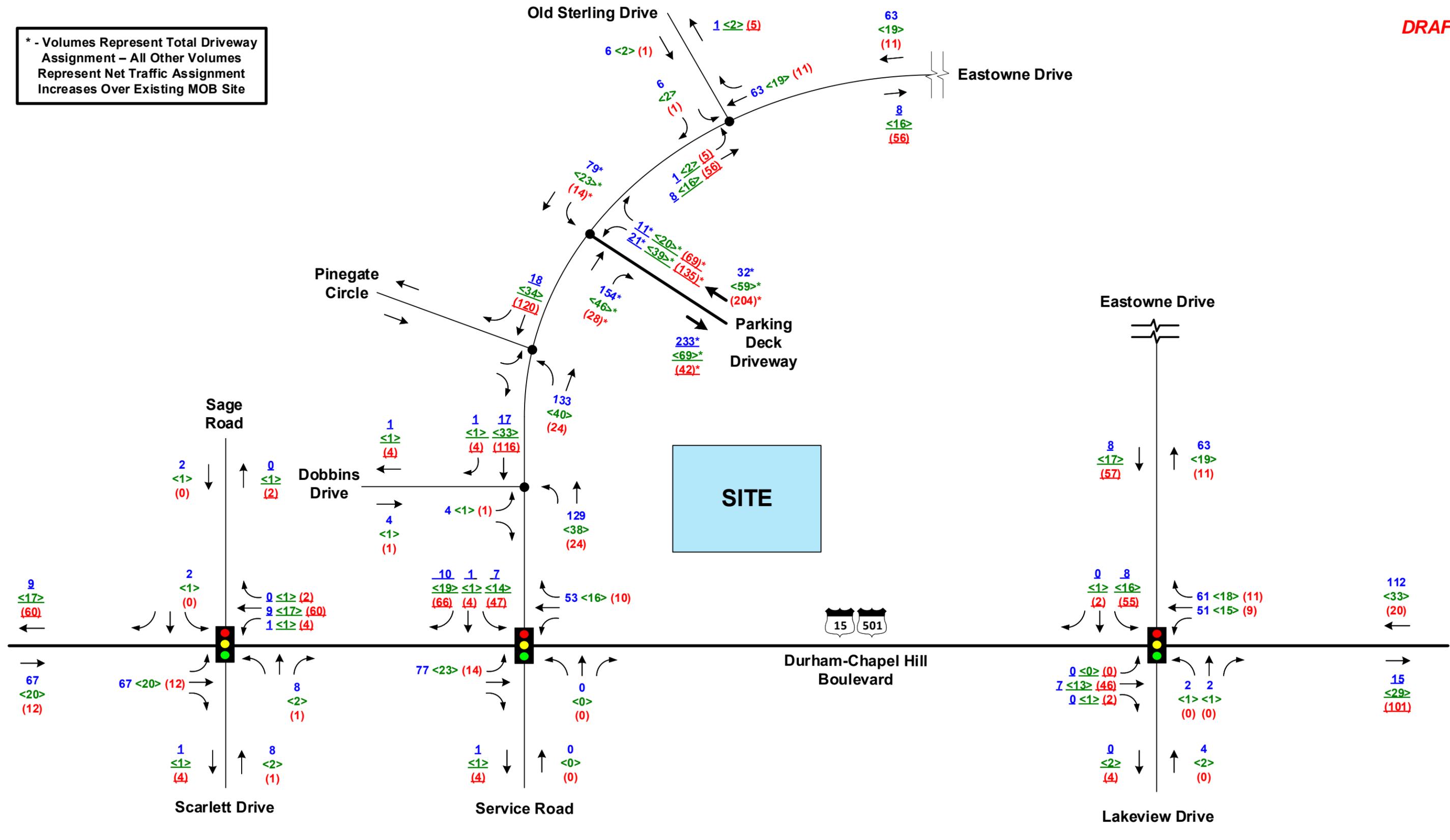
NOT TO SCALE

LEGEND
 XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
 Traffic Impact Study
 2024 PHASE 2 PEAK HOUR TRAFFIC VOLUMES
 WITHOUT PHASE 2 SITE

DATE: April 2018
FIGURE 14

* - Volumes Represent Total Driveway Assignment - All Other Volumes Represent Net Traffic Assignment Increases Over Existing MOB Site



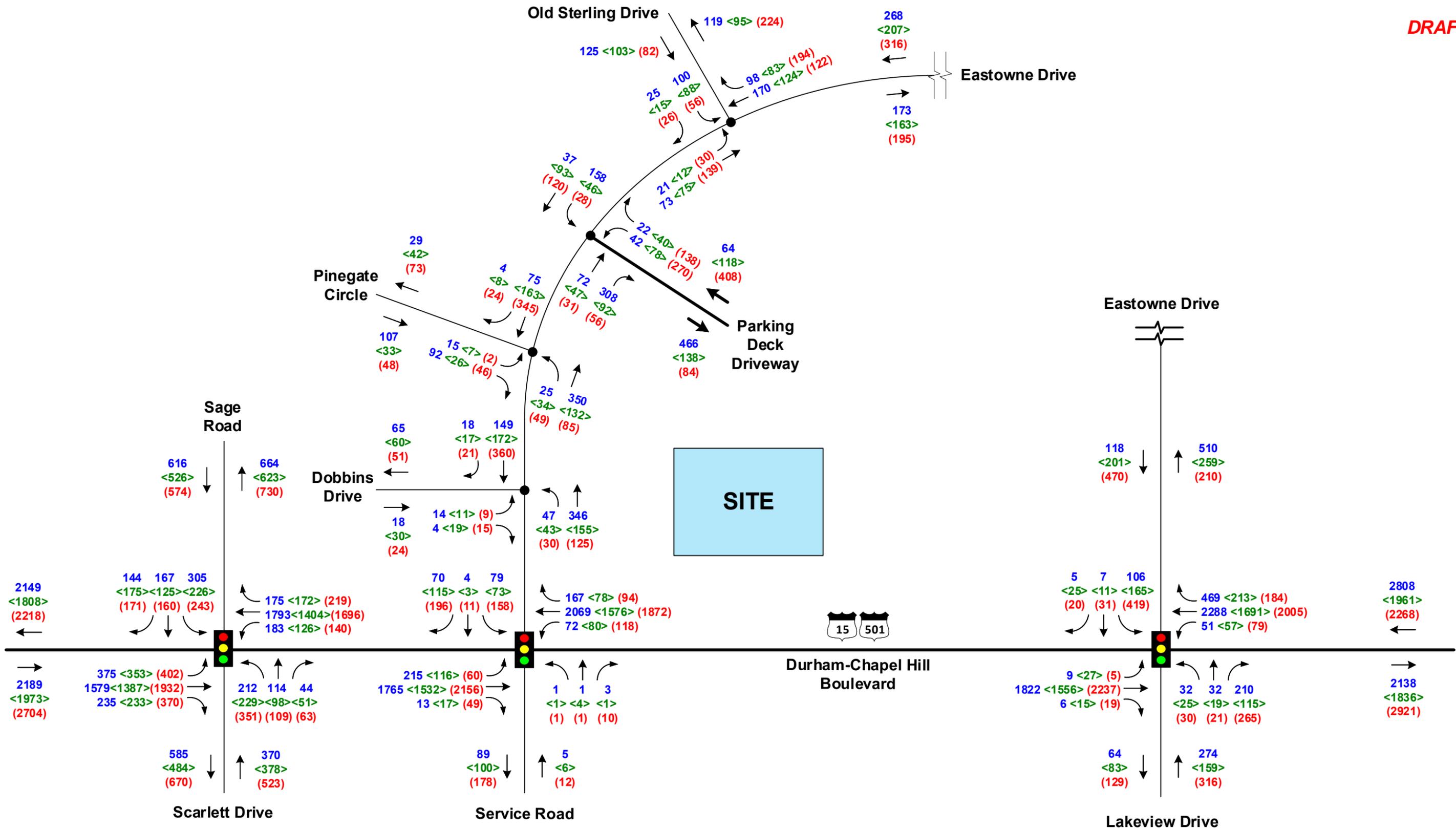
LEGEND	
XX / XX	= AM Peak Hour Enter / Exit
$<XX> / <XX>$	= Noon Peak Hour Enter / Exit
$(XX) / (XX)$	= PM Peak Hour Enter / Exit

UNC Health Care Eastowne MOB
Traffic Impact Study

2024 PHASE 2 PEAK HOUR SITE TRAFFIC ASSIGNMENT

DATE: April 2018

FIGURE 15

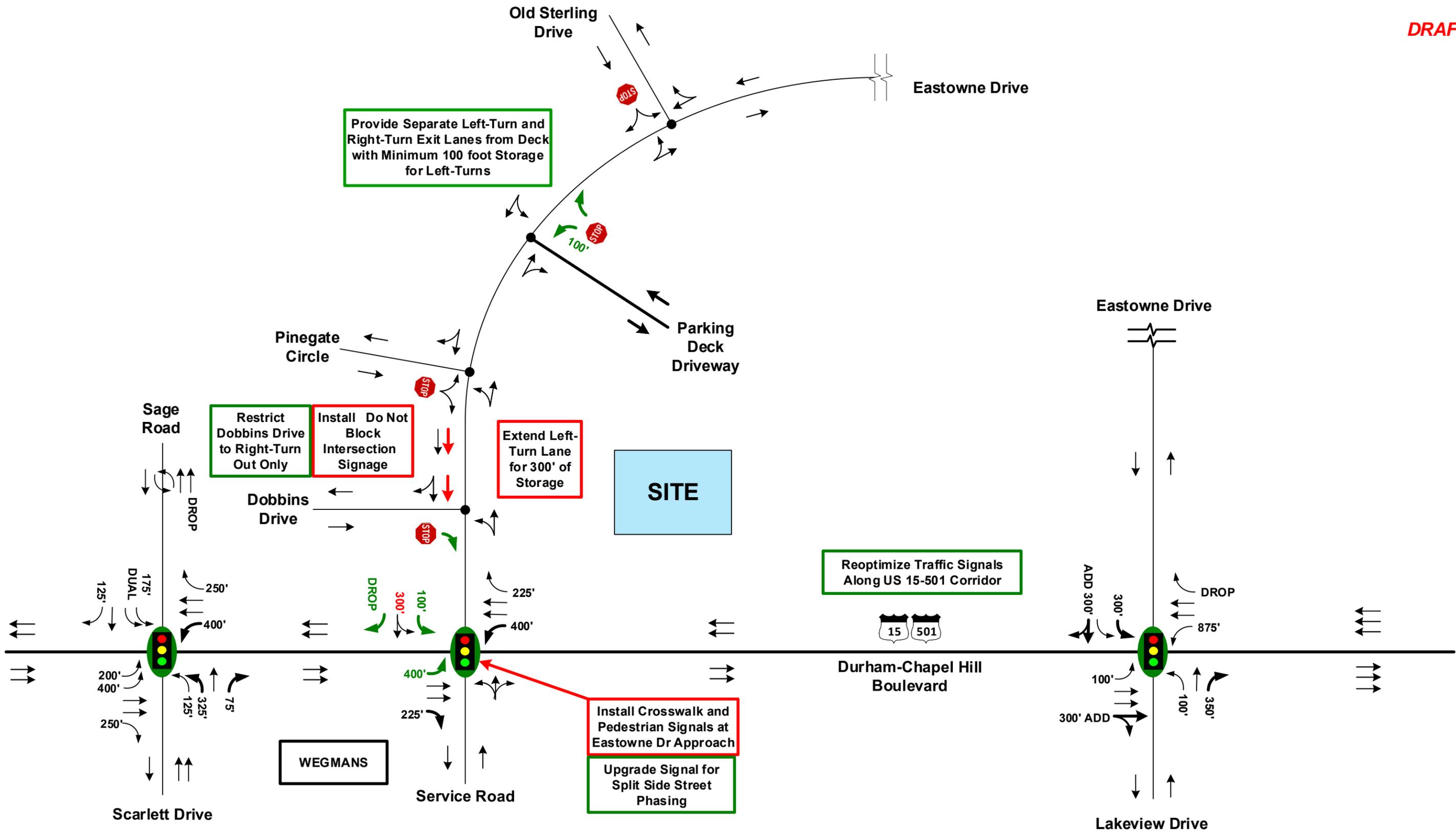


NOT TO SCALE

LEGEND
 XXX = AM Peak Hour Volume <XXX> = Noon Peak Hour Volume (XXX) = PM Peak Hour Volume

UNC Health Care Eastowne MOB
 Traffic Impact Study
 2024 PHASE 2 PEAK HOUR TRAFFIC VOLUMES
 WITH PHASE 2 SITE

DATE: April 2018
FIGURE 16



HNTB

TOWN OF CHAPEL HILL

NOT TO SCALE

LEGEND

= COMMITTED PHASE 1 SIGNAL TIMING & GEOMETRIC IMPROVEMENT

= NECESSARY IMPROVEMENT

UNC Health Care Eastowne MOB
Traffic Impact Study

2024 PHASE 2 –
COMMITTED AND RECOMMENDED IMPROVEMENTS

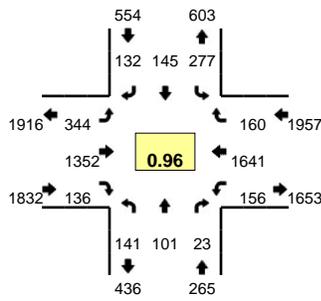
DATE: April 2018

FIGURE 17

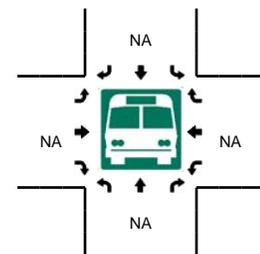
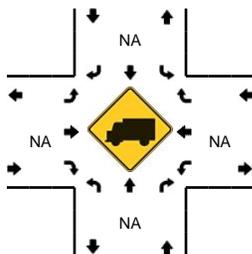
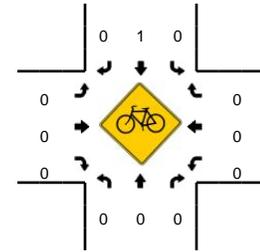
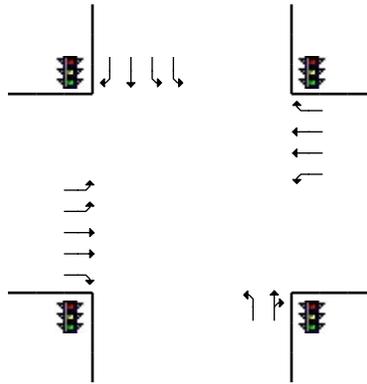
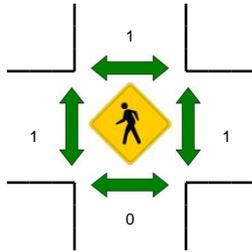
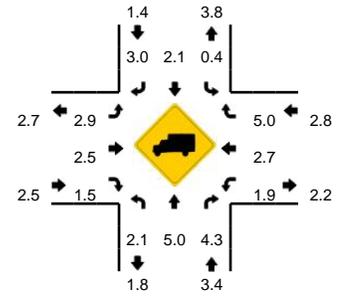
Appendix B – Traffic Count Data

LOCATION: Sage Rd/Scarlett Dr -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630407
DATE: Tue, Mar 20 2018



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

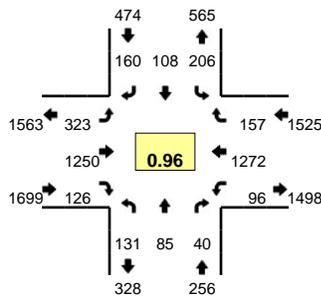


15-Min Count Period Beginning At	Sage Rd/Scarlett Dr (Northbound)				Sage Rd/Scarlett Dr (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	18	14	2	0	23	15	16	0	17	246	29	0	12	243	23	0	658	
7:15 AM	28	12	6	0	49	25	37	0	35	315	18	0	20	310	25	0	880	
7:30 AM	23	15	4	0	63	24	18	0	64	371	25	0	25	364	35	0	1031	
7:45 AM	42	24	9	0	77	28	31	0	95	359	43	0	42	402	44	0	1196	3765
8:00 AM	32	22	7	0	65	29	36	0	78	321	29	1	33	409	43	1	1106	4213
8:15 AM	35	21	5	0	73	46	27	0	81	343	33	0	40	416	41	0	1161	4494
8:30 AM	32	34	2	0	62	42	38	0	88	329	31	1	40	414	32	0	1145	4608
8:45 AM	28	23	3	0	73	39	36	0	58	310	26	0	30	375	26	1	1028	4440
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	168	96	36	0	308	112	124	0	380	1436	172	0	168	1608	176	0	4784	
Heavy Trucks	4	0	4	0	0	0	0	0	0	24	4	0	4	48	4	0	92	
Pedestrians	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
Bicycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Railroad																		
Stopped Buses																		

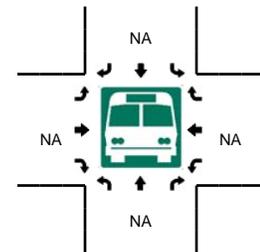
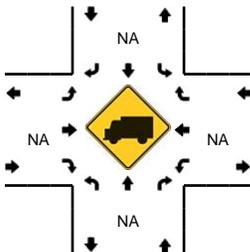
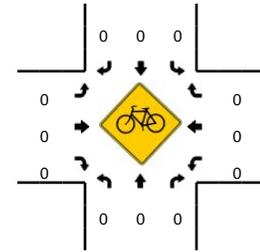
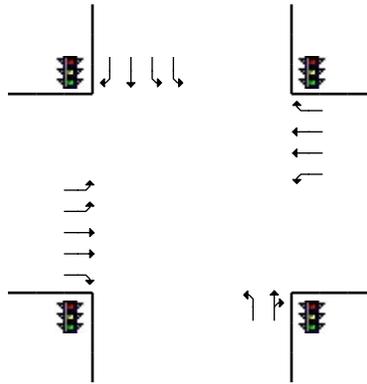
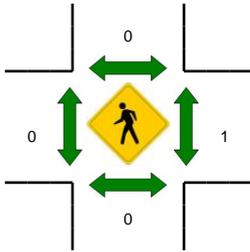
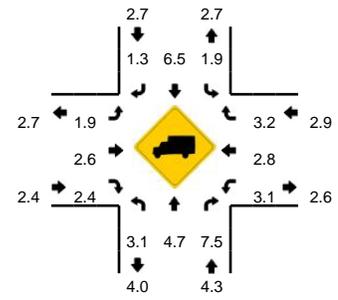
Comments:

LOCATION: Sage Rd/Scarlett Dr -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630401
DATE: Tue, Mar 20 2018



Peak-Hour: 12:30 PM -- 1:30 PM
Peak 15-Min: 12:45 PM -- 1:00 PM

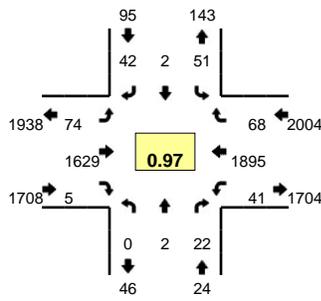


15-Min Count Period Beginning At	Sage Rd/Scarlett Dr (Northbound)				Sage Rd/Scarlett Dr (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
11:30 AM	27	20	12	0	61	27	52	1	47	266	22	0	14	283	31	3	866		
11:45 AM	17	24	10	1	47	27	37	0	77	300	22	0	14	287	41	2	906		
12:00 PM	17	20	11	0	57	31	52	0	66	304	40	0	10	298	42	1	949		
12:15 PM	24	23	7	0	62	28	35	1	52	302	35	0	21	323	35	0	948	3669	
12:30 PM	33	21	9	0	48	34	44	0	68	303	40	0	32	282	28	1	943	3746	
12:45 PM	30	22	9	0	68	32	35	0	103	311	29	0	22	327	44	0	1032	3872	
1:00 PM	40	20	9	0	42	26	41	0	84	319	30	0	24	332	40	1	1008	3931	
1:15 PM	28	22	13	0	48	16	40	0	68	317	27	0	16	331	45	0	971	3954	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
All Vehicles	120	88	36	0	272	128	140	0	412	1244	116	0	88	1308	176	0	4128		
Heavy Trucks	4	8	4		0	12	0		0	40	4		4	20	12		108		
Pedestrians	0	0	0		0	0	0		0	0	0		4	4	0		4		
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0		
Railroad																			
Stopped Buses																			

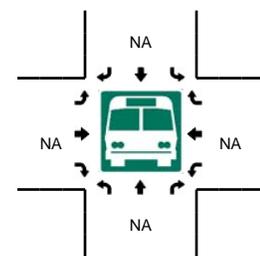
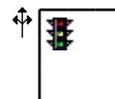
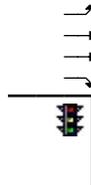
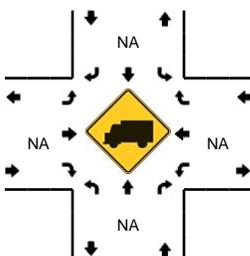
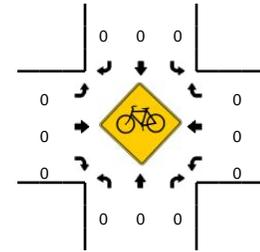
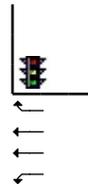
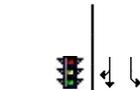
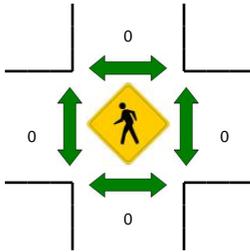
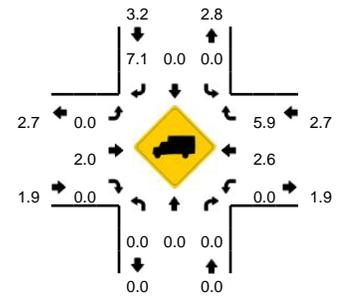
Comments:

LOCATION: Eastowne Dr/US 15-501 Service Rd -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630409
DATE: Tue, Mar 20 2018



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

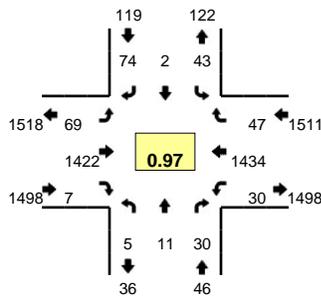


15-Min Count Period Beginning At	Eastowne Dr/US 15-501 Service Rd (Northbound)				Eastowne Dr/US 15-501 Service Rd (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	2	0	7	0	8	0	6	254	0	0	10	280	15	0	583	
7:15 AM	0	1	3	0	12	0	5	0	13	366	1	0	8	364	15	0	788	
7:30 AM	0	0	8	0	10	1	8	0	10	422	0	0	12	437	19	1	928	
7:45 AM	0	1	1	0	18	0	16	0	19	412	3	1	7	486	24	0	988	3287
8:00 AM	0	0	7	0	14	1	8	0	22	382	1	0	10	480	12	1	938	3642
8:15 AM	0	1	6	0	9	0	10	0	22	413	1	0	10	492	13	0	977	3831
8:30 AM	0	1	10	0	10	0	16	1	21	382	0	1	10	438	21	0	911	3814
8:45 AM	2	1	10	0	10	0	15	0	24	357	5	0	13	440	16	0	893	3719
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	4	4	0	72	0	64	0	76	1648	12	4	28	1944	96	0	3952	
Heavy Trucks	0	0	0		0	0	4		0	28	0		0	56	4		92	
Pedestrians	0				0				0				0				0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																	0	
Stopped Buses																	0	

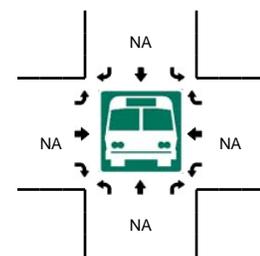
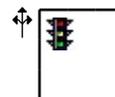
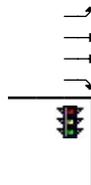
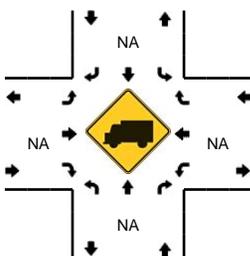
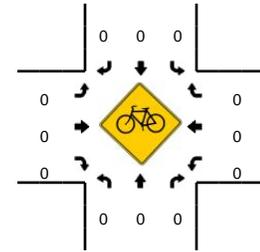
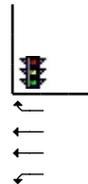
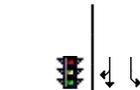
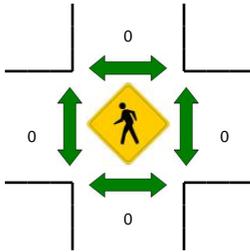
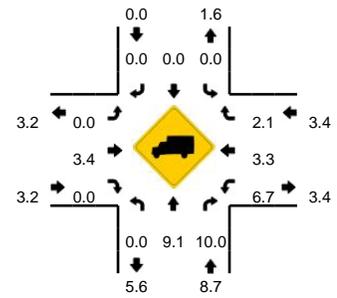
Comments:

LOCATION: Eastowne Dr/US 15-501 Service Rd -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630402
DATE: Tue, Mar 20 2018



Peak-Hour: 12:30 PM -- 1:30 PM
Peak 15-Min: 12:45 PM -- 1:00 PM

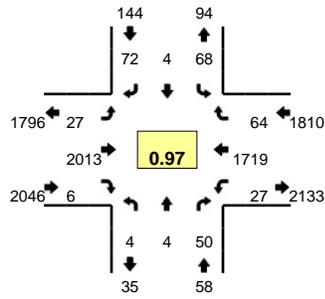


15-Min Count Period Beginning At	Eastowne Dr/US 15-501 Service Rd (Northbound)				Eastowne Dr/US 15-501 Service Rd (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:30 AM	0	0	6	0	13	0	10	0	12	352	1	1	10	306	8	1	720	
11:45 AM	2	1	11	0	12	1	18	0	10	349	0	1	4	324	8	0	741	
12:00 PM	2	0	10	0	18	2	28	0	11	361	1	1	10	312	17	2	775	
12:15 PM	2	0	12	0	8	0	19	0	12	359	0	0	8	361	14	2	797	3033
12:30 PM	1	3	12	0	14	0	25	0	15	338	1	0	6	311	10	1	737	3050
12:45 PM	1	3	3	0	9	0	16	0	20	367	3	2	3	382	13	0	822	3131
1:00 PM	1	3	8	0	7	1	20	0	13	356	1	1	8	377	12	2	810	3166
1:15 PM	2	2	7	0	13	1	13	0	16	361	2	2	10	364	12	0	805	3174
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	4	12	12	0	36	0	64	0	80	1468	12	8	12	1528	52	0	3288	
Heavy Trucks	0	0	0		0	0	0		0	44	0		0	40	0		84	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																	0	
Stopped Buses																	0	

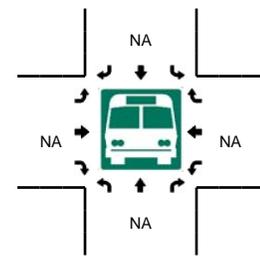
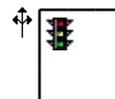
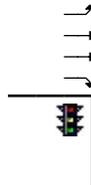
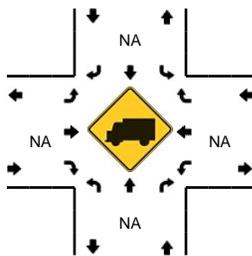
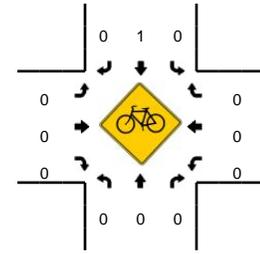
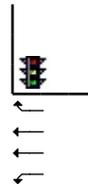
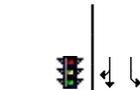
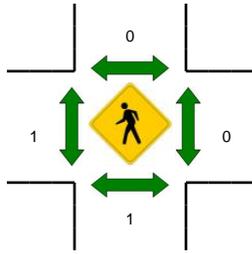
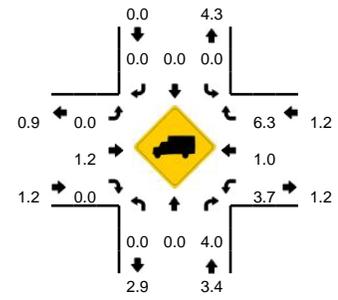
Comments:

LOCATION: Eastowne Dr/US 15-501 Service Rd -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630410
DATE: Tue, Mar 20 2018



Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

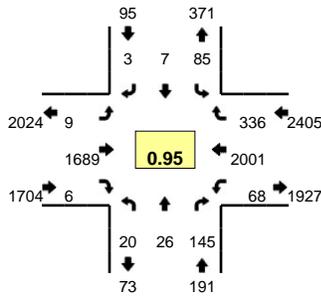


15-Min Count Period Beginning At	Eastowne Dr/US 15-501 Service Rd (Northbound)				Eastowne Dr/US 15-501 Service Rd (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	1	9	0	15	2	23	0	10	427	2	2	4	360	14	1	871	
4:15 PM	1	1	8	0	21	0	21	0	12	498	1	0	9	361	12	2	947	
4:30 PM	0	2	19	0	17	2	16	0	8	455	1	0	12	444	13	0	989	
4:45 PM	1	2	14	0	24	0	24	0	7	464	1	0	5	428	17	0	987	3794
5:00 PM	1	0	11	0	23	1	28	0	4	505	0	0	5	400	16	0	994	3917
5:15 PM	2	2	16	0	21	0	26	0	10	522	2	1	11	419	16	1	1049	4019
5:30 PM	1	2	12	0	12	2	10	0	5	510	3	0	6	442	17	0	1022	4052
5:45 PM	0	0	11	0	12	1	8	0	7	476	1	0	3	458	15	1	993	4058
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	8	64	0	84	0	104	0	40	2088	8	4	44	1676	64	4	4196	
Heavy Trucks	0	0	4		0	0	0		0	16	0		4	24	0		48	
Pedestrians			0				0			4				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																	0	
Stopped Buses																		

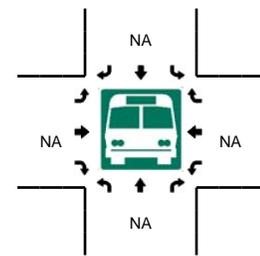
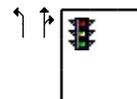
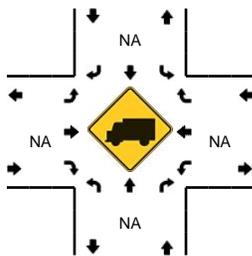
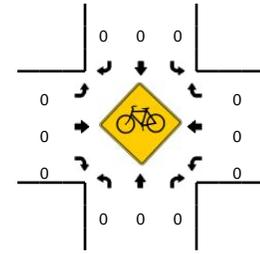
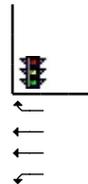
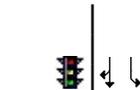
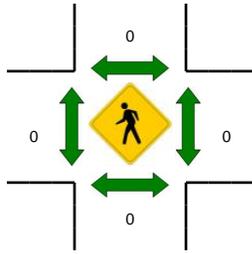
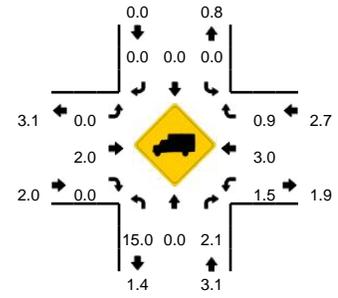
Comments:

LOCATION: Eastowne Dr/E Lakeview Dr -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630411
DATE: Tue, Mar 20 2018



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

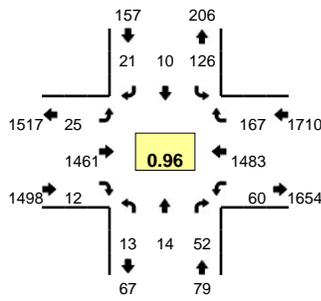


15-Min Count Period Beginning At	Eastowne Dr/E Lakeview Dr (Northbound)				Eastowne Dr/E Lakeview Dr (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	3	23	0	12	0	1	0	0	267	1	0	4	301	37	0	651	
7:15 AM	6	2	28	0	11	1	0	0	0	373	1	1	9	403	40	2	877	
7:30 AM	6	6	44	0	19	1	0	0	2	441	0	0	8	462	62	2	1053	
7:45 AM	5	6	34	0	24	0	0	0	2	432	3	0	18	516	115	3	1158	3739
8:00 AM	3	8	41	0	20	3	0	0	0	393	3	0	19	537	87	2	1116	4204
8:15 AM	6	6	26	0	22	3	3	0	5	423	0	0	15	486	72	1	1068	4395
8:30 AM	5	5	28	0	14	4	0	0	7	387	2	0	16	442	67	2	979	4321
8:45 AM	3	6	26	0	18	3	2	0	5	376	0	0	9	472	81	0	1001	4164
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	24	136	0	96	0	0	0	8	1728	12	0	72	2064	460	12	4632	
Heavy Trucks	4	0	0		0	0	0		0	28	0		0	64	4		100	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																	0	
Stopped Buses																	0	

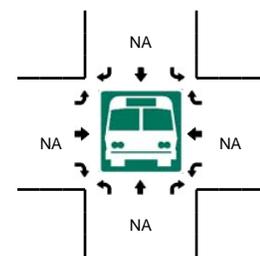
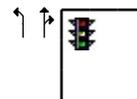
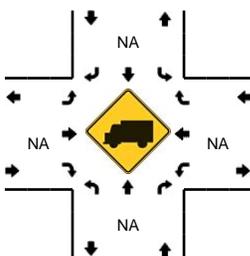
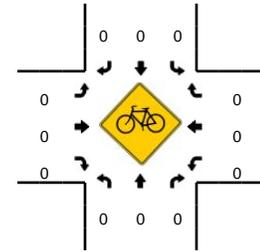
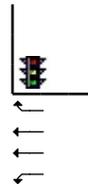
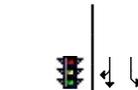
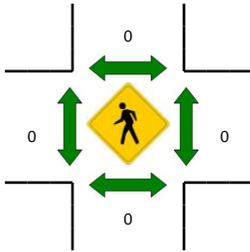
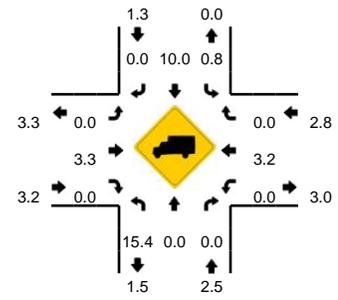
Comments:

LOCATION: Eastowne Dr/E Lakeview Dr -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630403
DATE: Tue, Mar 20 2018



Peak-Hour: 12:15 PM -- 1:15 PM
Peak 15-Min: 12:15 PM -- 12:30 PM

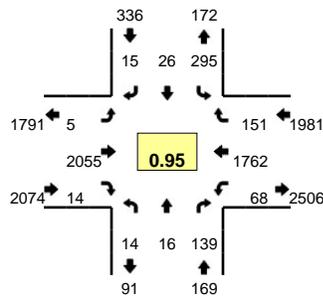


15-Min Count Period Beginning At	Eastowne Dr/E Lakeview Dr (Northbound)				Eastowne Dr/E Lakeview Dr (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:30 AM	2	1	15	0	41	1	5	0	3	380	0	0	9	331	16	2	806	
11:45 AM	1	1	9	0	30	2	8	0	4	379	2	0	11	324	24	3	798	
12:00 PM	4	2	13	0	58	10	8	0	2	383	3	0	8	338	31	6	866	
12:15 PM	6	4	14	0	39	4	8	0	8	371	6	0	9	382	45	3	899	3369
12:30 PM	2	3	15	0	26	2	6	0	3	355	2	0	8	312	26	4	764	3327
12:45 PM	1	5	11	0	28	3	4	0	6	372	4	0	15	393	46	4	892	3421
1:00 PM	4	2	12	0	33	1	3	0	8	363	0	0	13	396	50	4	889	3444
1:15 PM	7	4	16	0	21	1	4	0	4	375	1	0	2	388	48	5	876	3421
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	24	16	56	0	156	16	32	0	32	1484	24	0	36	1528	180	12	3596	
Heavy Trucks	4	0	0	0	0	0	0	0	0	56	0	0	0	56	0	0	116	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

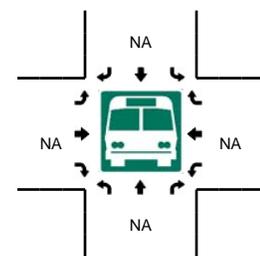
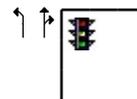
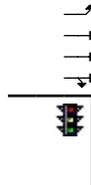
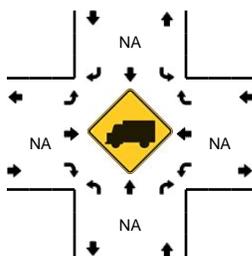
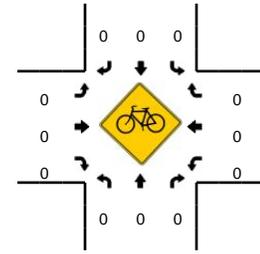
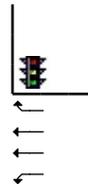
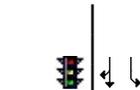
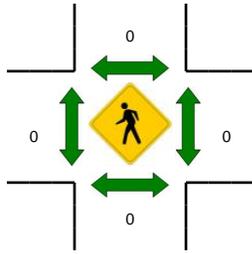
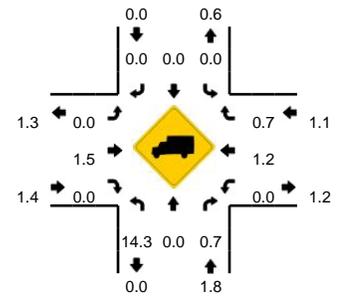
Comments:

LOCATION: Eastowne Dr/E Lakeview Dr -- US 15-501
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630412
DATE: Tue, Mar 20 2018



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

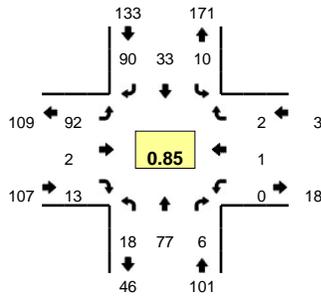


15-Min Count Period Beginning At	Eastowne Dr/E Lakeview Dr (Northbound)				Eastowne Dr/E Lakeview Dr (Southbound)				US 15-501 (Eastbound)				US 15-501 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	1	22	0	58	10	4	0	0	454	1	0	11	387	41	6	1002	
4:15 PM	4	3	23	0	41	2	2	0	1	505	2	0	14	387	31	2	1017	
4:30 PM	3	4	28	0	77	4	1	0	1	482	3	0	12	461	44	2	1122	
4:45 PM	3	4	27	0	64	8	5	0	1	500	2	0	13	436	36	5	1104	4245
5:00 PM	6	3	48	0	96	12	5	0	0	524	4	0	9	396	29	4	1136	4379
5:15 PM	2	5	36	0	58	2	4	0	3	549	5	0	17	469	42	6	1198	4560
5:30 PM	6	5	27	0	55	3	3	0	3	519	3	0	9	425	40	4	1102	4540
5:45 PM	6	9	30	0	28	4	4	0	0	501	7	0	23	465	30	2	1109	4545
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	20	144	0	232	8	16	0	12	2196	20	0	68	1876	168	24	4792	
Heavy Trucks	0	0	4		0	0	0		0	8	0		0	28	4		44	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

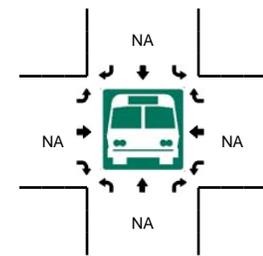
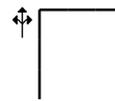
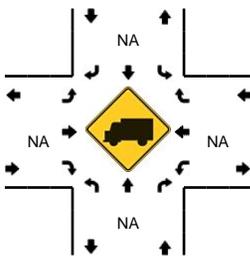
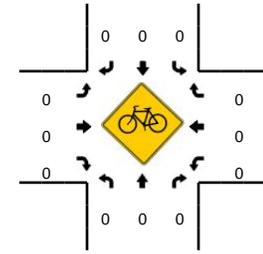
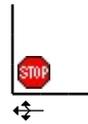
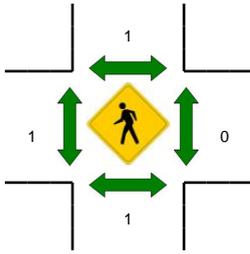
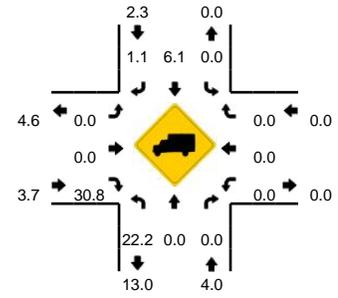
Comments:

LOCATION: Eastowne Dr -- Old Sterling Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630413
DATE: Tue, Mar 20 2018



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

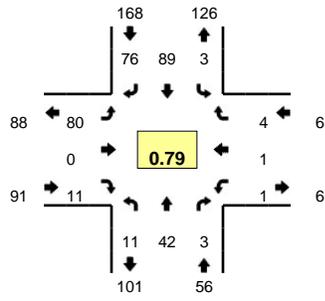


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Old Sterling Dr (Eastbound)				Old Sterling Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	6	0	0	1	2	5	0	16	2	3	0	0	0	0	0	36	
7:15 AM	2	12	1	1	0	4	6	0	16	0	2	0	0	0	0	0	44	
7:30 AM	0	10	4	0	4	2	13	0	24	0	4	0	0	0	0	0	61	
7:45 AM	4	15	4	0	3	11	30	0	29	1	4	0	0	0	0	0	101	242
8:00 AM	3	18	2	0	4	7	22	0	25	0	2	0	0	0	1	0	84	290
8:15 AM	4	24	0	0	3	9	14	0	20	0	3	0	0	1	1	0	79	325
8:30 AM	7	20	0	0	0	6	24	0	18	1	4	0	0	0	0	0	80	344
8:45 AM	6	24	0	0	0	11	15	0	25	0	3	0	0	0	0	0	84	327
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	16	60	16	0	12	44	120	0	116	4	16	0	0	0	0	0	404	
Heavy Trucks	4	0	0		0	0	4		0	0	4		0	0	0		12	
Pedestrians	0	0	0		0	4	0		0	0	0		0	0	0		4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

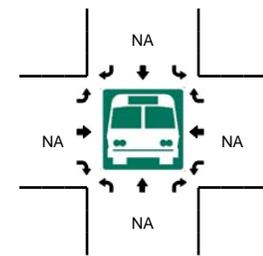
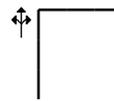
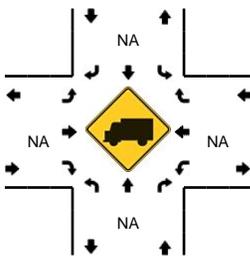
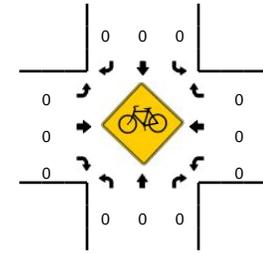
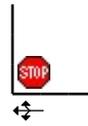
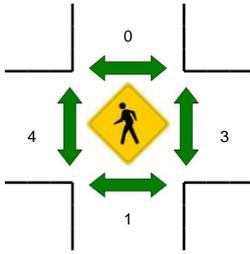
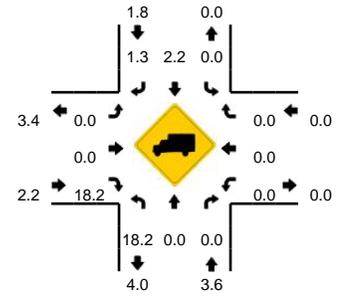
Comments:

LOCATION: Eastowne Dr -- Old Sterling Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630404
DATE: Tue, Mar 20 2018



Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:00 PM -- 12:15 PM

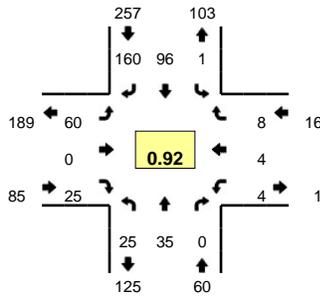


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Old Sterling Dr (Eastbound)				Old Sterling Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:30 AM	1	12	1	0	0	10	9	0	23	0	7	0	0	0	0	0	63	
11:45 AM	3	11	0	0	0	21	17	0	23	0	3	0	1	0	0	0	79	
12:00 PM	1	10	1	0	1	30	19	0	30	0	4	0	1	1	3	0	101	
12:15 PM	3	8	0	0	1	16	19	0	25	0	3	0	0	0	1	0	76	319
12:30 PM	3	8	0	0	1	22	17	0	8	0	3	0	0	0	0	0	62	318
12:45 PM	4	16	2	0	0	21	21	0	17	0	1	0	0	0	0	0	82	321
1:00 PM	8	13	0	0	0	24	24	0	11	1	5	1	1	0	1	0	89	309
1:15 PM	5	12	0	0	0	15	23	0	11	0	7	0	0	0	1	0	74	307
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	40	4	0	4	120	76	0	120	0	16	0	4	4	12	0	404	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	8	
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																	0	
Stopped Buses																		

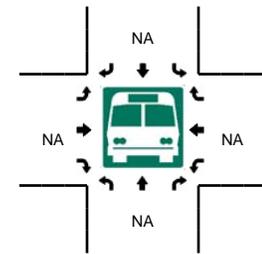
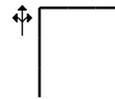
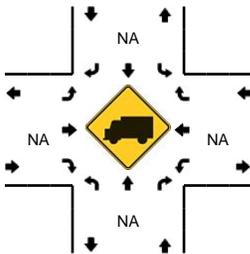
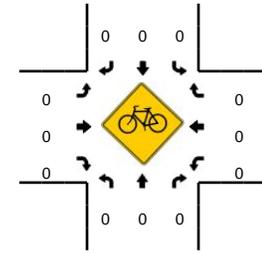
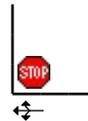
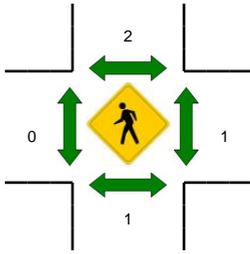
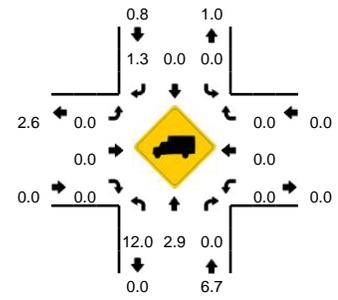
Comments:

LOCATION: Eastowne Dr -- Old Sterling Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630414
DATE: Tue, Mar 20 2018



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

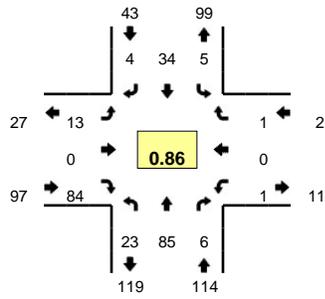


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Old Sterling Dr (Eastbound)				Old Sterling Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	7	0	0	1	19	25	0	16	0	5	0	1	0	3	0	79	
4:15 PM	6	12	0	0	0	20	30	0	13	0	2	0	0	0	0	0	83	
4:30 PM	12	14	0	0	0	18	34	0	11	0	6	0	1	1	2	0	99	358
4:45 PM	5	8	0	0	0	18	36	0	20	0	3	0	2	2	3	0	97	387
5:00 PM	6	5	0	0	0	32	41	0	13	0	8	0	1	1	1	0	108	418
5:15 PM	2	8	0	0	1	28	49	0	16	0	8	0	0	0	2	0	114	416
5:30 PM	9	6	0	0	0	17	46	0	13	0	5	0	0	0	1	0	97	394
5:45 PM	4	5	0	0	0	14	42	0	10	0	0	0	0	0	0	0	75	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	8	32	0	0	4	112	196	0	64	0	32	0	0	0	8	0	456	
Heavy Trucks	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8	
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

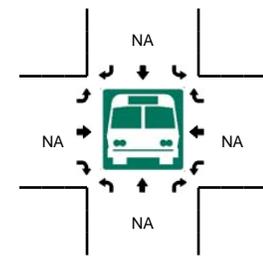
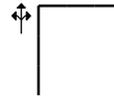
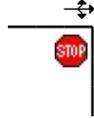
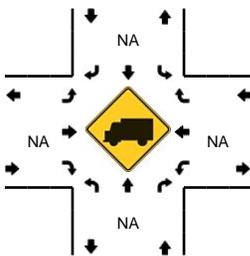
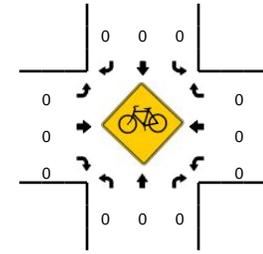
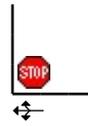
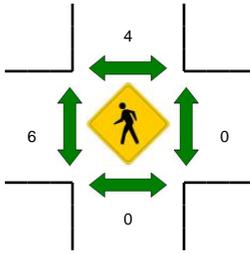
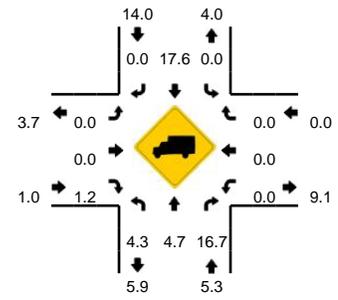
Comments:

LOCATION: Eastowne Dr -- Pinegate Cir
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630415
DATE: Tue, Mar 20 2018



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

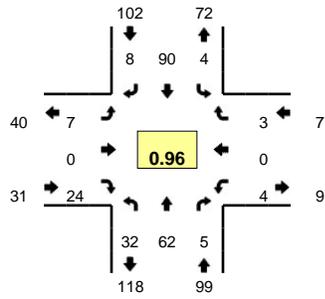


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Pinegate Cir (Eastbound)				Pinegate Cir (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U														
7:00 AM	3	11	0	0	0	5	0	0	0	0	11	0	0	0	0	0	30	
7:15 AM	4	16	0	0	0	4	0	0	1	0	16	0	0	0	0	0	41	
7:30 AM	1	16	4	0	0	3	1	0	1	0	17	0	0	0	1	0	44	
7:45 AM	5	20	3	0	1	10	0	0	4	0	30	0	1	0	0	0	74	189
8:00 AM	7	20	0	0	3	6	2	0	1	0	19	0	0	0	1	0	59	218
8:15 AM	4	22	3	0	0	12	1	0	5	0	16	0	0	0	0	0	63	240
8:30 AM	7	23	0	0	1	6	1	0	3	0	19	0	0	0	0	0	60	256
8:45 AM	4	29	2	0	1	11	2	0	1	0	16	0	1	0	1	0	68	250
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	20	80	12	0	4	40	0	0	16	0	120	0	4	0	0	0	296	
Heavy Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	
Pedestrians		0				0				4				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

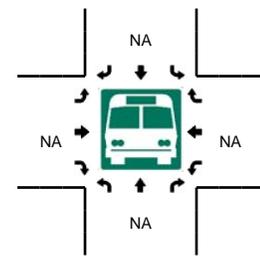
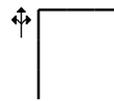
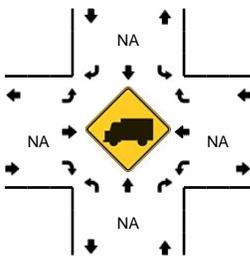
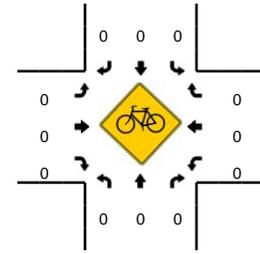
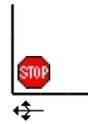
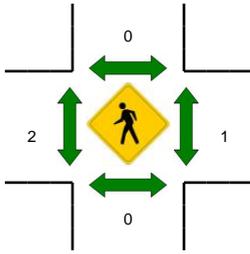
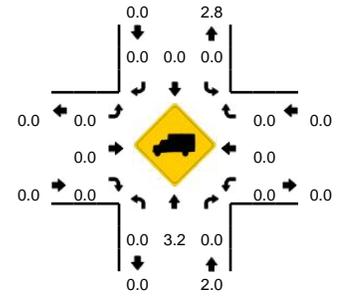
Comments:

LOCATION: Eastowne Dr -- Pinegate Cir
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630405
DATE: Tue, Mar 20 2018



Peak-Hour: 12:30 PM -- 1:30 PM
Peak 15-Min: 12:30 PM -- 12:45 PM



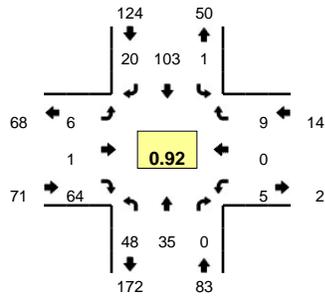
15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Pinegate Cir (Eastbound)				Pinegate Cir (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U														
11:30 AM	7	14	0	0	0	17	0	0	0	0	3	0	0	0	2	0	43	
11:45 AM	4	13	0	0	0	24	1	0	1	0	6	0	1	0	0	0	50	
12:00 PM	5	12	1	0	1	33	0	0	1	0	8	0	2	0	1	0	64	
12:15 PM	2	10	1	0	1	18	1	0	0	0	4	0	0	0	1	0	38	195
12:30 PM	10	10	1	0	1	24	2	0	4	0	10	0	0	0	0	0	62	214
12:45 PM	6	21	1	0	1	19	2	0	0	0	7	0	2	0	2	0	61	225
1:00 PM	6	18	0	0	1	29	1	0	1	0	2	0	0	0	1	0	59	220
1:15 PM	10	13	3	0	1	18	3	0	2	0	5	0	2	0	0	0	57	239

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	40	4	0	4	96	8	0	16	0	40	0	0	0	0	0	248
Heavy Trucks	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	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Railroad																	
Stopped Buses																	

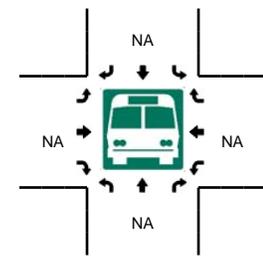
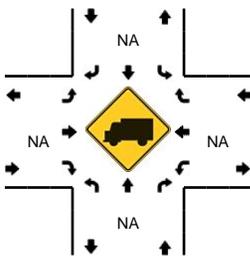
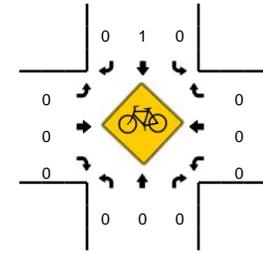
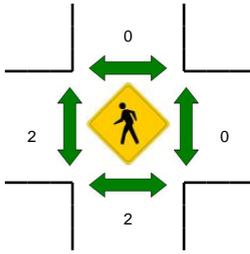
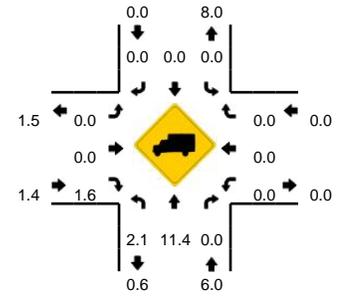
Comments:

