



FINAL

US 1 (Capital Blvd) Freeway Upgrade

Wake County | STIP Project U-5307

Project Level Traffic Forecast Report – Supplement

2015 No Build Conditions, 2015 Build Conditions,
2040 No Build Conditions and 2040 Build Conditions

December 2017

Project Level Traffic Forecast Report

STIP PROJECT U-5307

US 1 (Capital Blvd) Freeway Upgrade
Wake County

WBS # 47027.1.1

Project Level Traffic Forecast Report Supplement

2015 No Build Conditions, 2015 Build Conditions,
2040 No Build Conditions and 2040 Build Conditions

December 2017

Prepared By: **RS&H**

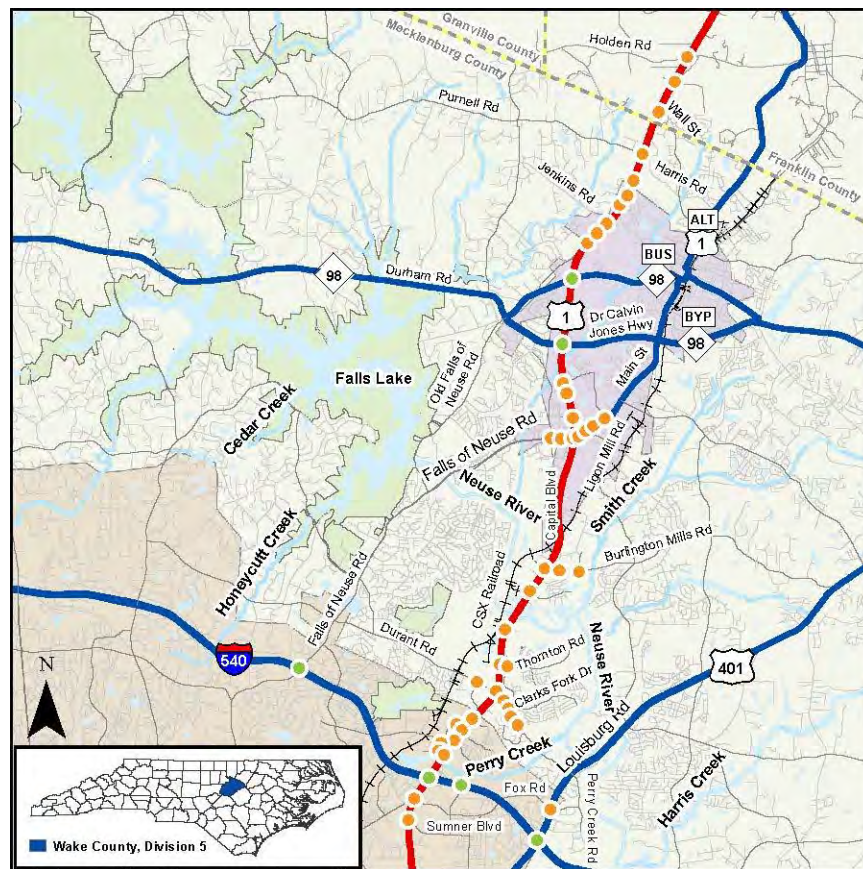


Table of Contents

1.0 PROJECT BACKGROUND	1
1.1 PROJECT REQUEST INFORMATION.....	1
1.2 AREA INFORMATION	2
1.3 ROUTE INFORMATION	3
2.0 SOURCES OF INFORMATION AND DATA.....	8
2.1 RELATED FORECASTS	8
2.2 HISTORIC AADT	9
2.3 FIELD DATA COLLECTION	9
2.4 FIELD INVESTIGATION	9
2.5 OTHER SOURCES	10
3.0 BASE YEAR NO BUILD FORECAST	20
3.1 ASSUMPTIONS	20
3.2 METHODOLOGY.....	23
3.3 DESIGN FACTORS	24
4.0 GENERAL MODEL DATA	30
4.1 MODEL INFORMATION.....	30
5.0 FUTURE YEAR NO BUILD FORECAST.....	34
5.1 ASSUMPTIONS	34
5.2 METHODOLOGY.....	34
5.3 HISTORIC AADT AND MODEL FORECASTED GROWTH RATES	40
5.4 DESIGN FACTORS	49
6.0 FUTURE YEAR BUILD FORECAST	51
6.1 2040 FUTURE YEAR BUILD CONDITIONS SCENARIO A	51
<i>Assumptions</i>	51
<i>Fiscal Constraint</i>	55
<i>Methodology</i>	55
<i>Design Factors</i>	62
6.2 2040 FUTURE YEAR BUILD CONDITIONS SCENARIO B	66
<i>Assumptions</i>	66
<i>Fiscal Constraint</i>	66

<i>Methodology</i>	66
<i>Design Factors</i>	69
6.3 2040 FUTURE YEAR BUILD CONDITIONS SCENARIO C	71
<i>Assumptions</i>	71
<i>Fiscal Constraint</i>	71
<i>Methodology</i>	71
<i>Design Factors</i>	74
6.4 2040 FUTURE YEAR BUILD CONDITIONS SCENARIO D.....	76
<i>Assumptions</i>	76
<i>Fiscal Constraint</i>	76
<i>Methodology</i>	76
<i>Design Factors</i>	79
6.5 2040 FUTURE YEAR BUILD CONDITIONS SCENARIO E.....	81
<i>Assumptions</i>	81
<i>Fiscal Constraint</i>	81
<i>Methodology</i>	81
<i>Design Factors</i>	84
7.0 BASE YEAR BUILD FORECAST	86
7.1 2015 BASE YEAR BUILD CONDITIONS SCENARIO A	86
<i>Assumptions</i>	86
<i>Fiscal Constraint</i>	88
<i>Methodology</i>	88
<i>Design Factors</i>	96
7.2 2015 BASE YEAR BUILD CONDITIONS SCENARIO B.....	99
<i>Assumptions</i>	99
<i>Fiscal Constraint</i>	99
<i>Methodology</i>	99
<i>Design Factors</i>	102
7.3 2015 BASE YEAR BUILD CONDITIONS SCENARIO C.....	104
<i>Assumptions</i>	104
<i>Fiscal Constraint</i>	104
<i>Methodology</i>	104
<i>Design Factors</i>	107
7.4 2015 BASE YEAR BUILD CONDITIONS SCENARIO D	109

Assumptions..... 109

Fiscal Constraint..... 109

Methodology..... 109

Design Factors..... 112

7.5 2015 BASE YEAR BUILD CONDITIONS SCENARIO E 114

Assumptions..... 114

Fiscal Constraint..... 114

Methodology..... 114

Design Factors..... 117

8.0 COMPARISON OF PAST FORECASTS 119

List of Tables

Table 1-1 – Population and Employment Growth Rates in Wake County, Franklin County, and NC Statewide	3
Table 1-2 – Study Area Roadway Characteristics	3
Table 2-1 – List of Related Forecasts in the Study Area	8
Table 2-2 – Agency Contact Data	10
Table 2-3 – 2015 Base Year No Build Traffic Forecasts	12
Table 2-4 – Field Data Collection	16
Table 2-5 – Traffic Count Comparison	19
Table 3-1 – Study Interchanges and Intersections	20
Table 3-2 – Hour-to-Day Factors	25
Table 3-3 – 2015 Base Year No Build Conditions Traffic Factors.....	26
Table 4-1 – 2015 Base Year No Build Conditions Model Estimates Comparison	31
Table 5-1 – 2040 Future Year No Build Conditions Annual Growth Rates.....	35
Table 5-2 – 2040 Future Year No Build Conditions Traffic Forecasts.....	36
Table 5-3 – Growth Rates.....	41
Table 5-4 – Model Validation	45
Table 5-5 – 2015 Base Year and 2040 Future Year No Build Design Factors	50
Table 6-1 – Build Conditions Scenarios	54
Table 6-2 – 2040 Future Year Build Conditions Scenario A Traffic Forecasts	58
Table 6-3 – 2040 Future Year Build Conditions Scenario A Traffic Factors.....	63
Table 6-4 – 2040 Future Year Build Conditions Scenario B Traffic Forecasts.....	68
Table 6-5 – 2040 Future Year Build Conditions Scenario B Traffic Factors	70
Table 6-6 – 2040 Future Year Build Conditions Scenario C Traffic Forecasts.....	73
Table 6-7 – 2040 Future Year Build Conditions Scenario C Traffic Factors.....	75
Table 6-8 – 2040 Future Year Build Conditions Scenario D Traffic Forecasts	78
Table 6-9 – 2040 Future Year Build Conditions Scenario D Traffic Factors	80
Table 6-10 – 2040 Future Year Build Conditions Scenario E Traffic Forecasts.....	83
Table 6-11 – 2040 Future Year Build Conditions Scenario E Traffic Factors.....	85
Table 7-1 – Base Year Build Conditions Scenarios.....	88
Table 7-2 – 2015 Base Year Build Conditions Scenario A Traffic Forecasts	91
Table 7-3 – 2015 Base Year Build Conditions Scenario A Traffic Factors	97
Table 7-4 – 2015 Base Year Build Conditions Scenario B Traffic Forecasts	101
Table 7-5 – 2015 Base Year Build Conditions Scenario B Traffic Factors.....	103
Table 7-6 – 2015 Base Year Build Conditions Scenario C Traffic Forecasts	106

Table 7-7 – 2015 Base Year Build Conditions Scenario C Traffic Factors 108

Table 7-8 – 2015 Base Year Build Conditions Scenario D Traffic Forecasts..... 111

Table 7-9 – 2015 Base Year Build Conditions Scenario D Traffic Factors 113

Table 7-10 – 2015 Base Year Build Conditions Scenario E Traffic Forecasts 116

Table 7-11 – 2015 Base Year Build Conditions Scenario E Traffic Factors..... 118

Table 8-1 – Comparison of Past Forecasts 121

Appendices

Appendix A: Traffic Forecast Diagrams

- Figure 1: U-5307 Study Area
- Figure 2: 2015 Base Year No Build Conditions Annual Average Daily Traffic Forecasts
- Figure 3: 2040 Future Year No Build Conditions Annual Average Daily Traffic Forecasts
- Figure 4: TRM Daily Traffic Volume Differences from 2040 Future Year No Build Conditions to 2040 Future Year Build Conditions Scenario A
- Figure 5: 2040 Future Year Build Conditions Scenario A Annual Average Daily Traffic Forecasts
- Figure 6: 2040 Future Year Build Conditions Scenario B Annual Average Daily Traffic Forecasts
- Figure 7: 2040 Future Year Build Conditions Scenario C Annual Average Daily Traffic Forecasts
- Figure 8: 2040 Future Year Build Conditions Scenario D Annual Average Daily Traffic Forecasts
- Figure 9: 2040 Future Year Build Conditions Scenario E Annual Average Daily Traffic Forecasts
- Figure 10: 2015 Base Year Build Conditions Scenario A Annual Average Daily Traffic Forecasts
- Figure 11: 2015 Base Year Build Conditions Scenario B Annual Average Daily Traffic Forecasts
- Figure 12: 2015 Base Year Build Conditions Scenario C Annual Average Daily Traffic Forecasts
- Figure 13: 2015 Base Year Build Conditions Scenario D Annual Average Daily Traffic Forecasts
- Figure 14: 2015 Base Year Build Conditions Scenario E Annual Average Daily Traffic Forecasts

Appendix B: Traffic Count Data

Appendix C: 24-Hour Turning Movement Spreadsheet

Appendix D: Peak Hour Turning Movement Spreadsheet

Appendix E: Traffic Forecast Utility Worksheets

Appendix F: U-5307 Traffic Forecast Memos

Appendix G: Travel Pattern Changes Diagrams

- Figure G-1: 2040 Future Year No Build Travel Pattern Changes due to Triangle Town Blvd/Sumner Blvd Extension
- Figure G-2: 2040 Future Year No Build Travel Pattern Changes due to Ligon Mill Rd Extension
- Figure G-3: 2040 Travel Pattern Changes from Future Year No Build Conditions to Future Year Build Conditions Scenario A
- Figure G-4: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario B
- Figure G-5: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario C
- Figure G-6: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario D
- Figure G-7: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario E

Appendices B through G are included electronically in the CD attached to the back cover.

1.0 PROJECT BACKGROUND

The North Carolina Department of Transportation (NCDOT) proposes to upgrade US 1 (Capital Blvd) from the I-540 interchange to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd) to a freeway in Wake County. This project is included in the NCDOT 2016-2025 State Transportation Improvement Program (STIP) as project number U-5307.

This report provides the background information, forecasting methodology, and traffic forecasts for the US 1 (Capital Blvd) Freeway Upgrade project. Figure 1 shows the study area, as well as the interchanges and intersections included in this forecast. All figures are provided in Appendix A at the end of this report and Appendix G included in the CD attached to the back cover.

1.1 Project Request Information

Lisa Feller, from NCDOT's Project Development and Environmental Analysis Unit (PDEA) - Western Section, originally requested a traffic forecast for the upgrade of US 1 to a freeway from the I-540 interchange to south of the NC 98 Bypass (Dr. Calvin Jones Hwy) interchange on November 12, 2014. On August 4, 2016, the NCDOT Board of Transportation approved an extension of the project limits from NC 98 Bypass (Dr. Calvin Jones Hwy) to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd). The extended study area will include a grade separation at NC 98 Business (Durham Rd) and SR 1909 (Purnell Rd)/SR 1931 (Harris Rd). Service roads will be studied on both sides of US 1. The project study area was extended and a forecast request for this extended study area was submitted by Dre Major, PDEA – Western Section, on September 28, 2016. As part of the request submitted in 2016, additional build scenarios were also included.

This is a supplement to the previously approved traffic forecast (June 2017) for this project. The June 2017 traffic forecast report included the following conditions:

- » 2015 Base Year No Build (BYNB) Conditions
- » 2040 Future Year No Build (FYNB) Conditions
- » 2040 Future Year Build (FYB) Conditions Scenario A
- » 2040 Future Year Build (FYB) Conditions Scenario B
- » 2040 Future Year Build (FYB) Conditions Scenario C
- » 2040 Future Year Build (FYB) Conditions Scenario D
- » 2040 Future Year Build (FYB) Conditions Scenario E

This supplement traffic forecast report also includes the following conditions:

- » 2015 Base Year Build (BYB) Conditions Scenario A
- » 2015 Base Year Build (BYB) Conditions Scenario B
- » 2015 Base Year Build (BYB) Conditions Scenario C
- » 2015 Base Year Build (BYB) Conditions Scenario D
- » 2015 Base Year Build (BYB) Conditions Scenario E

Descriptions of each of the Build Conditions are included in Sections 6.0 and 7.0 of this report.

1.2 Area Information

According to the North Carolina Office of State Budget and Management (OSBM), the 2015 population for Wake County was approximately 1,035,000. Between 2000 and 2015, the population in Wake County increased at the annual rate of 4.3%. This population rate increase indicates that Wake County is a high growth area. As a comparison, the statewide rate from 2000 to 2015 was 1.9%. According to the OSBM, historic rates in nearby Franklin County (2.9%) were lower than Wake County, but higher than the statewide average. The OSBM has projected that the population between 2015 and 2030 will continue to increase at an annual rate of 2.5% in Wake County, 2.0% in Franklin County, and 1.4% statewide.