LOCATION: Eastowne Dr -- Pinegate Cir
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630416
DATE: Tue, Mar 20 2018



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

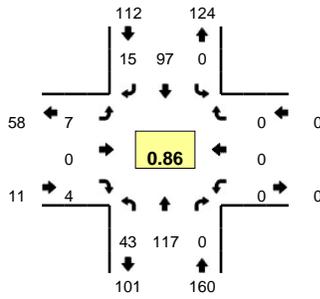


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Pinegate Cir (Eastbound)				Pinegate Cir (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U														
4:00 PM	13	8	0	0	0	21	3	0	0	0	10	0	2	0	0	0	57	
4:15 PM	15	9	1	0	1	18	2	0	5	0	9	0	3	0	0	0	63	
4:30 PM	13	13	0	0	0	18	6	0	0	1	13	0	2	0	5	0	71	
4:45 PM	15	4	0	0	0	20	3	0	5	0	23	0	1	0	2	0	73	264
5:00 PM	10	8	0	0	1	35	5	0	1	0	15	0	2	0	2	0	79	286
5:15 PM	10	10	0	0	0	30	6	0	0	0	13	0	0	0	0	0	69	292
5:30 PM	11	10	0	0	0	16	5	0	1	0	7	0	1	0	3	0	54	275
5:45 PM	14	7	0	0	1	10	6	0	0	0	7	0	4	0	0	0	49	251
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U														
All Vehicles	40	32	0	0	4	140	20	0	4	0	60	0	8	0	8	0	316	
Heavy Trucks	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1	
Railroad																		
Stopped Buses																		

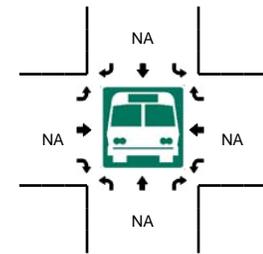
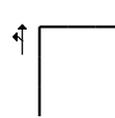
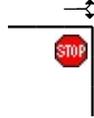
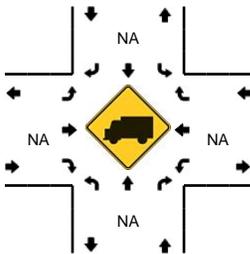
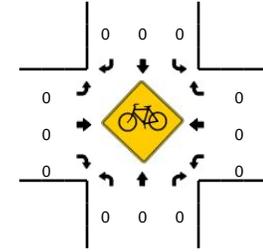
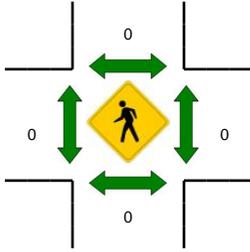
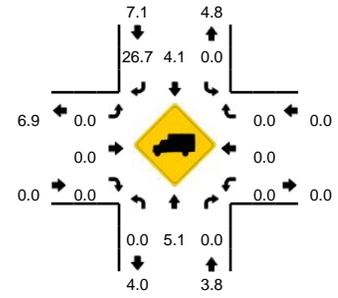
Comments:

LOCATION: Eastowne Dr -- Dobbins Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630417
DATE: Tue, Mar 20 2018



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

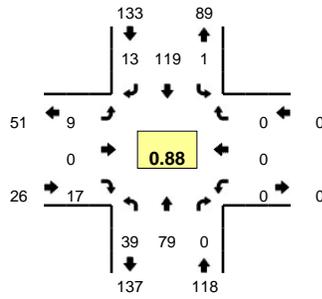


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Dobbins Dr (Eastbound)				Dobbins Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	17	0	0	0	15	1	0	0	0	0	0	0	0	0	0	38	
7:15 AM	8	22	0	0	0	18	1	1	1	0	0	0	0	0	0	0	51	
7:30 AM	6	23	0	0	0	19	2	0	0	0	1	0	0	0	0	0	51	
7:45 AM	15	29	0	0	0	35	3	0	0	0	0	0	0	0	0	0	82	222
8:00 AM	6	29	0	0	0	21	4	0	3	0	1	0	0	0	0	0	64	248
8:15 AM	10	27	0	0	0	19	5	0	3	0	2	0	0	0	0	0	66	263
8:30 AM	12	32	0	0	0	22	3	0	1	0	1	0	0	0	0	0	71	283
8:45 AM	7	33	0	0	0	23	4	0	1	0	1	0	0	0	0	0	69	270
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	60	116	0	0	0	140	12	0	0	0	0	0	0	0	0	0	328	
Heavy Trucks	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0	0	12	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

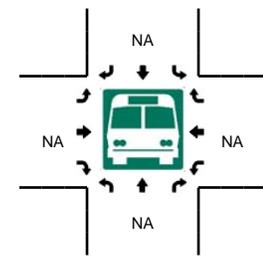
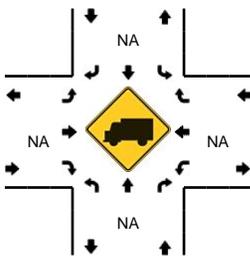
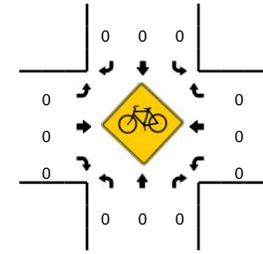
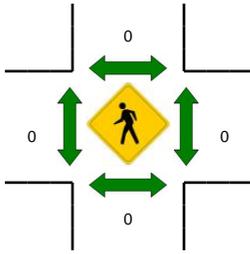
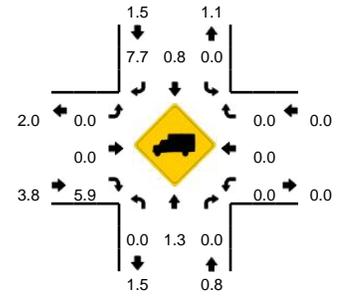
Comments:

LOCATION: Eastowne Dr -- Dobbins Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630406
DATE: Tue, Mar 20 2018



Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:00 PM -- 12:15 PM

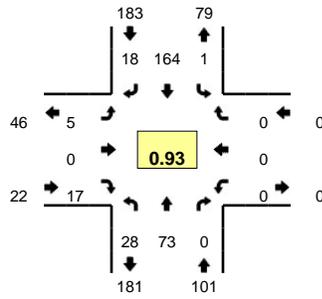


15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Dobbins Dr (Eastbound)				Dobbins Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:30 AM	3	18	0	0	0	18	1	0	3	0	5	0	0	0	0	0	48	
11:45 AM	6	13	0	0	0	28	2	0	4	0	5	0	0	0	0	0	58	
12:00 PM	12	15	0	0	0	42	3	0	2	0	5	0	0	0	0	0	79	
12:15 PM	10	16	0	1	0	22	2	0	2	0	5	0	0	0	0	0	58	243
12:30 PM	4	21	0	0	0	34	2	0	1	0	3	0	0	0	0	0	65	260
12:45 PM	12	27	0	0	0	21	6	1	4	0	4	0	0	0	0	0	75	277
1:00 PM	8	20	0	0	0	26	5	0	2	0	3	0	0	0	0	0	64	262
1:15 PM	4	24	0	0	0	21	4	1	3	0	6	0	0	0	0	0	63	267
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	48	60	0	0	0	168	12	0	8	0	20	0	0	0	0	0	316	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

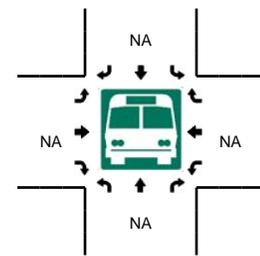
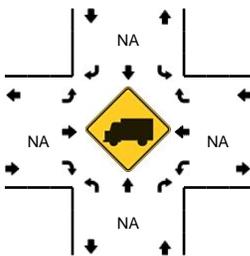
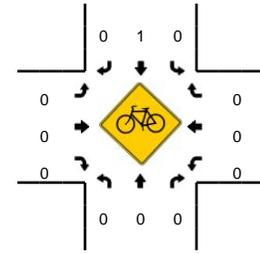
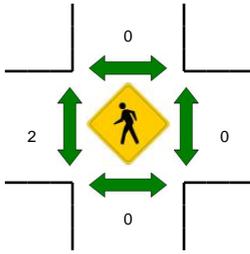
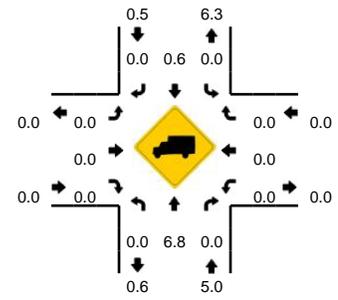
Comments:

LOCATION: Eastowne Dr -- Dobbins Dr
CITY/STATE: Chapel Hill, NC

QC JOB #: 14630418
DATE: Tue, Mar 20 2018



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM



15-Min Count Period Beginning At	Eastowne Dr (Northbound)				Eastowne Dr (Southbound)				Dobbins Dr (Eastbound)				Dobbins Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	18	0	0	0	29	5	0	3	0	8	0	0	0	0	0	71	
4:15 PM	0	23	0	0	0	32	4	0	4	0	10	0	0	0	0	0	73	
4:30 PM	3	22	0	0	0	34	2	0	1	0	2	0	0	0	0	0	64	
4:45 PM	6	20	0	0	0	40	8	0	1	0	5	0	0	0	0	0	80	288
5:00 PM	8	13	0	0	0	47	5	1	2	0	6	0	0	0	0	0	82	299
5:15 PM	11	18	0	0	0	43	3	0	1	0	4	0	0	0	0	0	80	306
5:30 PM	5	19	0	0	0	21	2	0	1	0	2	0	0	0	0	0	50	292
5:45 PM	4	18	0	0	0	21	2	0	3	0	1	0	0	0	0	0	49	261
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	32	52	0	0	0	188	20	4	8	0	24	0	0	0	0	0	328	
Heavy Trucks	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

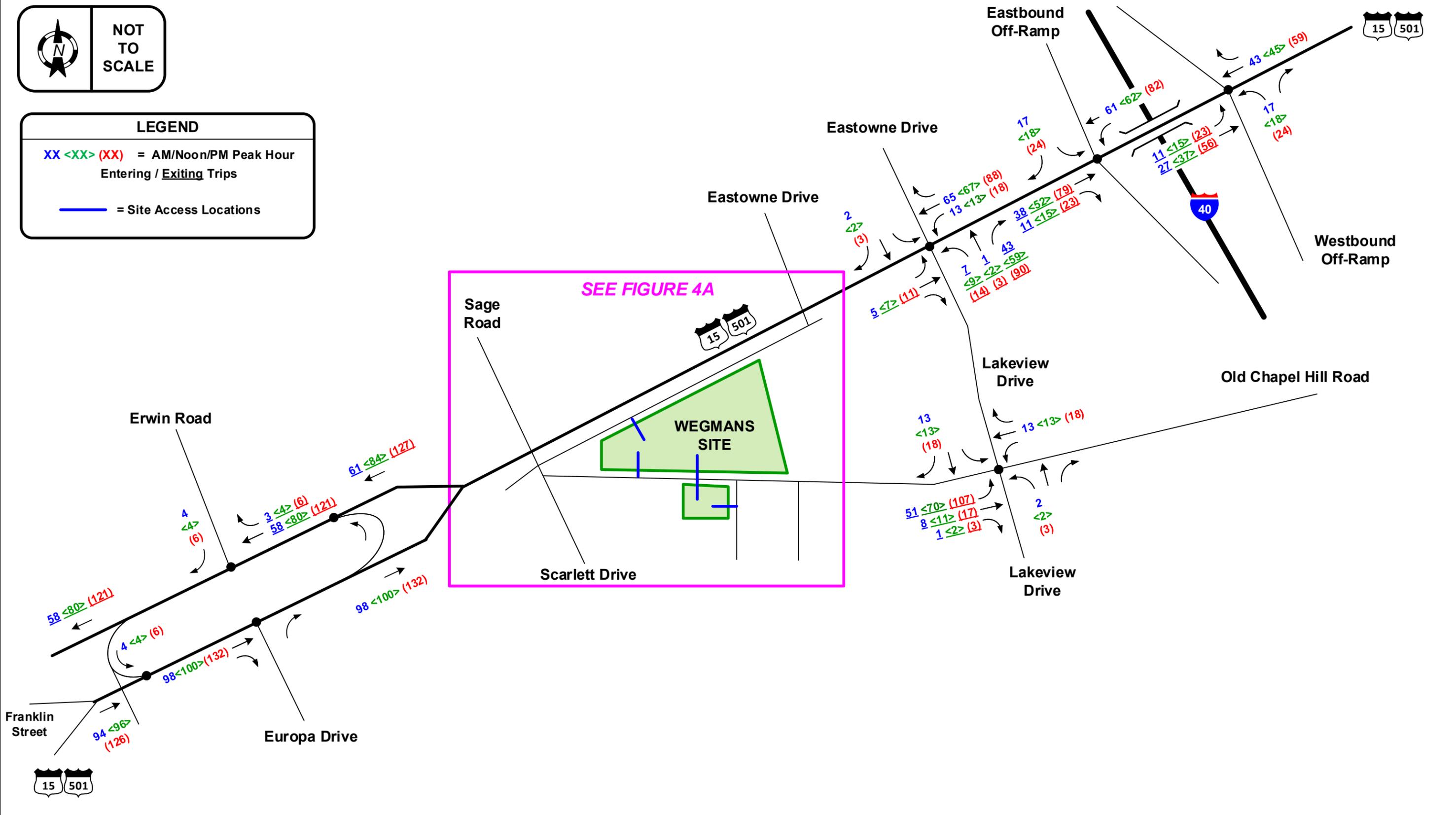
Appendix C – Background Generator Information



LEGEND

XX <XX> (XX) = AM/Noon/PM Peak Hour
Entering / Exiting Trips

— = Site Access Locations

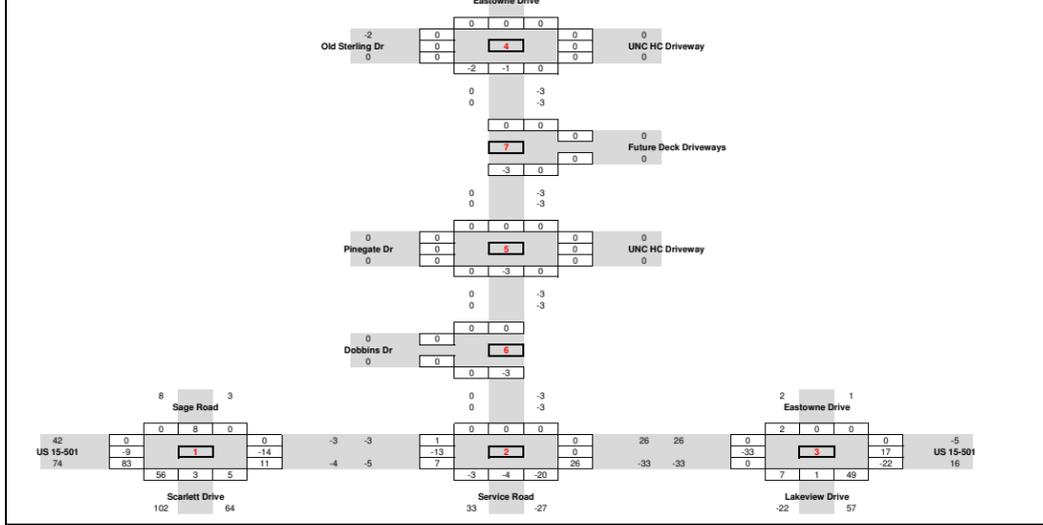
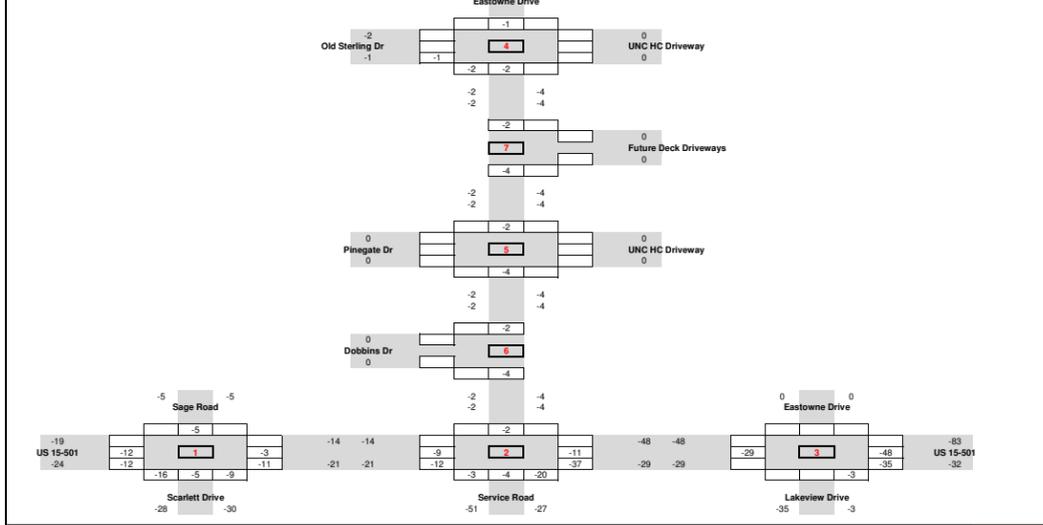
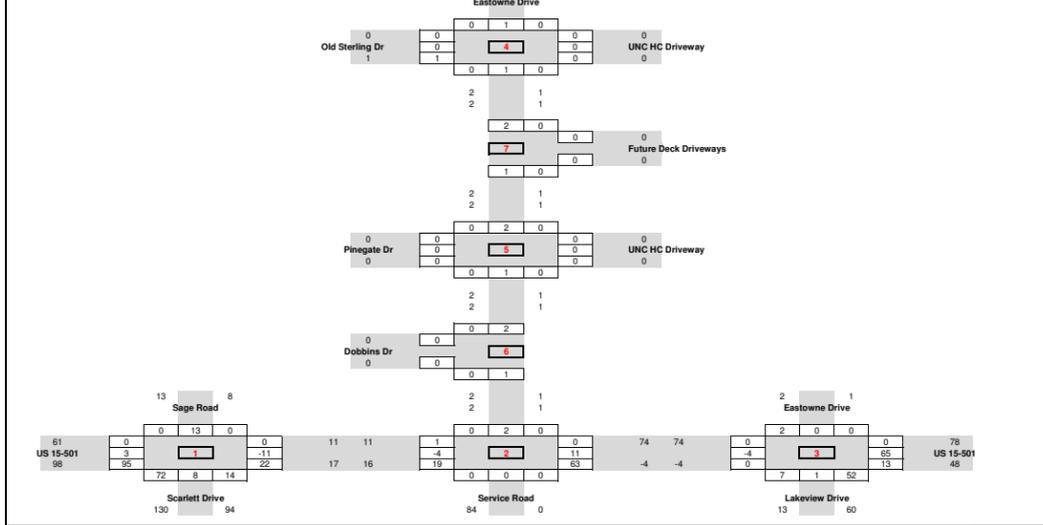
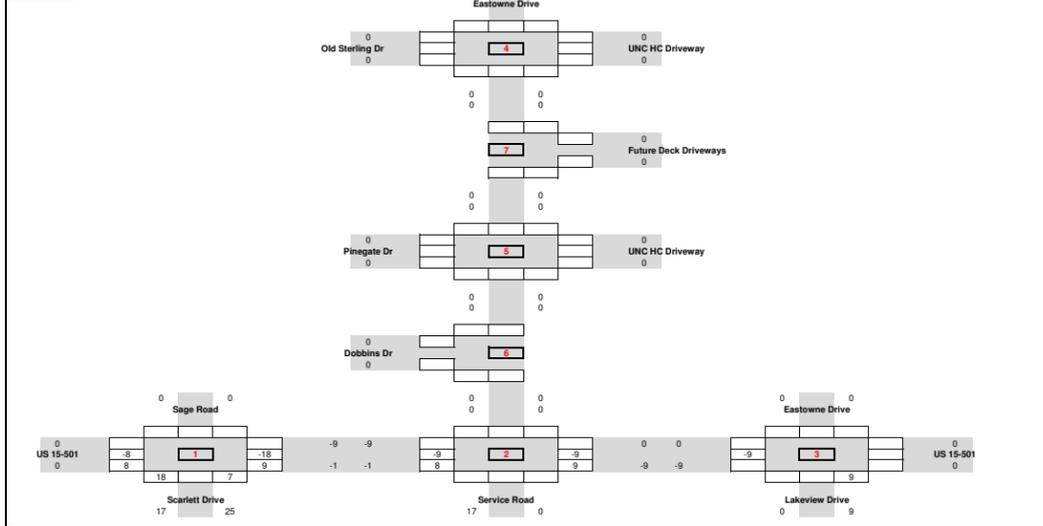
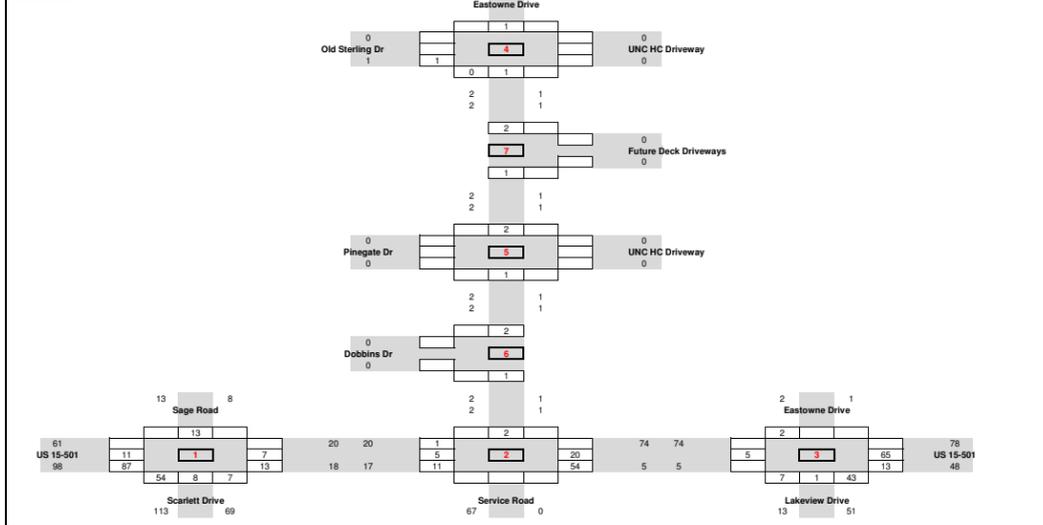


Wegmans Supermarket
 Traffic Impact Study – Service Road Inbound Access Technical Memorandum

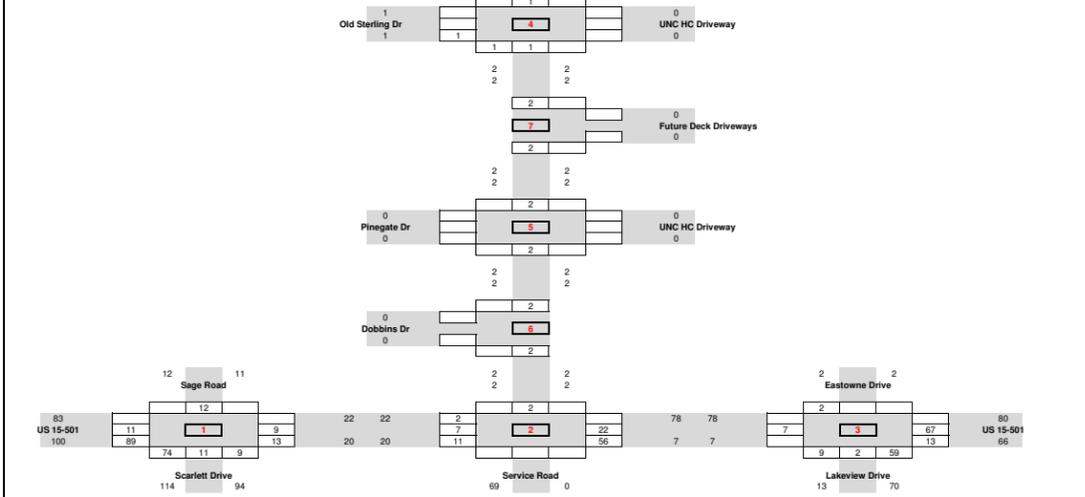
EXTERNAL SITE TRAFFIC ASSIGNMENT – NEW TRIPS

DATE: October 2017

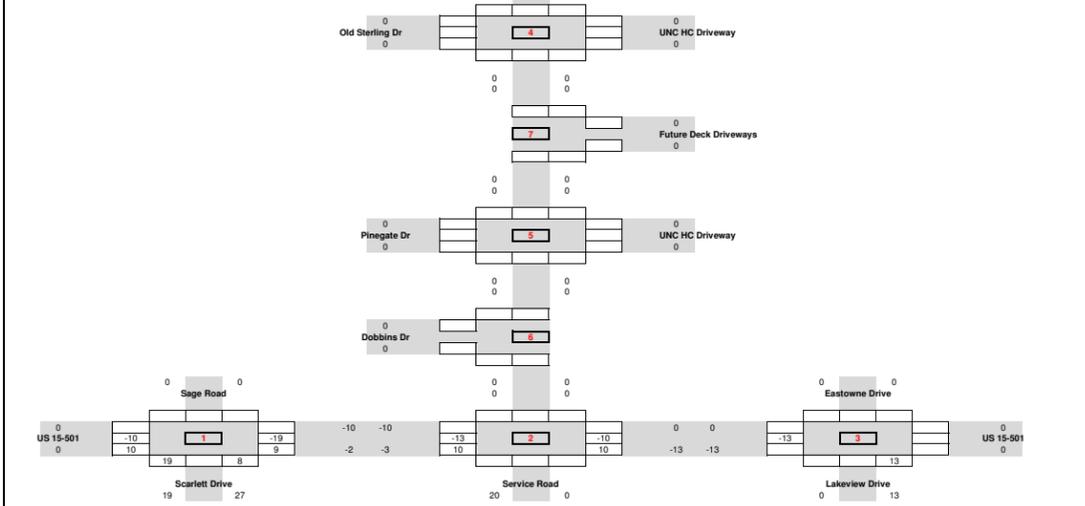
FIGURE 4



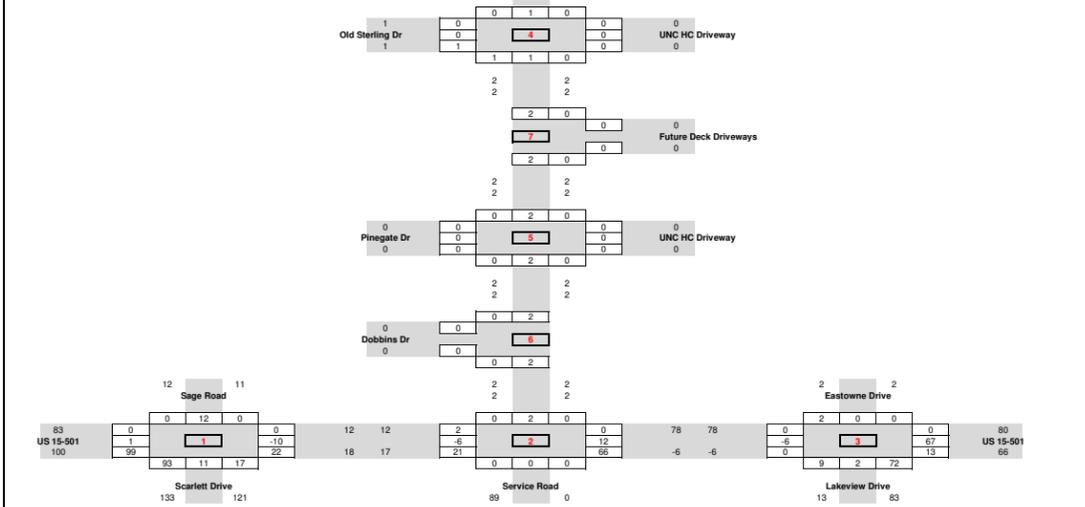
Peak Noon



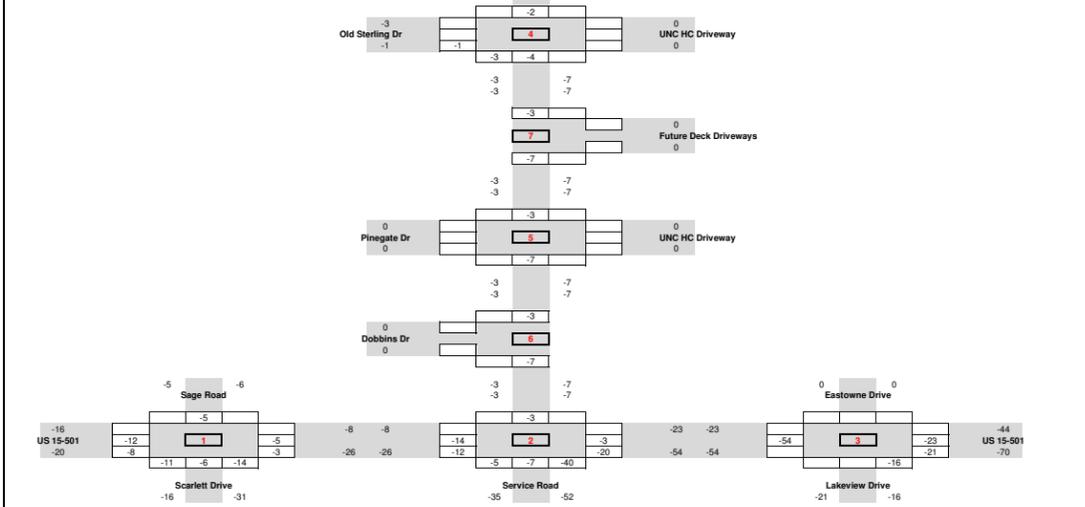
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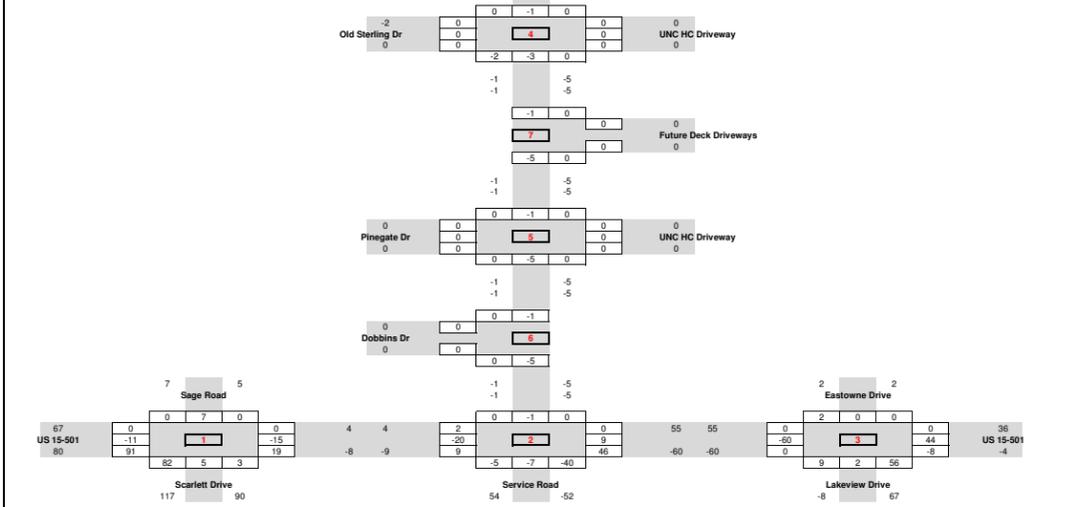
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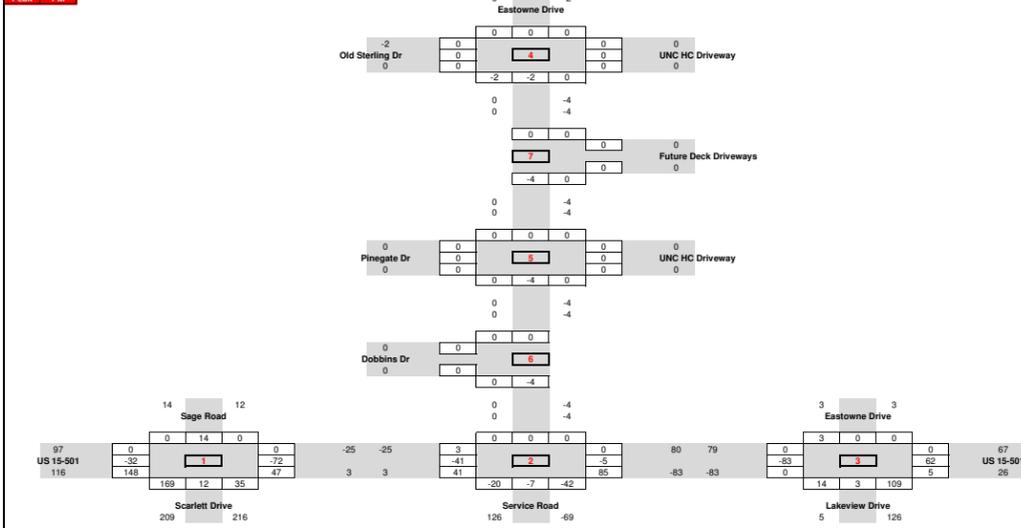
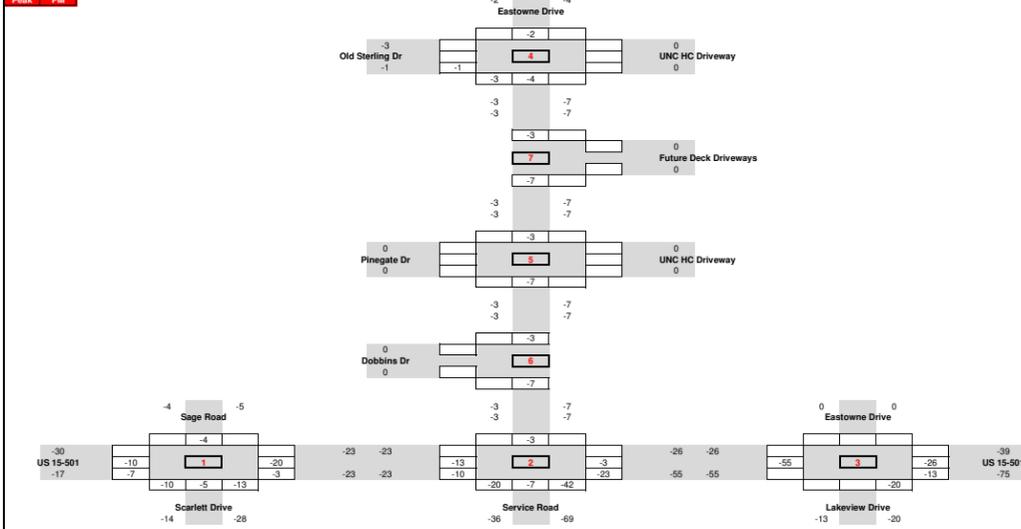
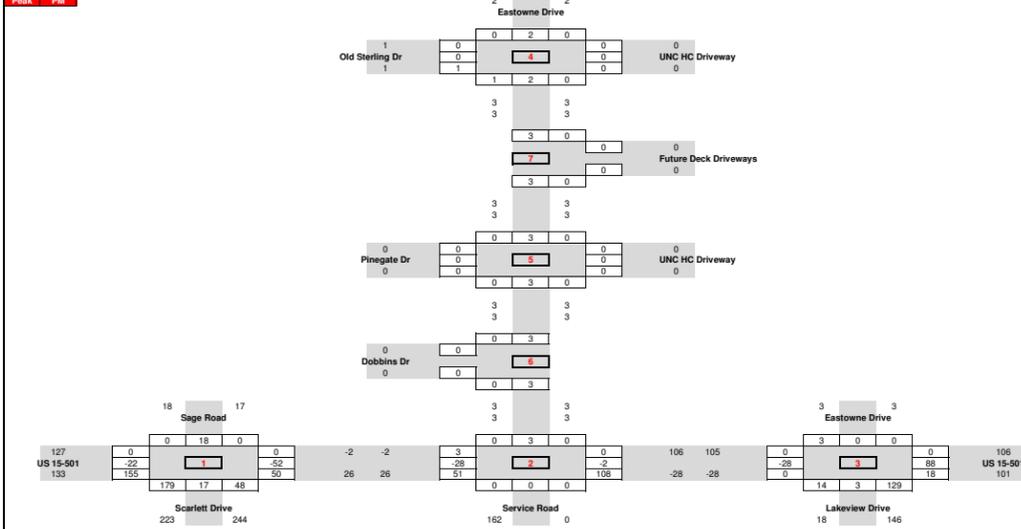
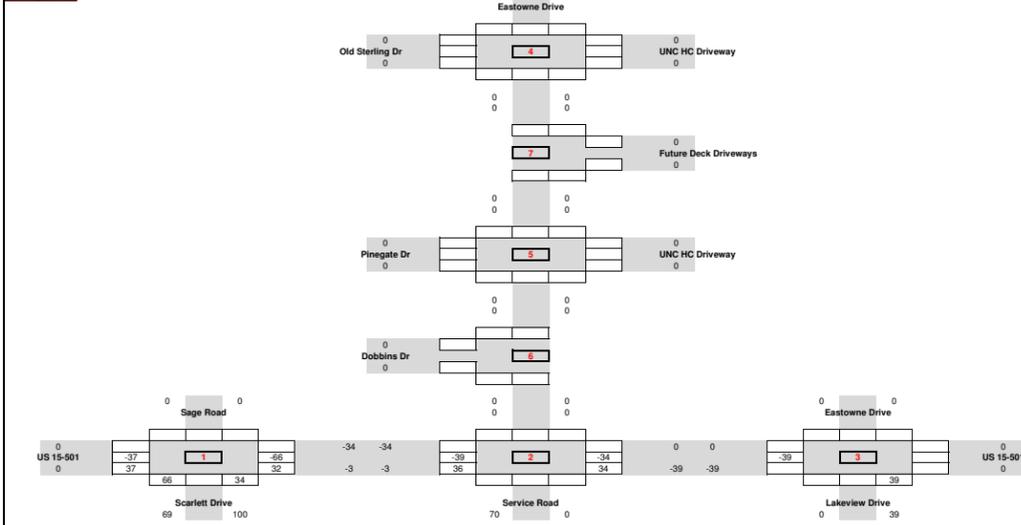
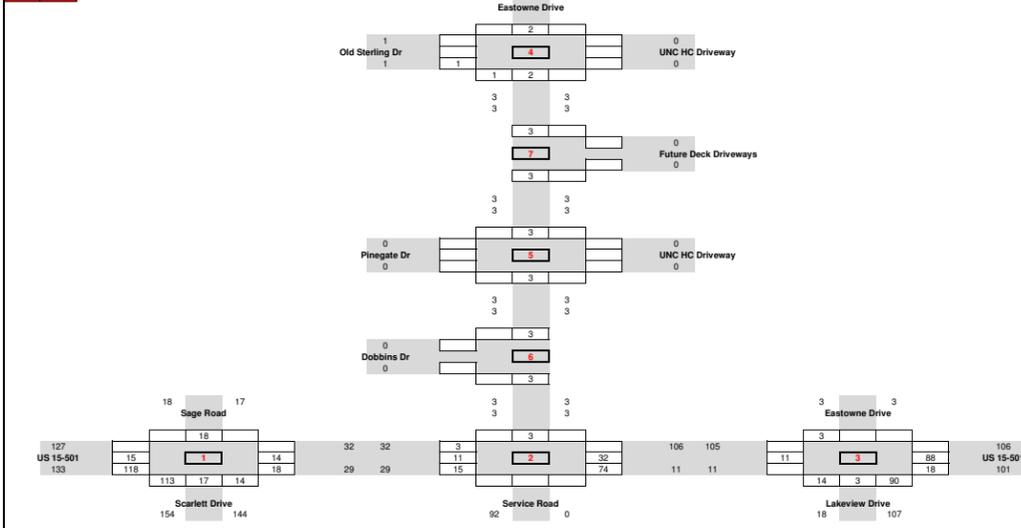


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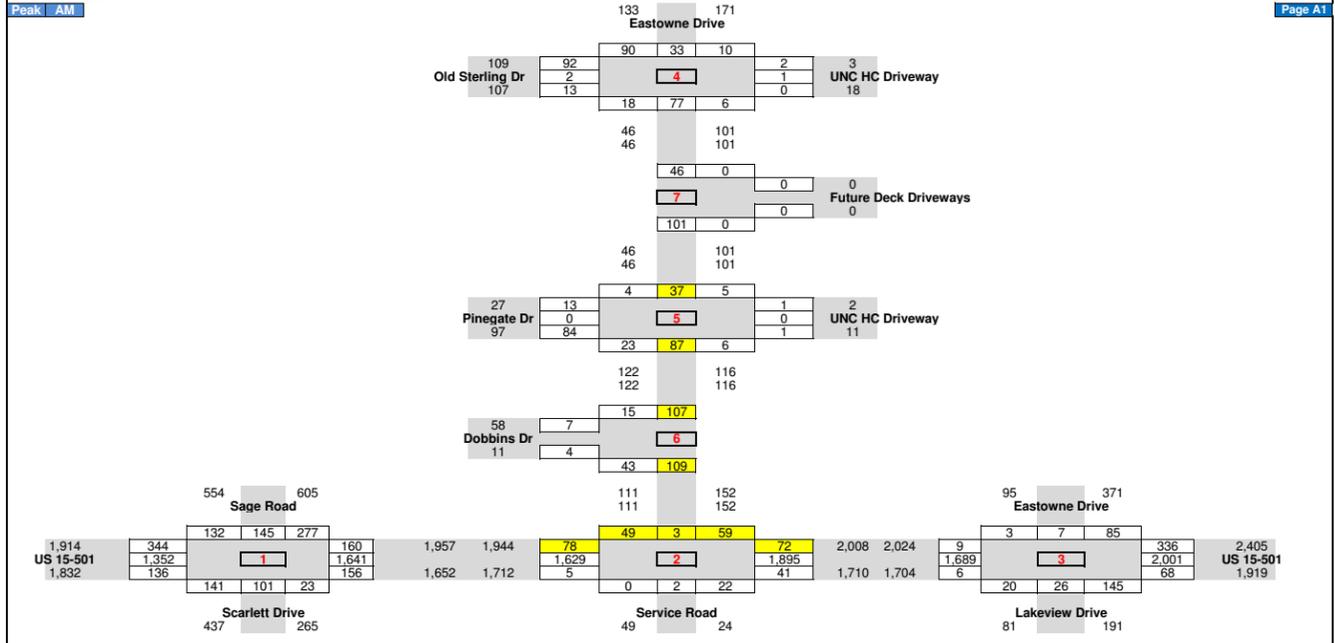
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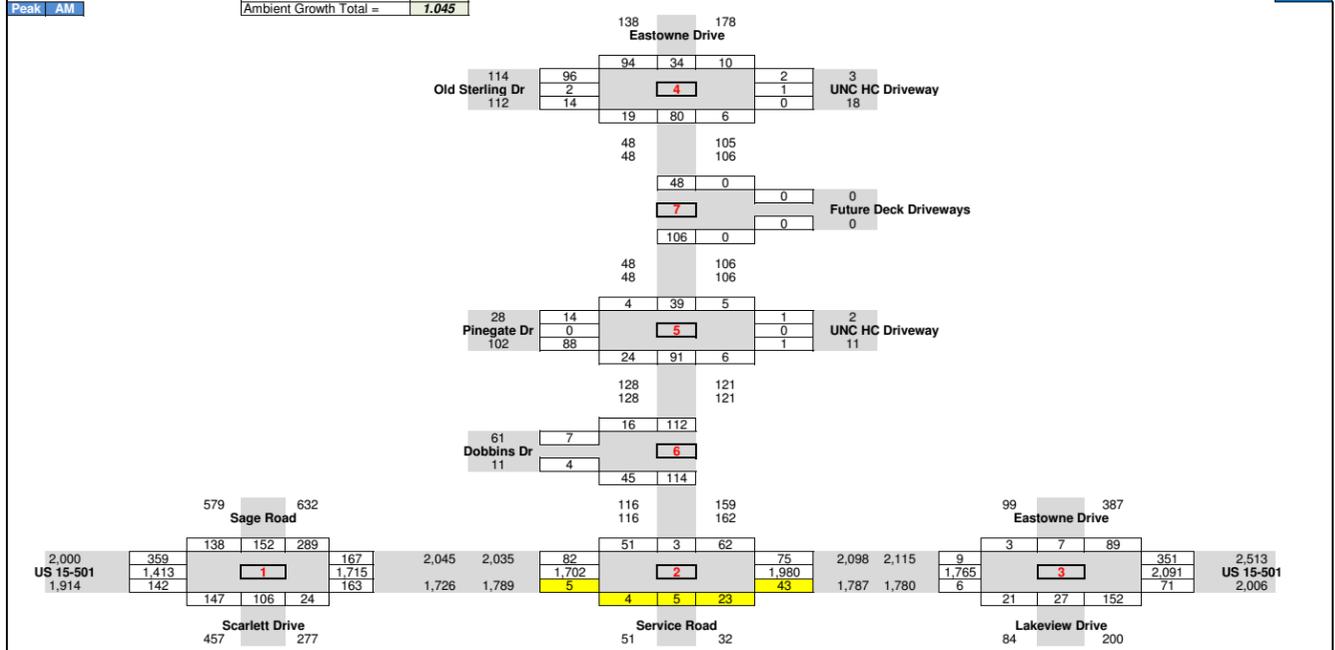
Appendix D - Traffic Volume Development
Spreadsheets

2018 Count Data

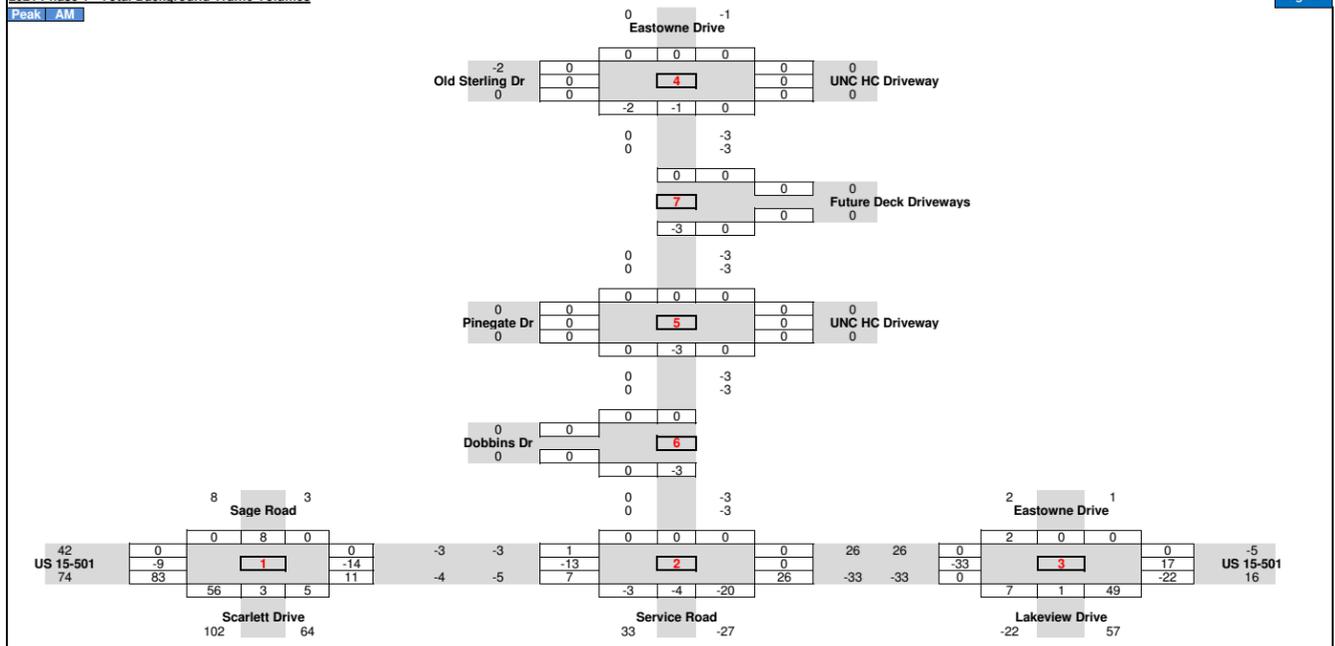


2021 Phase 1 Ambient Growth

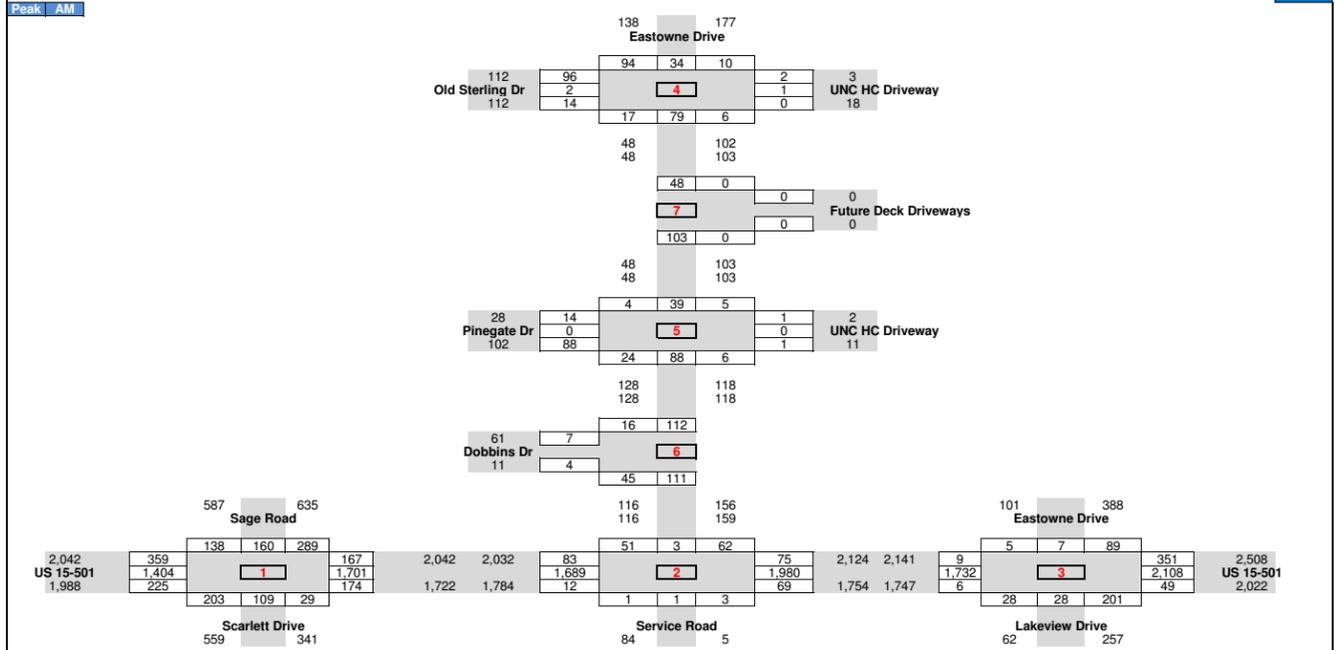
Ambient Growth Rate/Yr = 1.5%
 Ambient Growth Total = 1.045



2021 Phase 1 - Total Background Traffic Volumes



2021 Phase 1 Traffic Without Site

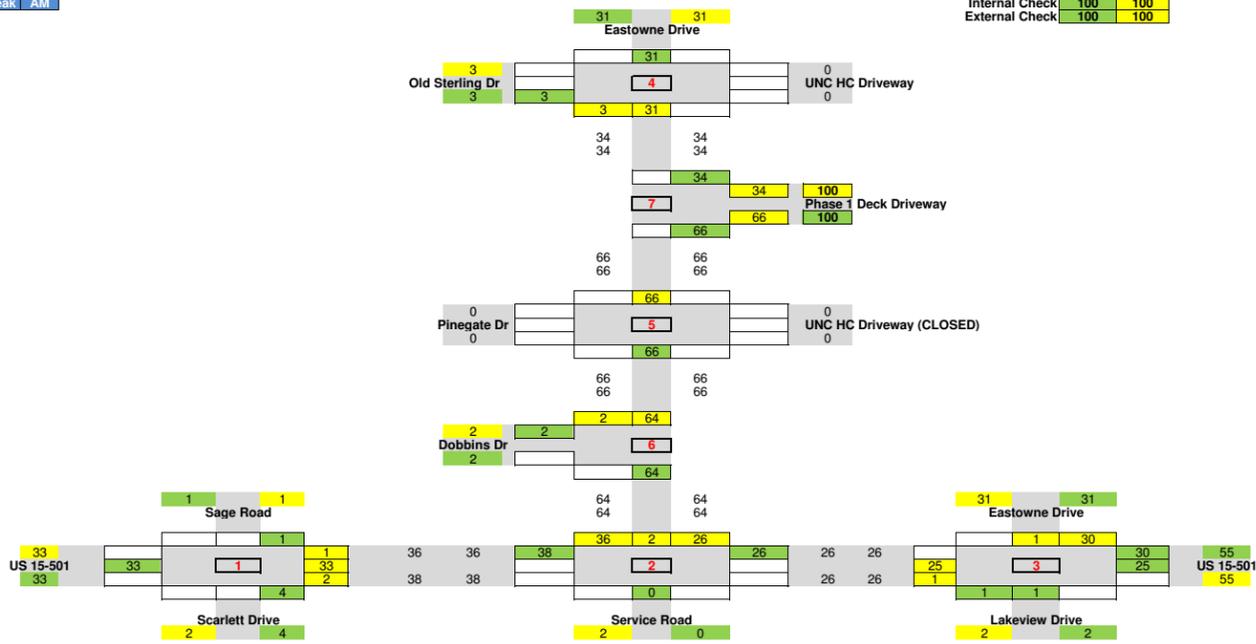


2021 Phase 1 Site Trip Distribution Percentages

Peak AM

	IN	OUT
Internal Check	100	100
External Check	100	100

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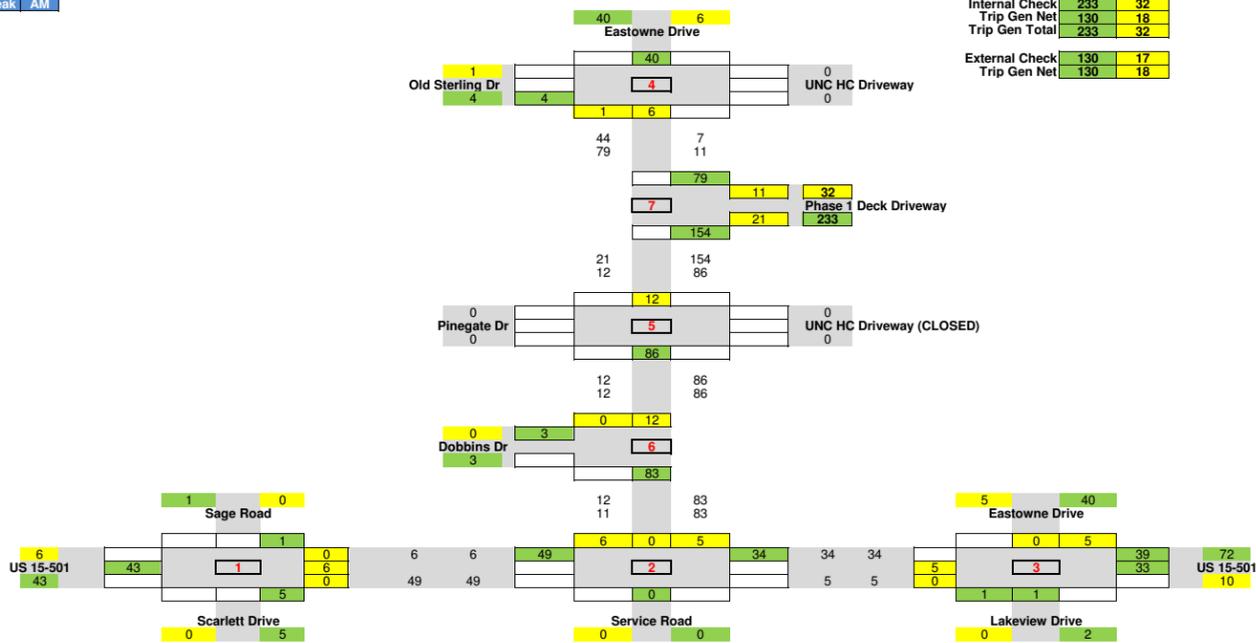