Annual employment data was obtained from the North Carolina Department of Commerce (NCDOC) for Wake County and North Carolina. This data indicates that between 2000 and 2010 employment within Wake County grew at an annual rate of 2.8%. As a comparison, the statewide annual rate from 2000 to 2015 was 1.1%. As with the historic population trend, nearby Franklin County has a lower employment growth rate (1.5%) than Wake County, but higher than the statewide average. In addition, NCDOC has projected an annual employment growth rate between 2010 and 2020 of 2.2% for the Capital Area (which includes Wake and Johnston Counties) and 1.3% statewide. Projected employment data for Franklin County was not readily available. Table 1-1 summarizes the historic and projected population and employment growth rates for Wake County and NC Statewide.

**Table 1-1 – Population and Employment Growth Rates
in Wake County, Franklin County, and NC Statewide**

Category	Annual Growth Rates	
	Historic (%)	Projected (%)
Population		
Wake County	4.3%	2.5%
Franklin County	2.9%	2.0%
NC Statewide	1.9%	1.4%
Employment		
Capital Area (Wake and Johnston Counties)	2.8%	2.2%
Franklin County	1.5%	-
NC Statewide	1.1%	1.3%

Sources: North Carolina Office of State Budget and Management and North Carolina Department of Commerce.

1.3 Route Information

The project study area lies within the northern portion Wake County, spanning approximately 10 miles along US 1 (Capital Blvd) from the I-540 interchange to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd). In this area, US 1 (Capital Blvd) is functionally classified as a Principal Arterial and is designated as a Strategic Highway Corridor. The following table provides a brief description of the roads within the study area.

Table 1-2 – Study Area Roadway Characteristics

Roadway Name	Federal Functional Classification	Roadway Characteristics	
		Current - 2015	MTP Proposed - by 2040
I-540	Interstate	6-lanes, divided	Add 2 managed lanes
US 1 (Capital Blvd) from Spring Forest Rd to Old Wake Forest Rd	Principal Arterial	6-lanes, divided	8-lanes
US 1 (Capital Blvd) from I-540 to Burlington Mills Rd	Principal Arterial	4-lanes, divided	8-lanes; upgrade to freeway

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Roadway Name	Federal Functional Classification	Roadway Characteristics	
		Current - 2015	MTP Proposed - by 2040
US 1 (Capital Blvd) from Burlington Mills to NC 98 Business	Principal Arterial	4-lanes, divided	6-lanes; upgrade to freeway
SR 2000 (Falls of Neuse Rd)	Minor Arterial	4-lanes, divided	6-lanes from I-540 to Durant Rd
Old Wake Forest Rd	Major Collector	2/4-lanes	4-lanes
Fox Rd (west of US 401)	Local	2-lanes	4-lanes
Burlington Mills Rd	Major Collector	2-lanes	4-lanes
Harris Rd	Major Collector	2-lanes	4-lanes
Stadium Dr	Major Collector	2-lanes	4-lanes
Sumner Blvd Ext	Local	N/A	4-lanes
Triangle Town Blvd Ext	Local	N/A	4-lanes
Triangle Town Connector	Local	N/A	4-lanes
Simms Creek Connector	Local	N/A	2-lanes
Ligon Mill Rd Ext	Major Collector	N/A	4-lanes
Height Ln Connector	Local	N/A	2-lanes
New Service Rd proposed north of NC 98 Business, east of US 1 (Capital Blvd)	Local	N/A	2-lanes
Frontage Rd proposed south of Jenkins Rd, west of US 1 (Capital Blvd)	Local	N/A	2-lanes
Roadways with no proposed changes per 2040 MTP			
US 1 (Capital Blvd) between Old Wake Forest Rd and Gresham Lake Rd	Principal Arterial	8-lanes, divided	-
US 401 (Louisburg Rd)	Principal Arterial	6-lanes, divided	-

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Roadway Name	Federal Functional Classification	Roadway Characteristics	
		Current - 2015	MTP Proposed - by 2040
Fox Rd (east of US 401)	Major Collector	4-lanes, divided	-
NC 98 Bypass	Principal Arterial	4-lanes, divided	-
Holden Rd (west of US 1)	Local	2-lanes	-
Holden Rd (east of US 1)	Minor Arterial	2-lanes	-
Durant Rd	Major Collector	4-lanes	-
Perry Creek Rd	Major Collector	4-lanes	-
Ligon Mill Rd	Major Collector	2-lanes	-
US 1A (Main St)	Major Collector	4-lanes	-
NC 98 Business	Major Collector	2-lanes	-
Purnell Rd	Major Collector	2-lanes	-
Sumner Blvd	Local	4-lanes	-
Thorpshire Dr	Local	2-lanes	-
Falls Valley Dr	Local	2-lanes	-
Triangle Town Blvd	Local	4-lanes	-
Gresham Lake Rd	Local	2-lanes	-
Capital Hills Dr	Local	2-lanes, divided	-
Overlook Rd	Local	2-lanes	-
Cheviot Hills Dr	Local	2-lanes	-
Capital Hills Connector	Local	4-lanes, divided	-
Simms Creek Rd	Local	2-lanes	-
Jacqueline Ln	Local	2-lanes	-
Homestead Dr	Local	2-lanes	-
Wadford Dr	Local	2-lanes	-
Wild Wood Forest Dr	Local	2-lanes	-
Thornton Rd	Local	2-lanes	-
River Haven Pl	Local	2-lanes	-

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Roadway Name	Federal Functional Classification	Roadway Characteristics	
		Current - 2015	MTP Proposed - by 2040
Shearon Farms Ave	Local	2-lanes	-
Clarks Fork Dr	Local	2-lanes	-
McGuire Dr	Local	2-lanes	-
Liston Dr	Local	2-lanes	-
Filbin Creek Dr	Local	2-lanes	-
Ponderosa Service Rd	Local	2-lanes	-
Common Oaks Dr (South)	Local	2-lanes	-
Height Ln	Local	2-lanes	-
Forest Pines Dr	Local	2-lanes	-
Wake Dr	Local	2-lanes	-
Star Rd	Local	2-lanes	-
One World Way	Local	2-lanes	-
Common Oaks Dr (North)	Local	2-lanes	-
Popes Creek Dr	Local	2-lanes	-
Corona Blvd	Local	2-lanes	-
Wakefield Commons Entrance	Local	2-lanes	-
Galaxy Dr	Local	2-lanes	-
Shoppes at Caveness Farms Connector	Local	2-lanes	-
Caveness Farms Ave	Local	2-lanes	-
Northpark Dr	Local	2-lanes	-
Retail Dr	Local	2-lanes	-
Hampton Way	Local	2-lanes	-
Richland Dr	Local	2-lanes	-
Lowes Ave	Local	2-lanes	-
Jenkins Rd	Local	2-lanes	-
Country Club Dr	Local	2-lanes	-
Templeridge Rd	Local	2-lanes	-
St Catherines Dr	Local	2-lanes	-
Club Villas Dr	Local	2-lanes	-
Wallridge Rd	Local	2-lanes	-
Wall Rd	Local	2-lanes	-
Sunset Dr	Local	2-lanes	-

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Roadway Name	Federal Functional Classification	Roadway Characteristics	
		Current - 2015	MTP Proposed - by 2040
Rolling Acres Rd	Local	2-lanes	-
Wake Union Church Rd	Local	2-lanes	-
Wakefield Plantation Dr	Local	2-lanes	-

2.0 SOURCES OF INFORMATION AND DATA

2.1 Related Forecasts

Previous traffic forecasts have been prepared for other projects surrounding the study area of the US 1 Freeway Upgrade project. The roads in common between the FS-1305A forecast and this project were used to investigate projected traffic volumes and growth rates in the area. The other forecasts used a different model or used a previous version of the model used for this forecast and were therefore not considered. Table 2-1 provides information on these related forecasts. A comparison of traffic volumes on the study area roads from this forecast with other past forecasts is presented in Section 8.0 of this report.

Table 2-1 – List of Related Forecasts in the Study Area

Forecast Date	Project Name	Forecast Preparer	Forecast Base Year	Forecast Future Year
June 1996	R-3600: US 1A from US 1 (Capital Blvd) to proposed NC 98 Bypass, Wake County	Wayne C. Davis, Ph. D. NCDOT Transportation Planning Division	1996	2020
June 2011	B-5318: Replacement of Bridge #126 on Ligon Mill Rd over Smith's Creek, Wake County	Jamie V. Moore NCDOT Transportation Planning Division	2011	2035
December 2012	FS-1205D: Widening of NC 50 (Creedmoor Rd) from I-540 to north of NC 98, Wake County	Darryl Austin NCDOT Statewide Planning Division	2012	2035
February 2013	FS-1205B: Interchange construction for Ligon Mill Rd/Mitchell Mill Rd at US 401 (Louisburg Rd), Wake County	Chris McKoy NCDOT Transportation Planning Division	2012	2035
June 2014	FS-1305A: I-540 Managed Lanes Feasibility Study from NC 54 to US 64/264, Durham and Wake Counties	John Burris, PTP URS Corporation – North Carolina	2013	2040

2.2 Historic AADT

Historic annual average daily traffic (AADT) count data was obtained from NCDOT for 44 locations within the study area from 2005 to 2013. Table 2-3 shows a comparison of the current and historic AADT counts along with the selected 2015 BYNB Conditions traffic forecasts for the study area roads.

After the 2015 BYNB Conditions traffic forecasts for the original study area locations were complete and approved in November 2015, the 2014 and 2015 Historic AADT volumes were published. These values have been added to Table 2-3 for comparison purposes only. Additional details are included in Section 5-3.

2.3 Field Data Collection

Originally, project specific traffic counts were conducted in the study area from March to May 2015. Continuous 48-hour vehicle traffic counts were conducted at 66 locations, all of which provided vehicle classification. Additionally, 16-hour intersection Turning Movement Counts (TMC) were performed at 42 locations in the study area.

Traffic counts for additional locations were taken in November 2016. Continuous 48-hour vehicle traffic counts were conducted at two repeat locations and seven additional locations, all of which provided vehicle classification. Also, 13-hour intersection TMCs were performed at three repeat locations and 18 additional locations in the study area.

Table 2-4 shows the locations and dates of the project specific traffic counts. Appendix B presents the traffic count files in electronic version, which are on a CD attached to the back cover of this report.

2.4 Field Investigation

A field investigation was conducted on May 1, 2015 for the original project study area. A second field investigation was conducted on May 31, 2016 for the extended project study area. All intersections included in this forecast were reviewed. The lane configurations, speeds limits, and major land uses at each intersection were noted to document the study area. Detailed photos and diagrams of study intersections were provided with the traffic counts.

2.5 Other Sources

Discussions with staff at the NCDOT Roadway Design Unit, NCDOT Congestion Management, NCDOT Division 5, NCDOT Transportation Planning Division (TPD), Capital Area Metropolitan Planning Organization (CAMPO), the Triangle Transit Authority (TTA), the City of Raleigh, the Town of Wake Forest, and the US 1 Corridor Council were conducted throughout the development of this traffic forecast in order to determine existing and future growth patterns expected in the study area. Details of who was contacted at each organization are included below in Table 2-2.

Table 2-2 – Agency Contact Data

Agency	Name	Initial Date of Contact	Form of Contact
NCDOT TPD	Scott Walston	6/9/15	Phone
	Rupal Desai	6/9/15	Phone
NCDOT Division 5	Joey Hopkins	6/8/15	Phone
	Reid Elmore	6/8/15	Phone
NCDOT Roadway Design	Jeffrey Teague	6/10/15	Phone
	Tony Houser	6/10/15	Phone
NCDOT Division 5	Al Grandy	6/8/15	Phone
NCDOT Congestion Management	Doumit Ishak	6/2/15	Email
	Jeff Weller	6/9/15	Phone
	Clarence Bunting	6/9/15	Phone
NCTA	Andy Lelewski	6/2/15	Email
Go Triangle	Darcy Downs	6/9/15	Phone
City of Raleigh	Eric Lamb	6/8/15	Phone
	Todd Delk	6/8/15	Phone
Town of Wake Forest	Chip Russell	6/9/15	Phone
Wake County	Sharon Peterson	6/2/15	Email
CAMPO	Chris Lukasina	6/8/15	Phone
CAMPO	Kenneth Withrow	6/8/15	Phone
US 1 Council of Planning	Shelby Powell	6/17/15	Phone

The US 1 Corridor Study, draft completed in June 2014, for CAMPO provides a wealth of information related to the upgrade of US 1 to a freeway facility. The purpose of the study was to provide recommendations for updating plans based on proposed development, with a focus on

interim improvements. This study provided a basis for the Project Team, through the NEPA/Merger process, to determine the build scenarios to include in this traffic forecast.

Table 2-3 - 2015 Base Year No Build Conditions Traffic Forecasts

Roadway	Location	Historic AADTs												2014 ⁺	2015 ⁺	Historic AADTs Forecasted to 2015* (AADT)	2015 Project Specific TMC Counts Reduced to 2015 (AADT)		2015 Project Specific Mainline Counts Reduced to 2015 (AADT)		2015 Base Year No Build Traffic Forecasts (AADT)
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013								
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd																56,814		49,422		50,400
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd		44,000		48,000		45,000		45,000		44,000		44,000		46,000	42,500	49,657				48,000
US 1 (Capital Blvd)	North of Old Wake Forest Rd										55,000				63,000		58,384				61,100
US 1 (Capital Blvd)	North of I-540																63,325				65,400
US 1 (Capital Blvd)	North of Gresham Lake Rd		47,000		51,000		55,000		55,000		55,000		49,000		61,000	51,800	58,515				60,300
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln																64,288				60,300
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr																61,655				57,800
US 1 (Capital Blvd)	North of Simms Creek Rd		57,000		61,000		63,000		62,000		60,000		62,000		65,000	61,300	61,035				57,800
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd				53,000		55,000		53,000		55,000		56,000		56,000	56,200	52,315				49,400
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd																51,028				48,300
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl																51,062				47,900
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave																48,028				47,800
US 1 (Capital Blvd)	North of Burlington Mills Rd		44,000		43,000		46,000		47,000		47,000		46,000		48,000	47,900	46,191		41,295		46,000
US 1 (Capital Blvd)	North of Height Ln																				46,000
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)		40,000		38,000		43,000		43,000		41,000		47,000		47,000	47,200	44,133				45,300
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd																48,457				46,900
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector																49,868				48,300
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave																50,851				49,200
US 1 (Capital Blvd)	North of NC 98 Bypass		34,000				43,000		47,000		42,000		43,000		46,000	42,500					41,300
US 1 (Capital Blvd)	North of NC 98 Business																37,007				38,700
US 1 (Capital Blvd)	North of Wake Union Church Rd		37,000		41,000				41,000		39,000		40,000		44,000	39,200	38,479	38,119	35,216	27,978	40,300
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy																38,242	38,212			39,900
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr																34,227	34,358			35,800
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd																34,127				36,000
US 1 (Capital Blvd)	North of St. Catherines Dr																				36,000
US 1 (Capital Blvd)	North of Club Villas Dr		32,000		34,000		45,000		35,000		35,000		36,000		43,000	35,200	33,705		33,264		36,000
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd		30,000		31,000		34,000		32,000		31,000		32,000		36,000	31,700	30,235	29,881			32,000
US 1 (Capital Blvd)	North of Wall Rd																29,436	31,925			32,600
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd																31,565	29,218			32,300
US 1 (Capital Blvd)	North of Holden Rd								23,000				19,000		24,000	17,000	22,643				24,000
Sumner Blvd Ext	West of US 1 (Capital Blvd)																1,872				1,800
Sumner Blvd	East of US 1 (Capital Blvd)																9,116		10,202		8,200
Old Wake Forest Rd	West of US 1 (Capital Blvd)		18,000		19,000		26,000				27,000		26,000		26,000	29,000	26,186		16,374		26,000
Old Wake Forest Rd	East of US 1 (Capital Blvd)																20,205		15,206		20,100
I-540	West of Falls of Neuse Rd	22,000	39,000	56,000	66,000	70,000	87,000	84,000	84,000	87,000	87,000	86,000	89,000	93,000	101,000	96,500					91,600
I-540	West of US 1 (Capital Blvd)		20,000	39,000	47,000	52,000	72,000	72,000	72,000	74,000	74,000	72,000	75,000	77,000	83,000	75,000					76,000
I-540	West of Triangle Town Blvd		7,900	12,000	15,000	18,000	55,000	57,000	58,000	61,000	61,000	57,000	61,000	63,000	68,000	62,300					63,900
I-540	West of US 401 (Louisburg Rd)						53,000	56,000	57,000	61,000	60,000	57,000	61,000	63,000	68,000	63,000					63,500
I-540	East of US 401 (Louisburg Rd)						48,000	51,000	51,000	54,000	55,000	51,000	56,000	59,000	64,000	57,300					55,800
Falls of Neuse Rd	South of Thorpshire Dr		26,000		30,000		32,000		32,000		32,000		34,000		38,000	34,400	34,034		29,735		33,100
Falls of Neuse Rd	South of I-540		26,000		30,000		32,000		32,000		32,000		34,000		38,000	34,400	34,034		29,735		34,400
Falls of Neuse Rd	North of I-540				38,000		43,000		40,000		46,000		44,000		47,000	46,700	44,800		41,485		46,000
Falls of Neuse Rd	North of Falls Valley Dr				38,000		43,000		40,000		46,000		44,000		47,000	46,700	44,800		41,485		44,000
Thorpshire Dr	East of Falls of Neuse Rd																2,774				2,700
Falls Valley Dr	East of Falls of Neuse Rd																4,321				4,200
Triangle Town Blvd	South of I-540																9,453		8,617		9,000