2021 Phase 1 Site Traffic Assignment

Peak AM

	IN	OUT
Internal Check	233	32
Trip Gen Net	130	18
Trip Gen Total	233	32
External Check	130	17
Trip Gen Net	130	18

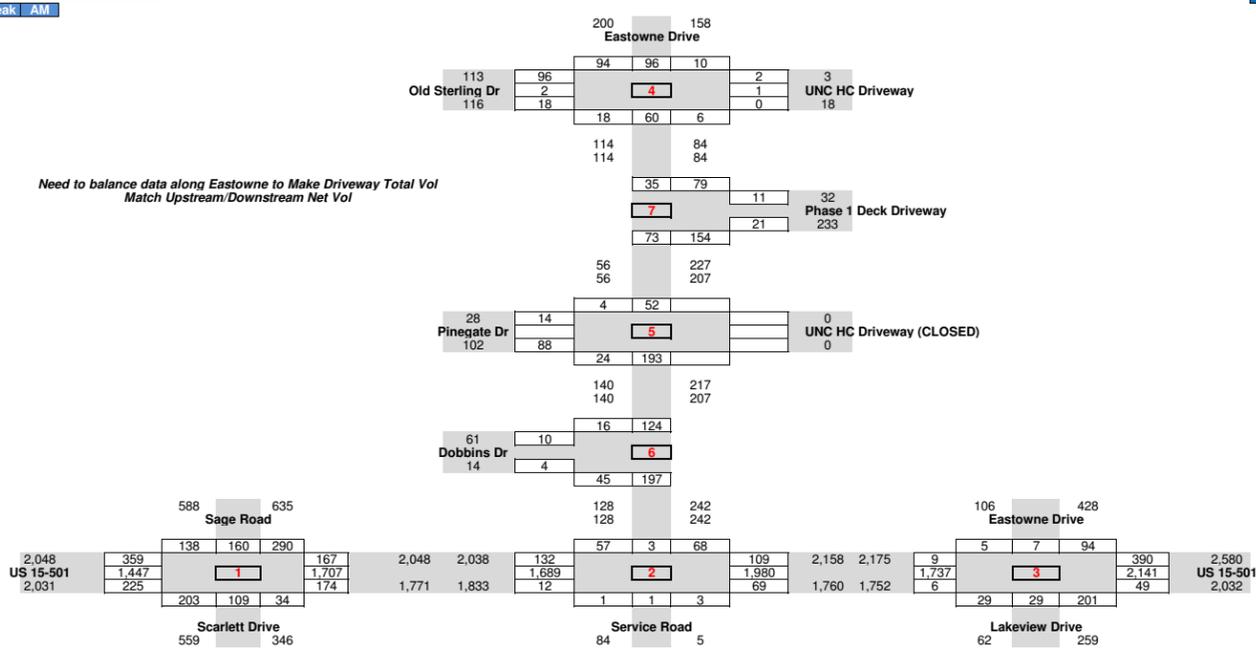
Page A6



2021 Phase 1 Traffic With Site

Peak AM

Page A7

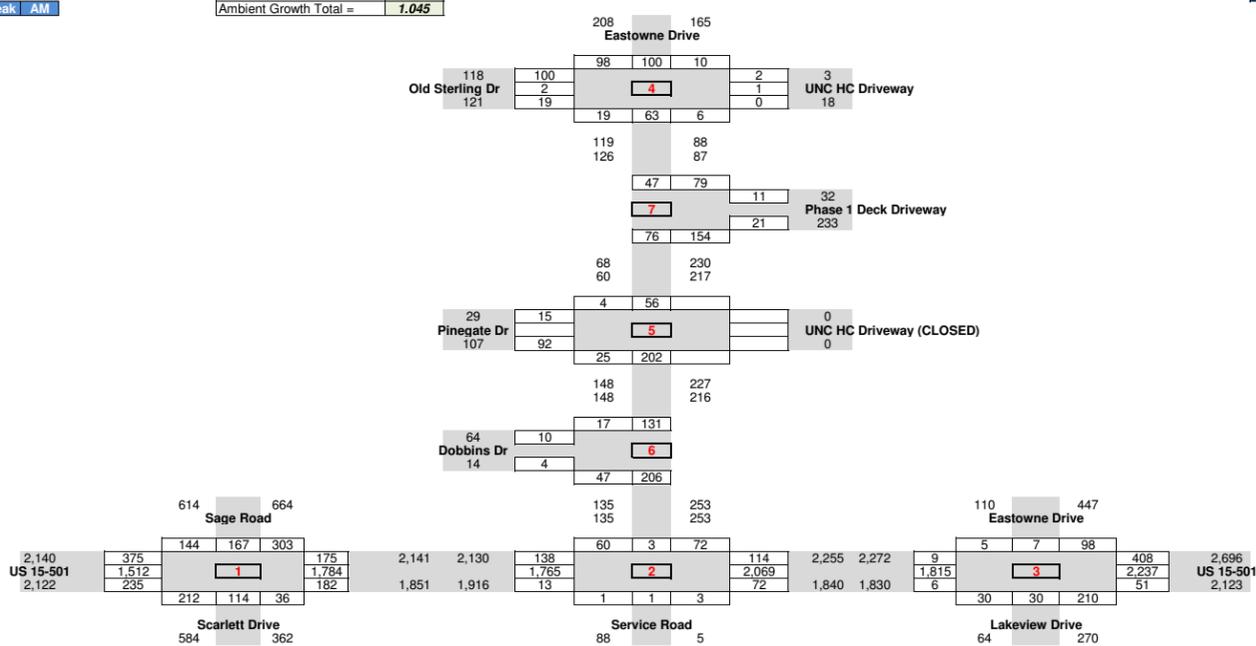


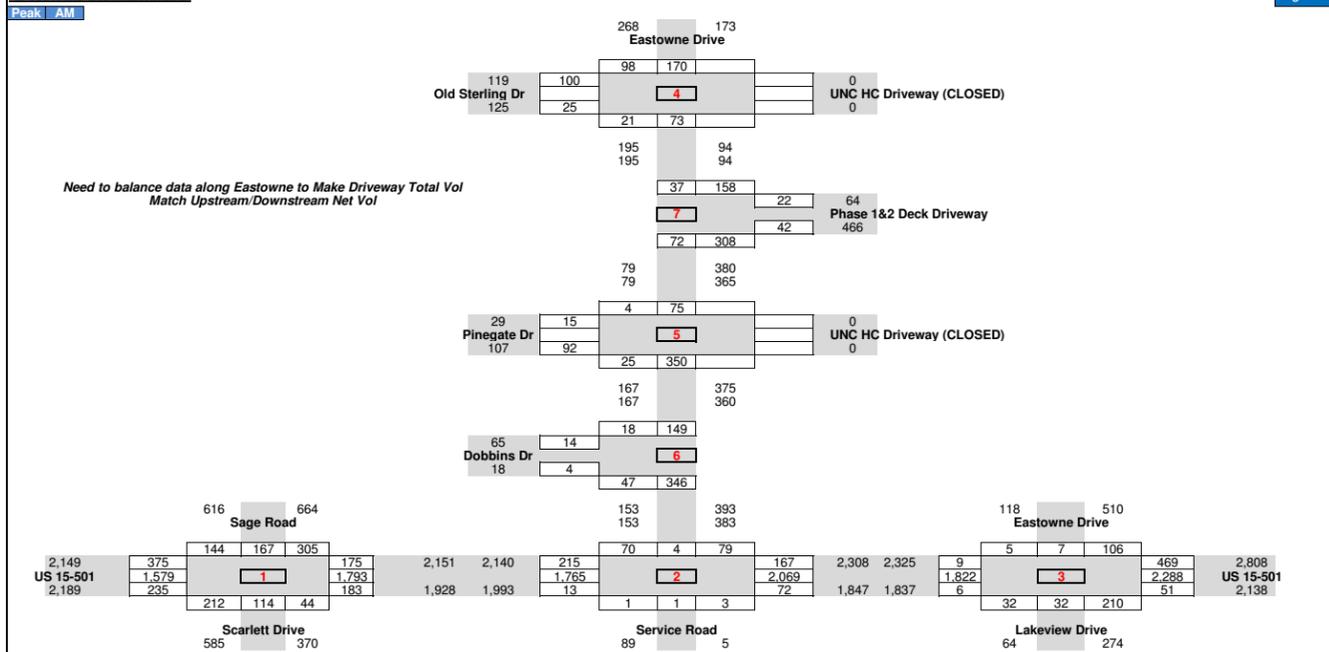
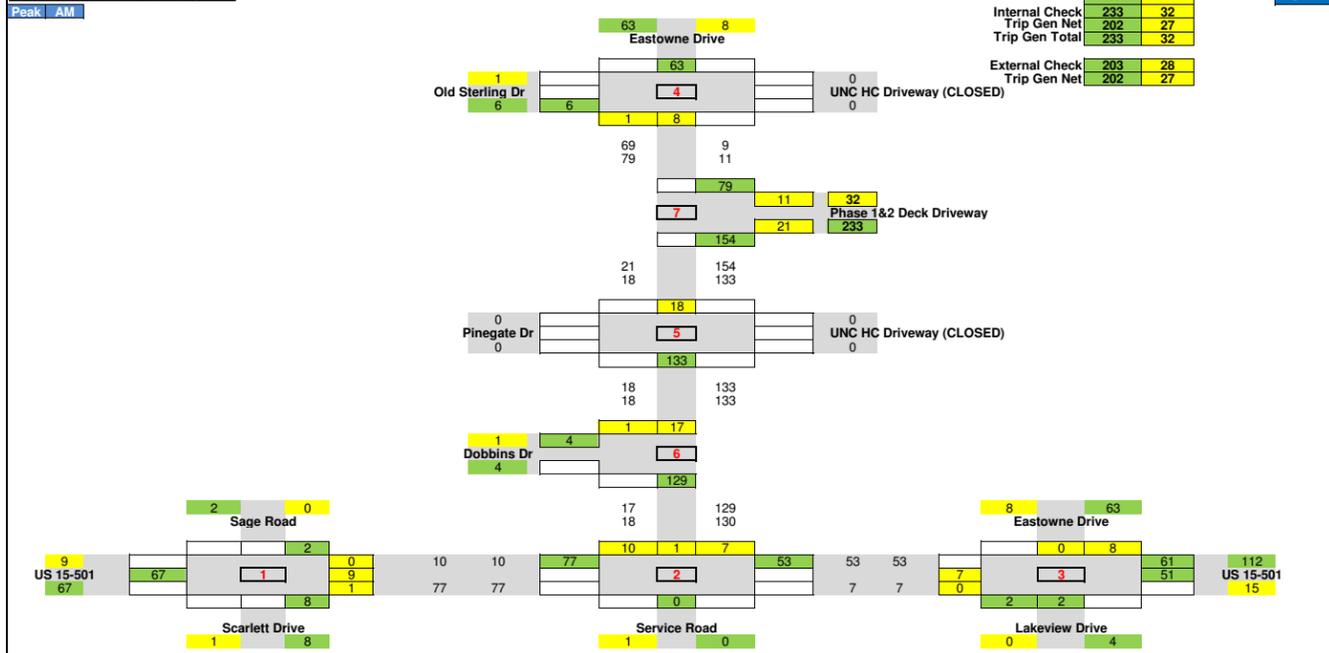
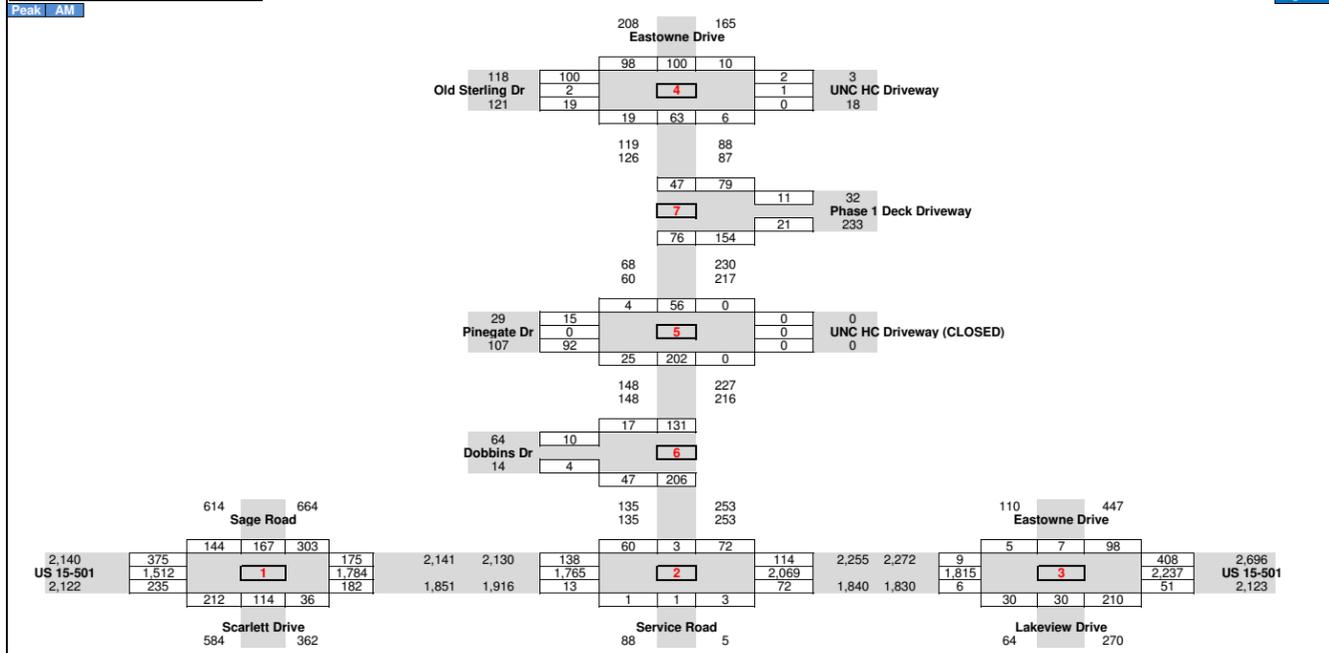
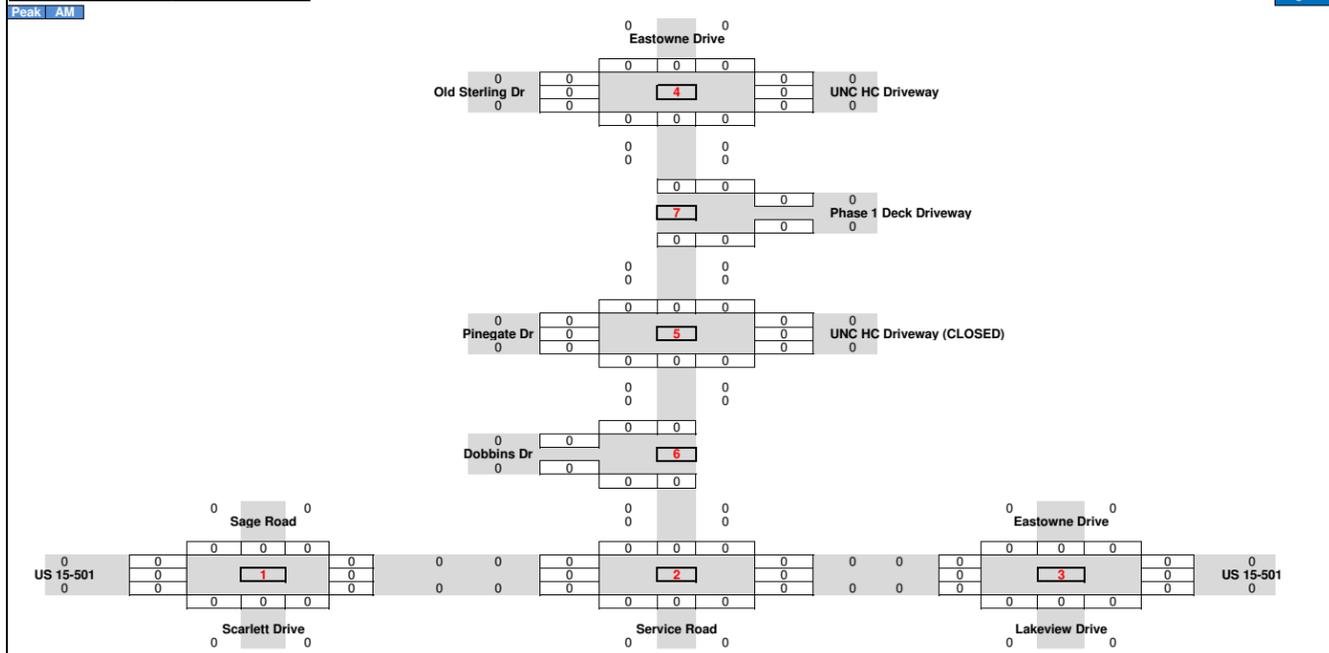
2024 Phase 2 Ambient Growth

Ambient Growth Rate/Yr =	1.5%
Ambient Growth Total =	1.045

Peak AM

Page A8

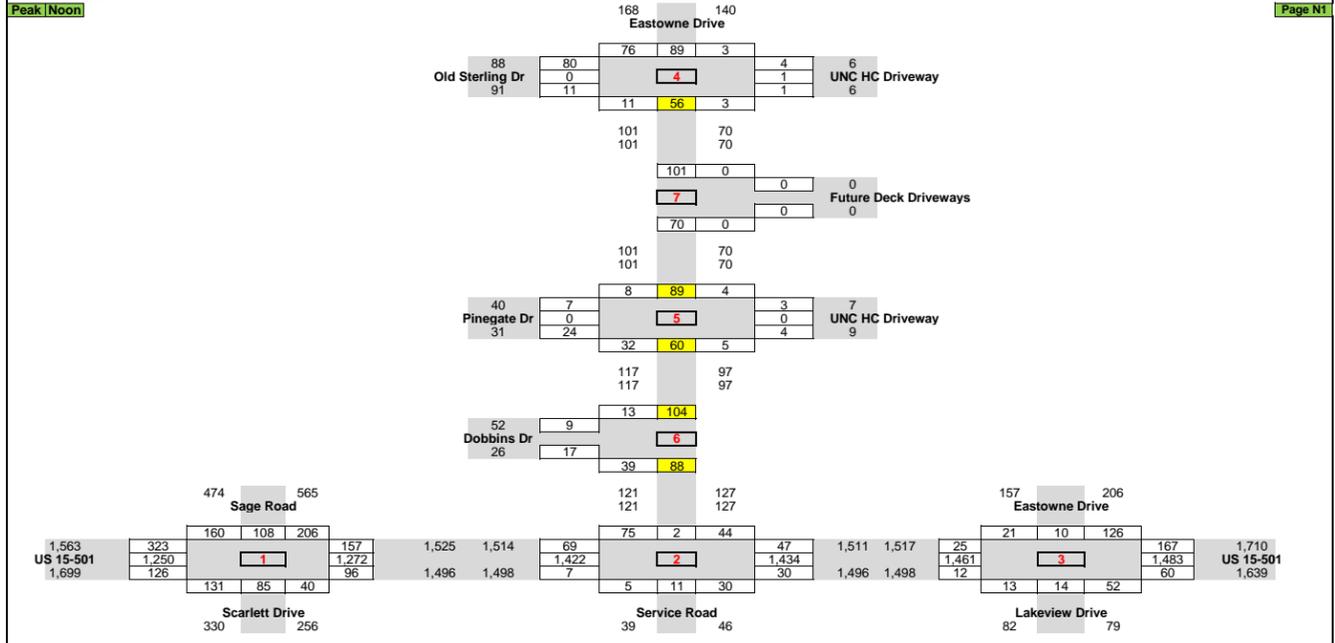




2018 Count Data

Peak | Noon

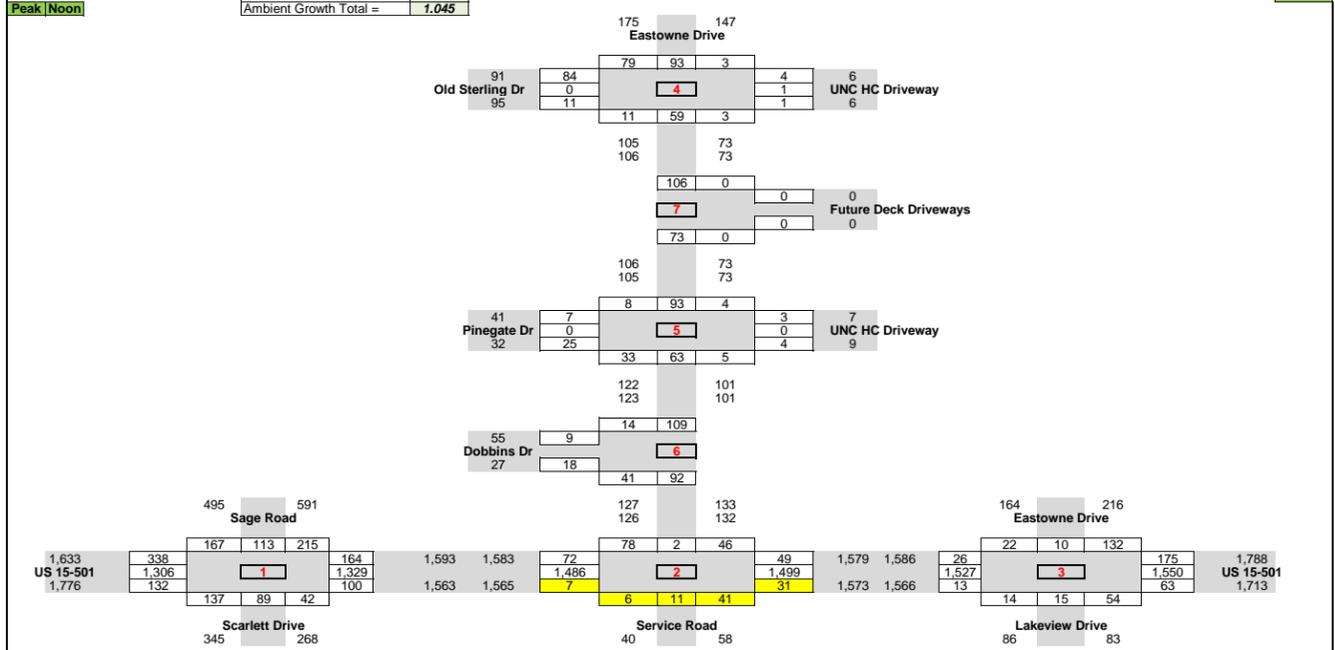
Page N1



2021 Phase 1 Ambient Growth

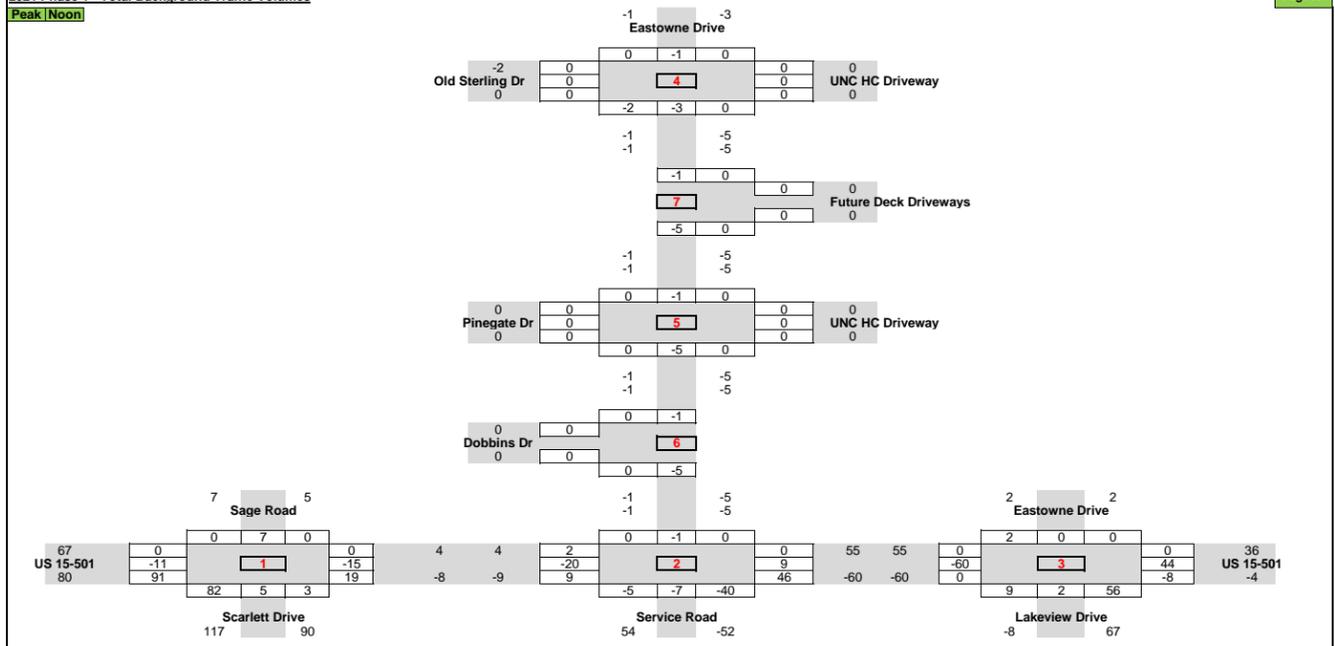
Ambient Growth Rate/Yr = 1.5%
Ambient Growth Total = 1.045

Peak | Noon



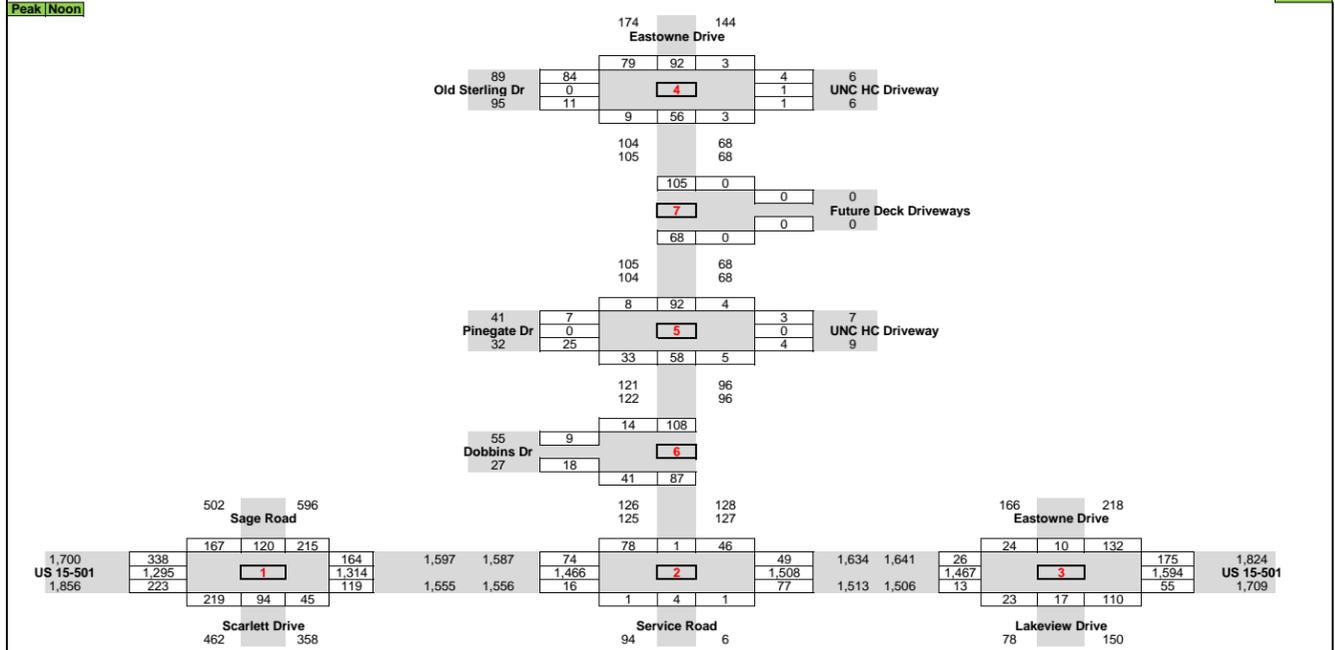
2021 Phase 1 - Total Background Traffic Volumes

Peak | Noon

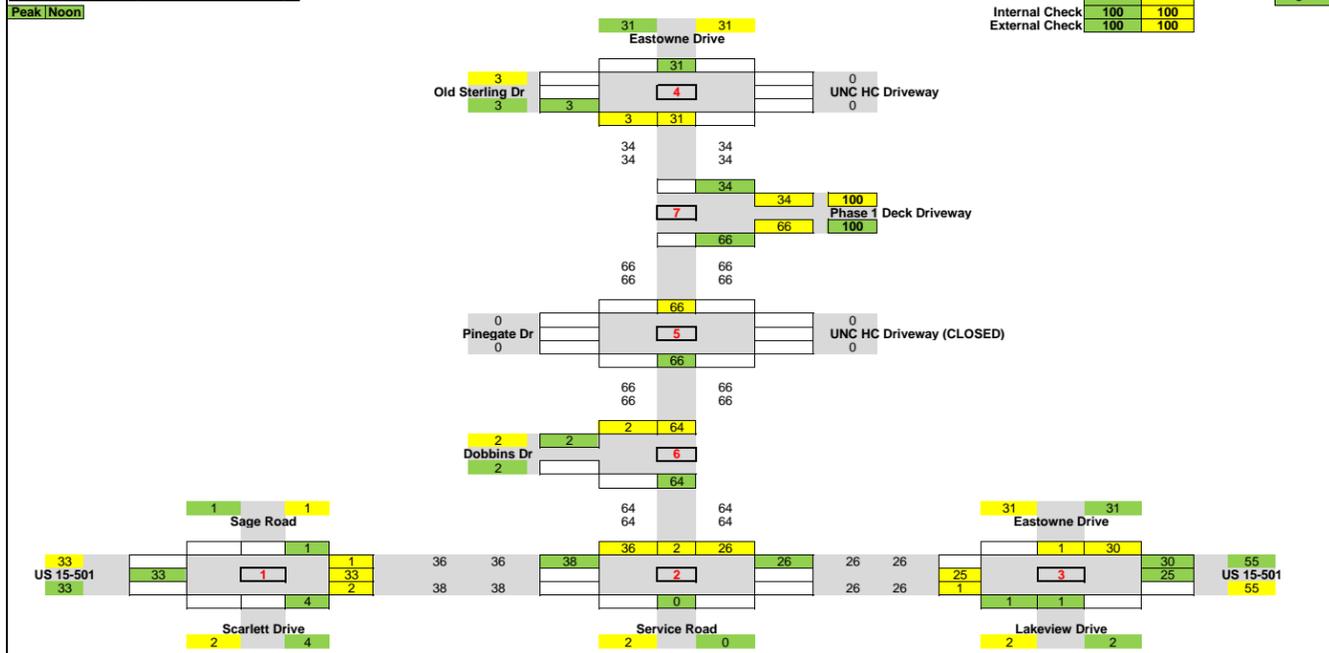


2021 Phase 1 Traffic Without Site

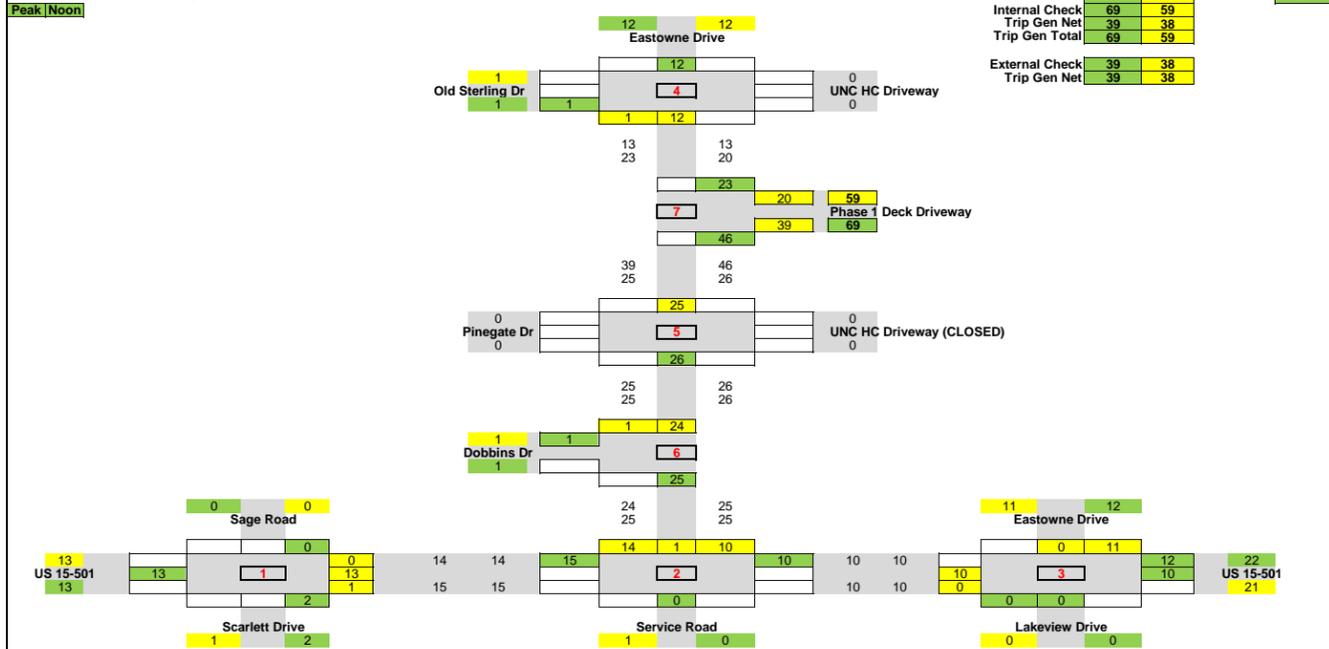
Peak | Noon



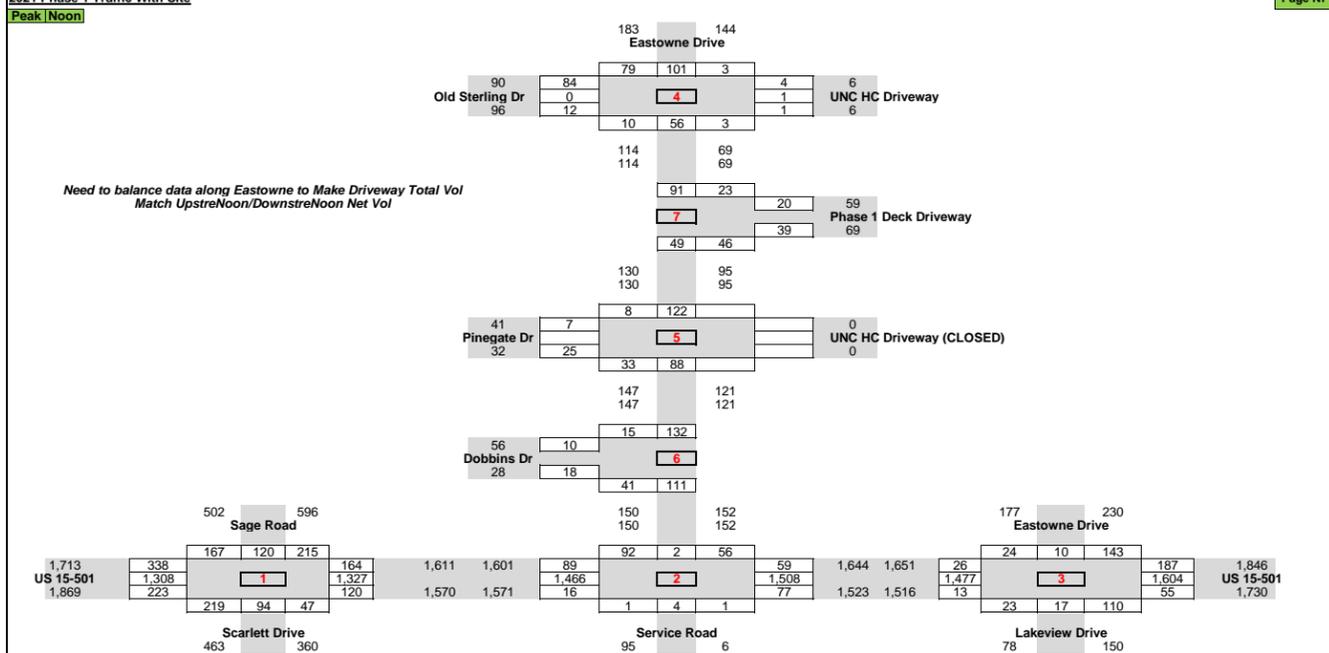
2021 Phase 1 Site Trip Distribution Percentages



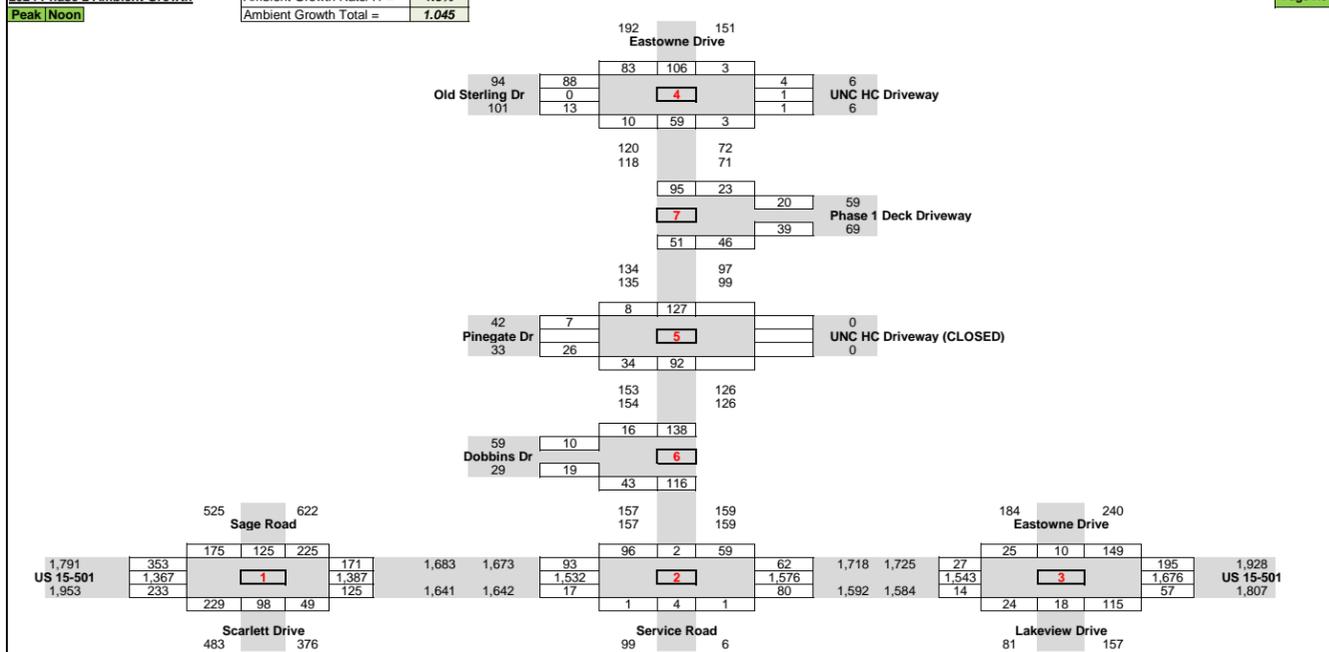
2021 Phase 1 Site Traffic Assignment



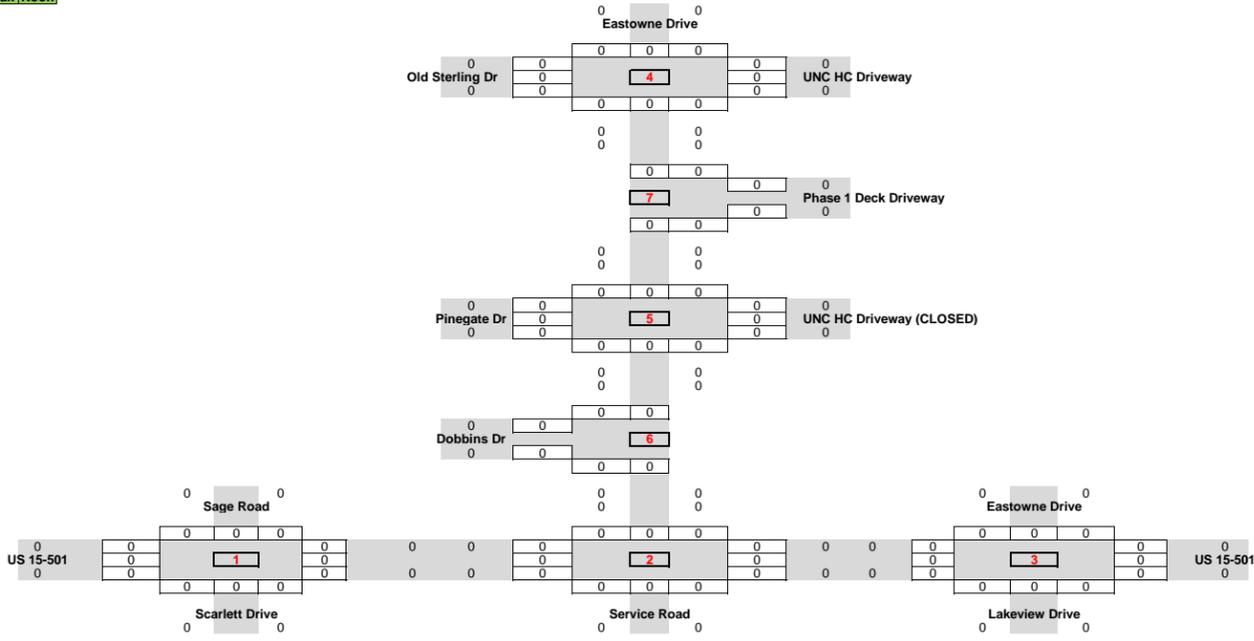
2021 Phase 1 Traffic With Site



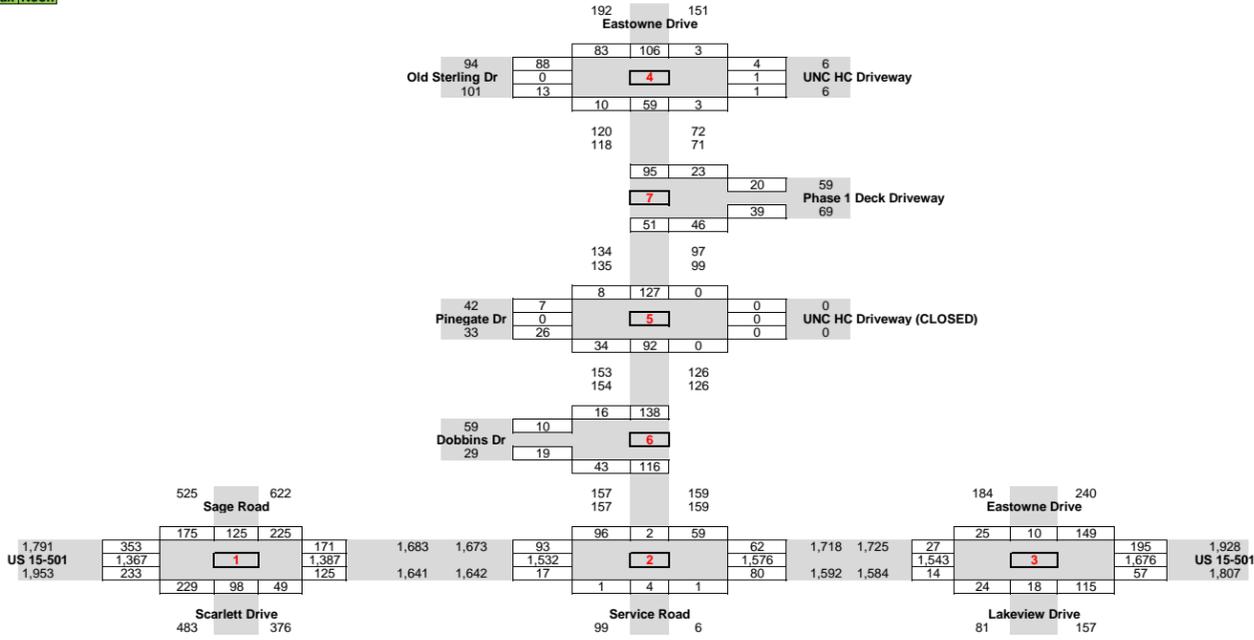
2024 Phase 2 Ambient Growth



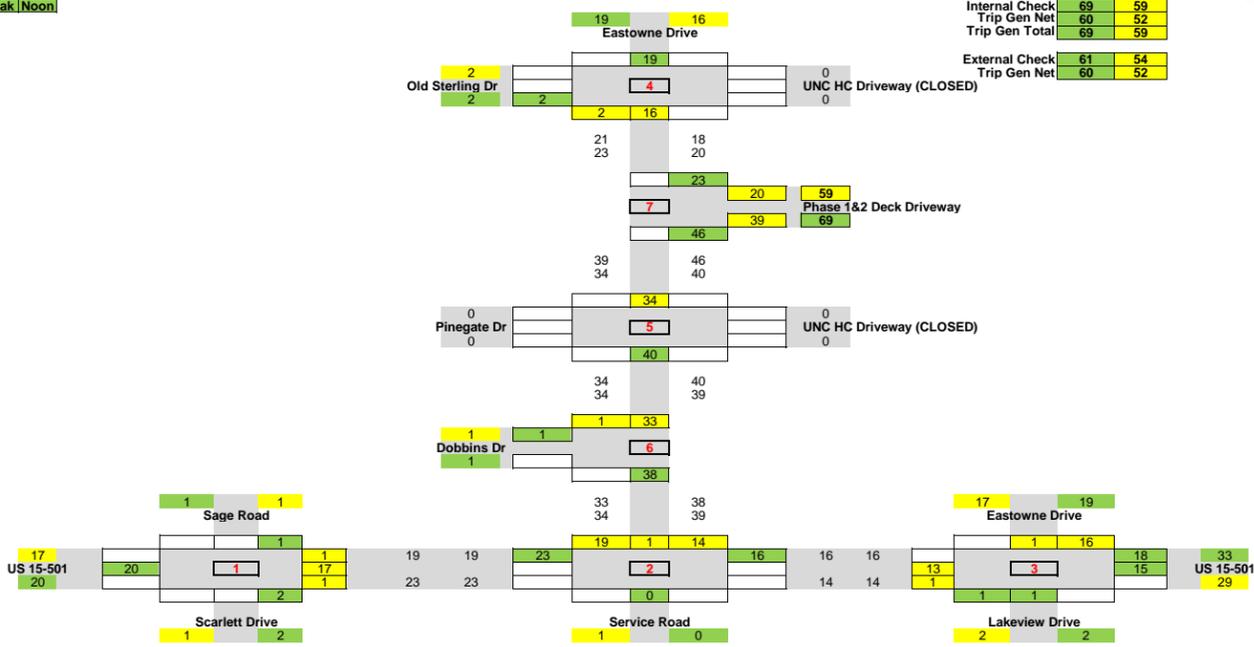
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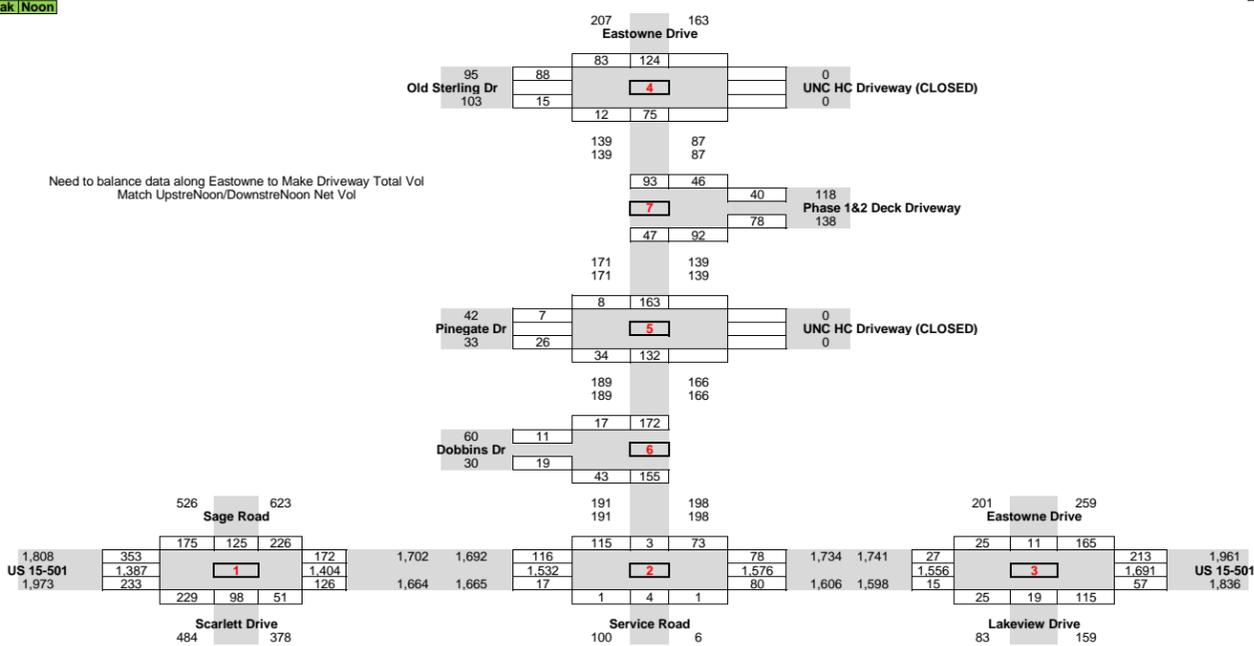
Peak Noon