+2014 and 2015 Historic AADTs were published after approval of the 2015 BYNB Traffic Forecasts and are shown here for informational purposes only.

*Historic AADTs Projected to 2015 were based on trends from 2005 to 2013.

Table 2-3 - 2015 Base Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	Historic AADTs												2014 ⁺	2015 ⁺	Historic AADTs Forecasted to 2015* (AADT)	2015 Project Specific TMC Counts Reduced to 2015 (AADT)		2015 Project Specific Mainline Counts Reduced to 2015 (AADT)		2015 Base Year No Build Traffic Forecasts (AADT)
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013								
US 401 (Louisburg Rd)	South of I-540										33,000				36,000		41,509		43,329		42,400
US 401 (Louisburg Rd)	North of I-540																53,250				54,500
US 401 (Louisburg Rd)	North of Fox Rd		27,000		34,000		38,000		38,000		40,000		39,000		44,000	41,400	48,949				53,600
Fox Rd	West of US 401 (Louisburg Rd)																9,799				10,600
Fox Rd	East of US 401 (Louisburg Rd)																7,590				8,100
Gresham Lake Rd	West of Capital Hills Dr		8,900		9,400		10,000		8,800		8,600		10,000		9,800	9,300	8,782		7,892		8,700
Gresham Lake Rd	East of Capital Hills Dr																8,854				8,900
Gresham Lake Rd	West of US 1 (Capital Blvd)																9,353				9,300
Capital Hills Dr	North of Gresham Lake Rd																3,076				3,000
Capital Hills Dr	North of Capital Hills Connector																3,354				3,400
Overlook Rd	South of Gresham Lake Rd																1,156				1,200
Cheviot Hills Dr	West of US 1 (Capital Blvd)																222				200
Jacqueline Ln	East of US 1 (Capital Blvd)																2,216				2,000
Capital Hills Connector	West of US 1 (Capital Blvd)																3,245		3,389		3,000
Homestead Dr	East of US 1 (Capital Blvd)																1,128				1,100
Simms Creek Rd	East of US 1 (Capital Blvd)																1,631				1,600
Durant Rd	West of Capital Hills Dr																17,952		17,757		17,700
Durant Rd	West of US 1 (Capital Blvd)		15,000		18,000		19,000				18,000		18,000		19,000	18,000	16,812				16,500
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr		15,000		17,000		16,000				18,000		19,000		23,000	19,300	19,344				19,100
Perry Creek Rd	West of Clarks Fork Dr																16,091				16,000
Perry Creek Rd	West of McGuire Dr																14,158				13,900
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr																13,440				13,200
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr																15,347		13,070		15,900
Eaton Dwy	South of Perry Creek Rd																185				200
Wild Wood Forest Dr	North of Perry Creek Rd																6,654				6,700
Clarks Fork Dr	North of Perry Creek Rd																2,903				2,900
McGuire Dr	South of Perry Creek Rd																1,686				1,700
Liston Dr	South of Perry Creek Rd																799				800
Filbin Creek Dr	North of Perry Creek Rd																4,439				4,500
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)																880				800
Thornton Rd	East of US 1 (Capital Blvd)																6,860				6,500
Thornton Rd	West of Wadford Dr																4,055				4,600
Thornton Rd	East of Wadford Dr																3,621		4,737		4,200
Wadford Dr	South of Thornton Rd																1,119				1,200
Wadford Dr	North of Thornton Rd																1,327				1,400
Pro Tire Dwy	West of US 1 (Capital Blvd)																80				200
River Haven Pl	East of US 1 (Capital Blvd)																584				600
U-Haul Dwy	West of US 1 (Capital Blvd)																258				200
Shearon Farms Ave	East of US 1 (Capital Blvd)																884				900
Crossroads Ford Dwy	West of US 1 (Capital Blvd)																1,091				1,100
Burlington Mills Rd	West of Urial Dr		11,000		14,000		11,000		11,000		11,000		11,000		13,000	9,800	9,668				9,700
Burlington Mills Rd	West of One World Way																9,445				9,500
Burlington Mills Rd	East of One World Way						7,900		8,200		8,200		8,300		9,200	8,500	8,436		9,454		8,500
Urial Dr	South of Burlington Mills Rd																1,403				1,400
One World Way	North of Burlington Mills Rd																3,247				3,200
Height Ln	West of Ponderosa Service Rd																				500
Height Ln	West of US 1 (Capital Blvd)																				3,700

+2014 and 2015 Historic AADTs were published after approval of the 2015 BYNB Traffic Forecasts and are shown here for informational purposes only.

*Historic AADTs Projected to 2015 were based on trends from 2005 to 2013.

Table 2-3 - 2015 Base Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	Historic AADTs												2014 ⁺	2015 ⁺	Historic AADTs Forecasted to 2015* (AADT)	2015 Project Specific TMC Counts Reduced to 2015 (AADT)		2015 Project Specific Mainline Counts Reduced to 2015 (AADT)		2015 Base Year No Build Traffic Forecasts (AADT)
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013								
Ponderosa Service Rd	North of Height Ln																		3,753		3,800
Common Oaks Dr (South)	West of Forest Pines Dr																				3,000
Falls of Neuse Rd	West of Forest Pines Dr																19,561		18,981		21,400
Falls of Neuse Rd	West of Wakefield Commons Entrance																20,524				21,900
Falls of Neuse Rd	West of US 1 (Capital Blvd)																25,917				25,500
US 1A (Main St)	West of Star Rd																26,207				26,000
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy		19,000		24,000		25,000		25,000		24,000		25,000		28,000	24,900	25,794				26,100
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy																24,296				25,800
US 1A (Main St)	West of Ligon Mill Rd																26,128				27,000
US 1A (Main St)	East of Ligon Mill Rd																28,263		27,179		29,200
Forest Pines Dr	South of Falls of Neuse Rd																6,036				6,000
Forest Pines Dr	North of Falls of Neuse Rd																7,823				7,900
Forest Pines Dr	North of Common Oaks Dr (North)																7,255				6,800
Forest Pines Dr	North of Corona Blvd																6,329				6,400
Common Oaks Dr (North)	West of Forest Pines Dr																2,858				2,900
Common Oaks Dr (North)	East of Forest Pines Dr																1,077				1,000
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd																1,402				1,400
Wakefield Commons Entrance	South of Falls of Neuse Rd																4,405				4,400
Star Rd	South of US 1A (Main St)																687				700
Wake Dr	South of US 1A (Main St)																1,616				1,600
Golden Corral Dwy	North of US 1A (Main St)																800				900
O2 Fitness Dwy	South of US 1A (Main St)																834				800
Walmart Dwy	North of US 1A (Main St)																8,558				9,200
Ligon Mill Rd	South of US 1A (Main St)		3,900		7,000		7,100		6,700		7,500		7,500		8,400	7,600	7,409				7,500
Ligon Mill Rd	North of US 1A (Main St)																4,736				4,700
Popes Creek Dr	West of US 1 (Capital Blvd)																1,440				1,400
Walmart Access Rd	East of US 1 (Capital Blvd)																4,584				4,600
Shoppes at Caveness Farms Connector	East of US 1 (Capital Blvd)																2,034				2,000
Corona Blvd	West of US 1 (Capital Blvd)																2,378				2,400
Caveness Farms Ave	East of US 1 (Capital Blvd)																3,313				3,300
NC 98 Bypass	West of Wakefield Plantation Dr										13,000		15,000		19,000	17,000	16,347				18,800
NC 98 Bypass	West of Retail Dr																20,861				23,400
NC 98 Bypass	West of US 1 (Capital Blvd)																29,021		16,000		28,700
NC 98 Bypass	West of Galaxy Dr										21,000		24,000		31,000	27,000	29,357		24,279		29,000
NC 98 Bypass	East of Galaxy Dr																24,569				27,000
Wakefield Plantation Dr	South of NC 98 Bypass																		5,050		6,400
Northpark Dr	South of NC 98 Bypass																2,784				2,800
Retail Dr	North of NC 98 Bypass																10,705				10,700
Retail Dr	South of NC 98 Business																4,935				5,600
Hampton Way	North of NC 98 Business																2,617				2,600
Galaxy Dr	North of NC 98 Bypass																1,753		1,532		2,400
Galaxy Dr	North of Lowes Ave																1,270				1,900
Lowes Ave	East of Galaxy Dr																614				700
NC 98 Business	West of Hampton Way		15,000		19,000		17,000		18,000							16,000	8,739				16,400
NC 98 Business	West of US 1 (Capital Blvd)																14,497		8,278		17,800
NC 98 Business	East of US 1 (Capital Blvd)																11,597		8,887		14,400

+2014 and 2015 Historic AADTs were published after approval of the 2015 BYNB Traffic Forecasts and are shown here for informational purposes only.

*Historic AADTs Projected to 2015 were based on trends from 2005 to 2013.

Table 2-3 - 2015 Base Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	Historic AADTs														Historic AADTs Forecasted to 2015* (AADT)	2015 Project Specific TMC Counts Reduced to 2015 (AADT)		2015 Project Specific Mainline Counts Reduced to 2015 (AADT)		2015 Base Year No Build Traffic Forecasts (AADT)
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 ⁺	2015 ⁺						
Wake Union Church Rd	West of US 1 (Capital Blvd)																6,125				6,100
Wake Union Church Rd	East of US 1 (Capital Blvd)																5,230				5,300
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)																301				300
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)																1,336				1,300
Jenkins Rd	West of US 1 (Capital Blvd)		3,400		4,400		4,200		4,500		4,400		4,400		6,800	4,400	5,384				5,400
Stadium Dr	East of US 1 (Capital Blvd)		7,100				5,700		4,000		6,700		6,800		7,400	7,300	6,069	6,023	6,199		6,100
Stadium Dr	East of Wake Forest Crossing Rear Dwy																6,473				6,600
Wake Forest Crossing Rear Dwy	South of Stadium Dr																3,140				3,100
Country Club Dr	West of US 1 (Capital Blvd)																287				300
Templeridge Rd	East of US 1 (Capital Blvd)																542				500
St Catherines Dr	East of US 1 (Capital Blvd)																		187		200
Club Villas Dr	West of US 1 (Capital Blvd)																		158		200
Purnell Rd	West of US 1 (Capital Blvd)		3,200		4,000		4,500		4,000		3,900					3,800	4,091		4,487		4,400
Harris Rd	East of US 1 (Capital Blvd)				2,900		3,100		2,700		3,800				4,300	3,900	4,815	4,754			4,800
Harris Rd	East of Wallridge Rd		1,900		2,300		2,400		2,100		2,500		2,700		3,100	2,700	3,510				3,100
Wallridge Rd	North of Harris Rd																2,770				2,500
Wall Rd	East of US 1 (Capital Blvd)																3,977				4,000
Sunset Dr	West of US 1 (Capital Blvd)																1,083				1,100
Rolling Acres Rd	East of US 1 (Capital Blvd)																611				600
Holden Rd	West of US 1 (Capital Blvd)		1,900		3,300		5,100		4,200		4,300				5,000	5,000	4,462				4,700
Holden Rd	East of US 1 (Capital Blvd)	6,300		6,500		6,500		6,400		6,200		6,700		5,500		6,600	6,119				6,200

+2014 and 2015 Historic AADTs were published after approval of the 2015 BYNB Traffic Forecasts and are shown here for informational purposes only.

*Historic AADTs Projected to 2015 were based on trends from 2005 to 2013.