Peak Noon



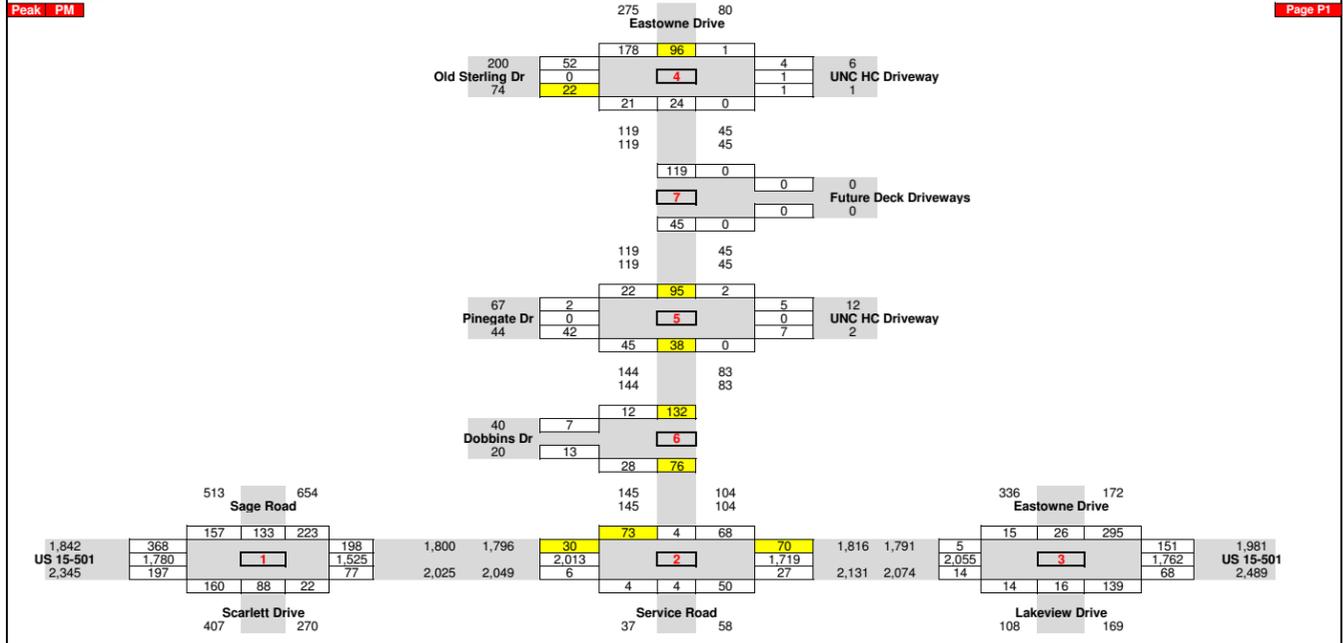
Peak Noon



2018 Count Data

Peak PM

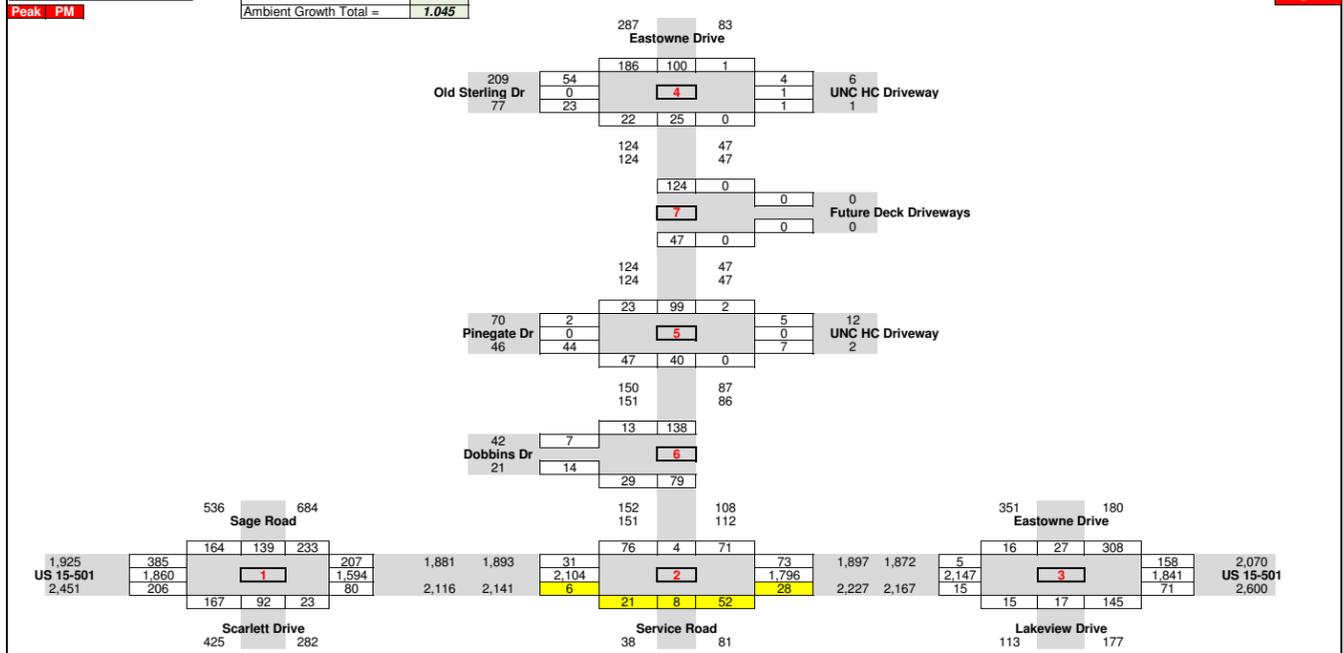
Page P1



2021 Phase 1 Ambient Growth

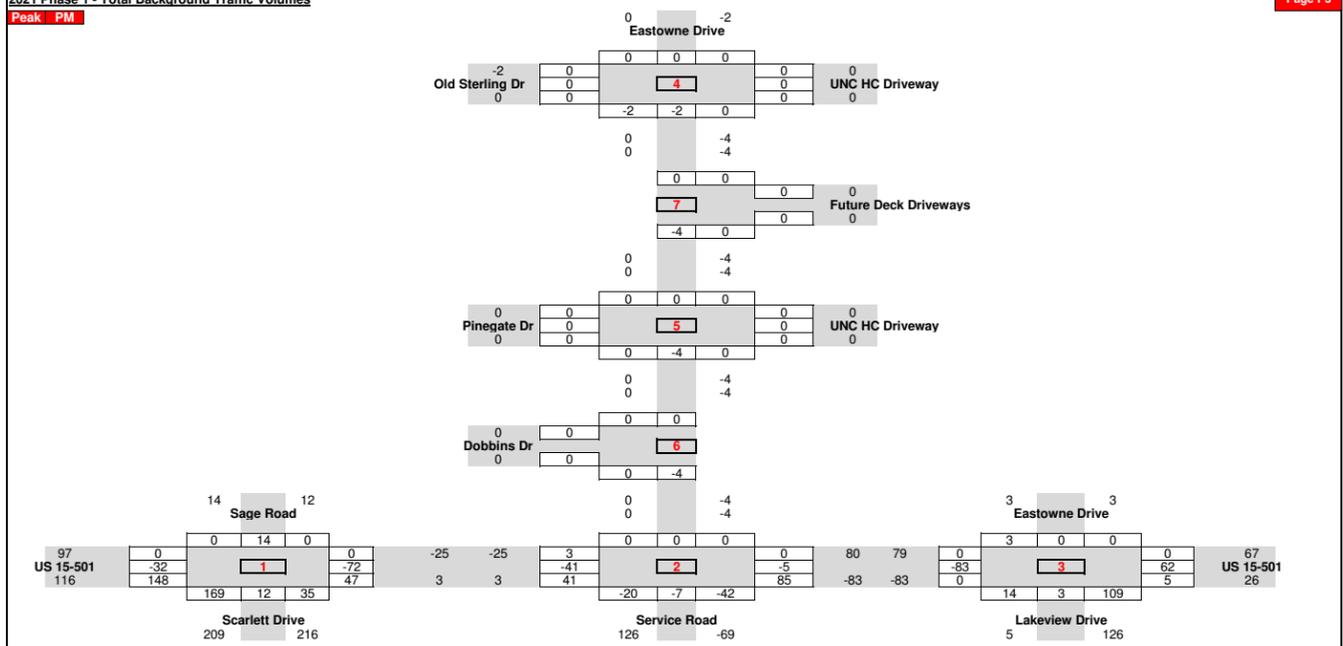
Ambient Growth Rate/Yr = 1.5%
Ambient Growth Total = 1.045

Peak PM



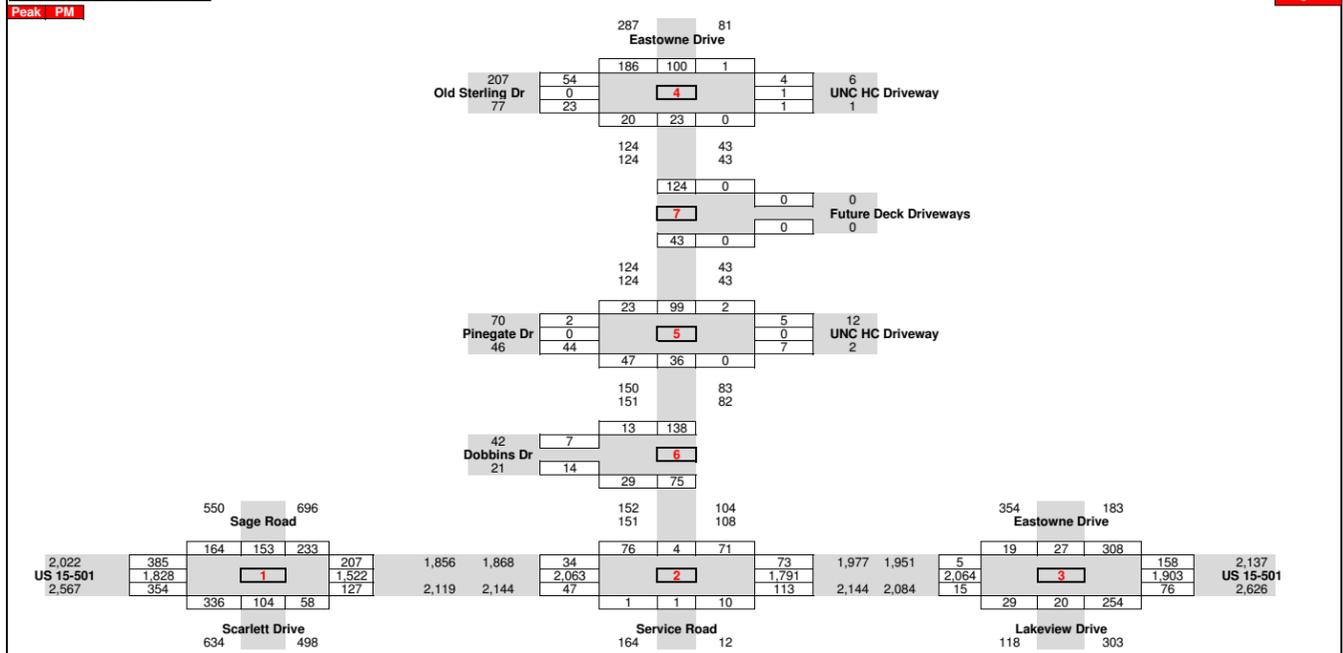
2021 Phase 1 - Total Background Traffic Volumes

Peak PM



2021 Phase 1 Traffic Without Site

Peak PM

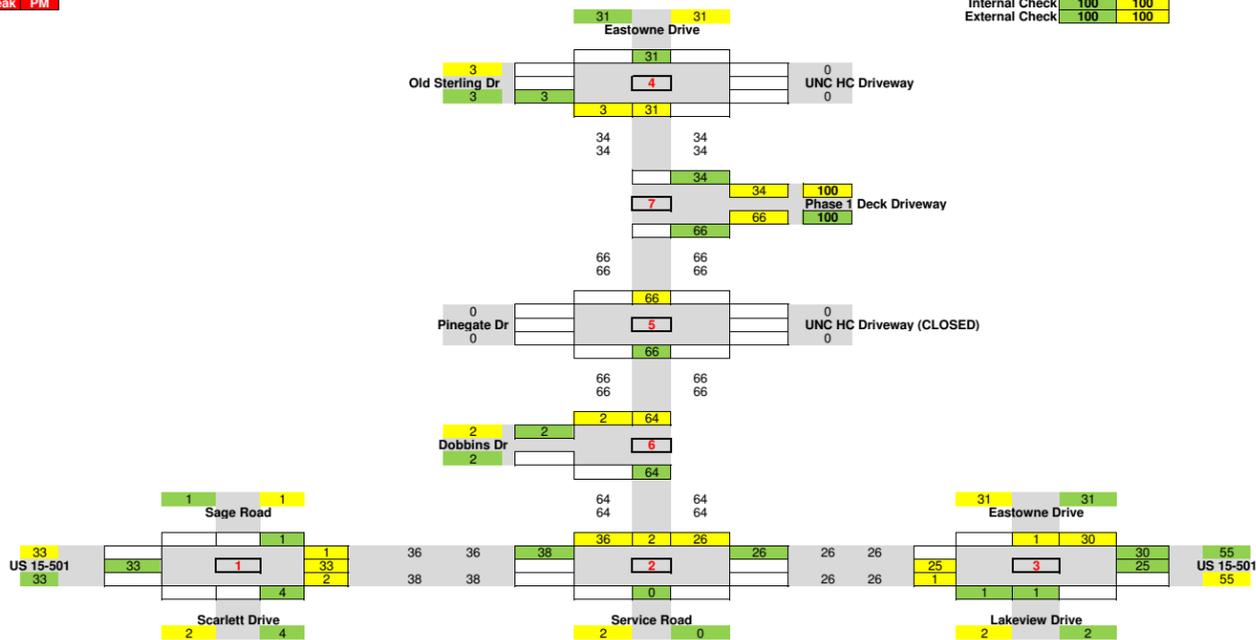


2021 Phase 1 Site Trip Distribution Percentages

Peak: PM

	IN	OUT
Internal Check	100	100
External Check	100	100

Page P5

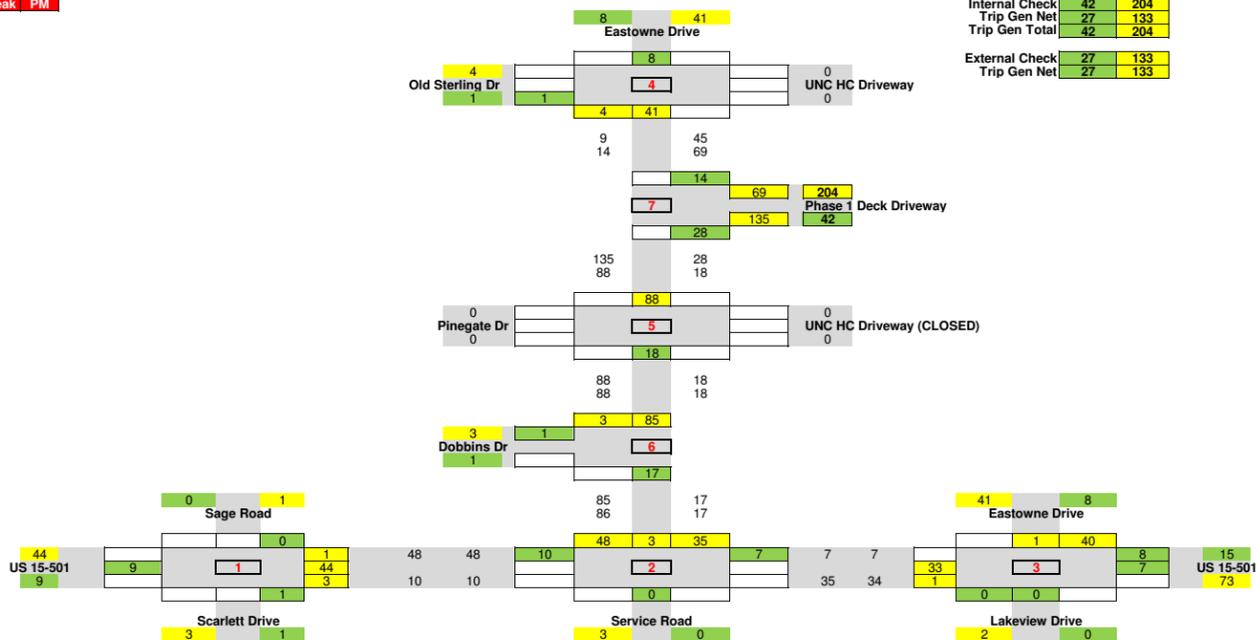


2021 Phase 1 Site Traffic Assignment

Peak: PM

	IN	OUT
Internal Check	42	204
Trip Gen Net	27	133
Trip Gen Total	42	204
External Check	27	133
Trip Gen Net	27	133

Page P6

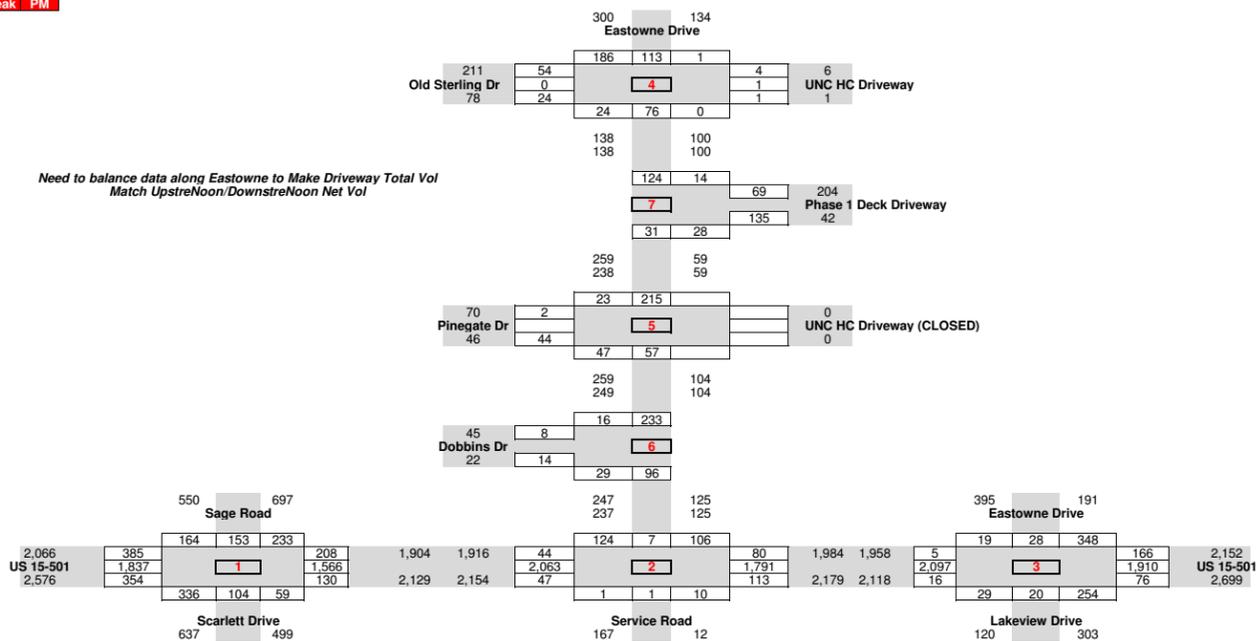


2021 Phase 1 Traffic With Site

Peak: PM

Page P7

Need to balance data along Eastowne to Make Driveway Total Vol Match Upstre/Downstre Noon Net Vol

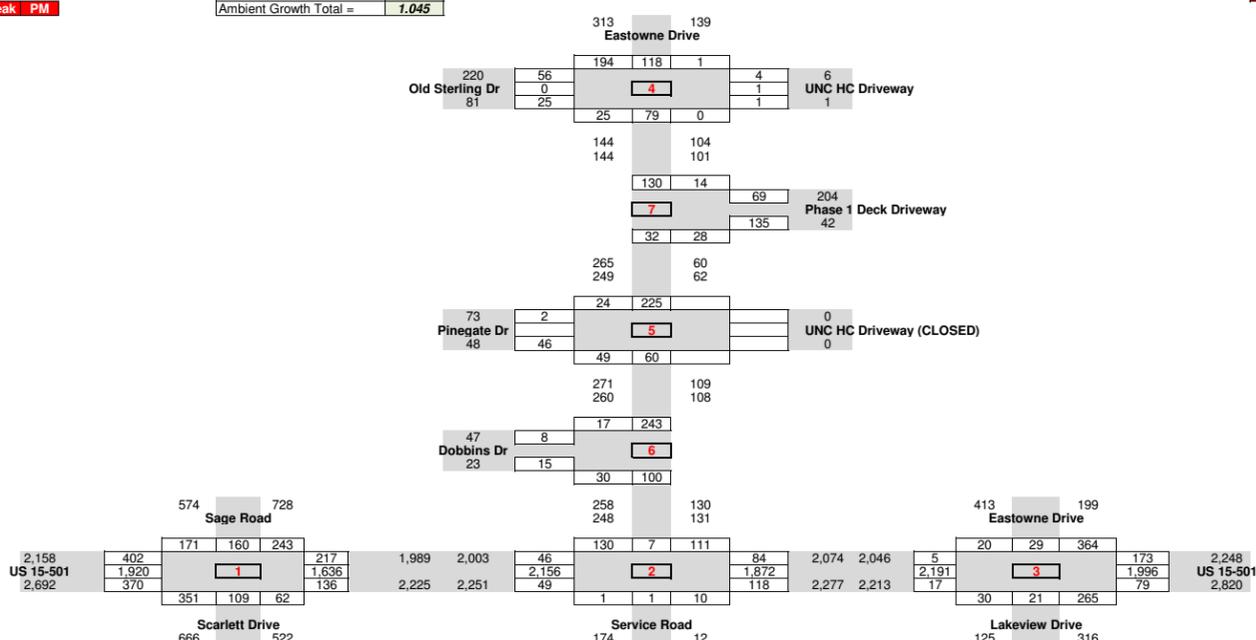


2024 Phase 2 Ambient Growth

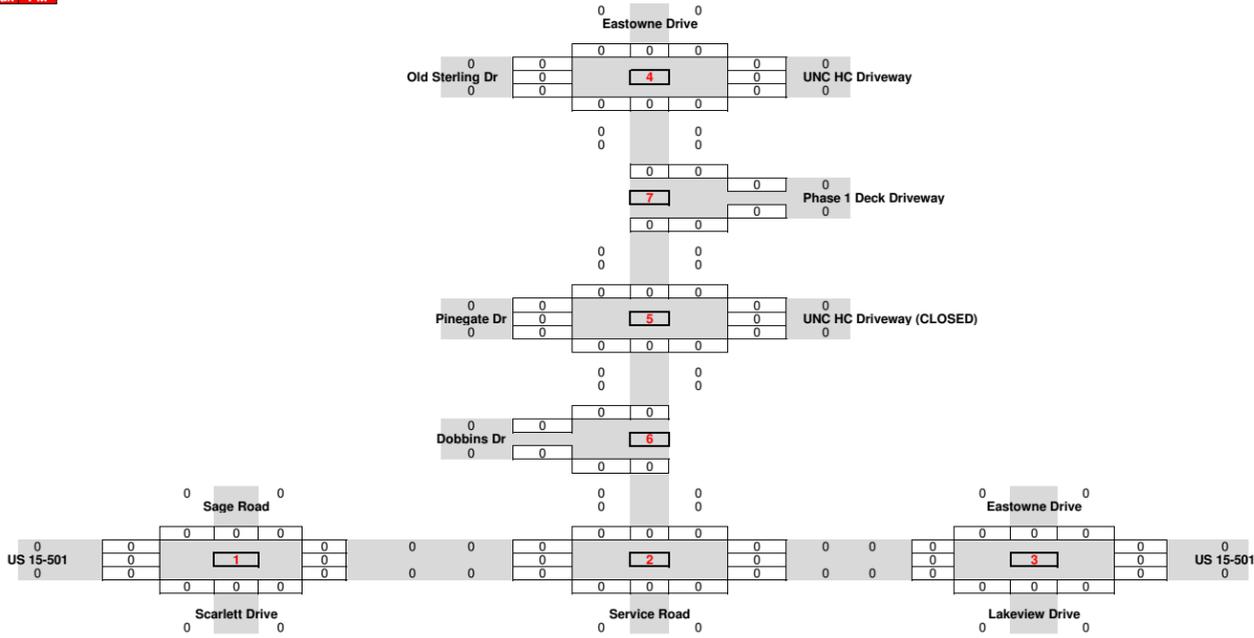
Peak: PM

Ambient Growth Rate/Yr =	1.5%
Ambient Growth Total =	1.045

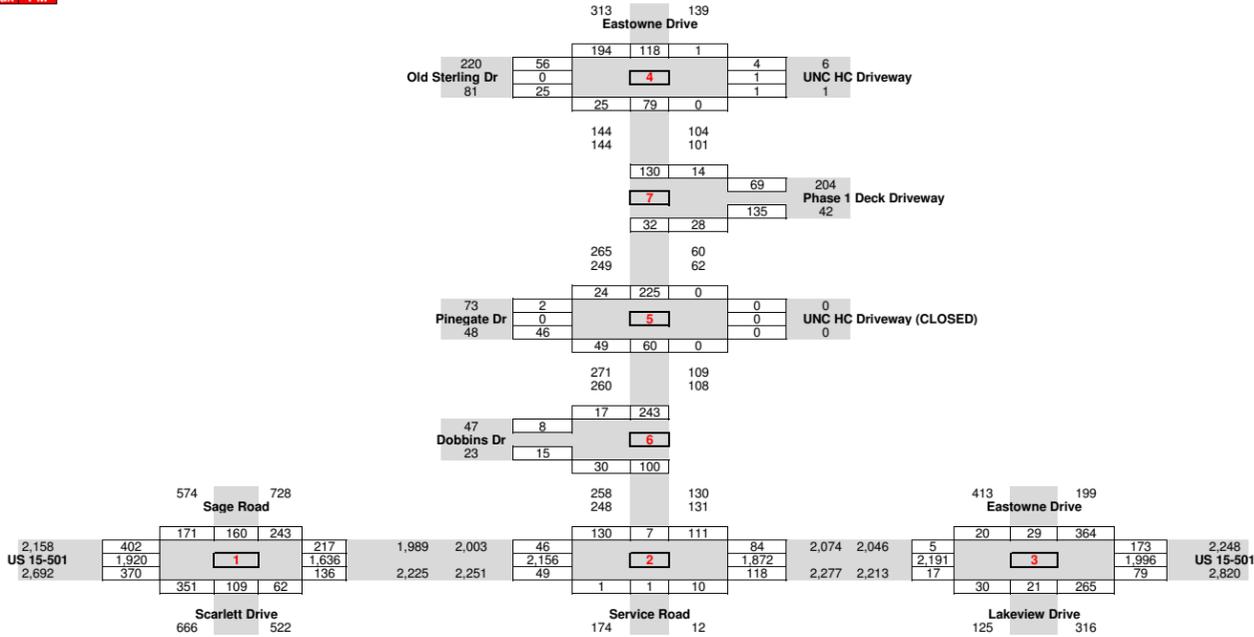
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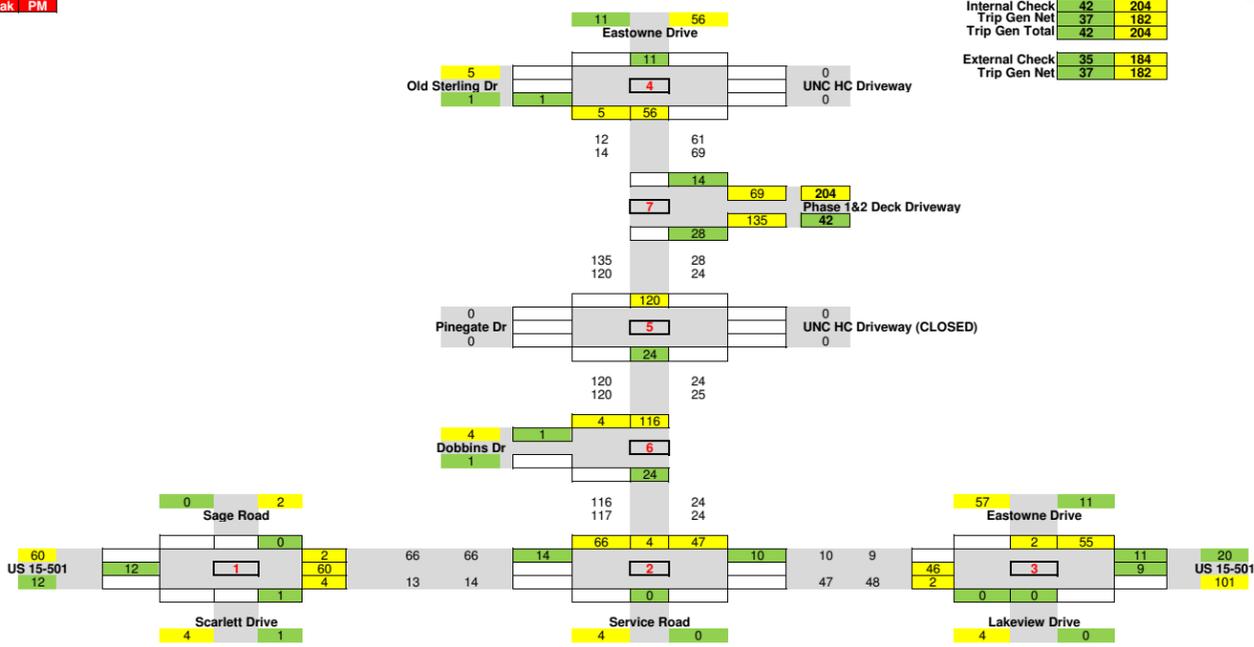
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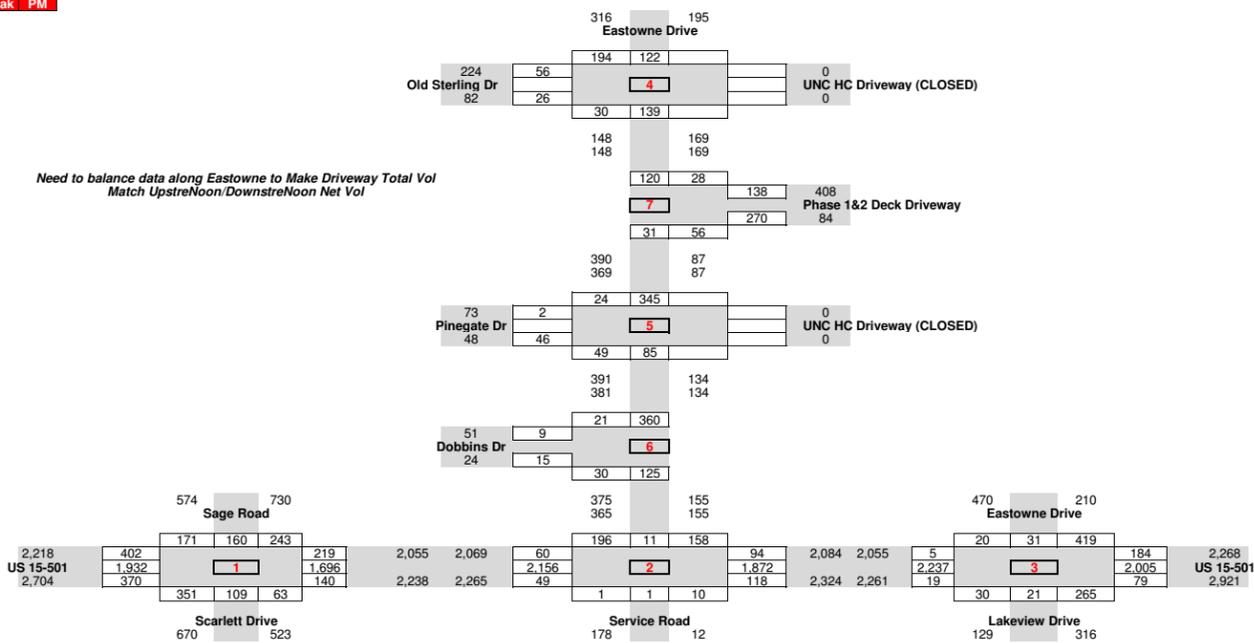
Peak: PM



Peak: PM



Peak: PM



Appendix E – Synchro Signalized Capacity Analysis
Output

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	1352	136	156	1641	160	141	101	23	277	145	132
Future Volume (vph)	344	1352	136	156	1641	160	141	101	23	277	145	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	250		250	100		0	200		125
Storage Lanes	2		1	1		1	1		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00	1.00		1.00		
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	1787	1824	0	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3381	3487	1560	1752	3505	1548	1784	1824	0	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)	1					1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	374	1470	148	159	1674	163	160	115	26	292	153	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	374	1470	148	159	1674	163	160	141	0	292	153	139
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	4
Permitted Phases			2			6						
Detector Phase	5	2	3	1	6	7	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0		14.0	14.0	
Total Split (s)	28.0	102.0	27.0	28.0	102.0	24.0	27.0	26.0		24.0	23.0	
Total Split (%)	15.6%	56.7%	15.0%	15.6%	56.7%	13.3%	15.0%	14.4%		13.3%	12.8%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5		3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6		-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												

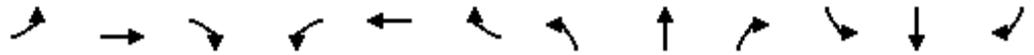
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1629	5	41	1895	72	0	2	22	59	3	49
Future Volume (vph)	78	1629	5	41	1895	72	0	2	22	59	3	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		75	225		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.850		0.878			0.858	
Fl _t Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1644	0	1735	1567	0
Fl _t Permitted	0.950			0.950						0.736		
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1644	0	1344	1567	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	80	1662	5	42	1954	74	0	3	29	84	4	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	1662	5	42	1954	74	0	32	0	84	74	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	20.0	111.0	111.0	32.0	123.0	123.0	37.0	37.0		37.0	37.0	
Total Split (%)	11.1%	61.7%	61.7%	17.8%	68.3%	68.3%	20.6%	20.6%		20.6%	20.6%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	15.0	142.6	142.6	9.3	134.4	134.4		15.6		15.6	15.6	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.08	0.79	0.79	0.05	0.75	0.75		0.09		0.09	0.09	
v/c Ratio	0.54	0.59	0.00	0.47	0.75	0.06		0.23		0.72	0.55	
Control Delay	69.6	1.8	1.0	121.9	3.9	2.2		77.8		111.3	92.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	69.6	1.8	1.0	121.9	3.9	2.2		77.8		111.3	92.4	
LOS	E	A	A	F	A	A		E		F	F	
Approach Delay		4.9			6.2			77.8			102.5	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	94	3	0	52	137	10		36		99	85	
Queue Length 95th (ft)	m124	194	m1	m65	42	m3		61		121	107	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		75	225		225				125		
Base Capacity (vph)	147	2803	1254	262	2616	1170		292		238	278	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.54	0.59	0.00	0.16	0.75	0.06		0.11		0.35	0.27	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 100 (56%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 10.0
 Intersection LOS: B
 Intersection Capacity Utilization 80.7%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷↷↷		↶	↷↷	↷	↶	↷		↶	↷	
Traffic Volume (vph)	9	1689	6	68	2001	336	20	26	145	85	7	3
Future Volume (vph)	9	1689	6	68	2001	336	20	26	145	85	7	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		100	0		0	100		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.873			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1752	3505	1568	1761	1618	0	1752	1752	0
Flt Permitted	0.950			0.950			0.750			0.305		
Satd. Flow (perm)	1770	5080	0	1752	3505	1568	1390	1618	0	562	1752	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1547			949			414			625	
Travel Time (s)		23.4			14.4			11.3			17.0	
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1759	6	74	2175	365	24	31	171	100	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1765	0	74	2175	365	24	202	0	100	12	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0		14.0	14.0	
Total Split (s)	15.0	79.0		49.0	113.0	113.0	52.0	52.0		52.0	52.0	
Total Split (%)	8.3%	43.9%		27.2%	62.8%	62.8%	28.9%	28.9%		28.9%	28.9%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.2	3.2		3.1	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2		-1.1	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	8.6	125.3		12.1	136.4	136.4	27.6	27.6		27.6	27.6	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.05	0.70		0.07	0.76	0.76	0.15	0.15		0.15	0.15	
v/c Ratio	0.11	0.50		0.63	0.82	0.31	0.11	0.82		1.18	0.04	
Control Delay	80.0	14.6		104.2	20.0	9.4	63.4	97.7		212.5	61.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	80.0	14.6		104.2	20.0	9.4	63.4	97.7		212.5	61.2	
LOS	E	B		F	B	A	E	F		F	E	
Approach Delay		15.0			20.9			94.0			196.3	
Approach LOS		B			C			F			F	
Queue Length 50th (ft)	10	286		87	657	104	25	235		~140	12	
Queue Length 95th (ft)	m16	356		144	1323	251	50	295		#219	30	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	98	3537		428	2656	1188	362	422		146	457	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.09	0.50		0.17	0.82	0.31	0.07	0.48		0.68	0.03	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 106 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.18
 Intersection Signal Delay: 26.3 Intersection LOS: C
 Intersection Capacity Utilization 85.2% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	323	1250	126	96	1272	157	131	85	40	206	108	160
Future Volume (vph)	323	1250	126	96	1272	157	131	85	40	206	108	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	250		250	100		0	200		125
Storage Lanes	2		1	1		1	1		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850			0.850		0.952				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	1770	1766	0	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	1770	1766	0	3438	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1121			1824			633				545
Travel Time (s)		17.0			27.6			12.3				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	336	1302	131	100	1325	164	141	91	43	234	123	182
Shared Lane Traffic (%)												
Lane Group Flow (vph)	336	1302	131	100	1325	164	141	134	0	234	123	182
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	4
Permitted Phases			2			6						
Detector Phase	5	2	3	1	6	7	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0		14.0	14.0	
Total Split (s)	25.0	103.0	25.0	22.0	100.0	25.0	25.0	30.0		25.0	30.0	
Total Split (%)	13.9%	57.2%	13.9%	12.2%	55.6%	13.9%	13.9%	16.7%		13.9%	16.7%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5		3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6		-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	
Act Effct Green (s)	20.9	103.2	121.9	17.0	99.3	118.3	18.8	20.8		19.0	21.1	47.4
Actuated g/C Ratio	0.12	0.57	0.68	0.09	0.55	0.66	0.10	0.12		0.11	0.12	0.26
v/c Ratio	0.86	0.65	0.12	0.61	0.69	0.16	0.77	0.66		0.64	0.56	0.43
Control Delay	98.2	28.9	5.7	79.7	22.2	4.4	103.9	91.2		85.6	84.6	58.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	98.2	28.9	5.7	79.7	22.2	4.4	103.9	91.2		85.6	84.6	58.1
LOS	F	C	A	E	C	A	F	F		F	F	E
Approach Delay		40.3			24.0			97.7				76.1
Approach LOS		D			C			F				E
Queue Length 50th (ft)	201	551	25	116	356	30	164	154		138	139	176
Queue Length 95th (ft)	#297	657	45	182	456	67	#261	229		184	206	251
Internal Link Dist (ft)		1041			1744			553				465
Turn Bay Length (ft)	325		250	250		250	100			200		125
Base Capacity (vph)	396	1998	1067	165	1933	1041	196	245		387	260	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.85	0.65	0.12	0.61	0.69	0.16	0.72	0.55		0.60	0.47	0.43

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 32 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 42.5

Intersection LOS: D

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



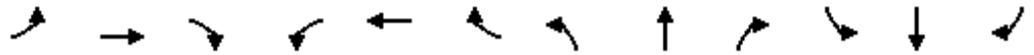
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	1422	7	30	1434	47	5	11	30	44	2	75
Future Volume (vph)	69	1422	7	30	1434	47	5	11	30	44	2	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		75	225		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.911			0.854	
Flt Protected	0.950			0.950				0.995		0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1588	0	1752	1575	0
Flt Permitted	0.950			0.950				0.947		0.593		
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1511	0	1094	1575	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			117			223	
Travel Time (s)		27.6			23.4			3.2			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	72	1481	7	32	1509	49	7	15	42	58	3	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	1481	7	32	1509	49	0	64	0	58	102	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	15.0	109.0	109.0	15.0	109.0	109.0	56.0	56.0		56.0	56.0	
Total Split (%)	8.3%	60.6%	60.6%	8.3%	60.6%	60.6%	31.1%	31.1%		31.1%	31.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	12.2	141.9	141.9	9.6	136.6	136.6		16.1		16.1	16.1	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

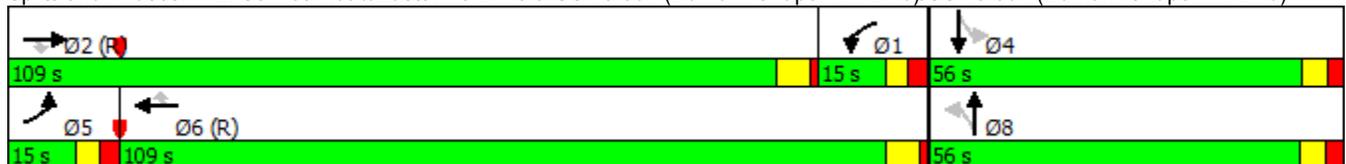


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.07	0.79	0.79	0.05	0.76	0.76		0.09		0.09	0.09	
v/c Ratio	0.61	0.54	0.01	0.34	0.57	0.04		0.47		0.60	0.72	
Control Delay	115.4	3.2	3.3	75.3	7.3	6.0		88.1		101.7	106.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	115.4	3.2	3.3	75.3	7.3	6.0		88.1		101.7	106.5	
LOS	F	A	A	E	A	A		F		F	F	
Approach Delay		8.4			8.6			88.1			104.7	
Approach LOS		A			A			F			F	
Queue Length 50th (ft)	88	78	1	37	197	11		73		67	120	
Queue Length 95th (ft)	m138	90	m1	m63	212	m20		99		99	154	
Internal Link Dist (ft)		1744			1467			37			143	
Turn Bay Length (ft)	225		75	225		225				125		
Base Capacity (vph)	123	2762	1235	97	2660	1190		428		309	446	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.59	0.54	0.01	0.33	0.57	0.04		0.15		0.19	0.23	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 26 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 14.6
 Intersection LOS: B
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

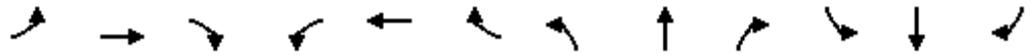
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕		↘	↕↕	↗	↘	↗		↘	↗	
Traffic Volume (vph)	25	1461	12	60	1483	167	13	14	52	126	10	21
Future Volume (vph)	25	1461	12	60	1483	167	13	14	52	126	10	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		100	0		0	100		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.882				0.899
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1635	0	1752	1658	0
Flt Permitted	0.950			0.950			0.731			0.653		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1355	1635	0	1204	1658	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			944			414				625
Travel Time (s)		23.4			14.3			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	26	1506	12	65	1595	180	16	17	63	164	13	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	1518	0	65	1595	180	16	80	0	164	40	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8				4
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		4		4
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0		7.0		7.0
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0		14.0		14.0
Total Split (s)	15.0	90.0		25.0	100.0	100.0	65.0	65.0		65.0		65.0
Total Split (%)	8.3%	50.0%		13.9%	55.6%	55.6%	36.1%	36.1%		36.1%		36.1%
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.2	3.2		3.1		3.1
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	3.0	3.0		3.0		3.0
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2		-1.1		-1.1
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None		None
Act Effect Green (s)	8.1	116.9		20.0	133.9	133.9	28.1	28.1		28.1		28.1

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	368	1780	197	77	1525	198	160	88	22	223	133	157
Future Volume (vph)	368	1780	197	77	1525	198	160	88	22	223	133	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	250		250	100		0	200		125
Storage Lanes	2		1	1		1	1		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850			0.850		0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	1805	1840	0	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	1805	1840	0	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1122			1824			665				545
Travel Time (s)		17.0			27.6			13.0				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	387	1874	207	80	1589	206	170	94	23	272	162	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	387	1874	207	80	1589	206	170	117	0	272	162	191
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	4 5
Permitted Phases			2			6						
Detector Phase	5	2	3	1	6	7	3	8		7	4	4 5
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0		14.0	14.0	
Total Split (s)	25.0	103.0	25.0	22.0	100.0	25.0	25.0	30.0		25.0	30.0	
Total Split (%)	13.9%	57.2%	13.9%	12.2%	55.6%	13.9%	13.9%	16.7%		13.9%	16.7%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5		3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6		-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None	None	None		None	None	

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	23.2	102.1	121.8	17.0	95.9	117.6	19.6	19.2		21.6	21.2	49.9
Actuated g/C Ratio	0.13	0.57	0.68	0.09	0.53	0.65	0.11	0.11		0.12	0.12	0.28
v/c Ratio	0.88	0.94	0.19	0.48	0.84	0.20	0.87	0.60		0.65	0.73	0.43
Control Delay	96.7	46.5	6.2	81.7	38.9	6.9	114.5	88.7		83.5	94.9	56.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	96.7	46.5	6.2	81.7	38.9	6.9	114.5	88.7		83.5	94.9	56.8
LOS	F	D	A	F	D	A	F	F		F	F	E
Approach Delay		51.0			37.2			103.9			78.3	
Approach LOS		D			D			F			E	
Queue Length 50th (ft)	236	1073	44	84	580	75	201	134		159	187	186
Queue Length 95th (ft)	#364	#1305	69	m136	777	100	#339	203		195	245	242
Internal Link Dist (ft)		1042			1744			585			465	
Turn Bay Length (ft)	325		250	250		250	100			200		125
Base Capacity (vph)	439	1998	1068	167	1886	1034	200	255		420	262	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.88	0.94	0.19	0.48	0.84	0.20	0.85	0.46		0.65	0.62	0.43

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 32 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 52.2 Intersection LOS: D
 Intersection Capacity Utilization 87.6% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



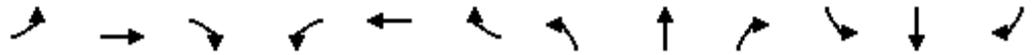
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2013	6	27	1719	70	4	4	50	68	4	73
Future Volume (vph)	30	2013	6	27	1719	70	4	4	50	68	4	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		75	225		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00				1.00			0.99	
Frt			0.850			0.850		0.882			0.858	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1752	1562	0
Flt Permitted	0.950			0.950				0.979		0.543		
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1601	0	1001	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			122			223	
Travel Time (s)		27.6			23.4			3.3			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	31	2097	6	28	1809	74	5	5	68	99	6	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	2097	6	28	1809	74	0	78	0	99	112	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	15.0	109.0	109.0	15.0	109.0	109.0	56.0	56.0		56.0	56.0	
Total Split (%)	8.3%	60.6%	60.6%	8.3%	60.6%	60.6%	31.1%	31.1%		31.1%	31.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?												

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	8.5	139.3	139.3	9.6	140.3	140.3		18.7		18.7	18.7	
Actuated g/C Ratio	0.05	0.77	0.77	0.05	0.78	0.78		0.10		0.10	0.10	
v/c Ratio	0.37	0.77	0.01	0.30	0.66	0.06		0.47		0.96	0.69	
Control Delay	96.8	7.0	6.2	68.4	10.9	8.3		83.5		156.5	98.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	96.8	7.0	6.2	68.4	10.9	8.3		83.5		156.5	98.2	
LOS	F	A	A	E	B	A		F		F	F	
Approach Delay		8.3			11.6			83.5			125.5	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	38	164	1	29	252	19		88		119	130	
Queue Length 95th (ft)	m45	238	m1	m35	440	m36		113		138	146	
Internal Link Dist (ft)		1744			1467			42			143	
Turn Bay Length (ft)	225		75	225		225				125		
Base Capacity (vph)	99	2738	1199	98	2758	1233		453		283	442	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.31	0.77	0.01	0.29	0.66	0.06		0.17		0.35	0.25	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 26 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 16.8
 Intersection LOS: B
 Intersection Capacity Utilization 74.9%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

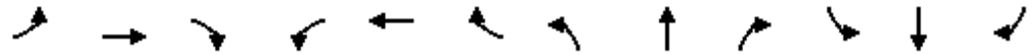
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕		↘	↕↕	↗	↘	↗		↘	↗	
Traffic Volume (vph)	5	2055	14	68	1762	151	14	16	139	295	26	15
Future Volume (vph)	5	2055	14	68	1762	151	14	16	139	295	26	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		100	0		0	100		0	100		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.999				0.850		0.866			0.945	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1621	0	1752	1743	0
Fl _t Permitted	0.950			0.950			0.721			0.513		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1350	1621	0	946	1743	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1547			952			414			625	
Travel Time (s)		23.4			14.4			11.3			17.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2210	15	73	1895	162	19	22	188	399	35	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2225	0	73	1895	162	19	210	0	399	55	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Detector Phase	5	2		1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0		14.0	14.0	
Total Split (s)	15.0	90.0		25.0	100.0	100.0	65.0	65.0		65.0	65.0	
Total Split (%)	8.3%	50.0%		13.9%	55.6%	55.6%	36.1%	36.1%		36.1%	36.1%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	3.2	3.2		3.1	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2		-1.1	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	7.6	85.0		20.0	107.5	107.5	60.0	60.0		60.0	60.0	
Actuated g/C Ratio	0.04	0.47		0.11	0.60	0.60	0.33	0.33		0.33	0.33	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

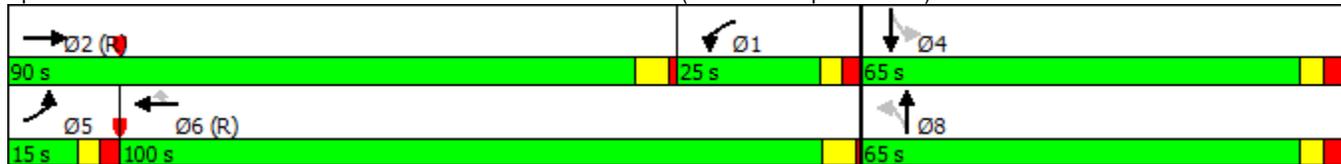


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.93		0.37	0.90	0.17	0.04	0.39		1.27	0.09	
Control Delay	92.6	37.7		80.2	38.4	17.5	41.1	48.6		189.8	42.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	92.6	37.7		80.2	38.4	17.5	41.1	48.6		189.8	42.0	
LOS	F	D		F	D	B	D	D		F	D	
Approach Delay		37.8			38.2			48.0			171.9	
Approach LOS		D			D			D			F	
Queue Length 50th (ft)	6	718		81	954	80	15	191		~590	45	
Queue Length 95th (ft)	m9	861		140	#1333	143	31	218		#602	67	
Internal Link Dist (ft)		1467			872			334			545	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	98	2398		196	2112	945	450	540		315	581	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.05	0.93		0.37	0.90	0.17	0.04	0.39		1.27	0.09	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 45 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.27
 Intersection Signal Delay: 50.5 Intersection LOS: D
 Intersection Capacity Utilization 94.8% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 			 	 	
Traffic Volume (vph)	359	1404	225	174	1701	167	203	109	29	289	160	138
Future Volume (vph)	359	1404	225	174	1701	167	203	109	29	289	160	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00		0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3468	1882	1599	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	3487	1560	1752	3505	1548	3451	1882	1578	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)	1						1	1		1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	390	1526	245	178	1736	170	231	124	33	304	168	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	390	1526	245	178	1736	170	231	124	33	304	168	145
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	106.0	20.0	29.0	106.0	24.0	20.0	21.0	29.0	24.0	25.0	
Total Split (%)	16.1%	58.9%	11.1%	16.1%	58.9%	13.3%	11.1%	11.7%	16.1%	13.3%	13.9%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?												