Table 2-4 - Field Data Collection

Location	Type of Count	Date(s)
US 1 (Capital Blvd) at Johnson Autoplex Dwy/Sumner Rd	16-hour Turning Movement Count	4/22/2015
US 1 (Capital Blvd) at Old Wake Forest Rd	16-hour Turning Movement Count	4/16/2015
US 1 (Capital Blvd) at I-540 EB Ramps	16-hour Turning Movement Count	4/14/2015
US 1 (Capital Blvd) at I-540 WB Ramps	16-hour Turning Movement Count	4/14/2015
US 1 (Capital Blvd) at Gresham Lake Rd	16-hour Turning Movement Count	4/16/2015
US 1 (Capital Blvd) at Cheviot Hills Dr/Jacqueline Ln	16-hour Turning Movement Count	4/8/2015
US 1 (Capital Blvd) at Capital Hills Connector/Homestead Dr	16-hour Turning Movement Count	4/8/2015
US 1 (Capital Blvd) at Simms Creek Rd	16-hour Turning Movement Count	4/7/2015
US 1 (Capital Blvd) at Durant Rd/Perry Creek Rd	16-hour Turning Movement Count	4/7/2015
US 1 (Capital Blvd) at Mallinckrodt, Inc. Dwy/Thornton Rd	16-hour Turning Movement Count	3/31/2015
US 1 (Capital Blvd) at Pro Tire Dwy/River Haven Pl	16-hour Turning Movement Count	3/12/2015
US 1 (Capital Blvd) at U-Haul Dwy/Shearon Farms Ave	16-hour Turning Movement Count	3/12/2015
US 1 (Capital Blvd) at Crossroads Ford Dwy/Burlington Mills Rd	16-hour Turning Movement Count	3/24/2015
US 1 (Capital Blvd) at Falls of Neuse Rd/US 1A (Main St)	16-hour Turning Movement Count	3/17/2015
US 1 (Capital Blvd) at Popes Creek Dr/Walmart Access Rd	16-hour Turning Movement Count	3/12/2015
US 1 (Capital Blvd) at Shoppes at Caveness Farms Connector	16-hour Turning Movement Count	3/10/2015
US 1 (Capital Blvd) at Corona Blvd/Caveness Farms Ave	16-hour Turning Movement Count	3/10/2015
US 1 (Capital Blvd) at NC 98 Bypass	16-hour Turning Movement Count	3/17/2015
US 1 (Capital Blvd) NB Ramps at NC 98 Business	16-hour Turning Movement Count	3/10/2015
US 1 (Capital Blvd) SB Ramps at NC 98 Business	16-hour Turning Movement Count	3/10/2015
US 1 (Capital Blvd) at Wake Union Church Rd/ Lowes Foods Dwy	16-hour Turning Movement Count	3/10/2015
Falls of Neuse Rd at I-540 EB Ramps/Thorpshire Dr	16-hour Turning Movement Count	4/21/2015
Falls of Neuse Rd at I-540 WB Ramps/Falls Valley Dr	16-hour Turning Movement Count	4/21/2015
US 401 (Louisburg Rd) at I-540 Ramps	16-hour Turning Movement Count	4/22/2015
US 401 (Louisburg Rd) at Fox Rd	16-hour Turning Movement Count	4/22/2015
Gresham Lake Rd at Capital Hills Dr	16-hour Turning Movement Count	4/8/2015
Gresham Lake Rd at Overlook Rd	16-hour Turning Movement Count	4/8/2015
Capital Hills Dr at Capital Hills Connector	16-hour Turning Movement Count	4/7/2015
Durant Rd at Capital Hills Dr	16-hour Turning Movement Count	3/31/2015
Perry Creek Rd at Eaton Dwy/Wild Wood Forest Dr	16-hour Turning Movement Count	4/1/2015
Perry Creek Rd at Clarks Fork Dr	16-hour Turning Movement Count	4/1/2015
Perry Creek Rd at McGuire Dr	16-hour Turning Movement Count	4/1/2015
Perry Creek Rd at Liston Dr/Filbin Creek Dr	16-hour Turning Movement Count	4/1/2015
Thornton Rd at Wadford Dr	16-hour Turning Movement Count	3/31/2015
Burlington Mills Rd at Urial Dr	16-hour Turning Movement Count	3/23/2015
Burlington Mills Rd at One World Way	16-hour Turning Movement Count	3/24/2015
Falls of Neuse Rd at Forest Pines Dr	16-hour Turning Movement Count	3/19/2015
Falls of Neuse Rd at Wakefield Commons Entrance	16-hour Turning Movement Count	3/19/2015
US 1A (Main St) at Star Rd	16-hour Turning Movement Count	3/19/2015
US 1A (Main St) at Wake Dr/Golden Corral Dwy	16-hour Turning Movement Count	3/19/2015
US 1A (Main St) at O2 Fitness Dwy/Walmart Dwy	16-hour Turning Movement Count	3/19/2015
US 1A (Main St) at Ligon Mill Rd	16-hour Turning Movement Count	3/24/2015
Common Oaks Dr (North) at Forest Pines Dr	13-hour Turning Movement Count	11/1/2016
Common Oaks Dr (North) at Popes Creek Dr	13-hour Turning Movement Count	11/1/2016
Forest Pines Dr at Corona Blvd	13-hour Turning Movement Count	11/1/2016
NC 98 Bypass at Wakefield Plantation Dr	13-hour Turning Movement Count	11/1/2016
NC 98 Bypass at Retail Dr/Northpark Dr	13-hour Turning Movement Count	11/1/2016
NC 98 Bypass at Galaxy Dr	13-hour Turning Movement Count	11/1/2016
Galaxy Dr at Lowes Ave	13-hour Turning Movement Count	11/1/2016
NC 98 Business at Retail Dr/Hampton Way	13-hour Turning Movement Count	11/1/2016
NC 98 Business at US 1 (Capital Blvd) SB Ramps	13-hour Turning Movement Count	11/1/2016
NC 98 Business at US 1 (Capital Blvd) NB Ramps	13-hour Turning Movement Count	11/1/2016

Table 2-4 - Field Data Collection (Continued)

Location	Type of Count	Date(s)
US 1 (Capital Blvd) at Wake Union Church Road	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Jenkins Rd/Stadium Dr	13-hour Turning Movement Count	11/1/2016
Stadium Dr at Wake Forest Crossing Dwy	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Templeridge Rd	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Purnell Rd/Harris Rd	13-hour Turning Movement Count	11/1/2016
Wallridge Road at Harris Rd	13-hour Turning Movement Count	11/1/2016
Wallridge Rd at Harris Crossing Rear Dwy	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Wall Rd	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Sunset Dr/Rolling Acres Rd	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) at Holden Rd	13-hour Turning Movement Count	11/10/2016
US 1 (Capital Blvd) at Presbyterian Church Dwy	13-hour Turning Movement Count	11/1/2016
US 1 (Capital Blvd) NB South of Johnson Autoplex Dwy/Sumner Blvd	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
US 1 (Capital Blvd) SB South of Johnson Autoplex Dwy/Sumner Blvd	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
US 1 (Capital Blvd) NB North of Crossroads Ford Dwy/ Burlington Mills Rd	48-hour Vehicle Classification Count	4/26/2015-4/29/2015
US 1 (Capital Blvd) SB North of Crossroads Ford Dwy/ Burlington Mills Rd	48-hour Vehicle Classification Count	4/26/2015-4/29/2015
US 1 (Capital Blvd) NB Off Ramp at NC 98 Bypass	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
US 1 (Capital Blvd) NB On Ramp at NC 98 Bypass	48-hour Vehicle Classification Count	3/16/2015-3/19/2015
US 1 (Capital Blvd) SB Off Ramp at NC 98 Bypass	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
US 1 (Capital Blvd) SB On Ramp at NC 98 Bypass	48-hour Vehicle Classification Count	3/16/2015-3/19/2015
US 1 (Capital Blvd) NB Off Ramp at NC 98 Business	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
US 1 (Capital Blvd) NB On Ramp at NC 98 Business	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
US 1 (Capital Blvd) SB Off Ramp at NC 98 Business	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
US 1 (Capital Blvd) SB On Ramp at NC 98 Business	48-hour Vehicle Classification Count	3/30/2015-4/2/2015
US 1 (Capital Blvd) NB North of Wake Union Church Rd/Lowes Foods Dwy	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
US 1 (Capital Blvd) SB North of Wake Union Church Rd/Lowes Foods Dwy	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
Sumner Blvd EB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
Sumner Blvd WB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
Old Wake Forest Rd EB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/29/2015-5/1/2015
Old Wake Forest Rd WB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/29/2015-5/1/2015
Old Wake Forest Rd EB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/26/2015-4/29/2015
Old Wake Forest Rd WB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/26/2015-4/29/2015
I-540 EB On Ramp at Falls of Neuse Rd	48-hour Vehicle Classification Count	4/20/2015-4/22/2015
I-540 EB Off Ramp at Falls of Neuse Rd	48-hour Vehicle Classification Count	5/4/2015-5/7/2015
I-540 WB On Ramp at Falls of Neuse Rd	48-hour Vehicle Classification Count	4/29/2015-5/1/2015
I-540 WB Off Ramp at Falls of Neuse Rd	48-hour Vehicle Classification Count	4/20/2015-4/22/2015
I-540 EB On Ramp at US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/15/2015-4/17/2015
I-540 EB Off Ramp at US 1 (Capital Blvd) NB	48-hour Vehicle Classification Count	4/13/2015-4/15/2015
I-540 EB Off Ramp at US 1 (Capital Blvd) SB	48-hour Vehicle Classification Count	4/13/2015-4/15/2015
I-540 WB On Ramp at US 1 (Capital Blvd) NB	48-hour Vehicle Classification Count	4/13/2015-4/15/2015
I-540 WB On Ramp at US 1 (Capital Blvd) SB	48-hour Vehicle Classification Count	4/13/2015-4/15/2015
I-540 WB Off Ramp at US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/13/2015-4/15/2015
I-540 EB On Ramp at Triangle Town Blvd	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
I-540 EB Off Ramp at Triangle Town Blvd	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
I-540 WB On Ramp at Triangle Town Blvd	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
I-540 WB Off Ramp at Triangle Town Blvd	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
I-540 EB On Ramp at US 401 (Louisburg Rd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
I-540 EB Off Ramp at US 401 (Louisburg Rd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
I-540 WB On Ramp at US 401 (Louisburg Rd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
I-540 WB Off Ramp at US 401 (Louisburg Rd)	48-hour Vehicle Classification Count	4/22/2015-4/24/2015
Falls of Neuse Rd South of I-540 Ramps/Thorpshire Dr	48-hour Vehicle Classification Count	4/20/2015-4/22/2015
Falls of Neuse Rd NB North of I-540/Falls Valley Dr	48-hour Vehicle Classification Count	4/27/2015-4/29/2015
Falls of Neuse Rd SB North of I-540/Falls Valley Dr	48-hour Vehicle Classification Count	4/27/2015-4/29/2015