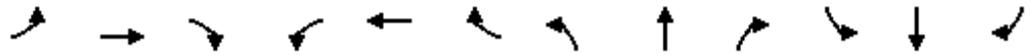
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1689	12	69	1980	75	1	1	3	62	3	51
Future Volume (vph)	83	1689	12	69	1980	75	1	1	3	62	3	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.910			0.858	
Flt Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1690	0	1735	1567	0
Flt Permitted	0.950			0.950				0.962		0.754		
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1639	0	1377	1567	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	85	1723	12	71	2041	77	1	1	4	89	4	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1723	12	71	2041	77	0	6	0	89	77	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	19.0	125.0	125.0	19.0	125.0	125.0	36.0	36.0		36.0	36.0	
Total Split (%)	10.6%	69.4%	69.4%	10.6%	69.4%	69.4%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	11.9	137.1	137.1	11.9	137.1	137.1		16.0		16.0	16.0	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.07	0.76	0.76	0.07	0.76	0.76		0.09		0.09	0.09	
v/c Ratio	0.73	0.64	0.01	0.62	0.76	0.06		0.04		0.73	0.55	
Control Delay	110.7	1.3	0.3	83.7	6.3	4.2		71.8		110.4	92.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	110.7	1.3	0.3	83.7	6.4	4.2		71.8		110.4	92.2	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		6.4			8.8			71.8			102.0	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	106	4	0	83	228	16		7		104	89	
Queue Length 95th (ft)	m136	154	m0	m105	158	m12		19		127	111	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	137	2695	1205	136	2670	1194		282		237	269	
Starvation Cap Reductn	0	0	0	0	34	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.62	0.64	0.01	0.52	0.77	0.06		0.02		0.38	0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 149 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 11.5 Intersection LOS: B
 Intersection Capacity Utilization 83.2% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

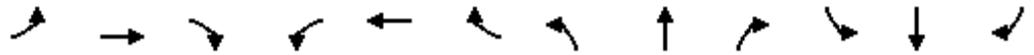
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

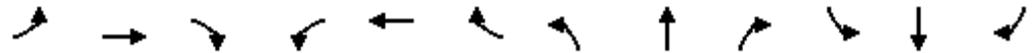


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗↗		↖	↗↗	↖	↖	↗	↖	↗↗	↖	↗
Traffic Volume (vph)	9	1732	6	49	2108	351	28	28	201	89	7	5
Future Volume (vph)	9	1732	6	49	2108	351	28	28	201	89	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt						0.850			0.850		0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1804	6	53	2291	382	33	33	236	105	8	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1810	0	53	2291	382	33	33	236	105	14	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	119.0		33.0	139.0	139.0	14.0	14.0	33.0	14.0	14.0	
Total Split (%)	7.2%	66.1%		18.3%	77.2%	77.2%	7.8%	7.8%	18.3%	7.8%	7.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.8	121.6		23.5	144.9	144.9	14.6	8.5	34.4	9.0	8.3	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.04	0.68		0.13	0.80	0.80	0.08	0.05	0.19	0.05	0.05	
v/c Ratio	0.12	0.53		0.23	0.81	0.30	0.23	0.38	0.79	0.62	0.18	
Control Delay	68.4	3.8		71.7	15.0	6.2	82.8	95.7	86.8	100.2	88.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.4	3.8		71.7	15.0	6.2	82.8	95.7	86.8	100.2	88.1	
LOS	E	A		E	B	A	F	F	F	F	F	
Approach Delay		4.1			14.9			87.3				98.7
Approach LOS		A			B			F				F
Queue Length 50th (ft)	11	78		57	634	92	36	39	265	63	16	
Queue Length 95th (ft)	m17	82		103	1083	188	76	76	335	94	42	
Internal Link Dist (ft)		1467			869			334				545
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	3435		272	2821	1262	143	92	340	169	86	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.12	0.53		0.19	0.81	0.30	0.23	0.36	0.69	0.62	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 160 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 17.3
 Intersection LOS: B
 Intersection Capacity Utilization 75.8%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



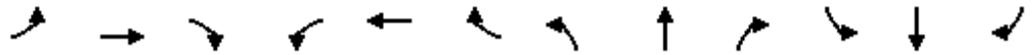
Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 			 		
Traffic Volume (vph)	338	1295	223	119	1314	164	219	94	45	215	120	167
Future Volume (vph)	338	1295	223	119	1314	164	219	94	45	215	120	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3434	1863	1584	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	3434	1863	1563	3436	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	352	1349	232	124	1369	171	235	101	48	244	136	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	352	1349	232	124	1369	171	235	101	48	244	136	190
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	103.0	24.0	26.0	98.0	24.0	24.0	27.0	26.0	24.0	27.0	
Total Split (%)	17.2%	57.2%	13.3%	14.4%	54.4%	13.3%	13.3%	15.0%	14.4%	13.3%	15.0%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

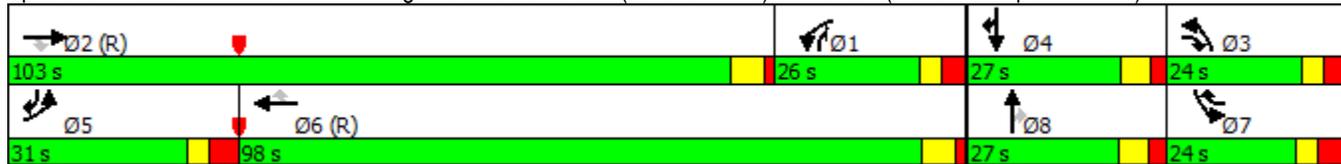


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.2	102.0	125.1	21.0	99.8	119.4	18.1	17.4	38.4	19.6	18.9	43.1
Actuated g/C Ratio	0.13	0.57	0.70	0.12	0.55	0.66	0.10	0.10	0.21	0.11	0.10	0.24
v/c Ratio	0.81	0.68	0.21	0.61	0.70	0.16	0.68	0.56	0.14	0.65	0.69	0.50
Control Delay	90.9	30.4	10.7	70.8	19.1	3.5	88.6	89.2	53.4	85.5	95.8	43.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.9	30.4	10.7	70.8	19.1	3.5	88.6	89.2	53.4	85.5	95.8	43.9
LOS	F	C	B	E	B	A	F	F	D	F	F	D
Approach Delay		39.1			21.4			84.4			74.1	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	210	593	94	143	338	26	139	116	45	143	157	151
Queue Length 95th (ft)	268	695	140	211	364	46	191	182	83	193	230	205
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	488	1976	1076	204	1943	1043	366	227	335	383	228	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.68	0.22	0.61	0.70	0.16	0.64	0.44	0.14	0.64	0.60	0.44

Intersection Summary

Area Type:	Other
Cycle Length:	180
Actuated Cycle Length:	180
Offset:	76 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	40.8
Intersection LOS:	D
Intersection Capacity Utilization:	71.4%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



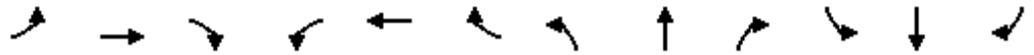
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	1466	16	77	1508	49	1	4	1	46	1	78
Future Volume (vph)	74	1466	16	77	1508	49	1	4	1	46	1	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.851	
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1712	0	1752	1569	0
Flt Permitted	0.950			0.950				0.969		0.752		
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1669	0	1387	1569	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	77	1527	17	81	1587	52	1	6	1	61	1	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	1527	17	81	1587	52	0	8	0	61	104	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	22.0	119.0	119.0	23.0	120.0	120.0	38.0	38.0		38.0	38.0	
Total Split (%)	12.2%	66.1%	66.1%	12.8%	66.7%	66.7%	21.1%	21.1%		21.1%	21.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	12.2	135.5	135.5	13.2	136.5	136.5		16.3		16.3	16.3	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.07	0.75	0.75	0.07	0.76	0.76		0.09		0.09	0.09	
v/c Ratio	0.65	0.58	0.01	0.63	0.60	0.04		0.05		0.49	0.73	
Control Delay	105.0	1.4	0.8	86.1	5.0	3.9		72.2		89.5	107.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	105.0	1.4	0.8	86.1	5.0	3.9		72.2		89.5	107.2	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		6.4			8.8			72.2			100.7	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	96	10	0	95	114	7		9		70	122	
Queue Length 95th (ft)	m143	86	m1	m148	140	m11		22		101	156	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	165	2637	1180	175	2657	1188		305		254	287	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.47	0.58	0.01	0.46	0.60	0.04		0.03		0.24	0.36	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 65 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 12.1
 Intersection LOS: B
 Intersection Capacity Utilization 69.2%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

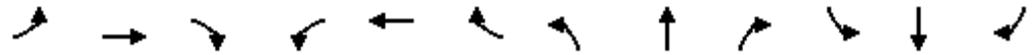
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗	↗	↘	↗	↗	↗↗	↗	↗
Traffic Volume (vph)	26	1467	13	55	1594	175	23	17	110	132	10	24
Future Volume (vph)	26	1467	13	55	1594	175	23	17	110	132	10	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t		0.999				0.850			0.850		0.894	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1649	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1649	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	27	1512	13	59	1714	188	28	21	134	171	13	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1525	0	59	1714	188	28	21	134	171	44	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	14.0
Total Split (s)	14.0	122.0		22.0	130.0	130.0	15.0	14.0	22.0	22.0	21.0	21.0
Total Split (%)	7.8%	67.8%		12.2%	72.2%	72.2%	8.3%	7.8%	12.2%	12.2%	11.7%	11.7%
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	3.1
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	3.0
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	-1.1
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effect Green (s)	8.7	125.3		14.4	133.5	133.5	9.6	8.4	19.5	17.2	13.4	13.4

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	1828	354	127	1522	207	336	104	58	233	153	164
Future Volume (vph)	385	1828	354	127	1522	207	336	104	58	233	153	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	3502	1900	1615	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	3502	1900	1593	3472	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	405	1924	373	132	1585	216	357	111	62	284	187	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	405	1924	373	132	1585	216	357	111	62	284	187	200
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	30.0	111.0	25.0	20.0	101.0	26.0	25.0	23.0	20.0	26.0	24.0	24.0
Total Split (%)	16.7%	61.7%	13.9%	11.1%	56.1%	14.4%	13.9%	12.8%	11.1%	14.4%	13.3%	13.3%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None						

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	24.2	106.0	131.1	15.0	96.8	119.3	20.1	16.6	31.6	22.4	18.9	44.1
Actuated g/C Ratio	0.13	0.59	0.73	0.08	0.54	0.66	0.11	0.09	0.18	0.12	0.10	0.24
v/c Ratio	0.88	0.93	0.33	0.90	0.83	0.21	0.92	0.63	0.22	0.65	0.94	0.51
Control Delay	97.2	42.6	9.6	110.6	28.3	4.2	106.5	95.2	61.2	83.4	128.1	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	42.6	9.6	110.6	28.3	4.2	106.5	95.2	61.2	83.4	128.1	44.2
LOS	F	D	A	F	C	A	F	F	E	F	F	D
Approach Delay		46.2			31.2			98.8			84.2	
Approach LOS		D			C			F			F	
Queue Length 50th (ft)	244	1053	146	152	418	35	219	128	61	169	223	158
Queue Length 95th (ft)	#328	1180	196	m#292	687	85	#317	202	109	203	#333	204
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	474	2074	1146	147	1903	1048	390	190	280	434	199	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.93	0.33	0.90	0.83	0.21	0.92	0.58	0.22	0.65	0.94	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 138 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 50.4 Intersection LOS: D
 Intersection Capacity Utilization 91.9% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



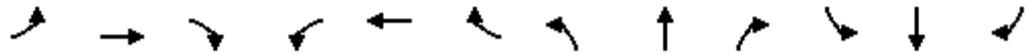
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	2063	47	113	1791	73	1	1	10	71	4	76
Future Volume (vph)	34	2063	47	113	1791	73	1	1	10	71	4	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00				1.00			0.99	
Frt			0.850			0.850		0.882			0.858	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1752	1562	0
Flt Permitted	0.950			0.950				0.985		0.747		
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1610	0	1378	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	35	2149	49	119	1885	77	1	1	14	103	6	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	2149	49	119	1885	77	0	16	0	103	116	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	14.0	123.0	123.0	21.0	130.0	130.0	36.0	36.0		36.0	36.0	
Total Split (%)	7.8%	68.3%	68.3%	11.7%	72.2%	72.2%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

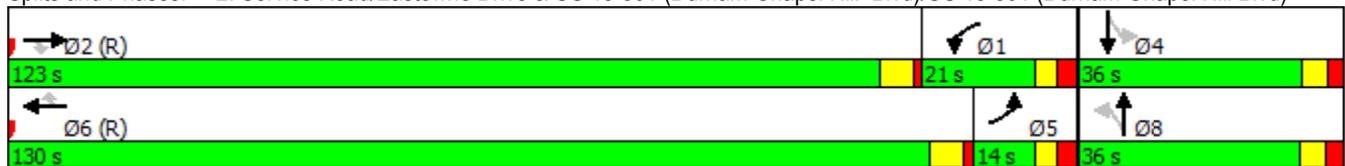


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	8.5	132.4	132.4	14.7	141.1	141.1		17.9		17.9	17.9	
Actuated g/C Ratio	0.05	0.74	0.74	0.08	0.78	0.78		0.10		0.10	0.10	
v/c Ratio	0.42	0.83	0.04	0.83	0.68	0.06		0.10		0.75	0.75	
Control Delay	85.7	3.3	1.3	92.7	4.3	3.2		71.9		109.2	105.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	85.7	3.3	1.3	92.7	4.3	3.2		71.9		109.2	105.6	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		4.5			9.3			71.9			107.3	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	43	38	2	140	165	11		18		121	136	
Queue Length 95th (ft)	m51	224	m3	m188	105	m8		35		139	153	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	88	2603	1140	157	2774	1241		277		237	269	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.40	0.83	0.04	0.76	0.68	0.06		0.06		0.43	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 124 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 11.9
 Intersection LOS: B
 Intersection Capacity Utilization 86.9%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

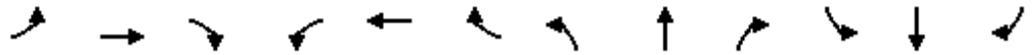
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕↗		↖	↕↕	↗	↖	↕	↗	↕↕	↗	
Traffic Volume (vph)	5	2064	15	76	1903	158	29	20	254	308	27	19
Future Volume (vph)	5	2064	15	76	1903	158	29	20	254	308	27	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850			0.850		0.937	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1728	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1728	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2219	16	82	2046	170	39	27	343	416	36	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2235	0	82	2046	170	39	27	343	416	62	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	96.0		39.0	122.0	122.0	15.0	14.0	39.0	31.0	30.0	
Total Split (%)	7.2%	53.3%		21.7%	67.8%	67.8%	8.3%	7.8%	21.7%	17.2%	16.7%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.7	94.2		34.1	130.7	130.7	20.1	8.4	40.9	26.0	14.5	
Actuated g/C Ratio	0.04	0.52		0.19	0.73	0.73	0.11	0.05	0.23	0.14	0.08	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.84		0.24	0.80	0.15	0.20	0.31	0.95	0.85	0.45	
Control Delay	72.4	21.9		64.4	20.8	9.1	74.1	92.5	97.3	91.4	90.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.4	21.9		64.4	20.8	9.1	74.1	92.5	97.3	91.4	90.8	
LOS	E	C		E	C	A	E	F	F	F	F	
Approach Delay		22.0			21.5			94.8			91.3	
Approach LOS		C			C			F			F	
Queue Length 50th (ft)	5	597		84	781	58	42	32	289	250	73	
Queue Length 95th (ft)	m8	732		141	1128	111	70	56	301	253	103	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	2657		337	2569	1149	200	93	363	499	240	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.84		0.24	0.80	0.15	0.20	0.29	0.94	0.83	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 154 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 33.4 Intersection LOS: C
 Intersection Capacity Utilization 86.4% ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	1447	225	174	1707	167	203	109	34	290	160	138
Future Volume (vph)	359	1447	225	174	1707	167	203	109	34	290	160	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00		0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3468	1882	1599	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	3487	1560	1752	3505	1548	3451	1882	1578	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)	1					1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	390	1573	245	178	1742	170	231	124	39	305	168	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	390	1573	245	178	1742	170	231	124	39	305	168	145
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	106.0	20.0	29.0	106.0	24.0	20.0	21.0	29.0	24.0	25.0	
Total Split (%)	16.1%	58.9%	11.1%	16.1%	58.9%	13.3%	11.1%	11.7%	16.1%	13.3%	13.9%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?												

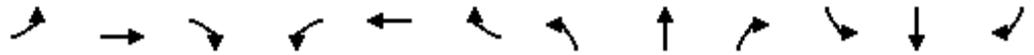
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	1689	12	69	1980	109	1	1	3	68	3	57
Future Volume (vph)	132	1689	12	69	1980	109	1	1	3	68	3	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.850		0.910			0.857	
Fl _t Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1690	0	1735	1565	0
Fl _t Permitted	0.950			0.950				0.963		0.754		
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1641	0	1377	1565	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	135	1723	12	71	2041	112	1	1	4	97	4	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	1723	12	71	2041	112	0	6	0	97	85	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	19.0	125.0	125.0	19.0	125.0	125.0	36.0	36.0		36.0	36.0	
Total Split (%)	10.6%	69.4%	69.4%	10.6%	69.4%	69.4%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	14.0	134.0	134.0	14.0	134.0	134.0		17.0		17.0	17.0	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.08	0.74	0.74	0.08	0.74	0.74		0.09		0.09	0.09	
v/c Ratio	0.99	0.65	0.01	0.52	0.78	0.10		0.04		0.75	0.57	
Control Delay	141.0	1.5	0.3	76.5	7.5	4.8		70.5		110.2	92.1	
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0		0.0		0.0	0.0	
Total Delay	141.0	1.5	0.3	76.5	7.5	4.8		70.5		110.2	92.1	
LOS	F	A	A	E	A	A		E		F	F	
Approach Delay		11.5			9.6			70.5			101.7	
Approach LOS		B			A			E			F	
Queue Length 50th (ft)	169	4	0	82	228	24		7		114	98	
Queue Length 95th (ft)	m#251	197	m1	m102	177	m20		19		134	119	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	137	2633	1178	136	2608	1166		282		237	269	
Starvation Cap Reductn	0	0	0	0	33	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.99	0.65	0.01	0.52	0.79	0.10		0.02		0.41	0.32	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 149 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 14.4 Intersection LOS: B
 Intersection Capacity Utilization 85.0% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

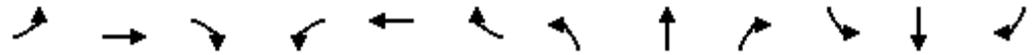
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕↗		↖	↕↕	↗	↖	↕	↗	↕↕	↗	
Traffic Volume (vph)	9	1737	6	49	2141	390	29	29	201	94	7	5
Future Volume (vph)	9	1737	6	49	2141	390	29	29	201	94	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t						0.850			0.850		0.936	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1547			949			414			625	
Travel Time (s)		23.4			14.4			11.3			17.0	
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1809	6	53	2327	424	34	34	236	111	8	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1815	0	53	2327	424	34	34	236	111	14	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	119.0		33.0	139.0	139.0	14.0	14.0	33.0	14.0	14.0	
Total Split (%)	7.2%	66.1%		18.3%	77.2%	77.2%	7.8%	7.8%	18.3%	7.8%	7.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.8	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.8	121.6		23.5	144.9	144.9	13.8	8.5	34.4	9.0	8.3	

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 			 		
Traffic Volume (vph)	338	1308	223	120	1327	164	219	94	47	215	120	167
Future Volume (vph)	338	1308	223	120	1327	164	219	94	47	215	120	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3434	1863	1584	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	3434	1863	1563	3436	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	352	1363	232	125	1382	171	235	101	51	244	136	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	352	1363	232	125	1382	171	235	101	51	244	136	190
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	103.0	24.0	26.0	98.0	24.0	24.0	27.0	26.0	24.0	27.0	27.0
Total Split (%)	17.2%	57.2%	13.3%	14.4%	54.4%	13.3%	13.3%	15.0%	14.4%	13.3%	15.0%	15.0%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

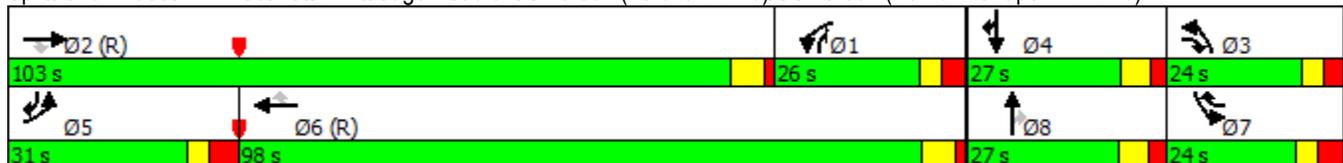


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.2	102.0	125.1	21.0	99.8	119.4	18.1	17.4	38.4	19.6	18.9	43.1
Actuated g/C Ratio	0.13	0.57	0.70	0.12	0.55	0.66	0.10	0.10	0.21	0.11	0.10	0.24
v/c Ratio	0.81	0.69	0.21	0.61	0.71	0.16	0.68	0.56	0.15	0.65	0.69	0.50
Control Delay	90.9	30.7	10.7	70.8	19.0	3.5	88.6	89.2	53.7	85.5	95.8	43.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.9	30.7	10.7	70.8	19.0	3.5	88.6	89.2	53.7	85.5	95.8	43.9
LOS	F	C	B	E	B	A	F	F	D	F	F	D
Approach Delay		39.2			21.3			84.2			74.1	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	210	604	94	144	346	26	139	116	48	143	157	151
Queue Length 95th (ft)	268	707	140	213	377	47	191	182	87	193	230	205
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	488	1976	1076	204	1943	1043	366	227	335	383	228	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.69	0.22	0.61	0.71	0.16	0.64	0.44	0.15	0.64	0.60	0.44

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 76 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 40.8
 Intersection LOS: D
 Intersection Capacity Utilization 71.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



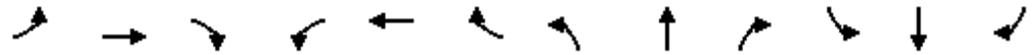
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	1466	16	77	1508	59	1	4	1	56	2	92
Future Volume (vph)	89	1466	16	77	1508	59	1	4	1	56	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.850		0.983			0.854	
Fl _t Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1712	0	1752	1575	0
Fl _t Permitted	0.950			0.950				0.971		0.752		
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1672	0	1387	1575	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	93	1527	17	81	1587	62	1	6	1	74	3	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	1527	17	81	1587	62	0	8	0	74	124	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	22.0	119.0	119.0	23.0	120.0	120.0	38.0	38.0		38.0	38.0	
Total Split (%)	12.2%	66.1%	66.1%	12.8%	66.7%	66.7%	21.1%	21.1%		21.1%	21.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	13.3	132.2	132.2	14.3	133.2	133.2		18.6		18.6	18.6	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.07	0.73	0.73	0.08	0.74	0.74		0.10		0.10	0.10	
v/c Ratio	0.72	0.59	0.01	0.58	0.61	0.05		0.05		0.52	0.77	
Control Delay	109.9	1.9	1.1	82.0	5.5	4.4		69.7		88.0	106.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	109.9	1.9	1.1	82.0	5.5	4.4		69.7		88.0	106.2	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		8.1			9.0			69.7			99.4	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	117	12	0	95	114	8		9		84	145	
Queue Length 95th (ft)	m172	179	m2	m147	141	m13		22		116	179	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	165	2573	1151	175	2593	1160		306		254	288	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.56	0.59	0.01	0.46	0.61	0.05		0.03		0.29	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 65 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.7
 Intersection LOS: B
 Intersection Capacity Utilization 69.8%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

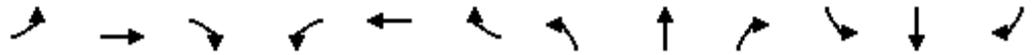
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

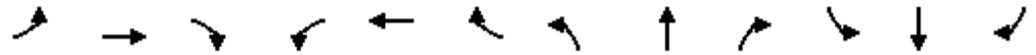


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗	↗	↘	↗	↗	↗↗	↗	↗
Traffic Volume (vph)	26	1477	13	55	1604	187	23	17	110	143	10	24
Future Volume (vph)	26	1477	13	55	1604	187	23	17	110	143	10	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t		0.999				0.850			0.850		0.894	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1649	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1649	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	27	1523	13	59	1725	201	28	21	134	186	13	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1536	0	59	1725	201	28	21	134	186	44	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	14.0
Total Split (s)	14.0	122.0		22.0	130.0	130.0	15.0	14.0	22.0	22.0	21.0	21.0
Total Split (%)	7.8%	67.8%		12.2%	72.2%	72.2%	8.3%	7.8%	12.2%	12.2%	11.7%	11.7%
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	3.1
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	3.0
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2	-0.8	-2.0	-1.1	-1.1
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.8	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effect Green (s)	8.7	125.1		14.4	133.3	133.3	8.8	8.4	19.5	17.4	13.7	13.7

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.05	0.70		0.08	0.74	0.74	0.05	0.05	0.11	0.10	0.08	
v/c Ratio	0.32	0.44		0.42	0.66	0.17	0.33	0.24	0.79	0.57	0.35	
Control Delay	72.5	3.2		88.1	15.2	8.7	92.8	89.9	98.4	84.7	86.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.5	3.2		88.1	15.2	8.7	92.8	89.9	98.4	84.7	86.2	
LOS	E	A		F	B	A	F	F	F	F	F	
Approach Delay		4.4			16.7			96.6				85.0
Approach LOS		A			B			F				F
Queue Length 50th (ft)	32	63		69	600	77	33	24	130	110	50	
Queue Length 95th (ft)	m55	60		121	685	114	65	53	171	131	83	
Internal Link Dist (ft)		1467			869			334				545
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	87	3495		165	2595	1160	90	92	193	344	146	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.31	0.44		0.36	0.66	0.17	0.31	0.23	0.69	0.54	0.30	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 71 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 19.5
 Intersection LOS: B
 Intersection Capacity Utilization 64.8%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	1837	354	130	1566	208	336	104	59	233	153	164
Future Volume (vph)	385	1837	354	130	1566	208	336	104	59	233	153	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	3502	1900	1615	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	3502	1900	1593	3472	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	405	1934	373	135	1631	217	357	111	63	284	187	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	405	1934	373	135	1631	217	357	111	63	284	187	200
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	30.0	111.0	25.0	20.0	101.0	26.0	25.0	23.0	20.0	26.0	24.0	24.0
Total Split (%)	16.7%	61.7%	13.9%	11.1%	56.1%	14.4%	13.9%	12.8%	11.1%	14.4%	13.3%	13.3%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None						

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	24.2	106.0	131.1	15.0	96.8	119.3	20.1	16.6	31.6	22.4	18.9	44.1
Actuated g/C Ratio	0.13	0.59	0.73	0.08	0.54	0.66	0.11	0.09	0.18	0.12	0.10	0.24
v/c Ratio	0.88	0.93	0.33	0.92	0.86	0.21	0.92	0.63	0.23	0.65	0.94	0.51
Control Delay	97.2	43.2	9.6	111.9	28.8	4.2	106.5	95.2	61.3	83.4	128.1	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	43.2	9.6	111.9	28.8	4.2	106.5	95.2	61.3	83.4	128.1	44.2
LOS	F	D	A	F	C	A	F	F	E	F	F	D
Approach Delay		46.7			31.8			98.8				84.2
Approach LOS		D			C			F				F
Queue Length 50th (ft)	244	1066	146	157	494	35	219	128	62	169	223	158
Queue Length 95th (ft)	#328	1194	196	m#280	786	82	#317	202	110	203	#333	204
Internal Link Dist (ft)		1032			1744			573				465
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	474	2074	1146	147	1903	1048	390	190	280	434	199	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.93	0.33	0.92	0.86	0.21	0.92	0.58	0.23	0.65	0.94	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 138 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 50.6 Intersection LOS: D
 Intersection Capacity Utilization 92.3% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



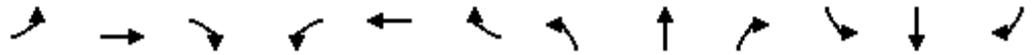
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	2063	47	113	1791	80	1	1	10	106	7	124
Future Volume (vph)	44	2063	47	113	1791	80	1	1	10	106	7	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00				1.00			0.99	
Frt			0.850			0.850		0.882			0.858	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1752	1562	0
Flt Permitted	0.950			0.950				0.985		0.747		
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1610	0	1378	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	46	2149	49	119	1885	84	1	1	14	154	10	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	2149	49	119	1885	84	0	16	0	154	190	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	14.0	123.0	123.0	21.0	130.0	130.0	36.0	36.0		36.0	36.0	
Total Split (%)	7.8%	68.3%	68.3%	11.7%	72.2%	72.2%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	8.5	125.0	125.0	14.7	133.7	133.7		25.4		25.4	25.4	
Actuated g/C Ratio	0.05	0.69	0.69	0.08	0.74	0.74		0.14		0.14	0.14	
v/c Ratio	0.55	0.88	0.05	0.83	0.72	0.07		0.07		0.79	0.86	
Control Delay	89.8	6.4	1.9	92.2	5.4	4.1		65.0		101.9	108.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	89.8	6.4	1.9	92.2	5.4	4.1		65.0		101.9	108.7	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		8.0			10.3			65.0			105.7	
Approach LOS		A			B			E			F	
Queue Length 50th (ft)	57	215	4	140	167	14		17		178	222	
Queue Length 95th (ft)	m65	224	m6	m185	108	m10		34		191	229	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	88	2456	1076	157	2628	1175		277		237	269	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.52	0.88	0.05	0.76	0.72	0.07		0.06		0.65	0.71	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 124 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 16.4

Intersection LOS: B

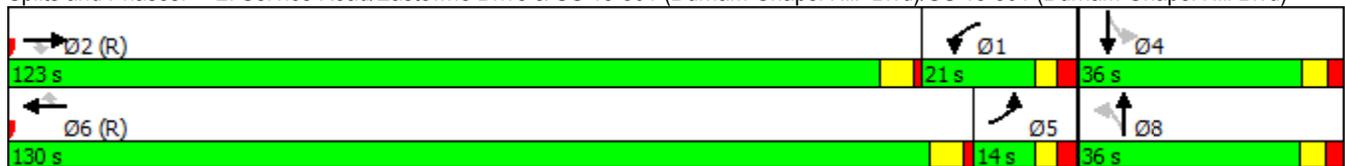
Intersection Capacity Utilization 88.7%

ICU Level of Service E

Analysis Period (min) 15

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

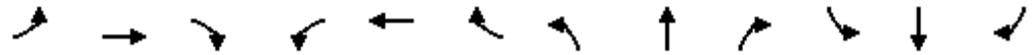
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

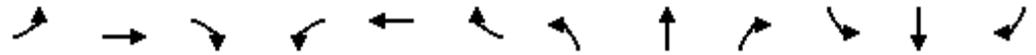


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕	↖	↖	↕	↖	↕↕	↕	↖
Traffic Volume (vph)	5	2097	16	76	1910	166	29	20	254	348	28	19
Future Volume (vph)	5	2097	16	76	1910	166	29	20	254	348	28	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850			0.850		0.939	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1732	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1732	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2255	17	82	2054	178	39	27	343	470	38	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2272	0	82	2054	178	39	27	343	470	64	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	96.0		39.0	122.0	122.0	15.0	14.0	39.0	31.0	30.0	
Total Split (%)	7.2%	53.3%		21.7%	67.8%	67.8%	8.3%	7.8%	21.7%	17.2%	16.7%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.8	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.7	93.2		34.1	129.7	129.7	19.1	8.4	40.9	26.9	15.6	
Actuated g/C Ratio	0.04	0.52		0.19	0.72	0.72	0.11	0.05	0.23	0.15	0.09	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.86		0.24	0.81	0.16	0.21	0.31	0.95	0.93	0.43	
Control Delay	69.2	22.4		64.4	21.4	9.2	75.3	92.5	97.3	99.4	88.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.2	22.4		64.4	21.4	9.2	75.3	92.5	97.3	99.4	88.9	
LOS	E	C		E	C	A	E	F	F	F	F	
Approach Delay		22.5			22.0			94.9			98.1	
Approach LOS		C			C			F			F	
Queue Length 50th (ft)	6	658		84	787	61	42	32	289	287	75	
Queue Length 95th (ft)	m6	746		141	1138	117	71	56	301	285	105	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	2629		337	2549	1140	190	93	363	508	247	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.86		0.24	0.81	0.16	0.21	0.29	0.94	0.93	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 154 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 35.0
 Intersection LOS: C
 Intersection Capacity Utilization 87.7%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	1512	235	182	1784	175	212	114	36	303	167	144
Future Volume (vph)	375	1512	235	182	1784	175	212	114	36	303	167	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00		0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3468	1882	1599	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	3487	1560	1752	3505	1548	3451	1882	1578	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)	1					1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	408	1643	255	186	1820	179	241	130	41	319	176	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	408	1643	255	186	1820	179	241	130	41	319	176	152
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	106.0	20.0	29.0	106.0	24.0	20.0	21.0	29.0	24.0	25.0	25.0
Total Split (%)	16.1%	58.9%	11.1%	16.1%	58.9%	13.3%	11.1%	11.7%	16.1%	13.3%	13.9%	13.9%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.6	101.6	121.9	24.0	102.0	120.6	15.3	15.8	39.8	18.6	19.1	43.7
Actuated g/C Ratio	0.13	0.56	0.68	0.13	0.57	0.67	0.08	0.09	0.22	0.10	0.11	0.24
v/c Ratio	0.92	0.83	0.24	0.80	0.92	0.17	0.82	0.79	0.12	0.89	0.88	0.39
Control Delay	102.8	37.3	12.0	79.4	29.6	3.2	102.1	110.8	53.2	104.8	116.5	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.8	37.3	12.0	79.4	29.6	3.2	102.1	110.8	53.2	104.8	116.5	43.0
LOS	F	D	B	E	C	A	F	F	D	F	F	D
Approach Delay		46.1			31.7			100.0				93.5
Approach LOS		D			C			F				F
Queue Length 50th (ft)	248	828	112	216	864	27	147	153	38	194	208	122
Queue Length 95th (ft)	#347	934	157	m266	911	m50	#211	#255	72	#278	#347	184
Internal Link Dist (ft)		1032			1744			573				465
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	451	1968	1056	233	1985	1042	295	167	351	367	210	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.83	0.24	0.80	0.92	0.17	0.82	0.78	0.12	0.87	0.84	0.38

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 158 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 49.9

Intersection LOS: D

Intersection Capacity Utilization 91.5%

ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

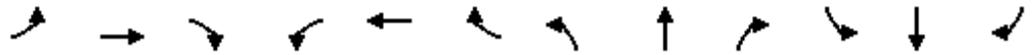
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

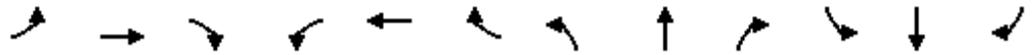
2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1765	13	72	2069	114	1	1	3	72	3	60
Future Volume (vph)	138	1765	13	72	2069	114	1	1	3	72	3	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.850		0.910			0.857	
Fl _t Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1690	0	1735	1565	0
Fl _t Permitted	0.950			0.950				0.964		0.754		
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1642	0	1377	1565	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	141	1801	13	74	2133	118	1	1	4	103	4	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	1801	13	74	2133	118	0	6	0	103	90	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	19.0	125.0	125.0	19.0	125.0	125.0	36.0	36.0		36.0	36.0	
Total Split (%)	10.6%	69.4%	69.4%	10.6%	69.4%	69.4%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	14.0	133.2	133.2	14.0	133.2	133.2		17.8		17.8	17.8	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

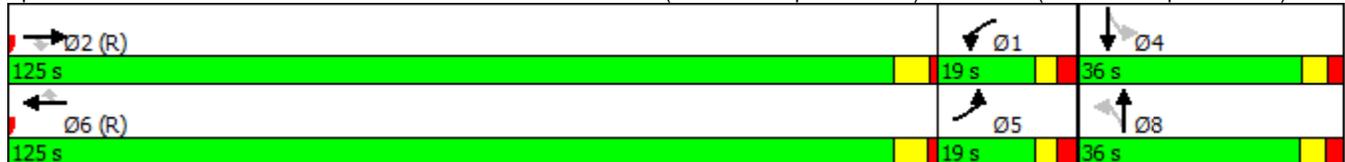


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.08	0.74	0.74	0.08	0.74	0.74		0.10		0.10	0.10	
v/c Ratio	1.03	0.69	0.01	0.54	0.82	0.10		0.04		0.76	0.58	
Control Delay	145.5	1.7	0.5	75.5	8.5	5.0		69.8		109.9	91.4	
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0		0.0		0.0	0.0	
Total Delay	145.5	1.7	0.5	75.5	8.6	5.0		69.8		109.9	91.4	
LOS	F	A	A	E	A	A		E		F	F	
Approach Delay		12.1			10.5			69.8			101.3	
Approach LOS		B			B			E			F	
Queue Length 50th (ft)	~181	5	1	86	238	25		7		121	104	
Queue Length 95th (ft)	m#251	206	m1	m101	302	m21		19		142	124	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	137	2618	1171	136	2593	1160		282		237	269	
Starvation Cap Reductn	0	0	0	0	30	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	1.03	0.69	0.01	0.54	0.83	0.10		0.02		0.43	0.33	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 149 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 15.2 Intersection LOS: B
 Intersection Capacity Utilization 88.0% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

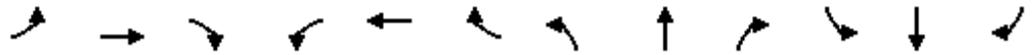
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

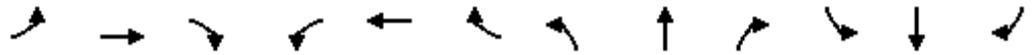


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕↘		↘	↕↕	↘	↘	↕	↘	↕↕	↘	↘
Traffic Volume (vph)	9	1815	6	51	2237	408	30	30	210	98	7	5
Future Volume (vph)	9	1815	6	51	2237	408	30	30	210	98	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt						0.850			0.850		0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1891	6	55	2432	443	35	35	247	115	8	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1897	0	55	2432	443	35	35	247	115	14	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	119.0		33.0	139.0	139.0	14.0	14.0	33.0	14.0	14.0	
Total Split (%)	7.2%	66.1%		18.3%	77.2%	77.2%	7.8%	7.8%	18.3%	7.8%	7.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.8	120.7		24.5	144.9	144.9	14.6	8.5	35.3	9.0	8.3	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.04	0.67		0.14	0.80	0.80	0.08	0.05	0.20	0.05	0.05	
v/c Ratio	0.12	0.56		0.23	0.86	0.35	0.24	0.40	0.80	0.68	0.18	
Control Delay	65.8	3.9		71.1	17.7	6.7	83.2	96.9	87.3	104.0	88.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.8	3.9		71.1	17.7	6.7	83.2	96.9	87.3	104.0	88.1	
LOS	E	A		E	B	A	F	F	F	F	F	
Approach Delay		4.2			17.0			87.9			102.3	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	11	87		59	761	112	38	41	277	70	16	
Queue Length 95th (ft)	m15	90		106	1305	228	79	80	352	102	42	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	3408		272	2821	1262	143	92	340	169	86	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.12	0.56		0.20	0.86	0.35	0.24	0.38	0.73	0.68	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 160 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 18.7
 Intersection LOS: B
 Intersection Capacity Utilization 79.6%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



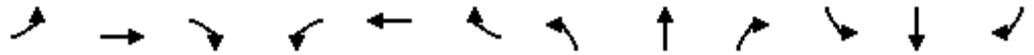
Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	1367	233	125	1387	171	229	98	49	225	125	175
Future Volume (vph)	353	1367	233	125	1387	171	229	98	49	225	125	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3434	1863	1584	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	3434	1863	1563	3437	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	368	1424	243	130	1445	178	246	105	53	256	142	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1424	243	130	1445	178	246	105	53	256	142	199
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	103.0	24.0	26.0	98.0	24.0	24.0	27.0	26.0	24.0	27.0	27.0
Total Split (%)	17.2%	57.2%	13.3%	14.4%	54.4%	13.3%	13.3%	15.0%	14.4%	13.3%	15.0%	15.0%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

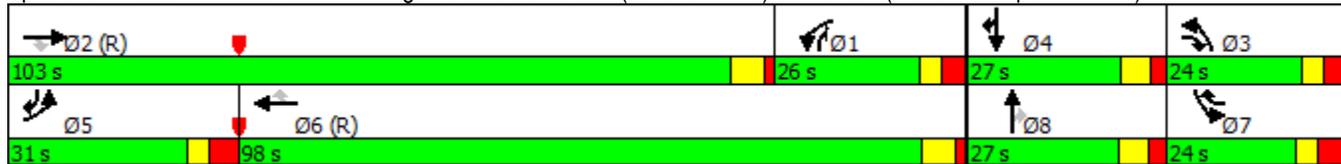


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	23.7	101.4	124.7	21.0	98.7	118.6	18.3	17.7	38.7	19.9	19.3	44.0
Actuated g/C Ratio	0.13	0.56	0.69	0.12	0.55	0.66	0.10	0.10	0.22	0.11	0.11	0.24
v/c Ratio	0.83	0.73	0.23	0.64	0.75	0.17	0.70	0.57	0.16	0.67	0.71	0.51
Control Delay	92.2	32.3	11.0	72.2	20.9	3.8	89.7	89.5	53.6	86.2	96.6	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.2	32.3	11.0	72.2	20.9	3.8	89.7	89.5	53.6	86.2	96.6	43.7
LOS	F	C	B	E	C	A	F	F	D	F	F	D
Approach Delay		40.6			22.9			84.9			74.5	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	220	658	100	148	362	27	145	121	50	150	164	156
Queue Length 95th (ft)	280	759	147	223	493	57	199	187	90	202	239	215
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	488	1963	1071	204	1921	1035	366	227	338	387	228	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.73	0.23	0.64	0.75	0.17	0.67	0.46	0.16	0.66	0.62	0.46

Intersection Summary

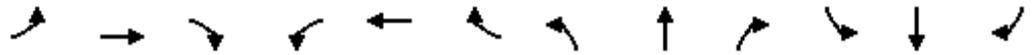
Area Type:	Other
Cycle Length:	180
Actuated Cycle Length:	180
Offset:	76 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	42.1
Intersection LOS:	D
Intersection Capacity Utilization:	78.2%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

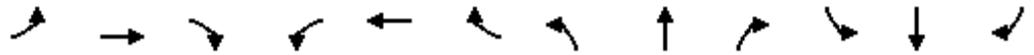
2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	1532	17	80	1576	62	1	4	1	59	2	96
Future Volume (vph)	93	1532	17	80	1576	62	1	4	1	59	2	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.853	
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1712	0	1752	1573	0
Flt Permitted	0.950			0.950				0.971		0.752		
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1672	0	1387	1573	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	97	1596	18	84	1659	65	1	6	1	78	3	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	1596	18	84	1659	65	0	8	0	78	129	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	22.0	119.0	119.0	23.0	120.0	120.0	38.0	38.0		38.0	38.0	
Total Split (%)	12.2%	66.1%	66.1%	12.8%	66.7%	66.7%	21.1%	21.1%		21.1%	21.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	13.6	131.3	131.3	14.6	132.3	132.3		19.1		19.1	19.1	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.08	0.73	0.73	0.08	0.74	0.74		0.11		0.11	0.11	
v/c Ratio	0.73	0.62	0.02	0.60	0.64	0.06		0.05		0.53	0.77	
Control Delay	108.7	2.1	1.1	80.9	5.7	4.5		69.0		87.9	106.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	108.7	2.1	1.1	80.9	5.7	4.5		69.0		87.9	106.3	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		8.2			9.2			69.0			99.4	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	121	13	0	98	121	9		9		89	151	
Queue Length 95th (ft)	m171	188	m2	m145	146	m13		22		121	185	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	165	2556	1143	175	2576	1152		306		254	288	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.59	0.62	0.02	0.48	0.64	0.06		0.03		0.31	0.45	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 65 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.8
 Intersection LOS: B
 Intersection Capacity Utilization 71.8%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

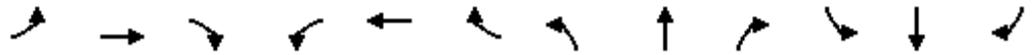
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

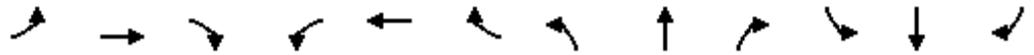


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕	↖	↖	↕	↖	↕↕	↕	↖
Traffic Volume (vph)	27	1543	14	57	1676	195	24	18	115	149	10	25
Future Volume (vph)	27	1543	14	57	1676	195	24	18	115	149	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t		0.999				0.850			0.850		0.893	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1647	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1647	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	28	1591	14	61	1802	210	29	22	140	194	13	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	1605	0	61	1802	210	29	22	140	194	45	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	14.0
Total Split (s)	14.0	122.0		22.0	130.0	130.0	15.0	14.0	22.0	22.0	21.0	21.0
Total Split (%)	7.8%	67.8%		12.2%	72.2%	72.2%	8.3%	7.8%	12.2%	12.2%	11.7%	11.7%
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	3.1
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	3.0
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2	-0.8	-2.0	-1.1	-1.1
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.8	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effect Green (s)	8.7	124.4		14.9	133.1	133.1	8.8	8.4	20.0	17.6	13.9	13.9

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.05	0.69		0.08	0.74	0.74	0.05	0.05	0.11	0.10	0.08	
v/c Ratio	0.33	0.46		0.42	0.70	0.18	0.34	0.26	0.80	0.58	0.36	
Control Delay	71.4	3.2		87.4	16.1	8.8	93.4	90.4	99.5	85.3	86.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.4	3.2		87.4	16.1	8.8	93.4	90.4	99.5	85.3	86.3	
LOS	E	A		F	B	A	F	F	F	F	F	
Approach Delay		4.4			17.5			97.5				85.5
Approach LOS		A			B			F				F
Queue Length 50th (ft)	33	65		71	661	82	34	26	135	114	51	
Queue Length 95th (ft)	m55	63		123	745	119	67	55	177	137	83	
Internal Link Dist (ft)		1467			869			334				545
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	87	3476		166	2592	1159	90	92	194	346	146	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.32	0.46		0.37	0.70	0.18	0.32	0.24	0.72	0.56	0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 71 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 19.9
 Intersection LOS: B
 Intersection Capacity Utilization 66.6%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	1920	370	136	1636	217	351	109	62	243	160	171
Future Volume (vph)	402	1920	370	136	1636	217	351	109	62	243	160	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	3502	1900	1615	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	3502	1900	1593	3472	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	423	2021	389	142	1704	226	373	116	66	296	195	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	423	2021	389	142	1704	226	373	116	66	296	195	209
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	30.0	111.0	25.0	20.0	101.0	26.0	25.0	23.0	20.0	26.0	24.0	24.0
Total Split (%)	16.7%	61.7%	13.9%	11.1%	56.1%	14.4%	13.9%	12.8%	11.1%	14.4%	13.3%	13.3%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	None

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	24.5	106.0	131.0	15.0	96.5	118.8	20.0	16.7	31.7	22.3	19.0	44.5
Actuated g/C Ratio	0.14	0.59	0.73	0.08	0.54	0.66	0.11	0.09	0.18	0.12	0.11	0.25
v/c Ratio	0.91	0.97	0.34	0.97	0.90	0.22	0.96	0.66	0.23	0.69	0.98	0.53
Control Delay	100.4	50.1	9.8	120.5	32.0	4.5	114.2	96.6	61.4	84.9	136.3	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.4	50.1	9.8	120.5	32.0	4.5	114.2	96.6	61.4	84.9	136.3	44.9
LOS	F	D	A	F	C	A	F	F	E	F	F	D
Approach Delay		52.1			35.1			104.3				87.3
Approach LOS		D			D			F				F
Queue Length 50th (ft)	257	1180	154	167	654	44	229	134	65	177	234	166
Queue Length 95th (ft)	#352	#1390	207	m#280	892	m84	#339	210	115	210	#353	212
Internal Link Dist (ft)		1032			1744			573				465
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	474	2074	1146	147	1897	1044	389	190	282	431	199	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.97	0.34	0.97	0.90	0.22	0.96	0.61	0.23	0.69	0.98	0.52

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 138 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 55.0 Intersection LOS: E
 Intersection Capacity Utilization 95.7% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



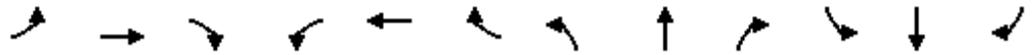
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	2156	49	118	1872	84	1	1	10	111	7	130
Future Volume (vph)	46	2156	49	118	1872	84	1	1	10	111	7	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00				1.00			0.99	
Frt			0.850			0.850		0.882			0.858	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1752	1562	0
Flt Permitted	0.950			0.950				0.985		0.747		
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1610	0	1378	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	48	2246	51	124	1971	88	1	1	14	161	10	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	2246	51	124	1971	88	0	16	0	161	198	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	14.0	123.0	123.0	21.0	130.0	130.0	36.0	36.0		36.0	36.0	
Total Split (%)	7.8%	68.3%	68.3%	11.7%	72.2%	72.2%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

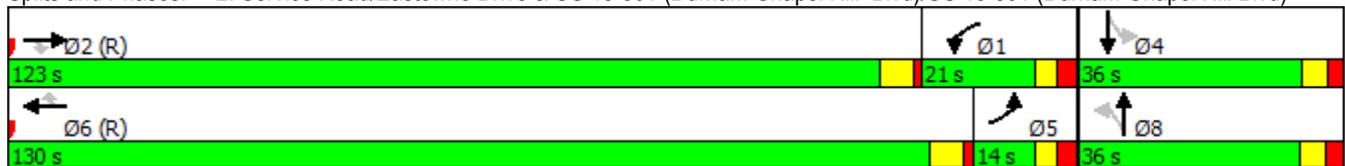


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	8.6	123.9	123.9	14.8	132.8	132.8		26.2		26.2	26.2	
Actuated g/C Ratio	0.05	0.69	0.69	0.08	0.74	0.74		0.15		0.15	0.15	
v/c Ratio	0.57	0.92	0.05	0.86	0.76	0.08		0.07		0.81	0.87	
Control Delay	88.0	8.4	2.0	92.0	5.6	4.2		64.3		101.8	108.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	88.0	8.4	2.0	92.0	5.6	4.2		64.3		101.8	108.2	
LOS	F	A	A	F	A	A		E		F	F	
Approach Delay		9.9			10.5			64.3			105.3	
Approach LOS		A			B			E			F	
Queue Length 50th (ft)	60	225	4	146	175	15		16		186	231	
Queue Length 95th (ft)	m65	m303	m6	m184	113	m10		34		199	238	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	88	2436	1067	157	2610	1167		277		237	269	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.55	0.92	0.05	0.79	0.76	0.08		0.06		0.68	0.74	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 124 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 17.3
 Intersection LOS: B
 Intersection Capacity Utilization 91.9%
 ICU Level of Service F
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

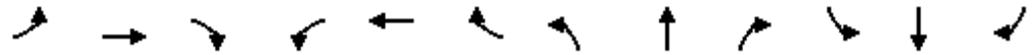
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

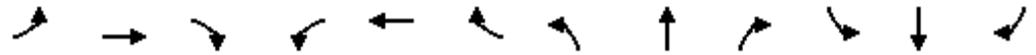


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕	↖	↖	↕	↖	↕↕	↖	↖
Traffic Volume (vph)	5	2191	17	79	1996	173	30	21	265	364	29	20
Future Volume (vph)	5	2191	17	79	1996	173	30	21	265	364	29	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850			0.850		0.939	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1732	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1732	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2356	18	85	2146	186	41	28	358	492	39	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2374	0	85	2146	186	41	28	358	492	66	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	96.0		39.0	122.0	122.0	15.0	14.0	39.0	31.0	30.0	
Total Split (%)	7.2%	53.3%		21.7%	67.8%	67.8%	8.3%	7.8%	21.7%	17.2%	16.7%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-1.2	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.8	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.7	91.3		35.0	128.7	128.7	18.9	8.4	41.8	27.9	16.8	
Actuated g/C Ratio	0.04	0.51		0.19	0.72	0.72	0.10	0.05	0.23	0.16	0.09	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.92		0.25	0.85	0.16	0.22	0.32	0.97	0.93	0.41	
Control Delay	72.0	26.6		64.2	23.8	9.5	75.9	92.9	100.7	99.5	87.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.0	26.6		64.2	23.8	9.5	75.9	92.9	100.7	99.5	87.4	
LOS	E	C		E	C	A	E	F	F	F	F	
Approach Delay		26.7			24.1			97.8			98.1	
Approach LOS		C			C			F			F	
Queue Length 50th (ft)	6	789		87	877	64	44	33	305	303	78	
Queue Length 95th (ft)	m5	846		146	1268	122	73	59	316	300	108	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	2576		344	2530	1131	188	93	369	527	256	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.92		0.25	0.85	0.16	0.22	0.30	0.97	0.93	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 154 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 37.8
 Intersection LOS: D
 Intersection Capacity Utilization 90.6%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



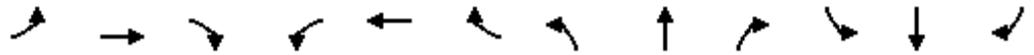
Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	1579	235	183	1793	175	212	114	44	305	167	144
Future Volume (vph)	375	1579	235	183	1793	175	212	114	44	305	167	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00		0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3468	1882	1599	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	3487	1560	1752	3505	1548	3451	1882	1578	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)	1					1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	408	1716	255	187	1830	179	241	130	50	321	176	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	408	1716	255	187	1830	179	241	130	50	321	176	152
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	106.0	20.0	29.0	106.0	24.0	20.0	21.0	29.0	24.0	25.0	
Total Split (%)	16.1%	58.9%	11.1%	16.1%	58.9%	13.3%	11.1%	11.7%	16.1%	13.3%	13.9%	
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

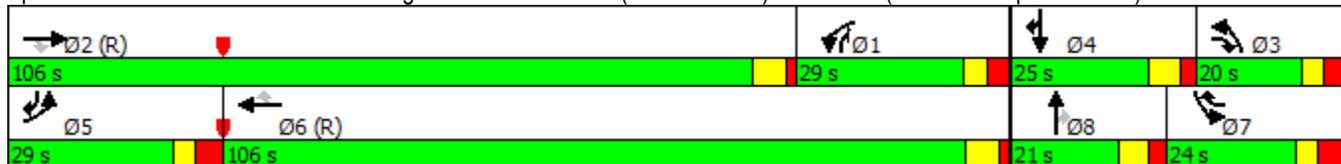


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.6	101.6	121.9	24.0	101.9	120.6	15.3	15.8	39.8	18.7	19.1	43.7
Actuated g/C Ratio	0.13	0.56	0.68	0.13	0.57	0.67	0.08	0.09	0.22	0.10	0.11	0.24
v/c Ratio	0.92	0.87	0.24	0.80	0.92	0.17	0.82	0.79	0.14	0.89	0.88	0.39
Control Delay	102.8	40.0	12.0	79.5	29.9	3.2	101.9	110.8	53.8	105.3	116.5	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.8	40.0	12.0	79.5	29.9	3.2	101.9	110.8	53.8	105.3	116.5	43.0
LOS	F	D	B	E	C	A	F	F	D	F	F	D
Approach Delay		47.8			31.9			98.9			93.7	
Approach LOS		D			C			F			F	
Queue Length 50th (ft)	248	902	112	214	856	26	147	153	46	196	208	122
Queue Length 95th (ft)	#347	1014	157	m266	943	m52	#211	#255	85	#282	#347	184
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	451	1967	1056	233	1984	1042	295	167	351	367	210	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.87	0.24	0.80	0.92	0.17	0.82	0.78	0.14	0.87	0.84	0.38

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 158 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 50.7 Intersection LOS: D
 Intersection Capacity Utilization 91.8% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

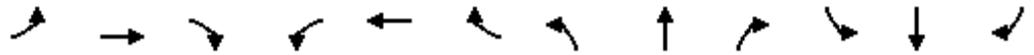
2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	1765	13	72	2069	167	1	1	3	79	4	70
Future Volume (vph)	215	1765	13	72	2069	167	1	1	3	79	4	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.850		0.910			0.858	
Fl _t Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1690	0	1735	1567	0
Fl _t Permitted	0.950			0.950				0.964		0.754		
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1642	0	1377	1567	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	219	1801	13	74	2133	172	1	1	4	113	6	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	219	1801	13	74	2133	172	0	6	0	113	106	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	19.0	125.0	125.0	19.0	125.0	125.0	36.0	36.0		36.0	36.0	
Total Split (%)	10.6%	69.4%	69.4%	10.6%	69.4%	69.4%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	14.0	131.9	131.9	14.0	131.9	131.9		19.1		19.1	19.1	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

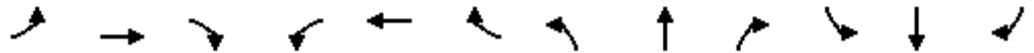


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖	↗	↖	↗	↗	↗↖↗	↗	
Traffic Volume (vph)	9	1822	6	51	2288	469	32	32	210	106	7	5
Future Volume (vph)	9	1822	6	51	2288	469	32	32	210	106	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr't						0.850			0.850		0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1898	6	55	2487	510	38	38	247	125	8	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1904	0	55	2487	510	38	38	247	125	14	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	119.0		33.0	139.0	139.0	14.0	14.0	33.0	14.0	14.0	
Total Split (%)	7.2%	66.1%		18.3%	77.2%	77.2%	7.8%	7.8%	18.3%	7.8%	7.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.8	120.7		24.4	144.9	144.9	14.6	8.5	35.3	9.0	8.3	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

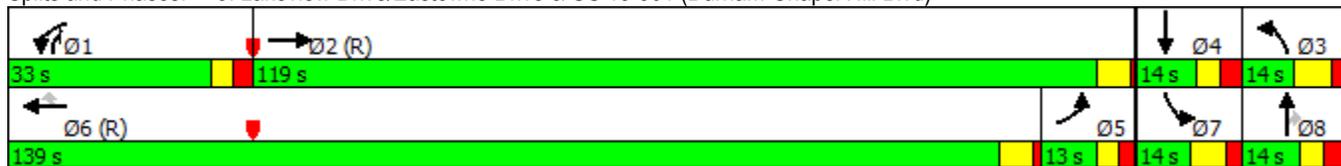


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.04	0.67		0.14	0.80	0.80	0.08	0.05	0.20	0.05	0.05	
v/c Ratio	0.12	0.56		0.23	0.88	0.40	0.27	0.44	0.80	0.74	0.18	
Control Delay	65.4	4.4		71.1	19.0	7.3	83.7	98.8	87.3	108.7	88.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.4	4.4		71.1	19.0	7.3	83.7	98.8	87.3	108.7	88.1	
LOS	E	A		E	B	A	F	F	F	F	F	
Approach Delay		4.7			17.9			88.2			106.6	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	11	94		59	824	138	41	45	277	76	16	
Queue Length 95th (ft)	m15	115		106	1407	276	84	85	352	#114	42	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	3408		272	2821	1262	143	92	340	169	86	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.12	0.56		0.20	0.88	0.40	0.27	0.41	0.73	0.74	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 160 (89%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 19.7 Intersection LOS: B
 Intersection Capacity Utilization 81.3% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



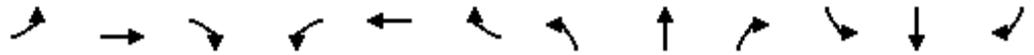
Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	1387	233	126	1404	172	229	98	51	226	125	175
Future Volume (vph)	353	1387	233	126	1404	172	229	98	51	226	125	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3434	1863	1584	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	3434	1863	1563	3437	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	368	1445	243	131	1463	179	246	105	55	257	142	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1445	243	131	1463	179	246	105	55	257	142	199
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	103.0	24.0	26.0	98.0	24.0	24.0	27.0	26.0	24.0	27.0	27.0
Total Split (%)	17.2%	57.2%	13.3%	14.4%	54.4%	13.3%	13.3%	15.0%	14.4%	13.3%	15.0%	15.0%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

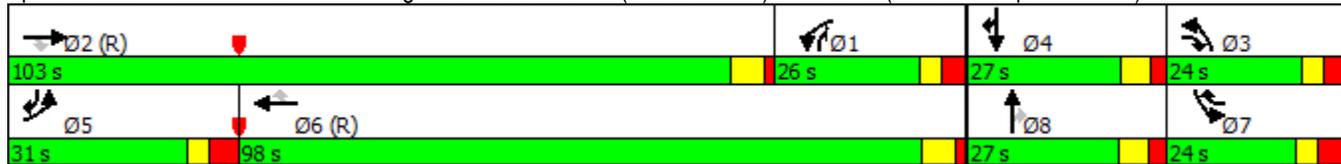


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	23.7	101.4	124.7	21.0	98.7	118.6	18.3	17.7	38.7	19.9	19.3	44.0
Actuated g/C Ratio	0.13	0.56	0.69	0.12	0.55	0.66	0.10	0.10	0.22	0.11	0.11	0.24
v/c Ratio	0.83	0.74	0.23	0.64	0.76	0.17	0.70	0.57	0.16	0.67	0.71	0.51
Control Delay	92.2	32.8	11.0	71.8	20.6	3.7	89.7	89.5	53.7	86.3	96.6	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.2	32.8	11.0	71.8	20.6	3.7	89.7	89.5	53.7	86.3	96.6	43.7
LOS	F	C	B	E	C	A	F	F	D	F	F	D
Approach Delay		40.8			22.7			84.8			74.6	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	220	675	100	148	375	27	145	121	51	151	164	156
Queue Length 95th (ft)	280	777	147	225	524	58	199	187	92	202	239	215
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	488	1963	1071	204	1921	1035	366	227	338	387	228	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.74	0.23	0.64	0.76	0.17	0.67	0.46	0.16	0.66	0.62	0.46

Intersection Summary

Area Type:	Other
Cycle Length:	180
Actuated Cycle Length:	180
Offset:	76 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	42.1
Intersection LOS:	D
Intersection Capacity Utilization:	78.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



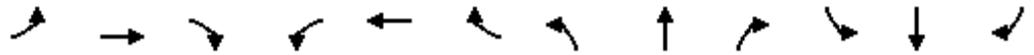
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1532	17	80	1576	78	1	4	1	73	3	115
Future Volume (vph)	116	1532	17	80	1576	78	1	4	1	73	3	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.983			0.854	
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1712	0	1752	1575	0
Flt Permitted	0.950			0.950				0.972		0.752		
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1674	0	1387	1575	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	121	1596	18	84	1659	82	1	6	1	96	4	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	1596	18	84	1659	82	0	8	0	96	155	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	22.0	119.0	119.0	23.0	120.0	120.0	38.0	38.0		38.0	38.0	
Total Split (%)	12.2%	66.1%	66.1%	12.8%	66.7%	66.7%	21.1%	21.1%		21.1%	21.1%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effect Green (s)	15.2	126.7	126.7	16.2	127.7	127.7		22.1		22.1	22.1	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.08	0.70	0.70	0.09	0.71	0.71		0.12		0.12	0.12	
v/c Ratio	0.82	0.65	0.02	0.53	0.67	0.07		0.04		0.57	0.80	
Control Delay	114.3	3.2	1.5	77.1	6.5	5.0		66.0		86.2	104.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	114.3	3.2	1.5	77.1	6.5	5.0		66.0		86.2	104.8	
LOS	F	A	A	E	A	A		E		F	F	
Approach Delay		10.9			9.7			66.0			97.7	
Approach LOS		B			A			E			F	
Queue Length 50th (ft)	151	163	1	99	137	11		9		109	181	
Queue Length 95th (ft)	m#213	188	m3	m144	146	m18		21		141	213	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	165	2466	1103	175	2486	1112		306		254	288	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.73	0.65	0.02	0.48	0.67	0.07		0.03		0.38	0.54	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 65 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 16.1 Intersection LOS: B
 Intersection Capacity Utilization 73.2% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

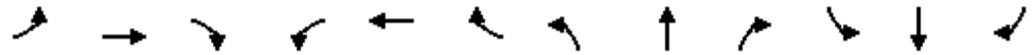
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

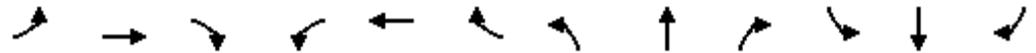


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1556	15	57	1691	213	25	19	115	165	11	25
Future Volume (vph)	27	1556	15	57	1691	213	25	19	115	165	11	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850			0.850		0.896	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1652	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1652	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	28	1604	15	61	1818	229	30	23	140	214	14	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	1619	0	61	1818	229	30	23	140	214	46	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	14.0
Total Split (s)	14.0	122.0		22.0	130.0	130.0	15.0	14.0	22.0	22.0	21.0	21.0
Total Split (%)	7.8%	67.8%		12.2%	72.2%	72.2%	8.3%	7.8%	12.2%	12.2%	11.7%	11.7%
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	3.1
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	3.0
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	-1.1
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effect Green (s)	8.7	124.2		14.9	132.9	132.9	9.6	8.4	20.0	17.8	14.1	14.1

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.05	0.69		0.08	0.74	0.74	0.05	0.05	0.11	0.10	0.08	
v/c Ratio	0.33	0.47		0.42	0.70	0.20	0.32	0.27	0.80	0.64	0.36	
Control Delay	71.0	3.2		87.4	16.4	9.0	91.2	90.8	99.5	87.2	86.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.0	3.2		87.4	16.4	9.0	91.2	90.8	99.5	87.2	86.2	
LOS	E	A		F	B	A	F	F	F	F	F	
Approach Delay		4.4			17.6			97.1			87.0	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	33	72		71	676	91	35	27	134	127	52	
Queue Length 95th (ft)	m53	70		123	760	130	67	56	177	150	85	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	87	3470		166	2588	1157	97	92	194	347	146	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.32	0.47		0.37	0.70	0.20	0.31	0.25	0.72	0.62	0.32	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 71 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 20.4
 Intersection LOS: C
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	1932	370	140	1696	219	351	109	63	243	160	171
Future Volume (vph)	402	1932	370	140	1696	219	351	109	63	243	160	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	3502	1900	1615	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	3502	1900	1593	3472	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	423	2034	389	146	1767	228	373	116	67	296	195	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	423	2034	389	146	1767	228	373	116	67	296	195	209
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4 5
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4 5
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	30.0	111.0	25.0	20.0	101.0	26.0	25.0	23.0	20.0	26.0	24.0	24.0
Total Split (%)	16.7%	61.7%	13.9%	11.1%	56.1%	14.4%	13.9%	12.8%	11.1%	14.4%	13.3%	13.3%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None						

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	24.5	106.0	131.0	15.0	96.5	118.8	20.0	16.7	31.7	22.3	19.0	44.5
Actuated g/C Ratio	0.14	0.59	0.73	0.08	0.54	0.66	0.11	0.09	0.18	0.12	0.11	0.25
v/c Ratio	0.91	0.98	0.34	0.99	0.93	0.22	0.96	0.66	0.24	0.69	0.98	0.53
Control Delay	100.4	51.4	9.8	120.5	33.3	4.4	114.2	96.6	61.5	84.9	136.3	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.4	51.4	9.8	120.5	33.3	4.4	114.2	96.6	61.5	84.9	136.3	44.9
LOS	F	D	A	F	C	A	F	F	E	F	F	D
Approach Delay		53.0			36.2			104.2				87.3
Approach LOS		D			D			F				F
Queue Length 50th (ft)	257	1197	154	173	807	43	229	134	66	177	234	166
Queue Length 95th (ft)	#352	#1405	207	m#250	m974	m71	#339	210	116	210	#353	212
Internal Link Dist (ft)		1032			1744			573				465
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	474	2074	1146	147	1897	1044	389	190	282	431	199	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.98	0.34	0.99	0.93	0.22	0.96	0.61	0.24	0.69	0.98	0.52

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 138 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 55.6 Intersection LOS: E
 Intersection Capacity Utilization 96.3% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2156	49	118	1872	94	1	1	10	158	11	196
Future Volume (vph)	60	2156	49	118	1872	94	1	1	10	158	11	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	225		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98	1.00				1.00			0.99	
Frt			0.850			0.850		0.882			0.858	
Flt Protected	0.950			0.950				0.997		0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1752	1562	0
Flt Permitted	0.950			0.950				0.882		0.747		
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1442	0	1378	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	63	2246	51	124	1971	99	1	1	14	229	16	284
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	2246	51	124	1971	99	0	16	0	229	300	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	
Total Split (s)	14.0	123.0	123.0	21.0	130.0	130.0	36.0	36.0		36.0	36.0	
Total Split (%)	7.8%	68.3%	68.3%	11.7%	72.2%	72.2%	20.0%	20.0%		20.0%	20.0%	
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead						
Lead-Lag Optimize?												

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	8.8	118.0	118.0	15.8	125.0	125.0		31.2		31.2	31.2	
Actuated g/C Ratio	0.05	0.66	0.66	0.09	0.69	0.69		0.17		0.17	0.17	
v/c Ratio	0.73	0.97	0.05	0.80	0.80	0.09		0.06		0.96	1.11	
Control Delay	95.9	13.1	2.3	83.9	7.1	4.8		63.4		120.2	151.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	95.9	13.1	2.3	83.9	7.1	4.8		63.4		120.2	151.0	
LOS	F	B	A	F	A	A		E		F	F	
Approach Delay		15.1			11.3			63.4			137.7	
Approach LOS		B			B			E			F	
Queue Length 50th (ft)	79	224	6	146	174	17		16		273	~405	
Queue Length 95th (ft)	m85	m268	m6	m181	112	m11		34		281	#392	
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	225		225	400		225				125		
Base Capacity (vph)	88	2320	1016	157	2457	1099		250		239	271	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.72	0.97	0.05	0.79	0.80	0.09		0.06		0.96	1.11	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 124 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 26.3

Intersection LOS: C

Intersection Capacity Utilization 94.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

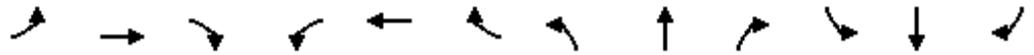
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕↕		↖	↕↕	↖	↖	↕	↖	↕↕	↕	↖
Traffic Volume (vph)	5	2237	19	79	2005	184	30	21	265	419	31	20
Future Volume (vph)	5	2237	19	79	2005	184	30	21	265	419	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t		0.999				0.850			0.850		0.941	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1735	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1735	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2405	20	85	2156	198	41	28	358	566	42	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2425	0	85	2156	198	41	28	358	566	69	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	96.0		39.0	122.0	122.0	15.0	14.0	39.0	31.0	30.0	
Total Split (%)	7.2%	53.3%		21.7%	67.8%	67.8%	8.3%	7.8%	21.7%	17.2%	16.7%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.7	91.0		34.0	127.4	127.4	19.4	8.4	40.8	29.2	18.4	
Actuated g/C Ratio	0.04	0.51		0.19	0.71	0.71	0.11	0.05	0.23	0.16	0.10	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.94		0.25	0.86	0.18	0.21	0.32	0.99	1.03	0.39	
Control Delay	69.8	27.2		64.6	24.9	9.8	75.3	92.9	107.5	115.5	85.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.8	27.2		64.6	24.9	9.8	75.3	92.9	107.5	115.5	85.7	
LOS	E	C		E	C	A	E	F	F	F	F	
Approach Delay		27.3			25.1			103.4			112.3	
Approach LOS		C			C			F			F	
Queue Length 50th (ft)	6	807		87	887	69	44	33	305	~394	81	
Queue Length 95th (ft)	m6	m920		146	1285	130	73	59	316	#381	111	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	2568		334	2504	1120	193	93	360	551	269	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.94		0.25	0.86	0.18	0.21	0.30	0.99	1.03	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 154 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 41.0 Intersection LOS: D
 Intersection Capacity Utilization 92.4% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 			 		
Traffic Volume (vph)	375	1579	235	183	1793	175	212	114	44	305	167	144
Future Volume (vph)	375	1579	235	183	1793	175	212	114	44	305	167	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99	1.00		0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3468	1882	1599	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3382	3487	1560	1752	3505	1548	3451	1882	1578	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)	1					1	1		1	1		1
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	408	1716	255	187	1830	179	241	130	50	321	176	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	408	1716	255	187	1830	179	241	130	50	321	176	152
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	29.0	106.0	20.0	28.0	105.0	25.0	20.0	21.0	28.0	25.0	26.0	26.0
Total Split (%)	16.1%	58.9%	11.1%	15.6%	58.3%	13.9%	11.1%	11.7%	15.6%	13.9%	14.4%	14.4%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

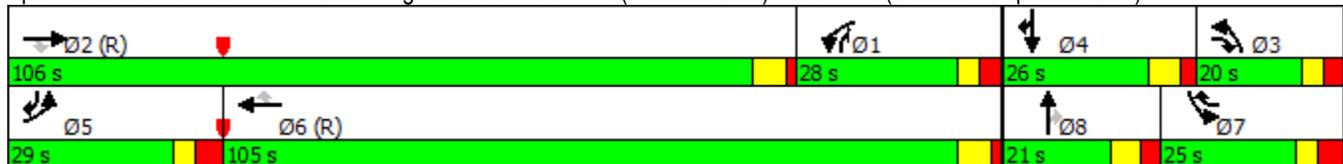


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.6	101.9	122.5	23.0	101.2	120.6	15.6	15.8	38.8	19.4	19.5	44.1
Actuated g/C Ratio	0.13	0.57	0.68	0.13	0.56	0.67	0.09	0.09	0.22	0.11	0.11	0.24
v/c Ratio	0.92	0.87	0.24	0.84	0.93	0.17	0.80	0.79	0.15	0.86	0.86	0.39
Control Delay	102.8	39.7	11.9	78.8	26.6	3.8	100.0	110.8	54.6	100.0	113.1	42.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.8	39.7	11.9	78.8	26.6	3.8	100.0	110.8	54.6	100.0	113.1	42.4
LOS	F	D	B	E	C	A	F	F	D	F	F	D
Approach Delay		47.6			29.2			97.9			90.0	
Approach LOS		D			C			F			F	
Queue Length 50th (ft)	248	902	112	215	868	37	147	153	47	194	206	121
Queue Length 95th (ft)	#347	1014	157	m262	873	m30	#211	#255	86	#270	#334	182
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	451	1973	1061	223	1971	1045	301	167	342	387	220	410
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.87	0.24	0.84	0.93	0.17	0.80	0.78	0.15	0.83	0.80	0.37

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 172 (96%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 49.0 Intersection LOS: D
 Intersection Capacity Utilization 91.8% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

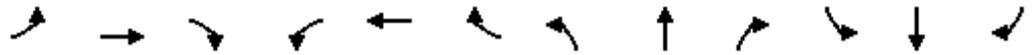


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	1765	13	72	2069	167	1	1	3	79	4	70
Future Volume (vph)	215	1765	13	72	2069	167	1	1	3	79	4	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	400		225	400		225	0		0	125		0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t			0.850			0.850		0.910				0.850
Fl _t Protected	0.950			0.950				0.992		0.950	0.957	
Satd. Flow (prot)	1770	3539	1583	1752	3505	1568	0	1690	0	1648	1660	1552
Fl _t Permitted	0.950			0.950				0.992		0.950	0.957	
Satd. Flow (perm)	1770	3539	1583	1752	3505	1568	0	1690	0	1648	1660	1552
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.98	0.98	0.98	0.97	0.97	0.97	0.75	0.75	0.75	0.70	0.70	0.70
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Adj. Flow (vph)	219	1801	13	74	2133	172	1	1	4	113	6	100
Shared Lane Traffic (%)										47%		
Lane Group Flow (vph)	219	1801	13	74	2133	172	0	6	0	60	59	100
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6	4	3	3		4	4	5
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	4	3	3		4	4	5
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	36.0	14.0	14.0		36.0	36.0	13.0
Total Split (s)	26.0	114.0	114.0	16.0	104.0	36.0	14.0	14.0		36.0	36.0	26.0
Total Split (%)	14.4%	63.3%	63.3%	8.9%	57.8%	20.0%	7.8%	7.8%		20.0%	20.0%	14.4%
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	3.6	3.3	3.3		3.6	3.6	3.0
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	2.3	2.8	2.8		2.3	2.3	2.8
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	-0.8
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None		None	None	None
Act Effect Green (s)	21.0	140.1	140.1	11.0	130.1	146.4		8.1		11.3	11.3	36.3

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018

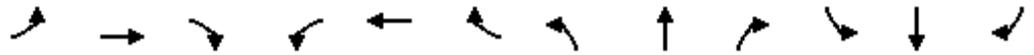


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗		↘	↗↗	↗	↘	↗	↗	↗↗	↗	↘
Traffic Volume (vph)	9	1822	6	51	2288	469	32	32	210	106	7	5
Future Volume (vph)	9	1822	6	51	2288	469	32	32	210	106	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t						0.850			0.850		0.936	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	0	1752	3505	1568	1761	1854	1576	3399	1726	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1547			949			414			625	
Travel Time (s)		23.4			14.4			11.3			17.0	
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	9	1898	6	55	2487	510	38	38	247	125	8	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1904	0	55	2487	510	38	38	247	125	14	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	118.0		34.0	139.0	139.0	14.0	14.0	34.0	14.0	14.0	
Total Split (%)	7.2%	65.6%		18.9%	77.2%	77.2%	7.8%	7.8%	18.9%	7.8%	7.8%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.8	120.4		24.7	144.9	144.9	14.6	8.5	35.6	9.0	8.3	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.04	0.67		0.14	0.80	0.80	0.08	0.05	0.20	0.05	0.05	
v/c Ratio	0.12	0.56		0.23	0.88	0.40	0.27	0.44	0.79	0.74	0.18	
Control Delay	66.4	4.7		70.7	19.0	7.3	83.7	98.8	86.4	108.7	88.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	66.4	4.7		70.7	19.0	7.3	83.7	98.8	86.4	108.7	88.1	
LOS	E	A		E	B	A	F	F	F	F	F	
Approach Delay		5.0			17.9			87.5				106.6
Approach LOS		A			B			F				F
Queue Length 50th (ft)	10	149		59	824	138	41	45	277	76	16	
Queue Length 95th (ft)	m17	249		106	1407	276	84	85	350	#114	42	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	3401		282	2821	1262	143	92	349	169	86	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.12	0.56		0.20	0.88	0.40	0.27	0.41	0.71	0.74	0.16	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 176 (98%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 19.8 Intersection LOS: B
 Intersection Capacity Utilization 81.3% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	1387	233	126	1404	172	229	98	51	226	125	175
Future Volume (vph)	353	1387	233	126	1404	172	229	98	51	226	125	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	3487	1560	1752	3505	1568	3434	1863	1584	3451	1872	1591
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	3487	1560	1752	3505	1568	3434	1863	1563	3437	1872	1591
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1112			1824			653			545	
Travel Time (s)		16.8			27.6			12.7			10.6	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Adj. Flow (vph)	368	1445	243	131	1463	179	246	105	55	257	142	199
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1445	243	131	1463	179	246	105	55	257	142	199
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	102.0	24.0	28.0	99.0	25.0	24.0	25.0	28.0	25.0	26.0	26.0
Total Split (%)	17.2%	56.7%	13.3%	15.6%	55.0%	13.9%	13.3%	13.9%	15.6%	13.9%	14.4%	14.4%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

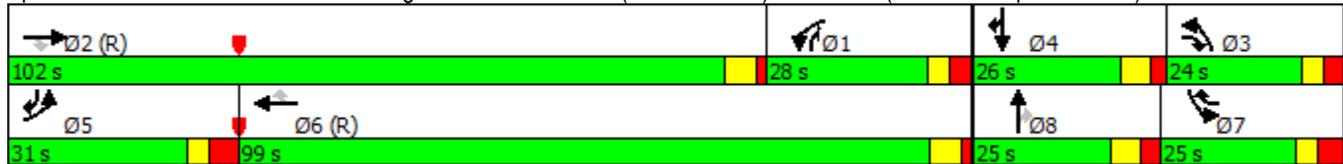


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	
Act Effct Green (s)	23.7	99.8	123.1	23.0	99.1	119.1	18.3	17.2	40.2	20.0	18.9	43.6
Actuated g/C Ratio	0.13	0.55	0.68	0.13	0.55	0.66	0.10	0.10	0.22	0.11	0.10	0.24
v/c Ratio	0.83	0.75	0.23	0.59	0.76	0.17	0.70	0.59	0.16	0.67	0.72	0.52
Control Delay	92.2	34.1	11.6	68.1	21.0	3.2	89.7	91.2	52.7	86.1	98.6	44.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.2	34.1	11.6	68.1	21.0	3.2	89.7	91.2	52.7	86.1	98.6	44.4
LOS	F	C	B	E	C	A	F	F	D	F	F	D
Approach Delay		41.8			22.7			85.1			75.2	
Approach LOS		D			C			F			E	
Queue Length 50th (ft)	220	693	104	150	470	30	145	121	51	151	164	156
Queue Length 95th (ft)	280	787	150	220	520	36	199	190	92	201	241	217
Internal Link Dist (ft)		1032			1744			573			465	
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	488	1933	1057	223	1929	1041	366	207	352	392	218	424
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.75	0.23	0.59	0.76	0.17	0.67	0.51	0.16	0.66	0.65	0.47

Intersection Summary

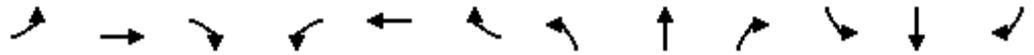
Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 83 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 42.6
 Intersection LOS: D
 Intersection Capacity Utilization 78.7%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

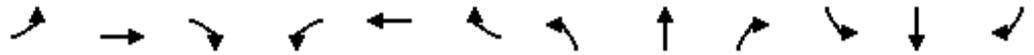


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	1532	17	80	1576	78	1	4	1	73	3	115
Future Volume (vph)	116	1532	17	80	1576	78	1	4	1	73	3	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	400		225	400		225	0		0	100		0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t			0.850			0.850		0.983				0.850
Fl _t Protected	0.950			0.950				0.994		0.950	0.956	
Satd. Flow (prot)	1752	3505	1568	1752	3505	1568	0	1712	0	1664	1675	1567
Fl _t Permitted	0.950			0.950				0.994		0.950	0.956	
Satd. Flow (perm)	1752	3505	1568	1752	3505	1568	0	1712	0	1664	1675	1567
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	9%	9%	9%	2%	2%	2%
Adj. Flow (vph)	121	1596	18	84	1659	82	1	6	1	96	4	151
Shared Lane Traffic (%)										48%		
Lane Group Flow (vph)	121	1596	18	84	1659	82	0	8	0	50	50	151
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6	4	3	3		4	4	5
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	4	3	3		4	4	5
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	36.0	14.0	14.0		36.0	36.0	13.0
Total Split (s)	25.0	109.0	109.0	21.0	105.0	36.0	14.0	14.0		36.0	36.0	25.0
Total Split (%)	13.9%	60.6%	60.6%	11.7%	58.3%	20.0%	7.8%	7.8%		20.0%	20.0%	13.9%
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	3.6	3.3	3.3		3.6	3.6	3.0
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	2.3	2.8	2.8		2.3	2.3	2.8
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	-0.8
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None		None	None	None
Act Effect Green (s)	18.0	135.5	135.5	14.0	131.5	146.8		8.1		10.3	10.3	31.2

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1556	15	57	1691	213	25	19	115	165	11	25
Future Volume (vph)	27	1556	15	57	1691	213	25	19	115	165	11	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850			0.850		0.896	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1652	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	5031	0	1752	3505	1568	1761	1854	1576	3399	1652	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.82	0.82	0.82	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	28	1604	15	61	1818	229	30	23	140	214	14	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	1619	0	61	1818	229	30	23	140	214	46	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	116.0		26.0	129.0	129.0	14.0	14.0	26.0	24.0	24.0	
Total Split (%)	7.2%	64.4%		14.4%	71.7%	71.7%	7.8%	7.8%	14.4%	13.3%	13.3%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effect Green (s)	7.9	122.9		15.3	132.8	132.8	9.0	8.4	20.4	18.7	15.6	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.04	0.68		0.08	0.74	0.74	0.05	0.05	0.11	0.10	0.09	
v/c Ratio	0.37	0.47		0.41	0.70	0.20	0.34	0.27	0.79	0.61	0.32	
Control Delay	73.3	5.0		86.2	16.6	9.1	93.6	90.8	96.1	84.7	82.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	73.3	5.0		86.2	16.6	9.1	93.6	90.8	96.1	84.7	82.3	
LOS	E	A		F	B	A	F	F	F	F	F	
Approach Delay		6.2			17.8			95.1			84.3	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	33	117		71	674	91	35	27	133	127	51	
Queue Length 95th (ft)	m56	102		122	775	132	68	56	172	148	83	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	77	3433		204	2585	1156	88	92	228	373	174	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.47		0.30	0.70	0.20	0.34	0.25	0.61	0.57	0.26	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 72 (40%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 20.9
 Intersection LOS: C
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	1932	370	140	1696	219	351	109	63	243	160	171
Future Volume (vph)	402	1932	370	140	1696	219	351	109	63	243	160	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			0%			-4%			-3%	
Storage Length (ft)	325		250	400		250	125		75	200		125
Storage Lanes	2		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3416	3522	1575	1770	3539	1583	3502	1900	1615	3485	1891	1607
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3416	3522	1575	1770	3539	1583	3502	1900	1593	3471	1891	1607
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1112			1824			653				545
Travel Time (s)		16.8			27.6			12.7				10.6
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	423	2034	389	146	1767	228	373	116	67	296	195	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	423	2034	389	146	1767	228	373	116	67	296	195	209
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pt+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	4
Permitted Phases			2			6			8			
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	12.0	7.0	7.0	12.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	19.0	13.0	14.0	19.0	14.0	13.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	31.0	113.0	25.0	19.0	101.0	25.0	25.0	23.0	19.0	25.0	23.0	23.0
Total Split (%)	17.2%	62.8%	13.9%	10.6%	56.1%	13.9%	13.9%	12.8%	10.6%	13.9%	12.8%	12.8%
Yellow Time (s)	3.0	4.4	3.0	3.0	4.5	3.0	3.0	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	3.9	1.3	2.9	3.3	1.6	3.7	2.9	2.5	3.3	3.7	2.3	2.3
Lost Time Adjust (s)	-1.9	-0.7	-0.9	-1.3	-1.1	-1.7	-0.9	-1.6	-1.3	-1.7	-1.4	-1.4
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	None	C-Max	None	None	C-Max	None	None	None	None	None	None	None

Lanes, Volumes, Timings

1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effect Green (s)	25.1	108.0	133.0	14.0	96.9	118.2	20.0	16.7	30.7	21.3	18.0	44.1
Actuated g/C Ratio	0.14	0.60	0.74	0.08	0.54	0.66	0.11	0.09	0.17	0.12	0.10	0.24
v/c Ratio	0.89	0.96	0.33	1.07	0.93	0.22	0.96	0.66	0.25	0.72	1.03	0.53
Control Delay	96.7	46.6	9.1	139.0	32.8	4.5	114.2	96.6	62.5	87.4	149.2	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.7	46.6	9.1	139.0	32.8	4.5	114.2	96.6	62.5	87.4	149.2	45.5
LOS	F	D	A	F	C	A	F	F	E	F	F	D
Approach Delay		48.9			37.0			104.3				92.1
Approach LOS		D			D			F				F
Queue Length 50th (ft)	255	1162	147	~188	810	41	229	134	67	178	~246	166
Queue Length 95th (ft)	#340	#1324	197	m#263	m942	m78	#339	210	117	212	#365	212
Internal Link Dist (ft)		1032			1744			573				465
Turn Bay Length (ft)	325		250	400		250	125		75	200		125
Base Capacity (vph)	493	2113	1163	137	1904	1039	389	190	273	412	189	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.96	0.33	1.07	0.93	0.22	0.96	0.61	0.25	0.72	1.03	0.52

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 124 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 54.6 Intersection LOS: D
 Intersection Capacity Utilization 96.3% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Scarlett Drive/Sage Road & US 15-501 (Fordham Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



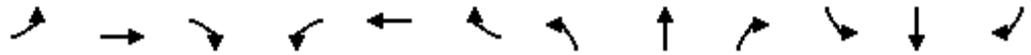
Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2156	49	118	1872	94	1	1	10	158	11	196
Future Volume (vph)	60	2156	49	118	1872	94	1	1	10	158	11	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%			2%	
Storage Length (ft)	400		225	400		225	0		0	100		0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor			0.98	1.00				1.00				0.99
Frt			0.850			0.850		0.882				0.850
Flt Protected	0.950			0.950				0.997		0.950	0.958	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1630	0	1664	1678	1567
Flt Permitted	0.950			0.950				0.997		0.950	0.958	
Satd. Flow (perm)	1770	3539	1550	1769	3539	1583	0	1630	0	1664	1678	1546
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1824			1547			133			223	
Travel Time (s)		27.6			23.4			3.6			6.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.73	0.73	0.73	0.69	0.69	0.69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	63	2246	51	124	1971	99	1	1	14	229	16	284
Shared Lane Traffic (%)										47%		
Lane Group Flow (vph)	63	2246	51	124	1971	99	0	16	0	121	124	284
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases			2			6						4
Detector Phase	5	2	2	1	6	6	3	3		4	4	5
Switch Phase												
Minimum Initial (s)	7.0	12.0	12.0	7.0	12.0	12.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	13.0	18.0	18.0	13.0	18.0	18.0	14.0	14.0		36.0	36.0	13.0
Total Split (s)	19.0	113.0	113.0	17.0	111.0	111.0	14.0	14.0		36.0	36.0	19.0
Total Split (%)	10.6%	62.8%	62.8%	9.4%	61.7%	61.7%	7.8%	7.8%		20.0%	20.0%	10.6%
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.3	3.3		3.6	3.6	3.0
All-Red Time (s)	2.8	1.1	1.1	2.8	1.3	1.3	2.8	2.8		2.3	2.3	2.8
Lost Time Adjust (s)	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9		-1.1		-0.9	-0.9	-0.8
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lanes, Volumes, Timings

2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)

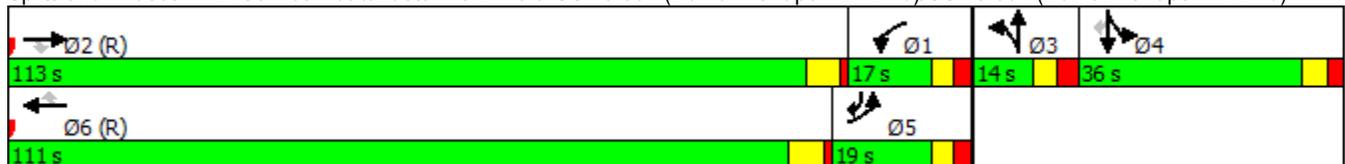


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	14.0	127.3	127.3	12.0	125.3	125.3		8.2		17.7	17.7	31.7
Actuated g/C Ratio	0.08	0.71	0.71	0.07	0.70	0.70		0.05		0.10	0.10	0.18
v/c Ratio	0.46	0.90	0.05	1.05	0.80	0.09		0.22		0.74	0.76	1.04
Control Delay	74.0	8.0	2.2	137.2	5.9	3.6		89.8		104.2	105.2	129.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	74.0	8.0	2.2	137.2	5.9	3.6		89.8		104.2	105.2	129.7
LOS	E	A	A	F	A	A		F		F	F	F
Approach Delay		9.6			13.2			89.8			118.1	
Approach LOS		A			B			F			F	
Queue Length 50th (ft)	77	228	4	~162	133	13		19		149	152	~314
Queue Length 95th (ft)	m85	m#1540	m8	m#207	45	m5		39		166	169	279
Internal Link Dist (ft)		1744			1467			53			143	
Turn Bay Length (ft)	400		225	400		225				100		
Base Capacity (vph)	137	2503	1096	118	2463	1102		81		286	288	273
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.46	0.90	0.05	1.05	0.80	0.09		0.20		0.42	0.43	1.04

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 120 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 22.7
 Intersection LOS: C
 Intersection Capacity Utilization 90.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

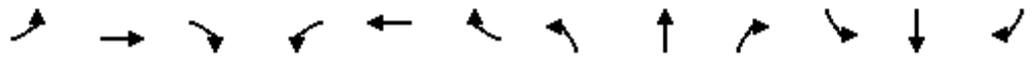
Splits and Phases: 2: Service Road/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)/US 15-501 (Durham-Chapel Hill Blvd)



Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

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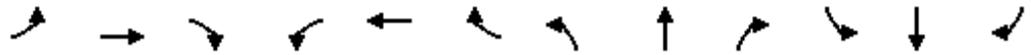


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕	↖	↖	↕	↖	↕↕	↕	↖
Traffic Volume (vph)	5	2237	19	79	2005	184	30	21	265	419	31	20
Future Volume (vph)	5	2237	19	79	2005	184	30	21	265	419	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-1%				2%
Storage Length (ft)	100		300	0		0	100		350	300		300
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr _t		0.999				0.850			0.850		0.941	
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1735	0
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5080	0	1770	3539	1583	1778	1872	1591	3399	1735	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1547			949			414				625
Travel Time (s)		23.4			14.4			11.3				17.0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	5	2405	20	85	2156	198	41	28	358	566	42	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2425	0	85	2156	198	41	28	358	566	69	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	1	7	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0	12.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	13.0	18.0		13.0	18.0	18.0	14.0	14.0	13.0	14.0	14.0	
Total Split (s)	13.0	99.0		31.0	117.0	117.0	14.0	14.0	31.0	36.0	36.0	
Total Split (%)	7.2%	55.0%		17.2%	65.0%	65.0%	7.8%	7.8%	17.2%	20.0%	20.0%	
Yellow Time (s)	3.0	4.5		3.0	4.5	4.5	5.0	3.2	3.0	5.0	3.1	
All-Red Time (s)	2.6	1.0		2.8	1.0	1.0	2.0	3.0	2.8	2.0	3.0	
Lost Time Adjust (s)	-0.6	-0.5		-0.8	-0.5	-0.5	-2.0	-1.2	-0.8	-2.0	-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	7.7	94.0		28.3	124.7	124.7	9.0	8.4	35.1	31.9	31.5	
Actuated g/C Ratio	0.04	0.52		0.16	0.69	0.69	0.05	0.05	0.20	0.18	0.18	

Lanes, Volumes, Timings

3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)

04/20/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.91		0.31	0.88	0.18	0.47	0.32	1.15	0.94	0.23	
Control Delay	74.4	31.3		71.9	28.0	11.2	100.6	92.9	154.4	96.6	66.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	74.4	31.3		71.9	28.0	11.2	100.6	92.9	154.4	96.6	66.5	
LOS	E	C		E	C	B	F	F	F	F	E	
Approach Delay		31.4			28.2			145.2			93.3	
Approach LOS		C			C			F			F	
Queue Length 50th (ft)	6	780		92	988	77	48	33	~402	345	71	
Queue Length 95th (ft)	m8	812		154	#1476	142	77	59	#416	334	101	
Internal Link Dist (ft)		1467			869			334			545	
Turn Bay Length (ft)	100						100		350	300		
Base Capacity (vph)	78	2652		278	2452	1096	88	93	310	602	303	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.91		0.31	0.88	0.18	0.47	0.30	1.15	0.94	0.23	

Intersection Summary

Area Type: Other
 Cycle Length: 180
 Actuated Cycle Length: 180
 Offset: 122 (68%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 44.9 Intersection LOS: D
 Intersection Capacity Utilization 92.4% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lakeview Drive/Eastowne Drive & US 15-501 (Durham-Chapel Hill Blvd)



Appendix F – Synchro Unsignalized HCM Analysis
Output

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	92	2	13	0	1	2	18	77	6	10	33	90
Future Vol, veh/h	92	2	13	0	1	2	18	77	6	10	33	90
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	79	79	79	38	38	38	90	90	90	76	76	76
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	2	2	2
Mvmt Flow	116	3	16	0	3	5	20	86	7	13	43	118

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	264	262	105	268	318	90	163	0	0	92	0	0
Stage 1	130	130	-	129	129	-	-	-	-	-	-	-
Stage 2	134	132	-	139	189	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.74	6.34	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	675	630	941	674	588	965	1404	-	-	1503	-	-
Stage 1	863	779	-	868	784	-	-	-	-	-	-	-
Stage 2	858	777	-	857	736	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	655	614	939	647	573	964	1403	-	-	1502	-	-
Mov Cap-2 Maneuver	655	614	-	647	573	-	-	-	-	-	-	-
Stage 1	849	770	-	855	772	-	-	-	-	-	-	-
Stage 2	837	765	-	830	728	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		9.6		1.4		0.6	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1403	-	-	679	785	1502	-
HCM Lane V/C Ratio	0.014	-	-	0.199	0.01	0.009	-
HCM Control Delay (s)	7.6	0	-	11.6	9.6	7.4	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0	-

Intersection

Int Delay, s/veh 4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	0	84	1	0	1	23	87	6	5	37	4
Future Vol, veh/h	13	0	84	1	0	1	23	87	6	5	37	4
Conflicting Peds, #/hr	4	0	0	0	0	4	6	0	0	0	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	71	71	71	50	50	50	95	95	95	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	10	10	10
Mvmt Flow	18	0	118	2	0	2	24	92	6	6	45	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	213	211	53	261	210	99	55	0	0	98	0	0
Stage 1	65	65	-	143	143	-	-	-	-	-	-	-
Stage 2	148	146	-	118	67	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.15	-	-	4.2	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.29	-	-
Pot Cap-1 Maneuver	744	686	1014	777	754	978	1531	-	-	1446	-	-
Stage 1	946	841	-	916	830	-	-	-	-	-	-	-
Stage 2	855	776	-	934	864	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	724	668	1008	675	734	974	1531	-	-	1440	-	-
Mov Cap-2 Maneuver	724	668	-	675	734	-	-	-	-	-	-	-
Stage 1	925	833	-	900	816	-	-	-	-	-	-	-
Stage 2	836	763	-	821	856	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.4		9.5		1.5		0.8	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1531	-	-	958	797	1440	-
HCM Lane V/C Ratio	0.016	-	-	0.143	0.005	0.004	-
HCM Control Delay (s)	7.4	0	-	9.4	9.5	7.5	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.5	0	0	-

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	43	109	107	15	7	4
Future Vol, veh/h	43	109	107	15	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	120	145	20	13	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	165	0	-	0	369 155
Stage 1	-	-	-	-	155 -
Stage 2	-	-	-	-	214 -
Critical Hdwy	4.12	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1413	-	-	-	671 902
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	852 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1413	-	-	-	647 902
Mov Cap-2 Maneuver	-	-	-	-	647 -
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	821 -

Approach	NB	SB	NE
HCM Control Delay, s	2.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	721	1413	-	-	-
HCM Lane V/C Ratio	0.028	0.033	-	-	-
HCM Control Delay (s)	10.1	7.6	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	0	11	1	1	4	11	56	3	3	89	76
Future Vol, veh/h	80	0	11	1	1	4	11	56	3	3	89	76
Conflicting Peds, #/hr	0	0	1	1	0	0	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	67	67	67	30	30	30	64	64	64	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	119	0	16	3	3	13	17	88	5	4	106	90

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	295	292	156	295	335	93	200	0	0	95	0	0
Stage 1	162	162	-	127	127	-	-	-	-	-	-	-
Stage 2	133	130	-	168	208	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	647	609	886	647	575	962	1360	-	-	1499	-	-
Stage 1	833	757	-	871	785	-	-	-	-	-	-	-
Stage 2	864	783	-	826	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	625	595	882	625	562	959	1359	-	-	1499	-	-
Mov Cap-2 Maneuver	625	595	-	625	562	-	-	-	-	-	-	-
Stage 1	819	752	-	857	773	-	-	-	-	-	-	-
Stage 2	837	771	-	807	716	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	12		9.6		1.2			0.1		
HCM LOS	B		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1359	-	-	648	795	1499	-
HCM Lane V/C Ratio	0.013	-	-	0.21	0.025	0.002	-
HCM Control Delay (s)	7.7	0	-	12	9.6	7.4	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	0	-

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	24	4	0	3	32	60	5	4	89	8
Future Vol, veh/h	7	0	24	4	0	3	32	60	5	4	89	8
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	1	1	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	55	55	55	44	44	44	88	88	88	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	44	9	0	7	36	68	6	5	109	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	272	273	115	290	275	72	120	0	0	75	0	0
Stage 1	125	125	-	145	145	-	-	-	-	-	-	-
Stage 2	147	148	-	145	130	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	680	634	937	753	715	1006	1468	-	-	1524	-	-
Stage 1	879	792	-	915	829	-	-	-	-	-	-	-
Stage 2	856	775	-	915	835	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	659	613	935	701	692	1005	1468	-	-	1524	-	-
Mov Cap-2 Maneuver	659	613	-	701	692	-	-	-	-	-	-	-
Stage 1	855	787	-	890	807	-	-	-	-	-	-	-
Stage 2	828	754	-	869	830	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.5		9.6		2.5		0.3	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	854	805	1524	-	-
HCM Lane V/C Ratio	0.025	-	-	0.066	0.02	0.003	-	-
HCM Control Delay (s)	7.5	0	-	9.5	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	39	88	104	13	9	17
Future Vol, veh/h	39	88	104	13	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	51	116	141	18	11	21

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	158	0	-	0	367 149
Stage 1	-	-	-	-	149 -
Stage 2	-	-	-	-	218 -
Critical Hdwy	4.12	-	-	-	5.84 5.94
Critical Hdwy Stg 1	-	-	-	-	4.84 -
Critical Hdwy Stg 2	-	-	-	-	4.84 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1422	-	-	-	669 904
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	844 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1422	-	-	-	644 904
Mov Cap-2 Maneuver	-	-	-	-	644 -
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	812 -

Approach	NB	SB	NE
HCM Control Delay, s	2.3	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	793	1422	-	-	-
HCM Lane V/C Ratio	0.04	0.036	-	-	-
HCM Control Delay (s)	9.7	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	0	22	1	1	4	21	24	0	1	96	178
Future Vol, veh/h	52	0	22	1	1	4	21	24	0	1	96	178
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	76	76	76	50	50	50	75	75	75	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	2	2	2
Mvmt Flow	68	0	29	2	2	8	28	32	0	1	110	205

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	310	304	214	319	406	35	315	0	0	33	0	0
Stage 1	215	215	-	89	89	-	-	-	-	-	-	-
Stage 2	95	89	-	230	317	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.17	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.218	-	-
Pot Cap-1 Maneuver	632	599	821	623	522	1037	1217	-	-	1579	-	-
Stage 1	778	716	-	914	817	-	-	-	-	-	-	-
Stage 2	907	817	-	763	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	613	584	820	589	509	1034	1216	-	-	1576	-	-
Mov Cap-2 Maneuver	613	584	-	589	509	-	-	-	-	-	-	-
Stage 1	760	715	-	892	797	-	-	-	-	-	-	-
Stage 2	875	797	-	735	642	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		9.6		3.7		0	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1216	-	-	663	797	1576	-
HCM Lane V/C Ratio	0.023	-	-	0.147	0.015	0.001	-
HCM Control Delay (s)	8	0	-	11.4	9.6	7.3	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0	0	-

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	42	7	0	5	45	38	0	2	95	22
Future Vol, veh/h	2	0	42	7	0	5	45	38	0	2	95	22
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	69	69	69	75	75	75	95	95	95	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	3	0	61	9	0	7	47	40	0	3	119	28

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	278	275	137	305	288	40	148	0	0	40	0	0
Stage 1	140	140	-	135	135	-	-	-	-	-	-	-
Stage 2	138	135	-	170	153	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.16	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.254	-	-	2.218	-	-
Pot Cap-1 Maneuver	674	632	911	741	707	1041	1409	-	-	1570	-	-
Stage 1	863	781	-	922	833	-	-	-	-	-	-	-
Stage 2	865	785	-	897	825	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	650	608	908	671	680	1041	1406	-	-	1570	-	-
Mov Cap-2 Maneuver	650	608	-	671	680	-	-	-	-	-	-	-
Stage 1	832	778	-	891	805	-	-	-	-	-	-	-
Stage 2	830	758	-	834	822	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.3		9.7		4.1		0.1	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	892	788	1570	-	-
HCM Lane V/C Ratio	0.034	-	-	0.071	0.02	0.002	-	-
HCM Control Delay (s)	7.7	0	-	9.3	9.7	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	28	76	132	12	7	13
Future Vol, veh/h	28	76	132	12	7	13
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	33	90	194	18	11	21

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	214	0	-	0	362 205
Stage 1	-	-	-	-	205 -
Stage 2	-	-	-	-	157 -
Critical Hdwy	4.15	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.245	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1338	-	-	-	677 850
Stage 1	-	-	-	-	858 -
Stage 2	-	-	-	-	895 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1338	-	-	-	657 848
Mov Cap-2 Maneuver	-	-	-	-	657 -
Stage 1	-	-	-	-	856 -
Stage 2	-	-	-	-	870 -

Approach	NB	SB	NE
HCM Control Delay, s	2.1	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	770	1338	-	-	-
HCM Lane V/C Ratio	0.041	0.025	-	-	-
HCM Control Delay (s)	9.9	7.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	2	14	0	1	2	17	79	6	10	34	94
Future Vol, veh/h	96	2	14	0	1	2	17	79	6	10	34	94
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	79	79	79	38	38	38	90	90	90	76	76	76
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	2	2	2
Mvmt Flow	122	3	18	0	3	5	19	88	7	13	45	124

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	268	266	109	273	325	92	169	0	0	94	0	0
Stage 1	134	134	-	129	129	-	-	-	-	-	-	-
Stage 2	134	132	-	144	196	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.74	6.34	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	670	627	936	669	582	963	1396	-	-	1500	-	-
Stage 1	858	776	-	868	784	-	-	-	-	-	-	-
Stage 2	858	777	-	852	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	651	611	934	642	568	962	1395	-	-	1499	-	-
Mov Cap-2 Maneuver	651	611	-	642	568	-	-	-	-	-	-	-
Stage 1	845	768	-	856	773	-	-	-	-	-	-	-
Stage 2	838	766	-	824	723	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.7		9.7		1.3		0.5	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1395	-	-	676	781	1499	-
HCM Lane V/C Ratio	0.014	-	-	0.21	0.01	0.009	-
HCM Control Delay (s)	7.6	0	-	11.7	9.7	7.4	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.8	0	0	-

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	0	88	1	0	1	24	88	6	5	39	4
Future Vol, veh/h	14	0	88	1	0	1	24	88	6	5	39	4
Conflicting Peds, #/hr	4	0	0	0	0	4	6	0	0	0	0	6
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	71	71	71	50	50	50	95	95	95	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	10	10	10
Mvmt Flow	20	0	124	2	0	2	25	93	6	6	47	5

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	218	216	55	269	216	100	58	0	0	99	0	0
Stage 1	67	67	-	146	146	-	-	-	-	-	-	-
Stage 2	151	149	-	123	70	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.15	-	-	4.2	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.29	-	-
Pot Cap-1 Maneuver	738	682	1012	770	751	977	1527	-	-	1445	-	-
Stage 1	943	839	-	914	828	-	-	-	-	-	-	-
Stage 2	851	774	-	931	863	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	718	664	1006	664	731	973	1527	-	-	1439	-	-
Mov Cap-2 Maneuver	718	664	-	664	731	-	-	-	-	-	-	-
Stage 1	922	831	-	898	814	-	-	-	-	-	-	-
Stage 2	832	761	-	813	855	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.4		9.6		1.5		0.8	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1527	-	-	954	789	1439	-
HCM Lane V/C Ratio	0.017	-	-	0.151	0.005	0.004	-
HCM Control Delay (s)	7.4	0	-	9.4	9.6	7.5	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0	0	-

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	45	111	112	16	7	4
Future Vol, veh/h	45	111	112	16	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	122	151	22	13	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	173	0	-	0	383
Stage 1	-	-	-	-	162
Stage 2	-	-	-	-	221
Critical Hdwy	4.12	-	-	-	5.82
Critical Hdwy Stg 1	-	-	-	-	4.82
Critical Hdwy Stg 2	-	-	-	-	4.82
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1404	-	-	-	660
Stage 1	-	-	-	-	891
Stage 2	-	-	-	-	846
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1404	-	-	-	636
Mov Cap-2 Maneuver	-	-	-	-	636
Stage 1	-	-	-	-	891
Stage 2	-	-	-	-	815

Approach	NB	SB	NE
HCM Control Delay, s	2.2	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	711	1404	-	-	-
HCM Lane V/C Ratio	0.028	0.035	-	-	-
HCM Control Delay (s)	10.2	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	84	0	11	1	1	4	9	56	3	3	92	79
Future Vol, veh/h	84	0	11	1	1	4	9	56	3	3	92	79
Conflicting Peds, #/hr	0	0	1	1	0	0	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	67	67	67	30	30	30	64	64	64	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	125	0	16	3	3	13	14	88	5	4	110	94

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	294	291	162	294	336	93	208	0	0	95	0	0
Stage 1	168	168	-	121	121	-	-	-	-	-	-	-
Stage 2	126	123	-	173	215	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	648	610	879	648	574	962	1351	-	-	1499	-	-
Stage 1	826	752	-	877	790	-	-	-	-	-	-	-
Stage 2	872	789	-	821	716	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	627	597	875	627	562	959	1350	-	-	1499	-	-
Mov Cap-2 Maneuver	627	597	-	627	562	-	-	-	-	-	-	-
Stage 1	814	747	-	865	779	-	-	-	-	-	-	-
Stage 2	847	778	-	802	711	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.1		9.6		1		0.1	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1350	-	-	648	795	1499	-
HCM Lane V/C Ratio	0.01	-	-	0.219	0.025	0.002	-
HCM Control Delay (s)	7.7	0	-	12.1	9.6	7.4	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	0	-

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	25	4	0	3	33	58	5	4	92	8
Future Vol, veh/h	7	0	25	4	0	3	33	58	5	4	92	8
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	1	1	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	55	55	55	44	44	44	88	88	88	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	45	9	0	7	38	66	6	5	112	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	276	277	119	295	279	70	124	0	0	73	0	0
Stage 1	129	129	-	145	145	-	-	-	-	-	-	-
Stage 2	147	148	-	150	134	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	676	631	933	749	712	1008	1463	-	-	1527	-	-
Stage 1	875	789	-	915	829	-	-	-	-	-	-	-
Stage 2	856	775	-	911	834	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	654	610	931	695	688	1007	1463	-	-	1527	-	-
Mov Cap-2 Maneuver	654	610	-	695	688	-	-	-	-	-	-	-
Stage 1	850	784	-	889	806	-	-	-	-	-	-	-
Stage 2	827	753	-	863	829	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.5		9.6		2.6		0.3	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	852	801	1527	-
HCM Lane V/C Ratio	0.026	-	-	0.068	0.02	0.003	-
HCM Control Delay (s)	7.5	0	-	9.5	9.6	7.4	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-

Intersection						
Int Delay, s/veh	2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	41	87	108	14	9	18
Future Vol, veh/h	41	87	108	14	9	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	54	114	146	19	11	22

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	165	0	-	0	377 155
Stage 1	-	-	-	-	155 -
Stage 2	-	-	-	-	222 -
Critical Hdwy	4.12	-	-	-	5.84 5.94
Critical Hdwy Stg 1	-	-	-	-	4.84 -
Critical Hdwy Stg 2	-	-	-	-	4.84 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1413	-	-	-	661 897
Stage 1	-	-	-	-	891 -
Stage 2	-	-	-	-	841 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1413	-	-	-	634 897
Mov Cap-2 Maneuver	-	-	-	-	634 -
Stage 1	-	-	-	-	891 -
Stage 2	-	-	-	-	807 -

Approach	NB	SB	NE
HCM Control Delay, s	2.5	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	788	1413	-	-	-
HCM Lane V/C Ratio	0.042	0.038	-	-	-
HCM Control Delay (s)	9.8	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	54	0	23	1	1	4	20	23	0	1	100	186
Future Vol, veh/h	54	0	23	1	1	4	20	23	0	1	100	186
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	76	76	76	50	50	50	75	75	75	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	2	2	2
Mvmt Flow	71	0	30	2	2	8	27	31	0	1	115	214

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	315	309	223	325	416	34	329	0	0	32	0	0
Stage 1	224	224	-	85	85	-	-	-	-	-	-	-
Stage 2	91	85	-	240	331	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.17	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.218	-	-
Pot Cap-1 Maneuver	627	595	811	617	515	1038	1203	-	-	1580	-	-
Stage 1	769	709	-	919	820	-	-	-	-	-	-	-
Stage 2	912	820	-	753	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	608	580	810	582	502	1035	1202	-	-	1577	-	-
Mov Cap-2 Maneuver	608	580	-	582	502	-	-	-	-	-	-	-
Stage 1	751	708	-	897	800	-	-	-	-	-	-	-
Stage 2	880	800	-	723	632	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.5		9.6		3.8		0	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1202	-	-	657	792	1577	-
HCM Lane V/C Ratio	0.022	-	-	0.154	0.015	0.001	-
HCM Control Delay (s)	8.1	0	-	11.5	9.6	7.3	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0	0	-

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	44	7	0	5	47	36	0	2	99	23
Future Vol, veh/h	2	0	44	7	0	5	47	36	0	2	99	23
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-8	-	-	0	-	-	-1	-
Peak Hour Factor	69	69	69	75	75	75	95	95	95	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	2
Mvmt Flow	3	0	64	9	0	7	49	38	0	3	124	29

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	285	282	142	314	297	38	155	0	0	38	0	0
Stage 1	145	145	-	137	137	-	-	-	-	-	-	-
Stage 2	140	137	-	177	160	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	5.52	4.92	5.42	4.16	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	4.52	3.92	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.254	-	-	2.218	-	-
Pot Cap-1 Maneuver	667	627	906	734	701	1043	1401	-	-	1572	-	-
Stage 1	858	777	-	921	832	-	-	-	-	-	-	-
Stage 2	863	783	-	892	822	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	642	602	903	661	673	1043	1398	-	-	1572	-	-
Mov Cap-2 Maneuver	642	602	-	661	673	-	-	-	-	-	-	-
Stage 1	826	774	-	888	802	-	-	-	-	-	-	-
Stage 2	827	755	-	826	819	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	9.4		9.7		4.3			0.1		
HCM LOS	A		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1398	-	-	887	780	1572	-	-
HCM Lane V/C Ratio	0.035	-	-	0.075	0.021	0.002	-	-
HCM Control Delay (s)	7.7	0	-	9.4	9.7	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	29	75	138	13	7	14
Future Vol, veh/h	29	75	138	13	7	14
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	35	89	203	19	11	22

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	224	0	-	0	373 215
Stage 1	-	-	-	-	215 -
Stage 2	-	-	-	-	158 -
Critical Hdwy	4.15	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.245	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1327	-	-	-	668 840
Stage 1	-	-	-	-	851 -
Stage 2	-	-	-	-	894 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1327	-	-	-	647 838
Mov Cap-2 Maneuver	-	-	-	-	647 -
Stage 1	-	-	-	-	849 -
Stage 2	-	-	-	-	867 -

Approach	NB	SB	NE
HCM Control Delay, s	2.2	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	763	1327	-	-	-
HCM Lane V/C Ratio	0.044	0.026	-	-	-
HCM Control Delay (s)	9.9	7.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	96	2	18	0	1	2	18	60	6	10	96	94
Future Vol, veh/h	96	2	18	0	1	2	18	60	6	10	96	94
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	79	79	79	38	38	38	90	90	90	76	76	76
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	2	2	2
Mvmt Flow	122	3	23	0	3	5	20	67	7	13	126	124

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	330	328	190	338	387	71	251	0	0	73	0	0
Stage 1	215	215	-	110	110	-	-	-	-	-	-	-
Stage 2	115	113	-	228	277	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.74	6.34	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	608	577	842	604	536	990	1303	-	-	1527	-	-
Stage 1	773	712	-	890	799	-	-	-	-	-	-	-
Stage 2	879	793	-	765	671	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	589	562	840	574	522	989	1302	-	-	1526	-	-
Mov Cap-2 Maneuver	589	562	-	574	522	-	-	-	-	-	-	-
Stage 1	760	704	-	876	786	-	-	-	-	-	-	-
Stage 2	857	780	-	733	664	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		9.8		1.7		0.4	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	617	762	1526	-	-
HCM Lane V/C Ratio	0.015	-	-	0.238	0.01	0.009	-	-
HCM Control Delay (s)	7.8	0	-	12.6	9.8	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0	0	-	-

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	14	88	24	193	52	4
Future Vol, veh/h	14	88	24	193	52	4
Conflicting Peds, #/hr	4	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	71	71	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	20	124	25	203	63	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	329	71	73	0	0
Stage 1	71	-	-	-	-
Stage 2	258	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-
Pot Cap-1 Maneuver	665	991	1508	-	-
Stage 1	952	-	-	-	-
Stage 2	785	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	645	985	1508	-	-
Mov Cap-2 Maneuver	645	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	766	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1508	-	919	-	-
HCM Lane V/C Ratio	0.017	-	0.156	-	-
HCM Control Delay (s)	7.4	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	45	197	124	16	10	4
Future Vol, veh/h	45	197	124	16	10	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	216	168	22	18	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	189	0	-	0	493 178
Stage 1	-	-	-	-	178 -
Stage 2	-	-	-	-	315 -
Critical Hdwy	4.12	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1385	-	-	-	581 878
Stage 1	-	-	-	-	878 -
Stage 2	-	-	-	-	780 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1385	-	-	-	558 878
Mov Cap-2 Maneuver	-	-	-	-	558 -
Stage 1	-	-	-	-	878 -
Stage 2	-	-	-	-	749 -