Table 2-4 - Field Data Collection (Continued)

Location	Type of Count	Date(s)
Triangle Town Blvd NB South of I-540	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
Triangle Town Blvd SB South of I-540	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
US 401 (Louisburg Rd) NB South of I-540	48-hour Vehicle Classification Count	5/4/2015-5/7/2015
US 401 (Louisburg Rd) SB South of I-540	48-hour Vehicle Classification Count	5/4/2015-5/7/2015
Gresham Lake Rd West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
Capital Hills Dr North of Capital Hills Connector	48-hour Vehicle Classification Count	4/6/2015-4/8/2015
Durant Rd EB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/31/2015-4/2/2015
Durant Rd WB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/31/2015-4/2/2015
Perry Creek Rd EB West of Eaton Dwy/Wild Wood Forest Dr	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
Perry Creek Rd WB West of Eaton Dwy/Wild Wood Forest Dr	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
Thornton Rd East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/30/2015-4/2/2015
Burlington Mills Rd East of One World Way	48-hour Vehicle Classification Count	3/30/2015-4/2/2015
Falls of Neuse Rd EB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
Falls of Neuse Rd WB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	4/8/2015-4/10/2015
US 1A (Main St) EB West of Star Rd	48-hour Vehicle Classification Count	3/31/2015-4/2/2015
US 1A (Main St) WB West of Star Rd	48-hour Vehicle Classification Count	3/30/2015-4/2/2015
Ponderosa Service Road West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/30/2015-4/2/2015
Common Oaks Dr West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/18/2015-3/20/2015
Forest Pines Dr North of Corona Blvd	48-hour Vehicle Classification Count	3/18/2015-3/20/2015
NC 98 Bypass EB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/16/2015-3/18/2015
NC 98 Bypass WB West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/16/2015-3/18/2015
NC 98 Bypass EB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/16/2015-3/18/2015
NC 98 Bypass WB East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/16/2015-3/18/2015
NC 98 Business West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
NC 98 Business East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	3/10/2015-3/12/2015
Wakefield Plantation Dr South of NC 98 Bypass	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
Galaxy Dr South of Lowes Ave	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
NC 98 Bypass East of Hampton Way	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
US 1 (Capital Blvd) North of Wake Union Church Rd	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
US 1 (Capital Blvd) North of Wake Union Church Rd	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
Stadium Dr East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
St. Catherines Dr East of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
Club Villas Dr West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
US 1 (Capital Blvd) South of Purnell Rd/Harris Dr	48-hour Vehicle Classification Count	11/1/2016-11/2/2016
Purnell Rd West of US 1 (Capital Blvd)	48-hour Vehicle Classification Count	11/1/2016-11/2/2016

Table 2-5 - Traffic Count Comparison

Roadway	Location	2015 Project Specific TMC Counts (AADT)	2016 Project Specific TMC Counts (AADT)	Change in Volume from 2016 Project Specific TMC Counts to 2015 Project Specific TMC Counts (AADT)	Rate of Change from 2016 Project Specific TMC Counts to 2015 Project Specific TMC Counts (%)	Adjustment Factor Selected (%)	2016 Project Specific TMC Counts Adjusted to 2015 (AADT)
US 1 (Capital Blvd)	North of NC 98 Business	37,007	45,146	-8,139	-18.0%	-18.0%	37,020
US 1 (Capital Blvd)	North of Wake Union Church Rd	38,479	46,562	-8,083	-17.4%	-18.0%	38,181
NC 98 Business	West of US 1 (Capital Blvd)	14,497	17,504	-3,007	-17.2%	-18.0%	14,353
NC 98 Business	East of US 1 (Capital Blvd)	11,597	14,155	-2,558	-18.1%	-18.0%	11,607
Wake Union Church Rd	West of US 1 (Capital Blvd)	6,125	7,421	-1,296	-17.5%	-18.0%	6,085
Wake Union Church Rd	East of US 1 (Capital Blvd)	5,230	7,834	-2,604	-33.2%	-18.0%	6,424

3.0 BASE YEAR NO BUILD FORECAST

3.1 Assumptions

The roadway network, under the current conditions, was used to analyze the 2015 BYNB Conditions, and no other changes to the network were considered. The study interchanges and intersections analyzed for this forecast are shown in Table 3-1 below and on Figure 1, included in Appendix A.

The Triangle Regional Travel Demand Model Version 5 (TRM) output used to produce this forecast included all projects documented in the Research Triangle Region 2040 Metropolitan Transportation Plan (MTP), dated May 8, 2013, which includes both CAMPO and DCHC MPO, and the current STIP projects funded for construction aside from the subject project, STIP Project U-5307.

The project specific traffic counts, along with the historic traffic count data, were used to develop the directional splits, peak-to-day factors, and truck percentages for the 2015 BYNB Conditions.

Table 3-1 – Study Interchanges and Intersections

Location	Existing Configuration
I-540 at Falls of Neuse Rd	Interchange
Falls of Neuse Rd at Falls Valley Dr	Intersection
Falls of Neuse Rd at Thorpshire Dr	Intersection
I-540 at Triangle Town Blvd	Interchange
I-540 at US 401 (Louisburg Rd)	Interchange
US 401 (Louisburg Rd) at Fox Rd	Intersection
US 1 (Capital Blvd) at Johnson Autoplex Dwy/Sumner Blvd	Intersection
US 1 (Capital Blvd) at Old Wake Forest Rd	Intersection
US 1 (Capital Blvd) at I-540	Interchange
US 1 (Capital Blvd) and Gresham Lake Rd	Intersection
Gresham Lake Rd at Capital Hills Dr	Intersection
Gresham Lake Rd at Overlook Rd	Intersection
US 1 (Capital Blvd) at Cheviot Hills Dr/Jacqueline Ln	Intersection
US 1 (Capital Blvd) at Capital Hills Connector/Homestead Dr	Intersection
Capital Hills Dr at Capital Hills Connector	Intersection
US 1 (Capital Blvd) at Simms Creek Rd	Intersection

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Location	Existing Configuration
US 1 (Capital Blvd) at Durant Rd/Perry Creek Rd	Intersection
Durant Rd at Capital Hills Dr	