Approach	NB	SB	NE
HCM Control Delay, s	1.4	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	623	1385	-	-	-
HCM Lane V/C Ratio	0.041	0.036	-	-	-
HCM Control Delay (s)	11	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	21	11	73	154	79	35
Future Vol, veh/h	21	11	73	154	79	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	23	12	77	162	95	42

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	391	158	0	0	239
Stage 1	158	-	-	-	-
Stage 2	233	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.2
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.29
Pot Cap-1 Maneuver	613	887	-	-	1282
Stage 1	871	-	-	-	-
Stage 2	806	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	566	887	-	-	1282
Mov Cap-2 Maneuver	566	-	-	-	-
Stage 1	871	-	-	-	-
Stage 2	745	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	5.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	646	1282
HCM Lane V/C Ratio	-	-	0.055	0.074
HCM Control Delay (s)	-	-	10.9	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	84	0	12	1	1	4	10	56	3	3	101	79
Future Vol, veh/h	84	0	12	1	1	4	10	56	3	3	101	79
Conflicting Peds, #/hr	0	0	1	1	0	0	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	67	67	67	30	30	30	64	64	64	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	125	0	18	3	3	13	16	88	5	4	120	94

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	307	304	172	308	349	93	218	0	0	95	0	0
Stage 1	178	178	-	124	124	-	-	-	-	-	-	-
Stage 2	129	126	-	184	225	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	634	599	867	633	564	962	1340	-	-	1499	-	-
Stage 1	816	745	-	874	788	-	-	-	-	-	-	-
Stage 2	868	786	-	809	709	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	612	586	863	610	551	959	1339	-	-	1499	-	-
Mov Cap-2 Maneuver	612	586	-	610	551	-	-	-	-	-	-	-
Stage 1	802	740	-	860	776	-	-	-	-	-	-	-
Stage 2	841	774	-	789	704	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.3		9.7		1.1		0.1	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	635	787	1499	-	-
HCM Lane V/C Ratio	0.012	-	-	0.226	0.025	0.002	-	-
HCM Control Delay (s)	7.7	0	-	12.3	9.7	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	0	-	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	7	25	33	88	122	8
Future Vol, veh/h	7	25	33	88	122	8
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	55	55	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	45	38	100	149	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	331	156	161	0	0
Stage 1	156	-	-	-	-
Stage 2	175	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	664	890	1418	-	-
Stage 1	872	-	-	-	-
Stage 2	855	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	643	888	1418	-	-
Mov Cap-2 Maneuver	643	-	-	-	-
Stage 1	870	-	-	-	-
Stage 2	829	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	820	-	-
HCM Lane V/C Ratio	0.026	-	0.071	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	41	111	132	15	10	18
Future Vol, veh/h	41	111	132	15	10	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	54	146	178	20	12	22

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	199	0	-	0	443 189
Stage 1	-	-	-	-	189 -
Stage 2	-	-	-	-	254 -
Critical Hdwy	4.12	-	-	-	5.84 5.94
Critical Hdwy Stg 1	-	-	-	-	4.84 -
Critical Hdwy Stg 2	-	-	-	-	4.84 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1373	-	-	-	612 861
Stage 1	-	-	-	-	865 -
Stage 2	-	-	-	-	818 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1373	-	-	-	586 861
Mov Cap-2 Maneuver	-	-	-	-	586 -
Stage 1	-	-	-	-	865 -
Stage 2	-	-	-	-	783 -

Approach	NB	SB	NE
HCM Control Delay, s	2.1	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	737	1373	-	-	-
HCM Lane V/C Ratio	0.047	0.039	-	-	-
HCM Control Delay (s)	10.1	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	20	49	46	23	91
Future Vol, veh/h	39	20	49	46	23	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	22	56	52	28	111

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	249	82	0	0	108
Stage 1	82	-	-	-	-
Stage 2	167	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	739	978	-	-	1483
Stage 1	941	-	-	-	-
Stage 2	863	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	724	978	-	-	1483
Mov Cap-2 Maneuver	724	-	-	-	-
Stage 1	941	-	-	-	-
Stage 2	846	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	794	1483
HCM Lane V/C Ratio	-	-	0.083	0.019
HCM Control Delay (s)	-	-	9.9	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	54	0	24	1	1	4	24	76	0	1	113	186
Future Vol, veh/h	54	0	24	1	1	4	24	76	0	1	113	186
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	76	76	76	50	50	50	75	75	75	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	2	2	2
Mvmt Flow	71	0	32	2	2	8	32	101	0	1	130	214

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	411	405	238	422	512	104	344	0	0	102	0	0
Stage 1	239	239	-	166	166	-	-	-	-	-	-	-
Stage 2	172	166	-	256	346	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.17	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.218	-	-
Pot Cap-1 Maneuver	539	523	796	529	452	948	1188	-	-	1490	-	-
Stage 1	754	698	-	828	754	-	-	-	-	-	-	-
Stage 2	822	754	-	738	623	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	519	507	795	495	438	945	1187	-	-	1487	-	-
Mov Cap-2 Maneuver	519	507	-	495	438	-	-	-	-	-	-	-
Stage 1	732	697	-	803	731	-	-	-	-	-	-	-
Stage 2	788	731	-	707	622	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.5		10.2		1.9		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1187	-	-	581	703	1487	-
HCM Lane V/C Ratio	0.027	-	-	0.177	0.017	0.001	-
HCM Control Delay (s)	8.1	0	-	12.5	10.2	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	2	44	47	57	215	23
Future Vol, veh/h	2	44	47	57	215	23
Conflicting Peds, #/hr	0	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	69	69	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	3	64	49	60	269	29

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	444	287	300	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	571	752	1239	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	546	749	1237	-	-	-
Mov Cap-2 Maneuver	546	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1237	-	737	-	-
HCM Lane V/C Ratio	0.04	-	0.09	-	-
HCM Control Delay (s)	8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	29	96	233	16	8	14
Future Vol, veh/h	29	96	233	16	8	14
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	35	114	343	24	13	22

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	368	0	-	0	539
Stage 1	-	-	-	-	356
Stage 2	-	-	-	-	183
Critical Hdwy	4.15	-	-	-	5.82
Critical Hdwy Stg 1	-	-	-	-	4.82
Critical Hdwy Stg 2	-	-	-	-	4.82
Follow-up Hdwy	2.245	-	-	-	3.518
Pot Cap-1 Maneuver	1174	-	-	-	551
Stage 1	-	-	-	-	752
Stage 2	-	-	-	-	875
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1174	-	-	-	531
Mov Cap-2 Maneuver	-	-	-	-	531
Stage 1	-	-	-	-	751
Stage 2	-	-	-	-	845

Approach	NB	SB	NE
HCM Control Delay, s	1.9	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	631	1174	-	-	-
HCM Lane V/C Ratio	0.055	0.029	-	-	-
HCM Control Delay (s)	11	8.2	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	5.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	135	69	31	28	14	124
Future Vol, veh/h	135	69	31	28	14	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	150	77	33	29	18	155

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	237	47	0	0	62
Stage 1	47	-	-	-	-
Stage 2	190	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	751	1022	-	-	1541
Stage 1	975	-	-	-	-
Stage 2	842	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	741	1022	-	-	1541
Mov Cap-2 Maneuver	741	-	-	-	-
Stage 1	975	-	-	-	-
Stage 2	831	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	817	1541
HCM Lane V/C Ratio	-	-	0.277	0.011
HCM Control Delay (s)	-	-	11.1	7.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	100	2	19	0	1	2	19	63	6	10	100	98
Future Vol, veh/h	100	2	19	0	1	2	19	63	6	10	100	98
Conflicting Peds, #/hr	1	0	1	1	0	1	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	79	79	79	38	38	38	90	90	90	76	76	76
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	2	2	2
Mvmt Flow	127	3	24	0	3	5	21	70	7	13	132	129

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	344	342	198	353	404	74	262	0	0	77	0	0
Stage 1	223	223	-	116	116	-	-	-	-	-	-	-
Stage 2	121	119	-	237	288	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.74	6.34	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.74	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	595	566	833	590	524	986	1291	-	-	1522	-	-
Stage 1	765	706	-	883	794	-	-	-	-	-	-	-
Stage 2	873	788	-	756	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	576	550	831	559	509	985	1290	-	-	1521	-	-
Mov Cap-2 Maneuver	576	550	-	559	509	-	-	-	-	-	-	-
Stage 1	751	698	-	868	781	-	-	-	-	-	-	-
Stage 2	850	775	-	723	656	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	13		9.8		1.7		0.4			
HCM LOS	B		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1290	-	-	605	751	1521	-	-
HCM Lane V/C Ratio	0.016	-	-	0.253	0.011	0.009	-	-
HCM Control Delay (s)	7.8	0	-	13	9.8	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0	0	-	-

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	92	25	202	56	4
Future Vol, veh/h	15	92	25	202	56	4
Conflicting Peds, #/hr	4	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	71	71	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	21	130	26	213	67	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	345	76	78	0	0
Stage 1	76	-	-	-	-
Stage 2	269	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-
Pot Cap-1 Maneuver	652	985	1502	-	-
Stage 1	947	-	-	-	-
Stage 2	776	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	632	979	1502	-	-
Mov Cap-2 Maneuver	632	-	-	-	-
Stage 1	942	-	-	-	-
Stage 2	756	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1502	-	909	-	-
HCM Lane V/C Ratio	0.018	-	0.166	-	-
HCM Control Delay (s)	7.4	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	47	206	131	17	10	4
Future Vol, veh/h	47	206	131	17	10	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	226	177	23	18	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	200	0	-	0	519 189
Stage 1	-	-	-	-	189 -
Stage 2	-	-	-	-	330 -
Critical Hdwy	4.12	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1372	-	-	-	564 866
Stage 1	-	-	-	-	870 -
Stage 2	-	-	-	-	770 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1372	-	-	-	540 866
Mov Cap-2 Maneuver	-	-	-	-	540 -
Stage 1	-	-	-	-	870 -
Stage 2	-	-	-	-	737 -

Approach	NB	SB	NE
HCM Control Delay, s	1.4	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	605	1372	-	-	-
HCM Lane V/C Ratio	0.042	0.038	-	-	-
HCM Control Delay (s)	11.2	7.7	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	11	76	154	79	47
Future Vol, veh/h	21	11	76	154	79	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	23	12	80	162	95	57

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	408	161	0	0	242
Stage 1	161	-	-	-	-
Stage 2	247	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.2
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.29
Pot Cap-1 Maneuver	599	884	-	-	1279
Stage 1	868	-	-	-	-
Stage 2	794	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	553	884	-	-	1279
Mov Cap-2 Maneuver	553	-	-	-	-
Stage 1	868	-	-	-	-
Stage 2	733	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	635	1279
HCM Lane V/C Ratio	-	-	0.056	0.074
HCM Control Delay (s)	-	-	11	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Intersection

Int Delay, s/veh 4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	0	13	1	1	4	10	59	3	3	106	83
Future Vol, veh/h	88	0	13	1	1	4	10	59	3	3	106	83
Conflicting Peds, #/hr	0	0	1	1	0	0	4	0	3	3	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	67	67	67	30	30	30	64	64	64	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	131	0	19	3	3	13	16	92	5	4	126	99

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	321	318	181	322	365	98	229	0	0	100	0	0
Stage 1	187	187	-	129	129	-	-	-	-	-	-	-
Stage 2	134	131	-	193	236	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	621	588	857	620	552	955	1327	-	-	1493	-	-
Stage 1	806	738	-	868	784	-	-	-	-	-	-	-
Stage 2	863	782	-	800	700	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	600	575	853	596	540	952	1326	-	-	1493	-	-
Mov Cap-2 Maneuver	600	575	-	596	540	-	-	-	-	-	-	-
Stage 1	792	733	-	854	772	-	-	-	-	-	-	-
Stage 2	836	770	-	779	695	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		9.8		1.1		0.1	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1326	-	-	624	776	1493	-	-
HCM Lane V/C Ratio	0.012	-	-	0.242	0.026	0.002	-	-
HCM Control Delay (s)	7.7	0	-	12.6	9.8	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	0	-	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	26	34	92	127	8
Future Vol, veh/h	7	26	34	92	127	8
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	55	55	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	47	39	105	155	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	344	162	167	0	0
Stage 1	162	-	-	-	-
Stage 2	182	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	652	883	1411	-	-
Stage 1	867	-	-	-	-
Stage 2	849	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	631	881	1411	-	-
Mov Cap-2 Maneuver	631	-	-	-	-
Stage 1	865	-	-	-	-
Stage 2	823	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1411	-	813	-	-
HCM Lane V/C Ratio	0.027	-	0.074	-	-
HCM Control Delay (s)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	43	116	138	16	10	19
Future Vol, veh/h	43	116	138	16	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	57	153	186	22	12	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	208	0	-	0	463
Stage 1	-	-	-	-	197
Stage 2	-	-	-	-	266
Critical Hdwy	4.12	-	-	-	5.84
Critical Hdwy Stg 1	-	-	-	-	4.84
Critical Hdwy Stg 2	-	-	-	-	4.84
Follow-up Hdwy	2.218	-	-	-	3.536
Pot Cap-1 Maneuver	1363	-	-	-	598
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	809
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1363	-	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	570
Stage 1	-	-	-	-	859
Stage 2	-	-	-	-	772

Approach	NB	SB	NE
HCM Control Delay, s	2.1	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	728	1363	-	-	-
HCM Lane V/C Ratio	0.049	0.042	-	-	-
HCM Control Delay (s)	10.2	7.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	20	51	46	23	95
Future Vol, veh/h	39	20	51	46	23	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	22	58	52	28	116

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	256	84	0	0	110	0
Stage 1	84	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	733	975	-	-	1480	-
Stage 1	939	-	-	-	-	-
Stage 2	858	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	718	975	-	-	1480	-
Mov Cap-2 Maneuver	718	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	841	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	788	1480
HCM Lane V/C Ratio	-	-	0.083	0.019
HCM Control Delay (s)	-	-	10	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	0	25	1	1	4	25	79	0	1	118	194
Future Vol, veh/h	56	0	25	1	1	4	25	79	0	1	118	194
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	-1	-	-	-3	-
Peak Hour Factor	76	76	76	50	50	50	75	75	75	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	2	2	2
Mvmt Flow	74	0	33	2	2	8	33	105	0	1	136	223

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	428	422	248	440	534	108	359	0	0	106	0	0
Stage 1	249	249	-	173	173	-	-	-	-	-	-	-
Stage 2	179	173	-	267	361	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.72	6.32	7.32	6.72	6.32	4.17	-	-	4.12	-	-
Critical Hdwy Stg 1	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.72	-	6.32	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.218	-	-
Pot Cap-1 Maneuver	524	511	785	515	439	943	1172	-	-	1485	-	-
Stage 1	745	691	-	821	748	-	-	-	-	-	-	-
Stage 2	815	748	-	728	613	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	504	495	784	481	425	940	1171	-	-	1482	-	-
Mov Cap-2 Maneuver	504	495	-	481	425	-	-	-	-	-	-	-
Stage 1	723	690	-	796	725	-	-	-	-	-	-	-
Stage 2	780	725	-	696	612	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.8		10.3		2		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1171	-	-	566	691	1482	-	-
HCM Lane V/C Ratio	0.028	-	-	0.188	0.017	0.001	-	-
HCM Control Delay (s)	8.2	0	-	12.8	10.3	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	0	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	2	46	49	60	225	24
Future Vol, veh/h	2	46	49	60	225	24
Conflicting Peds, #/hr	0	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	69	69	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	3	67	52	63	281	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	464	300	313	0	-	0
Stage 1	298	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	556	740	1225	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	530	737	1223	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1223	-	725	-	-
HCM Lane V/C Ratio	0.042	-	0.096	-	-
HCM Control Delay (s)	8.1	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	30	100	243	17	8	15
Future Vol, veh/h	30	100	243	17	8	15
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	36	119	357	25	13	24

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	384	0	-	0	562 372
Stage 1	-	-	-	-	372 -
Stage 2	-	-	-	-	190 -
Critical Hdwy	4.15	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.245	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1158	-	-	-	536 695
Stage 1	-	-	-	-	742 -
Stage 2	-	-	-	-	869 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1158	-	-	-	516 694
Mov Cap-2 Maneuver	-	-	-	-	516 -
Stage 1	-	-	-	-	741 -
Stage 2	-	-	-	-	839 -

Approach	NB	SB	NE
HCM Control Delay, s	1.9	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	620	1158	-	-	-
HCM Lane V/C Ratio	0.059	0.031	-	-	-
HCM Control Delay (s)	11.2	8.2	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	5.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	135	69	32	28	14	130
Future Vol, veh/h	135	69	32	28	14	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	150	77	34	29	18	163

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	246	48	0	0	63
Stage 1	48	-	-	-	-
Stage 2	198	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	742	1021	-	-	1540
Stage 1	974	-	-	-	-
Stage 2	835	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	732	1021	-	-	1540
Mov Cap-2 Maneuver	732	-	-	-	-
Stage 1	974	-	-	-	-
Stage 2	824	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	810	1540
HCM Lane V/C Ratio	-	-	0.28	0.011
HCM Control Delay (s)	-	-	11.2	7.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0

Intersection

Int Delay, s/veh 3.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	100	25	21	73	170	98
Future Vol, veh/h	100	25	21	73	170	98
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	79	79	90	90	76	76
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	127	32	23	81	224	129

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	418	290	354	0	-	0
Stage 1	289	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.64	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.64	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	574	738	1194	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	737	1193	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s 13.3 1.8 0
 HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1193	-	589	-	-
HCM Lane V/C Ratio	0.02	-	0.269	-	-
HCM Control Delay (s)	8.1	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	92	25	350	75	4
Future Vol, veh/h	15	92	25	350	75	4
Conflicting Peds, #/hr	4	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	71	71	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	21	130	26	368	90	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	524	99	101	0	0
Stage 1	99	-	-	-	-
Stage 2	425	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-
Pot Cap-1 Maneuver	514	957	1473	-	-
Stage 1	925	-	-	-	-
Stage 2	659	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	497	952	1473	-	-
Mov Cap-2 Maneuver	497	-	-	-	-
Stage 1	920	-	-	-	-
Stage 2	641	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1473	-	844	-	-
HCM Lane V/C Ratio	0.018	-	0.179	-	-
HCM Control Delay (s)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	47	346	149	18	14	4
Future Vol, veh/h	47	346	149	18	14	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	380	201	24	25	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	226	0	-	0	698 214
Stage 1	-	-	-	-	214 -
Stage 2	-	-	-	-	484 -
Critical Hdwy	4.12	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1342	-	-	-	457 841
Stage 1	-	-	-	-	852 -
Stage 2	-	-	-	-	672 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1342	-	-	-	435 841
Mov Cap-2 Maneuver	-	-	-	-	435 -
Stage 1	-	-	-	-	852 -
Stage 2	-	-	-	-	639 -

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

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	487	1342	-	-	-
HCM Lane V/C Ratio	0.067	0.038	-	-	-
HCM Control Delay (s)	12.9	7.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	42	22	72	308	158	37
Future Vol, veh/h	42	22	72	308	158	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	47	24	76	324	190	45

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	663	238	0	0	400	0
Stage 1	238	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.2	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.29	-
Pot Cap-1 Maneuver	426	801	-	-	1117	-
Stage 1	802	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	352	801	-	-	1117	-
Mov Cap-2 Maneuver	352	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	544	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	7.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	436	1117
HCM Lane V/C Ratio	-	-	0.163	0.17
HCM Control Delay (s)	-	-	14.9	8.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.6

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	88	15	12	75	124	83
Future Vol, veh/h	88	15	12	75	124	83
Conflicting Peds, #/hr	0	1	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	67	67	64	64	84	84
Heavy Vehicles, %	2	2	4	4	2	2
Mvmt Flow	131	22	19	117	148	99

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	356	202	250	0	0
Stage 1	201	-	-	-	-
Stage 2	155	-	-	-	-
Critical Hdwy	6.62	6.32	4.14	-	-
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-
Pot Cap-1 Maneuver	630	834	1304	-	-
Stage 1	824	-	-	-	-
Stage 2	866	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	615	830	1303	-	-
Mov Cap-2 Maneuver	615	-	-	-	-
Stage 1	821	-	-	-	-
Stage 2	849	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	639	-	-
HCM Lane V/C Ratio	0.014	-	0.241	-	-
HCM Control Delay (s)	7.8	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	34	132	163	8
Future Vol, veh/h	7	26	34	132	163	8
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	55	55	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	47	39	150	199	10

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	433	206	211	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	580	835	1360	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	833	1360	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	784	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	755	-	-
HCM Lane V/C Ratio	0.028	-	0.079	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	43	155	172	17	11	19
Future Vol, veh/h	43	155	172	17	11	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	57	204	232	23	14	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	255	0	-	0	561 244
Stage 1	-	-	-	-	244 -
Stage 2	-	-	-	-	317 -
Critical Hdwy	4.12	-	-	-	5.84 5.94
Critical Hdwy Stg 1	-	-	-	-	4.84 -
Critical Hdwy Stg 2	-	-	-	-	4.84 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1310	-	-	-	533 806
Stage 1	-	-	-	-	825 -
Stage 2	-	-	-	-	774 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1310	-	-	-	507 806
Mov Cap-2 Maneuver	-	-	-	-	507 -
Stage 1	-	-	-	-	825 -
Stage 2	-	-	-	-	736 -

Approach	NB	SB	NE
HCM Control Delay, s	1.7	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	663	1310	-	-	-
HCM Lane V/C Ratio	0.056	0.043	-	-	-
HCM Control Delay (s)	10.8	7.9	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	40	47	92	46	93
Future Vol, veh/h	78	40	47	92	46	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	44	53	105	56	113

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	332	106	0	0	158
Stage 1	106	-	-	-	-
Stage 2	226	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	663	948	-	-	1422
Stage 1	918	-	-	-	-
Stage 2	812	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	635	948	-	-	1422
Mov Cap-2 Maneuver	635	-	-	-	-
Stage 1	918	-	-	-	-
Stage 2	778	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	715	1422
HCM Lane V/C Ratio	-	-	0.183	0.039
HCM Control Delay (s)	-	-	11.2	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	56	26	30	139	122	194
Future Vol, veh/h	56	26	30	139	122	194
Conflicting Peds, #/hr	2	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	76	76	75	75	87	87
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	74	34	40	185	140	223

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	519	253	363	0	-	0
Stage 1	252	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.62	6.32	4.17	-	-	-
Critical Hdwy Stg 1	5.62	-	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.263	-	-	-
Pot Cap-1 Maneuver	502	780	1168	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	483	779	1167	-	-	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1167	-	549	-	-
HCM Lane V/C Ratio	0.034	-	0.197	-	-
HCM Control Delay (s)	8.2	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	2	46	49	85	345	24
Future Vol, veh/h	2	46	49	85	345	24
Conflicting Peds, #/hr	0	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	69	69	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	3	67	52	89	431	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	641	450	463	0	-	0
Stage 1	448	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	439	609	1078	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	415	607	1076	-	-	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	3.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1076	-	596	-	-
HCM Lane V/C Ratio	0.048	-	0.117	-	-
HCM Control Delay (s)	8.5	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Intersection						
Int Delay, s/veh	1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	30	125	360	21	9	15
Future Vol, veh/h	30	125	360	21	9	15
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	36	149	529	31	14	24

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	562	0	-	0	767 547
Stage 1	-	-	-	-	547 -
Stage 2	-	-	-	-	220 -
Critical Hdwy	4.15	-	-	-	5.82 5.92
Critical Hdwy Stg 1	-	-	-	-	4.82 -
Critical Hdwy Stg 2	-	-	-	-	4.82 -
Follow-up Hdwy	2.245	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	995	-	-	-	421 562
Stage 1	-	-	-	-	635 -
Stage 2	-	-	-	-	847 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	995	-	-	-	403 561
Mov Cap-2 Maneuver	-	-	-	-	403 -
Stage 1	-	-	-	-	634 -
Stage 2	-	-	-	-	812 -

Approach	NB	SB	NE
HCM Control Delay, s	1.7	0	13
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	489	995	-	-	-
HCM Lane V/C Ratio	0.078	0.036	-	-	-
HCM Control Delay (s)	13	8.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

Intersection						
Int Delay, s/veh	10.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	270	138	31	56	28	120
Future Vol, veh/h	270	138	31	56	28	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	300	153	33	59	35	150

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	282	62	0	0	92	0
Stage 1	62	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	708	1003	-	-	1503	-
Stage 1	961	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	690	1003	-	-	1503	-
Mov Cap-2 Maneuver	690	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	771	1503
HCM Lane V/C Ratio	-	-	0.588	0.023
HCM Control Delay (s)	-	-	16.1	7.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	3.9	0.1

Intersection

Int Delay, s/veh 3.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	100	25	21	73	170	98
Future Vol, veh/h	100	25	21	73	170	98
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	79	79	90	90	76	76
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	127	32	23	81	224	129

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	418	290	354	0	-	0
Stage 1	289	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.64	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.64	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	574	738	1194	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	737	1193	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s 13.3 1.8 0
 HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1193	-	589	-	-
HCM Lane V/C Ratio	0.02	-	0.269	-	-
HCM Control Delay (s)	8.1	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	15	92	25	350	75	4
Future Vol, veh/h	15	92	25	350	75	4
Conflicting Peds, #/hr	4	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	71	71	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	21	130	26	368	90	5

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	524	99	101	0	0
Stage 1	99	-	-	-	-
Stage 2	425	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-
Pot Cap-1 Maneuver	514	957	1473	-	-
Stage 1	925	-	-	-	-
Stage 2	659	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	497	952	1473	-	-
Mov Cap-2 Maneuver	497	-	-	-	-
Stage 1	920	-	-	-	-
Stage 2	641	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1473	-	844	-	-
HCM Lane V/C Ratio	0.018	-	0.179	-	-
HCM Control Delay (s)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection

Int Delay, s/veh 1

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↕↔			↕
Traffic Vol, veh/h	47	346	149	18	0	18
Future Vol, veh/h	47	346	149	18	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	91	91	74	74	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	380	201	24	0	33

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	226	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	-
Pot Cap-1 Maneuver	1341	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1341	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	NB	SB	NE
HCM Control Delay, s	0.9	0	9
HCM LOS			A

Minor Lane/Major Mvmt

	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	928	1341	-	-	-
HCM Lane V/C Ratio	0.035	0.039	-	-	-
HCM Control Delay (s)	9	7.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	22	72	308	158	37
Future Vol, veh/h	42	22	72	308	158	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	83	83
Heavy Vehicles, %	2	2	5	5	10	10
Mvmt Flow	47	24	76	324	190	45

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	663	238	0	0	400
Stage 1	238	-	-	-	-
Stage 2	425	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.2
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.29
Pot Cap-1 Maneuver	426	801	-	-	1117
Stage 1	802	-	-	-	-
Stage 2	659	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	352	801	-	-	1117
Mov Cap-2 Maneuver	352	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	544	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	7.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	352	801	1117
HCM Lane V/C Ratio	-	-	0.133	0.031	0.17
HCM Control Delay (s)	-	-	16.8	9.6	8.9
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0.6

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	88	15	12	75	124	83
Future Vol, veh/h	88	15	12	75	124	83
Conflicting Peds, #/hr	0	1	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	67	67	64	64	84	84
Heavy Vehicles, %	2	2	4	4	2	2
Mvmt Flow	131	22	19	117	148	99

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	356	202	250	0	0
Stage 1	201	-	-	-	-
Stage 2	155	-	-	-	-
Critical Hdwy	6.62	6.32	4.14	-	-
Critical Hdwy Stg 1	5.62	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-
Pot Cap-1 Maneuver	630	834	1304	-	-
Stage 1	824	-	-	-	-
Stage 2	866	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	615	830	1303	-	-
Mov Cap-2 Maneuver	615	-	-	-	-
Stage 1	821	-	-	-	-
Stage 2	849	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	639	-	-
HCM Lane V/C Ratio	0.014	-	0.241	-	-
HCM Control Delay (s)	7.8	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	26	34	132	163	8
Future Vol, veh/h	7	26	34	132	163	8
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	55	55	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	47	39	150	199	10

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	433	206	211	0	-	0
Stage 1	206	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	580	835	1360	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	833	1360	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	784	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	755	-	-
HCM Lane V/C Ratio	0.028	-	0.079	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↕↔			↕
Traffic Vol, veh/h	43	155	172	17	0	30
Future Vol, veh/h	43	155	172	17	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	76	76	74	74	81	81
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	57	204	232	23	0	37

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	255	0	-	0	- 128
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	- 6.66
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	-	- 3.338
Pot Cap-1 Maneuver	1309	-	-	-	0 903
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1309	-	-	-	- 903
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1.7	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	903	1309	-	-	-
HCM Lane V/C Ratio	0.041	0.043	-	-	-
HCM Control Delay (s)	9.2	7.9	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	-

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	40	47	92	46	93
Future Vol, veh/h	78	40	47	92	46	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	88	88	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	44	53	105	56	113

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	332	106	0	0	158
Stage 1	106	-	-	-	-
Stage 2	226	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	663	948	-	-	1422
Stage 1	918	-	-	-	-
Stage 2	812	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	635	948	-	-	1422
Mov Cap-2 Maneuver	635	-	-	-	-
Stage 1	918	-	-	-	-
Stage 2	778	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	635	948	1422
HCM Lane V/C Ratio	-	-	0.136	0.047	0.039
HCM Control Delay (s)	-	-	11.6	9	7.6
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0.1

HCM 2010 TWSC
 4: Eastowne Drive & Old Sterling Drive

04/20/2018

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	56	26	30	139	122	194
Future Vol, veh/h	56	26	30	139	122	194
Conflicting Peds, #/hr	2	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	1	-	-	-1	-3	-
Peak Hour Factor	76	76	75	75	87	87
Heavy Vehicles, %	2	2	7	7	2	2
Mvmt Flow	74	34	40	185	140	223

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	519	253	363	0	-	0
Stage 1	252	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.62	6.32	4.17	-	-	-
Critical Hdwy Stg 1	5.62	-	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.263	-	-	-
Pot Cap-1 Maneuver	502	780	1168	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	483	779	1167	-	-	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1167	-	549	-	-
HCM Lane V/C Ratio	0.034	-	0.197	-	-
HCM Control Delay (s)	8.2	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	46	49	85	345	24
Future Vol, veh/h	2	46	49	85	345	24
Conflicting Peds, #/hr	0	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	-1	-
Peak Hour Factor	69	69	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	3	67	52	89	431	30

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	641	450	463	0	-	0
Stage 1	448	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	439	609	1078	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	415	607	1076	-	-	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	3.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1076	-	596	-	-
HCM Lane V/C Ratio	0.048	-	0.117	-	-
HCM Control Delay (s)	8.5	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Intersection

Int Delay, s/veh 0.9

Movement NBL NBT SBT SBR NEL NER

Lane Configurations		↔	↕			↕
Traffic Vol, veh/h	30	125	360	21	0	24
Future Vol, veh/h	30	125	360	21	0	24
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-6	4	-	-3	-
Peak Hour Factor	84	84	68	68	63	63
Heavy Vehicles, %	5	5	2	2	2	2
Mvmt Flow	36	149	529	31	0	38

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	562	0	-	0	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.175	-	-	-	-	6.63
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2475	-	-	-	-	3.319
Pot Cap-1 Maneuver	990	-	-	-	0	733
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	990	-	-	-	-	732
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach NB SB NE

HCM Control Delay, s	1.7	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt NELn1 NBL NBT SBT SBR

Capacity (veh/h)	732	990	-	-	-
HCM Lane V/C Ratio	0.052	0.036	-	-	-
HCM Control Delay (s)	10.2	8.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	-

Intersection						
Int Delay, s/veh	8.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	270	138	31	56	28	120
Future Vol, veh/h	270	138	31	56	28	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-1	-	-	-1
Peak Hour Factor	90	90	95	95	80	80
Heavy Vehicles, %	2	2	6	6	2	2
Mvmt Flow	300	153	33	59	35	150

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	282	62	0	0	92
Stage 1	62	-	-	-	-
Stage 2	220	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	708	1003	-	-	1503
Stage 1	961	-	-	-	-
Stage 2	817	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	690	1003	-	-	1503
Mov Cap-2 Maneuver	690	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	797	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	690	1003	1503
HCM Lane V/C Ratio	-	-	0.435	0.153	0.023
HCM Control Delay (s)	-	-	14.2	9.2	7.5
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.5	0.1

Appendix G – Crash Data

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	2	66.67
Total Injury Crashes	2	66.67
Property Damage Only Crashes	1	33.33
Night Crashes	1	33.33
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	2	66.67
Property Damage Only Crashes	1	33.33

Vehicle Exposure Statistics

Annual ADT = 2000

Total Vehicle Exposure = 3.65 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	82.15
Fatal Crash Rate	0.00
Non Fatal Crash Rate	54.76
Night Crash Rate	27.38
Wet Crash Rate	0.00
EPDO Rate	487.40

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	5.93
EPDO Crash Index =	17.80
Estimated Property Damage Total = \$	29000.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	2	66.67
LEFT TURN, DIFFERENT ROADWAYS	1	33.33

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	3	100.00
Total Non-Fatal Injuries	3	100.00
Total Injuries	3	100.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	1	33.33
Feb	1	33.33
Mar	1	33.33
Apr	0	0.00
May	0	0.00
Jun	0	0.00
Jul	0	0.00
Aug	0	0.00
Sep	0	0.00
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	33.33
Tue	0	0.00
Wed	0	0.00
Thu	0	0.00
Fri	2	66.67
Sat	0	0.00
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	2	66.67
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	1	33.33
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	2	0	0	2
Dark	1	0	0	1
Other	0	0	0	0
Total	3	0	0	3

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	5	83.33
SPORT UTILITY	1	16.67

North Carolina Department of Transportation
 Traffic Engineering Accident Analysis System
 Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2013	1	0	0	1
2014	0	0	0	0
2015	0	0	0	0
2016	1	0	1	0
2017	1	0	1	0
2018	0	0	0	0
Total	3	0	2	1

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2013	0	0
2014	0	0
2015	0	0
2016	0	1
2017	0	2
2018	0	0
Total	0	3

Miscellaneous Totals

Year	Property Damage	EPDO Index
2013	\$ 3000	1.00
2014	\$ 0	0.00
2015	\$ 0	0.00
2016	\$ 18000	8.40
2017	\$ 8000	8.40
2018	\$ 0	0.00
Total	\$ 29000	17.80

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2013	0	0	0	0	1	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Year	Run Off Road &						
	Left Turn	Right Turn	Rear End	Fixed Object	Angle	Side Swipe	Other
2016	0	0	0	0	1	0	0
2017	1	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
Total	1	0	0	0	2	0	0

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CHTIAEASTOWNEATDOBBINS				76.8	8.4	2000	

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality			Y-Line Ft.	Begin Date	End Date	Years
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years	
ORANGE	68	7	All and Rural		150	3/1/2013	2/28/2018	5.00	

Location Text	Requestor
SR 2256 (Eastowne Dr) at Dobbins Dr	

Fiche Roads

Name	Code
SR 2256	40002256
EASTOWNE	50009246
DOBBINS	50008524

Intersection Road Combinations

Name	Code	Code	Name
SR 2256	40002256	50008524	DOBBINS
EASTOWNE	50009246	50008524	DOBBINS

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	2	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	2	100.00
Night Crashes	0	0.00
Wet Crashes	1	50.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	2	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	2	100.00

Vehicle Exposure Statistics

Annual ADT = 2000

Total Vehicle Exposure = 3.65 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	54.76
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	0.00
Wet Crash Rate	27.38
EPDO Rate	54.76

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	2.00
Estimated Property Damage Total = \$	8500.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	50.00
LEFT TURN, DIFFERENT ROADWAYS	1	50.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	0	0.00
Jun	1	50.00
Jul	0	0.00
Aug	1	50.00
Sep	0	0.00
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	1	50.00
Wed	0	0.00
Thu	1	50.00
Fri	0	0.00
Sat	0	0.00
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	1	50.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	1	50.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	1	1	0	2
Dark	0	0	0	0
Other	0	0	0	0
Total	1	1	0	2

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	3	75.00
PICKUP	1	25.00

North Carolina Department of Transportation
 Traffic Engineering Accident Analysis System
 Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2013	0	0	0	0
2014	1	0	0	1
2015	0	0	0	0
2016	0	0	0	0
2017	1	0	0	1
2018	0	0	0	0
Total	2	0	0	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2013	0	0
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2013	\$ 0	0.00
2014	\$ 6500	1.00
2015	\$ 0	0.00
2016	\$ 0	0.00
2017	\$ 2000	1.00
2018	\$ 0	0.00
Total	\$ 8500	2.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &				Other
				Fixed Object	Angle	Side Swipe		
2013	0	0	0	0	0	0	0	
2014	1	0	0	0	0	0	0	
2015	0	0	0	0	0	0	0	

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Year	Run Off Road &						
	Left Turn	Right Turn	Rear End	Fixed Object	Angle	Side Swipe	Other
2016	0	0	0	0	0	0	0
2017	0	0	0	0	1	0	0
2018	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CHTIAEASTOWNEATOLDSTERLING				76.8	8.4	2000	

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality			Y-Line Ft.	Begin Date	End Date	Years
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years	
ORANGE	68	7	All and Rural		150	3/1/2013	2/28/2018	5.00	

Location Text	Requestor
SR 2256 (Eastowne Dr) at Old Sterling Dr	

Fiche Roads

Name	Code
SR 2256	40002256
EASTOWNE	50009246
OLD STERLING	50022760

Intersection Road Combinations

Name	Code	Code	Name
SR 2256	40002256	50022760	OLD STERLING
EASTOWNE	50009246	50022760	OLD STERLING

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit 2 : 1		Alchl/Drgs: 0	Speed: 45 MPH	Dir: NE		Veh Mnvr/Ped Actn: 8				Obj Strk:						
Unit 3 : 1		Alchl/Drgs: 0	Speed: 35 MPH	Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
9	104903085	0.000	10/26/2016 14:39	ANGLE	\$ 7000	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 1		Alchl/Drgs: 0	Speed: 15 MPH	Dir: SE		Veh Mnvr/Ped Actn: 8				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 35 MPH	Dir: N		Veh Mnvr/Ped Actn: 4				Obj Strk:						
10	105078990	0.000	04/19/2017 00:53	LEFT TURN, SAME ROADWAY	\$ 21000	0	0	1	0	1	4	1	1	0	3	1
Unit 1 : 4		Alchl/Drgs: 0	Speed: 50 MPH	Dir: SW		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 10 MPH	Dir: NE		Veh Mnvr/Ped Actn: 8				Obj Strk:						
11	105111483	0.000	05/20/2017 10:25	LEFT TURN, DIFFERENT ROADWAYS	\$ 11950	0	0	0	2	1	1	1	1	0	3	1
Unit 1 : 1		Alchl/Drgs: 0	Speed: 5 MPH	Dir: S		Veh Mnvr/Ped Actn: 8				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 40 MPH	Dir: SW		Veh Mnvr/Ped Actn: 4				Obj Strk:						
12	104034261	0.009	04/09/2014 17:35	OTHER COLLISION WITH VEHICLE	\$ 150	0	0	0	0	1	1	2	3	0	3	1
Unit 1 : 1		Alchl/Drgs: 0	Speed: 0 MPH	Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 5 MPH	Dir: N		Veh Mnvr/Ped Actn: 16				Obj Strk:						
Unit 3 : 1		Alchl/Drgs: 0	Speed: 0 MPH	Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit 4 : 4		Alchl/Drgs: 7	Speed: 0 MPH	Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
13	103718490	0.045	03/29/2013 22:50	ANGLE	\$ 3000	0	0	0	0	1	4	1	1	0	1	1
Unit 1 : 1		Alchl/Drgs: 0	Speed: 5 MPH	Dir: E		Veh Mnvr/Ped Actn: 7				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 25 MPH	Dir: S		Veh Mnvr/Ped Actn: 4				Obj Strk:						
14	104668928	0.045	02/26/2016 12:04	ANGLE	\$ 18000	0	0	0	1	1	1	1	3	0		
Unit 1 : 1		Alchl/Drgs: 0	Speed: 3 MPH	Dir: N		Veh Mnvr/Ped Actn: 7				Obj Strk:						
Unit 2 : 4		Alchl/Drgs: 0	Speed: 20 MPH	Dir: E		Veh Mnvr/Ped Actn: 4				Obj Strk:						
15	105013547	0.045	01/30/2017 12:08	LEFT TURN, DIFFERENT ROADWAYS	\$ 8000	0	0	0	2	1	1	1	2	0	1	1
Unit 1 : 1		Alchl/Drgs: 0	Speed: 30 MPH	Dir: E		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 0 MPH	Dir: S		Veh Mnvr/Ped Actn: 8				Obj Strk:						
16	104090023	0.233	06/19/2014 13:13	LEFT TURN, DIFFERENT ROADWAYS	\$ 6500	0	0	0	0	1	1	1	1	0	1	1
Unit 1 : 2		Alchl/Drgs: 0	Speed: 5 MPH	Dir: W		Veh Mnvr/Ped Actn: 8				Obj Strk:						
Unit 2 : 1		Alchl/Drgs: 0	Speed: 10 MPH	Dir: S		Veh Mnvr/Ped Actn: 4				Obj Strk:						

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
17	105211593	0.233	08/29/2017 08:17	ANGLE	\$ 2000	0	0	0	0	2	1	3	7	0	1	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH	Dir:	E	Veh Mnvr/Ped Actn:				12	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	25 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			

Legend for Report Details:

- Acc No - Accident Number
- Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
- Condition: R - Road Surface, L - Ambient Light, W - Weather
- Rd Ch - Road Character
- Rd Ci - Roadway Contributing Circumstances
- Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
- Alchl/Drgs - Alcohol Drugs Suspected
- Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
- Obj Strk - Object Struck

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	17	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	8	47.06
Total Injury Crashes	8	47.06
Property Damage Only Crashes	9	52.94
Night Crashes	3	17.65
Wet Crashes	1	5.88
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	17	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	1	5.88
Class C Crashes	7	41.18
Property Damage Only Crashes	9	52.94

Vehicle Exposure Statistics

Annual ADT = 2000

Total Length = 0.233 (Miles)

0.375 (Kilometers)

Total Vehicle Exposure = 0.85 (MVMT)

1.37 (MVKMT)

Crash Rate	Crashes Per 100 Million Vehicle Miles	Crashes Per 100 Million Vehicle Kilometers
Total Crash Rate	1997.85	1241.40
Fatal Crash Rate	0.00	0.00
Non Fatal Crash Rate	940.16	584.19
Night Crash Rate	352.56	219.07
Wet Crash Rate	117.52	73.02
EPDO Rate	8955.06	5564.41

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Miscellaneous Statistics

Severity Index =	4.48
EPDO Crash Index =	76.20
Estimated Property Damage Total = \$	140750.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	6	35.29
LEFT TURN, DIFFERENT ROADWAYS	5	29.41
LEFT TURN, SAME ROADWAY	3	17.65
OTHER COLLISION WITH VEHICLE	1	5.88
REAR END, SLOW OR STOP	1	5.88
SIDESWIPE, SAME DIRECTION	1	5.88

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	1	8.33
Class C Injuries	11	91.67
Total Non-Fatal Injuries	12	100.00
Total Injuries	12	100.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	2	11.76
Feb	1	5.88
Mar	1	5.88
Apr	2	11.76
May	1	5.88
Jun	5	29.41
Jul	0	0.00
Aug	1	5.88
Sep	0	0.00
Oct	3	17.65
Nov	0	0.00
Dec	1	5.88

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	3	17.65
Tue	2	11.76
Wed	3	17.65
Thu	2	11.76
Fri	4	23.53
Sat	3	17.65
Sun	0	0.00

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Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	1	5.88
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	5.88
0800-0859	1	5.88
0900-0959	0	0.00
1000-1059	2	11.76
1100-1159	0	0.00
1200-1259	2	11.76
1300-1359	2	11.76
1400-1459	1	5.88
1500-1559	2	11.76
1600-1659	1	5.88
1700-1759	2	11.76
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	1	5.88
2200-2259	1	5.88
2300-2359	0	0.00

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Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	12	1	0	13
Dark	3	0	0	3
Other	1	0	0	1
Total	16	1	0	17

Object Struck Summary

Object Type	Times Struck	Percent of Total
OFFICIAL HIGHWAY SIGN NON-BREAKAWAY	1	50.00
TREE	1	50.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	1	2.63
PASSENGER CAR	28	73.68
PICKUP	3	7.89
SPORT UTILITY	4	10.53
VAN	2	5.26

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Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2013	1	0	0	1
2014	5	0	2	3
2015	3	0	1	2
2016	4	0	2	2
2017	4	0	3	1
2018	0	0	0	0
Total	17	0	8	9

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2013	0	0
2014	0	2
2015	0	2
2016	0	3
2017	0	5
2018	0	0
Total	0	12

Miscellaneous Totals

Year	Property Damage	EPDO Index
2013	\$ 3000	1.00
2014	\$ 24350	19.80
2015	\$ 27000	10.40
2016	\$ 43450	18.80
2017	\$ 42950	26.20
2018	\$ 0	0.00
Total	\$ 140750	76.20

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2013	0	0	0	0	1	0	0
2014	3	0	0	0	1	0	1
2015	1	0	1	0	1	0	0

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Year	Run Off Road &						
	Left Turn	Right Turn	Rear End	Fixed Object	Angle	Side Swipe	Other
2016	1	0	0	0	2	1	0
2017	3	0	0	0	1	0	0
2018	0	0	0	0	0	0	0
Total	8	0	1	0	6	1	1

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Strip Diagram

Features	Milepost	Crash IDs
US 15-501 FORDHAM BEGIN ANALYSIS	0.00	103997577 104109452 104271907 104420361 104534817 104547017 104775937 104777195 104903085 105078990 105111483
	0.01	104034261
	0.02	
	0.03	
	0.04	
DOBBINS	0.05	103718490 104668928 105013547
	0.06	
	0.07	
	0.08	
	0.09	
	0.10	
	0.11	
PINEGATE	0.12	
	0.13	
	0.14	
	0.15	
	0.16	
	0.17	
	0.18	
	0.19	
	0.20	
	0.21	
	0.22	
OLD STERLING END ANALYSIS	0.23	104090023 105211593

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Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CHTIAEASTOWNESTRIP				76.8	8.4	2000	40002256

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality			Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
						ORANGE	68	7	All and Rural		0	3/1/2013	2/28/2018	5.00

Location Text	Requestor
SR 2256 (Eastowne Dr) from US 15-501 (Fordham Blvd) to Old Sterling Dr	

Included Accidents	Old MP	New MP	Type
104271907		0	I
104534817		0	I
104547017		0	I
104109452		0	I
104420361		0	I
103997577		0	I
105078990		0	I
104777195		0	I
105111483		0	I
104903085		0	I
104775937		0	I
104034261		0.009	I
105013547		0.045	I
104668928		0.045	I
103718490		0.045	I
105211593		0.233	I
104090023		0.233	I

Fiche Roads

Name	Code
I 1	10000001
SR 2256	40002256
EASTOWNE	50009246

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Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
I 1	10000001	0.000	0.233	0.233	0.375

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Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
8	103997577	01/27/2014 15:48	LEFT TURN, SAME ROADWAY	\$ 9200	0	0	0	1	1	1	2	1	0	3	1
Unit	1 : 3	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 4		Obj Strk:									
Unit	2 : 5	Alchl/Drgs: 0	Speed: 25 MPH Dir: N	Veh Mnvr / Ped Actn: 8		Obj Strk: 33									
9	104002494	02/14/2014 01:30	PARKED MOTOR VEHICLE	\$ 9000	0	0	0	0	5	8	4	1	9	3	1
Unit	1 : 1	Alchl/Drgs: 7	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 2		Obj Strk:									
Unit	2 : 32	Alchl/Drgs: 7	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 4		Obj Strk:									
10	104017422	03/11/2014 00:00	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	4	1	0			
Unit	1 : 1	Alchl/Drgs: 0	Speed: 35 MPH Dir: W	Veh Mnvr / Ped Actn: 11		Obj Strk:									
Unit	2 : 2	Alchl/Drgs: 0	Speed: 5 MPH Dir: W	Veh Mnvr / Ped Actn: 11		Obj Strk:									
11	104034261	04/09/2014 17:35	OTHER COLLISION WITH VEHICLE	\$ 150	0	0	0	0	1	1	2	3	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 1		Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn: 16		Obj Strk:									
Unit	3 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 1		Obj Strk:									
Unit	4 : 4	Alchl/Drgs: 7	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 1		Obj Strk:									
12	104068208	05/15/2014 11:28	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: NE	Veh Mnvr / Ped Actn: 11		Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: NE	Veh Mnvr / Ped Actn: 4		Obj Strk:									
13	104109452	06/07/2014 13:56	LEFT TURN, DIFFERENT ROADWAYS	\$ 4500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 4		Obj Strk:									
Unit	2 : 5	Alchl/Drgs: 0	Speed: 15 MPH Dir: NW	Veh Mnvr / Ped Actn: 8		Obj Strk:									
14	104110513	06/13/2014 16:21	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 10 MPH Dir: N	Veh Mnvr / Ped Actn: 4		Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn: 1		Obj Strk:									
15	104102836	07/02/2014 12:54	REAR END, SLOW OR STOP	\$ 3700	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs: 0	Speed: 10 MPH Dir: N	Veh Mnvr / Ped Actn: 11		Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn: 1		Obj Strk:									
16	104271907	12/26/2014 07:26	ANGLE	\$ 4000	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 4		Obj Strk:									
Unit	2 : 2	Alchl/Drgs: 0	Speed: 5 MPH Dir: NE	Veh Mnvr / Ped Actn: 8		Obj Strk:									

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Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
17	104298200	01/08/2015 18:16	REAR END, TURN	\$ 1950	0	0	0	0	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: SE	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: SE	Veh Mnvr / Ped Actn: 8	Obj Strk:										
18	104420361	06/25/2015 10:28	LEFT TURN, DIFFERENT ROADWAYS	\$ 12000	0	0	0	2	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 5 MPH Dir: SE	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
19	104427580	07/02/2015 11:30	SIDESWIPE, SAME DIRECTION	\$ 3000	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 5	Alchl/Drgs: 0	Speed: 30 MPH Dir: N	Veh Mnvr / Ped Actn: 15	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
20	104534817	10/23/2015 16:41	REAR END, SLOW OR STOP	\$ 7500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	3 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn: 11	Obj Strk:										
21	104547017	10/26/2015 17:15	ANGLE	\$ 7500	0	0	0	0	1	2	1	1	0	12	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: S	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
22	104547018	10/27/2015 16:32	REAR END, SLOW OR STOP	\$ 3000	0	0	0	2	2	1	3	3	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit	2 : 3	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
23	104576024	11/14/2015 12:12	REAR END, SLOW OR STOP	\$ 6500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 5	Alchl/Drgs: 0	Speed: 25 MPH Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
24	104599935	12/06/2015 23:48	REAR END, SLOW OR STOP	\$ 10000	0	0	0	2	1	4	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs: 0	Speed: 10 MPH Dir: W	Veh Mnvr / Ped Actn: 12	Obj Strk:										
Unit	2 : 2	Alchl/Drgs: 0	Speed: 35 MPH Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
25	104668850	02/12/2016 11:21	REAR END, SLOW OR STOP	\$ 1000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn: 11	Obj Strk:										

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Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
26	104751651	05/18/2016 18:17	REAR END, SLOW OR STOP	\$ 1550	0	0	0	1	1	1	2	1	0	3	1
Unit	1 : 2	Alchl/Drgs: 0	Speed: 0 MPH Dir: NE	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 30 MPH Dir: NE	Veh Mnvr / Ped Actn: 4	Obj Strk:										
27	104769998	05/31/2016 15:16	SIDESWIPE, SAME DIRECTION	\$ 3000	0	0	0	0	1	1	1	1	0	0	1
Unit	1 : 3	Alchl/Drgs: 0	Speed: 50 MPH Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn: 5	Obj Strk:										
28	104775937	06/11/2016 21:29	SIDESWIPE, SAME DIRECTION	\$ 2200	0	0	0	0	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: N	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: S	Veh Mnvr / Ped Actn: 7	Obj Strk:										
29	104777195	06/14/2016 15:10	LEFT TURN, SAME ROADWAY	\$ 16250	0	0	0	2	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 45 MPH Dir: SW	Veh Mnvr / Ped Actn: 4	Obj Strk: 37										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: NE	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit	3 : 1	Alchl/Drgs: 0	Speed: 35 MPH Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
30	104812584	07/13/2016 20:00	REAR END, SLOW OR STOP	\$ 5000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 25 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit	2 : 2	Alchl/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										
31	104889129	09/24/2016 12:10	REAR END, SLOW OR STOP	\$ 1800	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 40 MPH Dir: W	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: W	Veh Mnvr / Ped Actn: 4	Obj Strk:										
32	104892382	09/30/2016 15:18	REAR END, SLOW OR STOP	\$ 12000	0	0	0	1	2	1	2	1	0		
Unit	1 : 3	Alchl/Drgs: 0	Speed: 40 MPH Dir: S	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
Unit	3 : 5	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn: 1	Obj Strk:										
33	104903085	10/26/2016 14:39	ANGLE	\$ 7000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: SE	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 35 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
34	104939649	11/07/2016 18:30	REAR END, SLOW OR STOP	\$ 10300	0	0	0	2	1	5	1	1	0	0	
Unit	1 : 4	Alchl/Drgs: 0	Speed: 30 MPH Dir: SW	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	2 : 4	Alchl/Drgs: 0	Speed: 10 MPH Dir: SW	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	3 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: SW	Veh Mnvr / Ped Actn: 11	Obj Strk:										

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Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit	4 : 1	Alchl/Drgs: 0	Speed: 5 MPH Dir: SW	Veh Mnvr / Ped Actn:	11	Obj Strk:									
35	104945770	11/15/2016 06:35	ANIMAL	\$ 1500	0	0	0	0	1	3	1	1	0		
Unit	1 : 4	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn:	4	Obj Strk: 17									
36	104940883	11/17/2016 20:03	REAR END, SLOW OR STOP	\$ 10100	0	0	0	1	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 45 MPH Dir: S	Veh Mnvr / Ped Actn:	4	Obj Strk:									
Unit	2 : 4	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn:	1	Obj Strk:									
Unit	3 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: S	Veh Mnvr / Ped Actn:	1	Obj Strk:									
37	104940316	11/18/2016 17:16	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	2	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: N	Veh Mnvr / Ped Actn:	11	Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn:	11	Obj Strk:									
38	105078990	04/19/2017 00:53	LEFT TURN, SAME ROADWAY	\$ 21000	0	0	1	0	1	4	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 50 MPH Dir: SW	Veh Mnvr / Ped Actn:	4	Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: NE	Veh Mnvr / Ped Actn:	8	Obj Strk:									
39	105169506	07/17/2017 13:54	REAR END, TURN	\$ 6000	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 3	Alchl/Drgs: 0	Speed: 35 MPH Dir: S	Veh Mnvr / Ped Actn:	4	Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 20 MPH Dir: S	Veh Mnvr / Ped Actn:	7	Obj Strk:									
40	105259946	10/04/2017 20:29	REAR END, SLOW OR STOP	\$ 14550	0	0	0	3	1	4	1	3	0	0	
Unit	1 : 4	Alchl/Drgs: 0	Speed: 35 MPH Dir: N	Veh Mnvr / Ped Actn:	4	Obj Strk: 37									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 35 MPH Dir: N	Veh Mnvr / Ped Actn:	11	Obj Strk:									
Unit	3 : 4	Alchl/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn:	1	Obj Strk:									
41	105258316	10/08/2017 12:46	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 25 MPH Dir: S	Veh Mnvr / Ped Actn:	11	Obj Strk:									
Unit	2 : 1	Alchl/Drgs: 0	Speed: 25 MPH Dir: S	Veh Mnvr / Ped Actn:	4	Obj Strk:									
42	105283419	11/02/2017 09:41	REAR END, SLOW OR STOP	\$ 1800	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 0 MPH Dir: E	Veh Mnvr / Ped Actn:	1	Obj Strk:									
Unit	2 : 2	Alchl/Drgs: 0	Speed: 10 MPH Dir: E	Veh Mnvr / Ped Actn:	11	Obj Strk:									
Unit	3 : 4	Alchl/Drgs: 0	Speed: 5 MPH Dir: E	Veh Mnvr / Ped Actn:	11	Obj Strk:									
43	105319248	12/02/2017 13:51	REAR END, SLOW OR STOP	\$ 4300	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: SW	Veh Mnvr / Ped Actn:	1	Obj Strk:									

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Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit	2 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: SW	Veh Mnvr / Ped Actn:	11	Obj Strk:									
Unit	3 : 1	Alchl/Drgs: 0	Speed: 40 MPH Dir: SW	Veh Mnvr / Ped Actn:	4	Obj Strk:									
44	105359908	01/03/2018 22:30	RAN OFF ROAD - LEFT	\$ 200	0	0	0	0	5	1	4	3	1	3	1
Unit	1 : 1	Alchl/Drgs: 0	Speed: 15 MPH Dir: SW	Veh Mnvr / Ped Actn:	7	Obj Strk:		55							
45	105373960	01/17/2018 16:03	RAN OFF ROAD - RIGHT	\$ 6500	0	0	0	0	5	1	4	3	0	1	1
Unit	1 : 4	Alchl/Drgs: 0	Speed: 25 MPH Dir: SW	Veh Mnvr / Ped Actn:	4	Obj Strk:		33							

Legend for Report Details:
 Acc No - Accident Number
 Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
 Condition: R - Road Surface, L - Ambient Light, W - Weather
 Rd Ch - Road Character
 Rd Ci - Roadway Contributing Circumstances
 Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
 Alchl/Drgs - Alcohol Drugs Suspected
 Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
 Obj Strk - Object Struck

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	45	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	13	28.89
Total Injury Crashes	13	28.89
Property Damage Only Crashes	32	71.11
Night Crashes	9	20.00
Wet Crashes	3	6.67
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	45	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	1	2.22
Class C Crashes	12	26.67
Property Damage Only Crashes	32	71.11

Vehicle Exposure Statistics

Annual ADT = 44000

Total Vehicle Exposure = 80.34 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	56.01
Fatal Crash Rate	0.00
Non Fatal Crash Rate	16.18
Night Crash Rate	11.20
Wet Crash Rate	3.73
EPDO Rate	175.74

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Miscellaneous Statistics

Severity Index =	3.14
EPDO Crash Index =	141.20
Estimated Property Damage Total = \$	245400.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	3	6.67
ANIMAL	1	2.22
LEFT TURN, DIFFERENT ROADWAYS	2	4.44
LEFT TURN, SAME ROADWAY	3	6.67
OTHER COLLISION WITH VEHICLE	1	2.22
PARKED MOTOR VEHICLE	1	2.22
RAN OFF ROAD - LEFT	1	2.22
RAN OFF ROAD - RIGHT	1	2.22
REAR END, SLOW OR STOP	27	60.00
REAR END, TURN	2	4.44
SIDESWIPE, SAME DIRECTION	3	6.67

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	1	5.00
Class C Injuries	19	95.00
Total Non-Fatal Injuries	20	100.00
Total Injuries	20	100.00

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Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	5	11.11
Feb	2	4.44
Mar	2	4.44
Apr	2	4.44
May	3	6.67
Jun	6	13.33
Jul	4	8.89
Aug	0	0.00
Sep	3	6.67
Oct	6	13.33
Nov	8	17.78
Dec	4	8.89

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	4	8.89
Tue	7	15.56
Wed	11	24.44
Thu	7	15.56
Fri	8	17.78
Sat	6	13.33
Sun	2	4.44

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Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	2	4.44
0100-0159	1	2.22
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	1	2.22
0700-0759	1	2.22
0800-0859	0	0.00
0900-0959	2	4.44
1000-1059	1	2.22
1100-1159	4	8.89
1200-1259	6	13.33
1300-1359	3	6.67
1400-1459	2	4.44
1500-1559	4	8.89
1600-1659	4	8.89
1700-1759	5	11.11
1800-1859	3	6.67
1900-1959	0	0.00
2000-2059	3	6.67
2100-2159	1	2.22
2200-2259	1	2.22
2300-2359	1	2.22

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Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	27	3	2	32
Dark	9	0	0	9
Other	3	0	1	4
Total	39	3	3	45

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	1	16.67
OFFICIAL HIGHWAY SIGN NON-BREAKAWAY	2	33.33
TRAFFIC ISLAND CURB OR MEDIAN	1	16.67
TREE	2	33.33

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	5	4.95
PASSENGER CAR	60	59.41
PICKUP	10	9.90
SPORT UTILITY	19	18.81
UNKNOWN	2	1.98
VAN	5	4.95

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Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2013	6	0	1	5
2014	10	0	2	8
2015	8	0	3	5
2016	13	0	5	8
2017	6	0	2	4
2018	2	0	0	2
Total	45	0	13	32

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2013	0	1
2014	0	2
2015	0	6
2016	0	7
2017	0	4
2018	0	0
Total	0	20

Miscellaneous Totals

Year	Property Damage	EPDO Index
2013	\$ 23450	13.40
2014	\$ 41050	24.80
2015	\$ 51450	30.20
2016	\$ 73700	50.00
2017	\$ 49050	20.80
2018	\$ 6700	2.00
Total	\$ 245400	141.20

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &				Other
				Fixed Object	Angle	Side Swipe		
2013	0	0	6	0	0	0	0	
2014	2	0	5	0	1	0	2	
2015	1	0	5	0	1	1	0	

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Year	Run Off Road &						
	Left Turn	Right Turn	Rear End	Fixed Object	Angle	Side Swipe	Other
2016	1	0	8	0	1	2	1
2017	1	0	5	0	0	0	0
2018	0	0	0	2	0	0	0
Total	5	0	29	2	3	3	3

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Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CHTIAUS15501ATEASTOWNE				76.8	8.4	44000	

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality			Y-Line Ft.	Begin Date	End Date	Years
Name	Code	Div.	Name	Code					
ORANGE	68	7	All and Rural		150	3/1/2013	2/28/2018	5.00	

Location Text	Requestor
US 15-501 (Fordham Blvd) at SR 2256 (Eastowne Dr)	

Included Accidents
104068208
105359908

Excluded Accidents
103703971
103707863
103752464
103828013
103905042
103929026
103988829
104023563
104110642
104355658
104355750
104369918
104453342
104547008
104576497
104628339
104705067
104742439
104778282
105075919
105105743
105111483

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Excluded Accidents

105278685
105294048
105328719
105338572
105338602
103746131
104756762

Fiche Roads

Name	Code
US 15	20000015
US 501	20000501
FORDHAM	50010799
SR 2256	40002256
EASTOWNE	50009246

Intersection Road Combinations

Name	Code	Code	Name
US 15	20000015	40002256	SR 2256
US 15	20000015	50009246	EASTOWNE
US 501	20000501	40002256	SR 2256
US 501	20000501	50009246	EASTOWNE
FORDHAM	50010799	40002256	SR 2256
FORDHAM	50010799	50009246	EASTOWNE

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
8	105078980	7.702	04/23/2017 19:10	REAR END, SLOW OR STOP	\$ 1500	0	0	0	0	2	1	3	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 5 MPH Dir: S		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 20 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
9	105218435	7.702	09/06/2017 15:41	RIGHT TURN, DIFFERENT ROADWAYS	\$ 1600	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 40 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed: 10 MPH Dir: NW		Veh Mnvr/Ped Actn:				7	Obj Strk:					
10	105223449	7.702	09/08/2017 15:44	REAR END, TURN	\$ 2200	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 32	Alchl/Drgs:	7	Speed: 25 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
11	105255133	7.702	10/13/2017 03:34	ANGLE	\$ 14000	0	0	2	0	2	4	3	4	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed: 35 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn:				4	Obj Strk:					
12	104937319	7.704	11/07/2016 19:30	REAR END, TURN	\$ 3000	0	0	0	1	1	4	1	3	0	3	2
Unit	1 : 4	Alchl/Drgs:	0	Speed: 20 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	7	Speed: 30 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
13	105255098	7.708	10/12/2017 12:20	REAR END, SLOW OR STOP	\$ 1700	0	0	0	0	1	1	2	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn:				4	Obj Strk:					
14	104889128	7.712	09/24/2016 11:53	REAR END, SLOW OR STOP	\$ 2500	0	0	0	1	1	1	1	1	0	3	2
Unit	1 : 1	Alchl/Drgs:	0	Speed: 20 MPH Dir: SE		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SE		Veh Mnvr/Ped Actn:				1	Obj Strk:					
15	104340313	7.716	01/07/2015 19:25	REAR END, SLOW OR STOP	\$ 4000	0	0	0	0	1	4	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 15 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	4 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
16	104667236	7.716	02/24/2016 08:55	REAR END, SLOW OR STOP	\$ 2500	0	0	0	0	2	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: SW		Veh Mnvr/Ped Actn:				4	Obj Strk:					

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
17	104355715	7.718	02/04/2015 07:46	REAR END, SLOW OR STOP	\$ 1200	0	0	0	2	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
18	104916626	7.720	10/23/2016 12:44	REAR END, SLOW OR STOP	\$ 3800	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:		1	Obj Strk:							
Unit	2 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:		4	Obj Strk:							
19	104268458	7.725	12/30/2014 18:02	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	4	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: SW	Veh Mnvr/Ped Actn:		12	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: SW	Veh Mnvr/Ped Actn:		12	Obj Strk:							
20	104547011	7.738	10/29/2015 23:00	ANIMAL	\$ 2000	0	0	0	0	1	4	2	1	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed:	30 MPH Dir: SE	Veh Mnvr/Ped Actn:		11	Obj Strk:		17					
21	104012596	7.740	02/28/2014 19:24	REAR END, SLOW OR STOP	\$ 1400	0	0	0	1	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 5	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	3 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		1	Obj Strk:							
22	104582813	7.740	11/24/2015 21:18	REAR END, SLOW OR STOP	\$ 6500	0	0	0	1	1	5	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 5	Alchl/Drgs:	0	Speed:	30 MPH Dir: SW	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	3 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: SW	Veh Mnvr/Ped Actn:		4	Obj Strk:							
23	104984828	7.743	11/24/2016 18:35	REAR END, SLOW OR STOP	\$ 7000	0	0	0	0	1	4	1	1	0	0	1
Unit	1 : 32	Alchl/Drgs:	1	Speed:	35 MPH Dir: SW	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 5	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:		1	Obj Strk:							
24	104355644	7.749	03/14/2015 15:09	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	1	1	2	1	0		
Unit	1 : 2	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		1	Obj Strk:							
Unit	2 : 4	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
25	104017410	7.752	03/08/2014 18:05	ANGLE	\$ 7000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	10 MPH Dir: E	Veh Mnvr/Ped Actn:		9	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: W	Veh Mnvr/Ped Actn:		7	Obj Strk:							

**North Carolina Department of Transportation
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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
26	104647897	7.752	02/04/2016 18:34	LEFT TURN, SAME ROADWAY	\$ 2000	0	0	0	0	1	4	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 15 MPH Dir: SE		Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 15 MPH Dir: SE		Veh Mnvr/Ped Actn:				5	Obj Strk:					

27	103808170	7.754	06/15/2013 14:32	REAR END, SLOW OR STOP	\$ 37500	0	0	0	1	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	4 : 5	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					

28	105402579	7.758	02/06/2018 00:15	RAN OFF ROAD - LEFT	\$ 1700	0	0	0	0	1	5	1	1	0	0	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 45 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:		37			
Unit	2 : 32	Alchl/Drgs:	7	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:		37			

29	103729701	7.759	04/10/2013 10:53	REAR END, SLOW OR STOP	\$ 1200	0	0	0	0	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed: 20 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 20 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					

30	104490145	7.759	08/27/2015 19:06	REAR END, SLOW OR STOP	\$ 5700	0	0	0	3	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed: 55 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	4 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					

31	104358506	7.761	04/17/2015 22:01	REAR END, SLOW OR STOP	\$ 2500	0	0	1	0	1	5	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn:				5	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				1	Obj Strk:					

32	104079589	7.787	05/21/2014 17:57	REAR END, SLOW OR STOP	\$ 1600	0	0	0	1	1	1	1	1	0	2	
Unit	1 : 5	Alchl/Drgs:	0	Speed: 35 MPH Dir: NE		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: NE		Veh Mnvr/Ped Actn:				11	Obj Strk:					

33	104231892	7.787	11/14/2014 08:04	REAR END, SLOW OR STOP	\$ 1020	0	0	0	2	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	7	Speed: 15 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report**

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
34	105197243	7.799	08/14/2017 15:06	REAR END, SLOW OR STOP	\$ 1750	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	5 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 4	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
35	104169496	7.805	03/08/2014 02:35	RAN OFF ROAD - LEFT	\$ 13500	0	0	4	2	4	5	1	2	1	0	3
Unit	1 : 1	Alchl/Drgs:	7	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				2	Obj Strk:		20			
Unit	2 : 1	Alchl/Drgs:	7	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				2	Obj Strk:		20			
Unit	3 : 1	Alchl/Drgs:	7	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:		14			
Unit	4 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
Unit	5 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
Unit	6 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
Unit	7 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
Unit	8 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
Unit	9 : 24	Alchl/Drgs:	7	Speed:	0 MPH Dir:	Veh Mnvr/Ped Actn:					Obj Strk:					
36	104707485	7.822	04/05/2016 10:02	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	1	2	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
37	104723838	7.832	04/22/2016 14:51	REAR END, SLOW OR STOP	\$ 12800	0	0	0	2	2	1	3	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
38	104933508	7.832	11/21/2016 14:45	SIDESWIPE, SAME DIRECTION	\$ 11000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	20 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 3	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	4 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				5	Obj Strk:					
39	105238508	7.842	09/28/2017 08:23	REAR END, SLOW OR STOP	\$ 2200	0	0	0	0	1	1	1	1	0		2
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
40	105296202	7.842	11/16/2017 11:32	REAR END, SLOW OR STOP	\$ 1500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 32	Alchl/Drgs:	7	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
41	105416136	7.842	02/22/2018 14:42	RAN OFF ROAD - LEFT	\$ 7500	0	0	0	2	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	3 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
42	104761774	7.852	05/24/2016 14:59	SIDESWIPE, SAME DIRECTION	\$ 1000	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: NE	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:		5	Obj Strk:							
43	104402865	7.862	06/02/2015 15:43	REAR END, SLOW OR STOP	\$ 1900	0	0	0	0	1	1	2	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: NE	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:		11	Obj Strk:							
44	104946797	7.862	11/13/2016 12:49	REAR END, SLOW OR STOP	\$ 12000	0	0	0	4	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
45	103878198	7.901	09/13/2013 08:12	REAR END, SLOW OR STOP	\$ 1300	0	0	0	0	1	1	1	1	0	0	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	20 MPH Dir: S	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 5	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		1	Obj Strk:							
Unit	3 : 5	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:		1	Obj Strk:							
46	104705067	7.901	03/25/2016 15:11	REAR END, SLOW OR STOP	\$ 7800	0	0	0	3	1	1	2	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	3 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
47	103729498	7.902	03/29/2013 16:10	REAR END, SLOW OR STOP	\$ 10300	0	0	1	1	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: W	Veh Mnvr/Ped Actn:		4	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: W	Veh Mnvr/Ped Actn:		1	Obj Strk:							
Unit	3 : 3	Alchl/Drgs:	0	Speed:	0 MPH Dir: W	Veh Mnvr/Ped Actn:		1	Obj Strk:							
Unit	4 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: W	Veh Mnvr/Ped Actn:		1	Obj Strk:							
48	104079970	7.927	06/03/2014 14:10	REAR END, SLOW OR STOP	\$ 2700	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							
Unit	3 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:		11	Obj Strk:							

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
49	104334251	7.927	01/18/2015 17:15	REAR END, SLOW OR STOP	\$ 1000	0	0	0	2	1	1	1	1	0	3	2
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					

50	104384305	7.927	05/16/2015 14:38	REAR END, SLOW OR STOP	\$ 6000	0	0	0	0	1	1	1	1	0		
Unit	1 : 5	Alchl/Drgs:	0	Speed:	5 MPH Dir: NE	Veh Mnvr/Ped Actn:				12	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					

51	103769222	7.951	05/31/2013 09:30	REAR END, SLOW OR STOP	\$ 1200	0	0	0	0	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					

52	104778282	7.951	06/27/2016 16:58	REAR END, SLOW OR STOP	\$ 1100	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	10 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					

53	104809404	7.951	07/25/2016 17:32	REAR END, SLOW OR STOP	\$ 1200	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 12	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					

54	105338570	7.991	12/21/2017 13:10	REAR END, SLOW OR STOP	\$ 8050	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					

55	103752464	8.000	05/10/2013 15:02	SIDESWIPE, SAME DIRECTION	\$ 4800	0	0	0	0	1	1	2	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 20	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:				16	Obj Strk:					

56	104534879	8.002	10/19/2015 18:49	REAR END, SLOW OR STOP	\$ 4000	0	0	0	1	1	2	1	1	0	3	2
Unit	1 : 1	Alchl/Drgs:	1	Speed:	50 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					

57	105100926	8.011	05/10/2017 17:10	REAR END, SLOW OR STOP	\$ 3800	0	0	0	1	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
58	104358501	8.012	04/21/2015 09:04	REAR END, SLOW OR STOP	\$ 12000	0	0	0	0	1	1	1	1	0		2
Unit	1 : 4	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	3 : 4	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				1	Obj Strk:			
59	104494610	8.021	09/15/2015 16:00	REAR END, SLOW OR STOP	\$ 5600	0	0	0	0	1	1	1	1	0		0
Unit	1 : 4	Alchl/Drgs:	0	Speed:	10 MPH	Dir:	SE	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	25 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				4	Obj Strk:			
60	105039653	8.031	03/13/2017 14:41	REAR END, SLOW OR STOP	\$ 2100	0	0	0	0	2	1	3	1	1	3	2
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	20 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			
61	105100935	8.031	05/10/2017 16:50	REAR END, SLOW OR STOP	\$ 7950	0	0	0	2	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	3 : 1	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				4	Obj Strk:			
62	104029382	8.051	03/29/2014 17:19	REAR END, SLOW OR STOP	\$ 2300	0	0	0	0	2	1	1	1	0		0
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH	Dir:	W	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	W	Veh Mnvr/Ped Actn:				4	Obj Strk:			
63	105278685	8.054	11/02/2017 11:57	RAN OFF ROAD - RIGHT	\$ 100	0	0	0	1	1	1	1				
Unit	1 : 21	Alchl/Drgs:	1	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			
64	105328719	8.056	12/05/2017 17:25	REAR END, SLOW OR STOP	\$ 1500	0	0	0	0	1	5	1				
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	2 : 5	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				11	Obj Strk:			
65	104049954	8.061	04/17/2014 15:18	REAR END, SLOW OR STOP	\$ 4400	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	SE	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	3 : 2	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				4	Obj Strk:			
66	104420370	8.061	06/25/2015 10:34	REAR END, SLOW OR STOP	\$ 6600	0	0	0	2	1	1	2	1	0		0
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	N	Veh Mnvr/Ped Actn:				1	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	25 MPH	Dir:	N	Veh Mnvr/Ped Actn:				4	Obj Strk:			

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
67	104024582	8.066	03/21/2014 18:49	REAR END, SLOW OR STOP	\$ 13900	0	0	0	3	1	1	1	1	0	0	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: SE		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 2	Alchl/Drgs:	0	Speed: 5 MPH Dir: SW		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	3 : 4	Alchl/Drgs:	0	Speed: 5 MPH Dir: SW		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	4 : 1	Alchl/Drgs:	0	Speed: 5 MPH Dir: SW		Veh Mnvr/Ped Actn: 11				Obj Strk:						

68	103752789	8.075	05/10/2013 11:56	REAR END, SLOW OR STOP	\$ 1300	0	0	0	0	1	1	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 3	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						

69	103819596	8.075	07/30/2013 10:22	REAR END, SLOW OR STOP	\$ 6000	0	0	0	0	1	1	1	1	0		2
Unit	1 : 4	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: SW		Veh Mnvr/Ped Actn: 5				Obj Strk:						

70	104703172	8.076	03/23/2016 11:20	REAR END, SLOW OR STOP	\$ 21600	0	0	0	2	1	1	1	1	0		0
Unit	1 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	3 : 1	Alchl/Drgs:	0	Speed: 10 MPH Dir: NE		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	4 : 1	Alchl/Drgs:	2	Speed: 35 MPH Dir: NE		Veh Mnvr/Ped Actn: 4				Obj Strk:						

71	104471605	8.081	08/14/2015 10:45	REAR END, SLOW OR STOP	\$ 16200	0	0	0	0	1	1	1	1	0		0
Unit	1 : 1	Alchl/Drgs:	0	Speed: 15 MPH Dir: N		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	2 : 4	Alchl/Drgs:	0	Speed: 20 MPH Dir: N		Veh Mnvr/Ped Actn: 4				Obj Strk:						

72	105001608	8.081	01/13/2017 16:00	REAR END, SLOW OR STOP	\$ 3700	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 40 MPH Dir: SW		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: SW		Veh Mnvr/Ped Actn: 4				Obj Strk:						

73	104377298	8.094	05/08/2015 23:06	ANIMAL	\$ 2500	0	0	0	0	1	5	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: NE		Veh Mnvr/Ped Actn: 4				Obj Strk:		17				

74	105105626	8.094	05/12/2017 09:37	REAR END, SLOW OR STOP	\$ 1600	0	0	0	1	2	1	2	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	2 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn: 12				Obj Strk:						

75	103794077	8.101	06/25/2013 08:57	REAR END, SLOW OR STOP	\$ 3200	0	0	0	0	1	1	2	1	0		0
Unit	1 : 2	Alchl/Drgs:	0	Speed: 25 MPH Dir: S		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 2 MPH Dir: S		Veh Mnvr/Ped Actn: 11				Obj Strk:						

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
76	105195874	8.107	08/12/2017 17:05	REAR END, SLOW OR STOP	\$ 19235	0	0	0	3	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
77	104029383	8.113	03/29/2014 17:50	REAR END, SLOW OR STOP	\$ 3000	0	0	0	2	1	1	1	1	0	0	2
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
78	105341824	8.114	12/16/2017 17:47	REAR END, SLOW OR STOP	\$ 8000	0	0	0	0	1	5	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
79	104892382	8.123	09/30/2016 15:18	REAR END, SLOW OR STOP	\$ 12000	0	0	0	1	2	1	2	1	0		
Unit	1 : 3	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 5	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
80	105283419	8.126	11/02/2017 09:41	REAR END, SLOW OR STOP	\$ 1800	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: E	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	10 MPH Dir: E	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 4	Alchl/Drgs:	0	Speed:	5 MPH Dir: E	Veh Mnvr/Ped Actn:				11	Obj Strk:					
81	105258316	8.128	10/08/2017 12:46	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	25 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	25 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
82	104547018	8.130	10/27/2015 16:32	REAR END, SLOW OR STOP	\$ 3000	0	0	0	2	2	1	3	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 3	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
83	104427580	8.136	07/02/2015 11:30	SIDESWIPE, SAME DIRECTION	\$ 3000	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed:	30 MPH Dir: N	Veh Mnvr/Ped Actn:				15	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
84	104945770	8.137	11/15/2016 06:35	ANIMAL	\$ 1500	0	0	0	0	1	3	1	1	0		
Unit	1 : 4	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:		17	
85	103721155	8.140	03/27/2013 14:22	REAR END, SLOW OR STOP	\$ 11000	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	40 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	3 : 1	Alchl/Drgs:	0	Speed:	40 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:			
86	104068208	8.140	05/15/2014 11:28	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	40 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				4	Obj Strk:			
87	104769998	8.141	05/31/2016 15:16	SIDESWIPE, SAME DIRECTION	\$ 3000	0	0	0	0	1	1	1	1	0	0	1
Unit	1 : 3	Alchl/Drgs:	0	Speed:	50 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	S	Veh Mnvr/Ped Actn:				5	Obj Strk:			
88	104939649	8.142	11/07/2016 18:30	REAR END, SLOW OR STOP	\$ 10300	0	0	0	2	1	5	1	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed:	30 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 4	Alchl/Drgs:	0	Speed:	10 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	3 : 1	Alchl/Drgs:	0	Speed:	10 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	4 : 1	Alchl/Drgs:	0	Speed:	5 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				11	Obj Strk:			
89	104102836	8.143	07/02/2014 12:54	REAR END, SLOW OR STOP	\$ 3700	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	10 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	N	Veh Mnvr/Ped Actn:				1	Obj Strk:			
90	105169506	8.146	07/17/2017 13:54	REAR END, TURN	\$ 6000	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 3	Alchl/Drgs:	0	Speed:	35 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	20 MPH	Dir:	S	Veh Mnvr/Ped Actn:				7	Obj Strk:			
91	104576024	8.147	11/14/2015 12:12	REAR END, SLOW OR STOP	\$ 6500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed:	25 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	N	Veh Mnvr/Ped Actn:				4	Obj Strk:			
92	104002494	8.149	02/14/2014 01:30	PARKED MOTOR VEHICLE	\$ 9000	0	0	0	0	5	8	4	1	9	3	1
Unit	1 : 1	Alchl/Drgs:	7	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				2	Obj Strk:			
Unit	2 : 32	Alchl/Drgs:	7	Speed:	0 MPH	Dir:	S	Veh Mnvr/Ped Actn:				4	Obj Strk:			

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
93	103916319	8.150	11/09/2013 12:57	REAR END, SLOW OR STOP	\$ 3250	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 50 MPH Dir: NE		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn:				1	Obj Strk:					
94	103792491	8.151	06/05/2013 17:37	REAR END, SLOW OR STOP	\$ 3400	0	0	0	0	3	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	4 : 32	Alchl/Drgs:	7	Speed: 20 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:					
95	103916309	8.151	11/08/2013 11:58	REAR END, SLOW OR STOP	\$ 1200	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed: 10 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:					
96	103973468	8.151	12/17/2013 09:37	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 20 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
97	103997577	8.151	01/27/2014 15:48	LEFT TURN, SAME ROADWAY	\$ 9200	0	0	0	1	1	1	2	1	0	3	1
Unit	1 : 3	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 5	Alchl/Drgs:	0	Speed: 25 MPH Dir: N		Veh Mnvr/Ped Actn:				8	Obj Strk:		33			
98	104017422	8.151	03/11/2014 00:00	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	4	1		0		
Unit	1 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: W		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed: 5 MPH Dir: W		Veh Mnvr/Ped Actn:				11	Obj Strk:					
99	104109452	8.151	06/07/2014 13:56	LEFT TURN, DIFFERENT ROADWAYS	\$ 4500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 5	Alchl/Drgs:	0	Speed: 15 MPH Dir: NW		Veh Mnvr/Ped Actn:				8	Obj Strk:					
100	104110513	8.151	06/13/2014 16:21	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 10 MPH Dir: N		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn:				1	Obj Strk:					
101	104271907	8.151	12/26/2014 07:26	ANGLE	\$ 4000	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed: 5 MPH Dir: NE		Veh Mnvr/Ped Actn:				8	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
102	104298200	8.151	01/08/2015 18:16	REAR END, TURN	\$ 1950	0	0	0	0	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: SE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: SE	Veh Mnvr/Ped Actn:				8	Obj Strk:					
103	104420361	8.151	06/25/2015 10:28	LEFT TURN, DIFFERENT ROADWAYS	\$ 12000	0	0	0	2	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: SE	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: W	Veh Mnvr/Ped Actn:				4	Obj Strk:					
104	104534817	8.151	10/23/2015 16:41	REAR END, SLOW OR STOP	\$ 7500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
105	104547017	8.151	10/26/2015 17:15	ANGLE	\$ 7500	0	0	0	0	1	2	1	1	0	12	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:				12	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: W	Veh Mnvr/Ped Actn:				4	Obj Strk:					
106	104599935	8.151	12/06/2015 23:48	REAR END, SLOW OR STOP	\$ 10000	0	0	0	2	1	4	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	10 MPH Dir: W	Veh Mnvr/Ped Actn:				12	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	35 MPH Dir: W	Veh Mnvr/Ped Actn:				4	Obj Strk:					
107	104775937	8.151	06/11/2016 21:29	SIDESWIPE, SAME DIRECTION	\$ 2200	0	0	0	0	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: N	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: S	Veh Mnvr/Ped Actn:				7	Obj Strk:					
108	104777195	8.151	06/14/2016 15:10	LEFT TURN, SAME ROADWAY	\$ 16250	0	0	0	2	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:		37			
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
109	104812584	8.151	07/13/2016 20:00	REAR END, SLOW OR STOP	\$ 5000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	25 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
110	104903085	8.151	10/26/2016 14:39	ANGLE	\$ 7000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: SE	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
111	104940883	8.151	11/17/2016 20:03	REAR END, SLOW OR STOP	\$ 10100	0	0	0	1	1	4	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	3 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
112	104940316	8.151	11/18/2016 17:16	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	2	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 10 MPH Dir: N		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 5 MPH Dir: N		Veh Mnvr/Ped Actn: 11				Obj Strk:						
113	105078990	8.151	04/19/2017 00:53	LEFT TURN, SAME ROADWAY	\$ 21000	0	0	1	0	1	4	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 50 MPH Dir: SW		Veh Mnvr/Ped Actn: 4				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 10 MPH Dir: NE		Veh Mnvr/Ped Actn: 8				Obj Strk:						
114	105359908	8.151	01/03/2018 22:30	RAN OFF ROAD - LEFT	\$ 200	0	0	0	0	5	1	4	3	1	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 15 MPH Dir: SW		Veh Mnvr/Ped Actn: 7				Obj Strk: 55						
115	105259946	8.158	10/04/2017 20:29	REAR END, SLOW OR STOP	\$ 14550	0	0	0	3	1	4	1	3	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed: 35 MPH Dir: N		Veh Mnvr/Ped Actn: 4				Obj Strk: 37						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 35 MPH Dir: N		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	3 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: N		Veh Mnvr/Ped Actn: 1				Obj Strk:						
116	104668850	8.159	02/12/2016 11:21	REAR END, SLOW OR STOP	\$ 1000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn: 11				Obj Strk:						
117	103862607	8.160	09/05/2013 12:59	REAR END, SLOW OR STOP	\$ 1600	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed: 0 MPH Dir: SW		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	2 : 4	Alchl/Drgs:	0	Speed: 5 MPH Dir: SW		Veh Mnvr/Ped Actn: 11				Obj Strk:						
118	103958719	8.160	01/07/2014 17:26	REAR END, SLOW OR STOP	\$ 2000	0	0	0	0	1	4	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn: 11				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn: 11				Obj Strk:						
119	104751651	8.160	05/18/2016 18:17	REAR END, SLOW OR STOP	\$ 1550	0	0	0	1	1	1	2	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn: 1				Obj Strk:						
Unit	2 : 1	Alchl/Drgs:	0	Speed: 30 MPH Dir: NE		Veh Mnvr/Ped Actn: 4				Obj Strk:						

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
120	105319248	8.163	12/02/2017 13:51	REAR END, SLOW OR STOP	\$ 4300	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: SW		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: SW		Veh Mnvr/Ped Actn:				4	Obj Strk:					
121	104889129	8.172	09/24/2016 12:10	REAR END, SLOW OR STOP	\$ 1800	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 40 MPH Dir: W		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: W		Veh Mnvr/Ped Actn:				4	Obj Strk:					
122	105373960	8.172	01/17/2018 16:03	RAN OFF ROAD - RIGHT	\$ 6500	0	0	0	0	5	1	4	3	0	1	1
Unit	1 : 4	Alchl/Drgs:	0	Speed: 25 MPH Dir: SW		Veh Mnvr/Ped Actn:				4	Obj Strk:		33			
123	105078981	8.195	04/22/2017 21:03	REAR END, SLOW OR STOP	\$ 11000	0	0	0	0	1	5	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: SW		Veh Mnvr/Ped Actn:				11	Obj Strk:					
124	104369918	8.200	05/05/2015 15:07	REAR END, SLOW OR STOP	\$ 2500	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 40 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
125	103734161	8.208	04/17/2013 09:16	REAR END, SLOW OR STOP	\$ 3500	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: S		Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:					
126	103993206	8.210	01/16/2014 04:40	RAN OFF ROAD - RIGHT	\$ 5000	0	0	0	1	2	4	4	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:		59			
127	105010026	8.213	01/31/2017 17:12	REAR END, SLOW OR STOP	\$ 12700	0	0	0	1	1	1	2	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed: 0 MPH Dir: NE		Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 2	Alchl/Drgs:	0	Speed: 30 MPH Dir: NE		Veh Mnvr/Ped Actn:				4	Obj Strk:					
128	105247859	8.215	10/03/2017 19:38	ANIMAL	\$ 2000	0	0	0	0	1	4	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed: 45 MPH Dir: NW		Veh Mnvr/Ped Actn:				4	Obj Strk:		17			
129	105411848	8.223	02/23/2018 18:52	RAN OFF ROAD - RIGHT	\$ 3000	0	0	1	0	1	5	1	1	0	0	
Unit	1 : 4	Alchl/Drgs:	1	Speed: 50 MPH Dir: S		Veh Mnvr/Ped Actn:				4	Obj Strk:		18			

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						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
130	104074566	8.227	05/23/2014 15:52	REAR END, SLOW OR STOP	\$ 4300	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
131	104711020	8.232	03/25/2016 15:34	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	2 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
132	105261610	8.234	10/16/2017 17:12	REAR END, SLOW OR STOP	\$ 19500	0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 3	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 3	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	4 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
133	104901884	8.236	10/11/2016 08:48	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
134	105351889	8.244	12/28/2017 10:59	REAR END, SLOW OR STOP	\$ 4500	0	0	0	2	1	1	1	1	0	3	1
Unit	1 : 3	Alchl/Drgs:	0	Speed:	35 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 2	Alchl/Drgs:	0	Speed:	40 MPH Dir: S	Veh Mnvr/Ped Actn:				11	Obj Strk:					
135	105319247	8.245	12/03/2017 14:10	REAR END, SLOW OR STOP	\$ 16800	0	0	0	1	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: SW	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
136	104607117	8.246	12/22/2015 13:26	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	2	1	2	1	0	0	
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	35 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
137	104023788	8.251	03/15/2014 14:30	REAR END, SLOW OR STOP	\$ 1200	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 10	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 32	Alchl/Drgs:	7	Speed:	35 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
138	104356244	8.251	04/13/2015 17:29	REAR END, SLOW OR STOP	\$ 4000	0	0	0	2	1	1	1	1	0	0	
Unit	1 : 4	Alchl/Drugs:	0	Speed:	48 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drugs:	0	Speed:	30 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
139	104975619	8.251	12/06/2016 15:17	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	2	1	3	3	0	3	1
Unit	1 : 4	Alchl/Drugs:	0	Speed:	40 MPH Dir: E	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drugs:	0	Speed:	40 MPH Dir: E	Veh Mnvr/Ped Actn:				4	Obj Strk:					
140	103932733	8.281	11/25/2013 11:51	REAR END, SLOW OR STOP	\$ 5800	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drugs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drugs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	3 : 5	Alchl/Drugs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
141	104453342	8.281	08/03/2015 14:22	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	1	1		0		
Unit	1 : 1	Alchl/Drugs:	0	Speed:	55 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 3	Alchl/Drugs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
142	105104919	8.300	05/13/2017 16:19	REAR END, SLOW OR STOP	\$ 8500	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drugs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 4	Alchl/Drugs:	7	Speed:	50 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
143	104106959	8.310	07/03/2014 13:54	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	2	1	2	1	0		
Unit	1 : 1	Alchl/Drugs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drugs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
144	104622569	8.310	12/21/2015 15:42	RAN OFF ROAD - RIGHT	\$ 3500	0	0	0	0	1	1	1	1	0		
Unit	1 : 1	Alchl/Drugs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:		56			
145	104087582	8.330	05/21/2014 17:41	REAR END, SLOW OR STOP	\$ 7100	0	0	0	1	1	1	1	1	0		
Unit	1 : 4	Alchl/Drugs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 4	Alchl/Drugs:	0	Speed:	20 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
146	105118451	8.333	05/25/2017 12:59	REAR END, SLOW OR STOP	\$ 11400	0	0	0	0	1	1	2	1	0	0	
Unit	1 : 1	Alchl/Drugs:	0	Speed:	50 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 5	Alchl/Drugs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drugs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	4 : 1	Alchl/Drugs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
147	103803071	8.334	07/03/2013 15:47	REAR END, SLOW OR STOP	\$ 2950	0	0	0	0	2	1	2	1	0	0	
Unit	1 : 3	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
148	104297733	8.334	01/03/2015 15:47	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	20 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
149	103892115	8.346	10/29/2013 13:19	REAR END, SLOW OR STOP	\$ 2500	0	0	0	0	1	1	1	1	0		
Unit	1 : 5	Alchl/Drgs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
150	104889169	8.350	09/21/2016 07:46	REAR END, SLOW OR STOP	\$ 400	0	0	0	1	2	1	1	1	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed:	10 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
151	104937320	8.352	11/22/2016 15:36	REAR END, SLOW OR STOP	\$ 8000	0	0	0	0	1	1	1	3	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
152	104245357	8.353	12/09/2014 15:56	REAR END, SLOW OR STOP	\$ 4000	0	0	0	0	2	1	3	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	5 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
153	103919942	8.363	11/07/2013 19:48	REAR END, SLOW OR STOP	\$ 12500	0	0	0	0	1	5	1	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
154	104771999	8.369	04/08/2016 09:18	REAR END, SLOW OR STOP	\$ 1800	0	0	0	0	1	1	1	1	0		
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
155	105402619	8.375	02/20/2018 08:38	REAR END, SLOW OR STOP	\$ 9075	0	0	0	0	2	1	5	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 1	Alchl/Drgs:	0	Speed:	20 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
156	104110642	8.390	06/22/2014 16:53	ANIMAL	\$ 1500	0	0	0	0	1	1	2	1	0		
Unit	1 : 1	Alchl/Drgs:	0	Speed:	35 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:		17			
157	103867526	8.391	09/24/2013 13:25	REAR END, SLOW OR STOP	\$ 2900	0	0	0	0	1	1	2	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	20 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
158	104262179	8.391	12/09/2014 15:56	REAR END, SLOW OR STOP	\$ 500	0	0	0	0	2	1	3	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	10 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
159	104756762	8.391	05/28/2016 11:56	REAR END, SLOW OR STOP	\$ 1100	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
160	104982834	8.393	12/22/2016 17:03	REAR END, SLOW OR STOP	\$ 11000	0	0	0	0	1	2	1	1	0		
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: SW	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 3	Alchl/Drgs:	0	Speed:	45 MPH Dir: SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
161	104245256	8.396	12/06/2014 19:53	REAR END, SLOW OR STOP	\$ 15000	0	0	1	0	2	5	3	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
162	104547042	8.396	11/02/2015 12:25	REAR END, SLOW OR STOP	\$ 4000	0	0	0	0	2	1	3	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	10 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
163	103907811	8.398	10/25/2013 14:35	REAR END, SLOW OR STOP	\$ 4000	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	40 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
164	104812552	8.399	07/10/2016 13:47	REAR END, SLOW OR STOP	\$ 1600	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs:	0	Speed:	45 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
165	103989427	8.402	01/15/2014 14:18	REAR END, SLOW OR STOP	\$ 300	0	0	0	1	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	3 : 32	Alchl/Drgs:	7	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
166	104979890	8.403	11/28/2016 17:02	REAR END, SLOW OR STOP	\$ 18900	0	0	1	2	1	2	1	3	0	3	1
Unit	1 : 11	Alchl/Drgs:	0	Speed:	55 MPH Dir: E	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: E	Veh Mnvr/Ped Actn:				7	Obj Strk:					
Unit	3 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: E	Veh Mnvr/Ped Actn:				4	Obj Strk:		37			
Unit	4 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	5 : 4	Alchl/Drgs:	0	Speed:	45 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
167	104023563	8.407	03/27/2014 17:06	REAR END, SLOW OR STOP	\$ 2200	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs:	0	Speed:	20 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
168	105260327	8.407	10/17/2017 17:34	REAR END, SLOW OR STOP	\$ 5500	0	0	0	2	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	40 MPH Dir: NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
169	104407365	8.408	06/10/2015 17:25	REAR END, SLOW OR STOP	\$ 1400	0	0	0	0	1	1	1	1	0	3	2
Unit	1 : 3	Alchl/Drgs:	0	Speed:	0 MPH Dir: NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 4	Alchl/Drgs:	0	Speed:	10 MPH Dir: NE	Veh Mnvr/Ped Actn:				12	Obj Strk:					
170	103900501	8.410	10/24/2013 12:47	ANGLE	\$ 11000	0	0	0	1	1	1	1	1	0	12	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: E	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	30 MPH Dir: N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
171	103929026	8.410	11/03/2013 18:27	ANGLE	\$ 16000	0	0	0	0	1	5	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	10 MPH Dir: SW	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	45 MPH Dir: NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
172	104355750	8.410	02/03/2015 17:04	REAR END, SLOW OR STOP	\$ 8000	0	0	0	1	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				4	Obj Strk:					
Unit	2 : 2	Alchl/Drgs:	0	Speed:	0 MPH Dir: S	Veh Mnvr/Ped Actn:				1	Obj Strk:					
173	104355658	8.410	03/17/2015 18:20	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	0 MPH Dir: N	Veh Mnvr/Ped Actn:				11	Obj Strk:					

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Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl			
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op		
Unit	2 : 4	Alchl/Drgs:	0	Speed:	25 MPH	Dir:	N	Veh Mnvr/Ped Actn:				11	Obj Strk:					
174	104355688	8.410	03/31/2015 13:45	REAR END, SLOW OR STOP	\$ 4000			0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 5	Alchl/Drgs:	0	Speed:	15 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				1	Obj Strk:					
175	104628339	8.410	01/15/2016 16:42	REAR END, SLOW OR STOP	\$ 1700			0	0	0	0	2	2	3	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	0 MPH	Dir:	N	Veh Mnvr/Ped Actn:				1	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	10 MPH	Dir:	N	Veh Mnvr/Ped Actn:				4	Obj Strk:					
176	104662182	8.410	01/30/2016 13:23	REAR END, SLOW OR STOP	\$ 9000			0	0	0	0	1	1	1	3	0	3	1
Unit	1 : 4	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				11	Obj Strk:					
Unit	2 : 3	Alchl/Drgs:	0	Speed:	45 MPH	Dir:	NE	Veh Mnvr/Ped Actn:				4	Obj Strk:					
177	105111483	8.410	05/20/2017 10:25	LEFT TURN, DIFFERENT ROADWAYS	\$ 11950			0	0	0	2	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	5 MPH	Dir:	S	Veh Mnvr/Ped Actn:				8	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	40 MPH	Dir:	SW	Veh Mnvr/Ped Actn:				4	Obj Strk:					
178	105204492	8.410	08/18/2017 08:44	REAR END, SLOW OR STOP	\$ 1000			0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alchl/Drgs:	0	Speed:	20 MPH	Dir:	E	Veh Mnvr/Ped Actn:				15	Obj Strk:					
Unit	2 : 1	Alchl/Drgs:	0	Speed:	15 MPH	Dir:	E	Veh Mnvr/Ped Actn:				4	Obj Strk:					

Legend for Report Details:
 Acc No - Accident Number
 Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
 Condition: R - Road Surface, L - Ambient Light, W - Weather
 Rd Ch - Road Character
 Rd Ci - Roadway Contributing Circumstances
 Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
 Alchl/Drgs - Alcohol Drugs Suspected
 Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
 Obj Strk - Object Struck

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Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	178	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	62	34.83
Total Injury Crashes	62	34.83
Property Damage Only Crashes	116	65.17
Night Crashes	33	18.54
Wet Crashes	23	12.92
Alcohol/Drugs Involvement Crashes	6	3.37

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	178	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	9	5.06
Class C Crashes	53	29.78
Property Damage Only Crashes	116	65.17

Vehicle Exposure Statistics

Annual ADT = 42000

Total Length = 0.708 (Miles)

1.139 (Kilometers)

Total Vehicle Exposure = 54.3 (MVMT)

87.38 (MVKMT)

Crash Rate	Crashes Per 100 Million Vehicle Miles	Crashes Per 100 Million Vehicle Kilometers
Total Crash Rate	327.82	203.70
Fatal Crash Rate	0.00	0.00
Non Fatal Crash Rate	114.18	70.95
Night Crash Rate	60.78	37.76
Wet Crash Rate	42.36	26.32
EPDO Rate	1172.79	728.74

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Miscellaneous Statistics

Severity Index =	3.58
EPDO Crash Index =	636.80
Estimated Property Damage Total = \$	1004330.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	10	5.62
ANIMAL	5	2.81
LEFT TURN, DIFFERENT ROADWAYS	4	2.25
LEFT TURN, SAME ROADWAY	4	2.25
PARKED MOTOR VEHICLE	1	0.56
RAN OFF ROAD - LEFT	4	2.25
RAN OFF ROAD - RIGHT	5	2.81
REAR END, SLOW OR STOP	134	75.28
REAR END, TURN	4	2.25
RIGHT TURN, DIFFERENT ROADWAYS	1	0.56
SIDESWIPE, SAME DIRECTION	6	3.37

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	13	12.75
Class C Injuries	89	87.25
Total Non-Fatal Injuries	102	100.00
Total Injuries	102	100.00

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Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	14	7.87
Feb	12	6.74
Mar	18	10.11
Apr	14	7.87
May	21	11.80
Jun	14	7.87
Jul	9	5.06
Aug	6	3.37
Sep	13	7.30
Oct	18	10.11
Nov	22	12.36
Dec	17	9.55

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	18	10.11
Tue	35	19.66
Wed	27	15.17
Thu	28	15.73
Fri	33	18.54
Sat	24	13.48
Sun	13	7.30

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Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	4	2.25
0100-0159	2	1.12
0200-0259	1	0.56
0300-0359	1	0.56
0400-0459	1	0.56
0500-0559	0	0.00
0600-0659	1	0.56
0700-0759	3	1.69
0800-0859	8	4.49
0900-0959	8	4.49
1000-1059	8	4.49
1100-1159	13	7.30
1200-1259	12	6.74
1300-1359	11	6.18
1400-1459	15	8.43
1500-1559	23	12.92
1600-1659	12	6.74
1700-1759	24	13.48
1800-1859	12	6.74
1900-1959	8	4.49
2000-2059	3	1.69
2100-2159	3	1.69
2200-2259	2	1.12
2300-2359	3	1.69

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Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	117	18	2	137
Dark	28	4	1	33
Other	6	1	1	8
Total	151	23	4	178

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	5	25.00
CATCH BASIN OR CULVERT ON SHOULDER	1	5.00
EMBANKMENT	1	5.00
MOVABLE OBJECT	1	5.00
OFFICIAL HIGHWAY SIGN BREAKAWAY	1	5.00
OFFICIAL HIGHWAY SIGN NON-BREAKAWAY	5	25.00
PARKED MOTOR VEHICLE	2	10.00
PEDESTRIAN	1	5.00
TRAFFIC ISLAND CURB OR MEDIAN	1	5.00
TREE	2	10.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	16	3.88
MOPED	1	0.24
MOTORCYCLE	1	0.24
PASSENGER CAR	243	58.98
PEDESTRIAN	6	1.46
PICKUP	30	7.28
SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)	1	0.24
SINGLE UNIT TRUCK (3 OR MORE AXLES)	1	0.24
SPORT UTILITY	80	19.42
TRUCK/TRAILER	2	0.49
UNKNOWN	9	2.18
VAN	22	5.34

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Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2013	27	0	6	21
2014	31	0	12	19
2015	37	0	13	24
2016	41	0	14	27
2017	36	0	15	21
2018	6	0	2	4
Total	178	0	62	116

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2013	0	7
2014	0	21
2015	0	22
2016	0	25
2017	0	24
2018	0	3
Total	0	102

Miscellaneous Totals

Year	Property Damage	EPDO Index
2013	\$ 168700	71.40
2014	\$ 137720	119.80
2015	\$ 184550	133.20
2016	\$ 241000	144.60
2017	\$ 244385	147.00
2018	\$ 27975	20.80
Total	\$ 1004330	636.80

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2013	1	0	22	0	3	1	0
2014	2	0	23	2	2	0	2
2015	1	0	30	1	2	1	2

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Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2016	2	0	33	0	1	4	1
2017	2	1	29	1	2	0	1
2018	0	0	1	5	0	0	0
Total	8	1	138	9	10	6	6

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Strip Diagram

Features	Milepost	Crash IDs
SR 1788 SR 1838 OLD DURHAM SAGE	7.70	103710099 103757750 103875312 104356230
SCARLETT		104356257 104868351 105030114 105078980
		105218435 105223449 105255133 104937319
	7.71	105255098 104889128
	7.72	104340313 104667236 104355715 104916626
		104268458
	7.73	
	7.74	104547011 104012596 104582813 104984828
SR 1741	7.75	104355644 104017410 104647897 103808170
	7.76	105402579 103729701 104490145 104358506
	7.77	
	7.78	
	7.79	104079589 104231892
	7.80	105197243 104169496
	7.81	
	7.82	104707485
	7.83	104723838 104933508
	7.84	105238508 105296202 105416136
	7.85	104761774
	7.86	104402865 104946797
	7.87	
	7.88	
	7.89	
	7.90	103878198 104705067 103729498
	7.91	
	7.92	
	7.93	104079970 104334251 104384305
	7.94	
	7.95	103769222 104778282 104809404
	7.96	
	7.97	
	7.98	
	7.99	105338570
	8.00	103752464 104534879
	8.01	105100926 104358501
	8.02	104494610
	8.03	105039653 105100935
	8.04	
	8.05	104029382 105278685
	8.06	105328719 104049954 104420370
	8.07	104024582 103752789 103819596
	8.08	104703172 104471605 105001608

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Features	Milepost	Crash IDs
	8.09	104377298 105105626
SR 2256	8.10	103794077
	8.11	105195874 104029383 105341824
	8.12	104892382
	8.13	105283419 105258316 104547018
	8.14	104427580 104945770 103721155 104068208 104769998 104939649 104102836
EASTOWNE	8.15	105169506 104576024 104002494 103916319 103792491 103916309 103973468 103997577 104017422 104109452 104110513 104271907 104298200 104420361 104534817 104547017 104599935 104775937 104777195 104812584 104903085 104940883 104940316 105078990 105359908
	8.16	105259946 104668850 103862607 103958719 104751651 105319248
	8.17	104889129 105373960
	8.18	
	8.19	105078981
	8.20	104369918
	8.21	103734161 103993206 105010026
	8.22	105247859 105411848
	8.23	104074566 104711020 105261610
	8.24	104901884 105351889 105319247
	8.25	104607117 104023788 104356244 104975619
	8.26	
	8.27	
	8.28	103932733 104453342
	8.29	
	8.30	105104919
	8.31	104106959 104622569
	8.32	
	8.33	104087582 105118451 103803071 104297733
	8.34	
	8.35	103892115 104889169 104937320 104245357
	8.36	103919942
	8.37	104771999
	8.38	105402619
	8.39	104110642 103867526 104262179 104756762 104982834
	8.40	104245256 104547042 103907811 104812552 103989427 104979890
EASTOWNE LAKE VIEW	8.41	104023563 105260327 104407365 103900501

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Features	Milepost	Crash IDs
		103929026 104355750 104355658 104355688
		104628339 104662182 105111483 105204492

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Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
CHTIAUS15501STRIP				76.8	8.4	42000	20000015

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality						
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years	
ORANGE	68	7	All and Rural		0	3/1/2013	2/28/2018	5.00	

Location Text	Requestor
US 15-501 (Fordham Blvd) from Sage Dr/Scarlett Dr to Eastowne Dr/Lakeview Dr	

Included Accidents	Old MP	New MP	Type
104668850		8.159	I
104271907		8.151	I
104534817		8.151	I
104809404		7.951	I
104029382		8.051	I
104622569		8.31	I
105416136		7.842	I
104079970		7.927	I
104334251		7.927	I
104751651		8.16	I
105010026		8.213	I
103932733		8.281	I
104074566		8.227	I
104356244		8.251	I
104358501		8.012	I
104607117		8.246	I
104975619		8.251	I
105118451		8.333	I
105261610		8.234	I
103734161		8.208	I
103862607		8.16	I
103916319		8.15	I
103958719		8.16	I
103993206		8.21	I
104023563		8.407	I
104110642		8.39	I
104298200		8.151	I

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104711020		8.232	I
104889129		8.172	I
104901884		8.236	I
104937320		8.352	I
104982834		8.393	I
105039653		8.031	I
105078981		8.195	I
105104919		8.3	I
105259946		8.158	I
105319248		8.163	I
105351889		8.244	I
105373960		8.172	I
105402619		8.375	I
103792491		8.151	I
103916309		8.151	I
103973468		8.151	I
104369918		8.2	I
104599935		8.151	I
104812584		8.151	I
104940883		8.151	I
105278685		8.054	I
105328719		8.056	I
104889169		8.35	I
105411848		8.223	I
104775937		8.151	I
105319247		8.245	I
105338570		7.991	I
105359908		8.151	I
104705067	8.151	7.901	R
104778282	8.151	7.951	R
103752464	8.151	8	R
104384305	8.16	7.927	R
104068208	8.202	8.14	R
104023788	8.31	8.251	R
105247859	8.346	8.215	R
104940316	8.41	8.151	R
104903085	8.41	8.151	R
104110513	8.41	8.151	R
104453342	8.41	8.281	R

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Excluded Accidents

104471431
 104110509
 105133635
 104409755
 105373954
 104039956
 104458408
 104032770
 103929504
 104915726
 105294048
 103892314
 104085640
 105283421
 104947190
 104531450
 104232395

Fiche Roads

Name	Code
US 15	20000015
US 501	20000501
FORDHAM	50010799
DURHAM	50009049
CHAPEL HILL	50005632
DURHAM-CHAPEL HILL	50034020

Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
US 15	20000015	7.702	8.410	0.708	1.139
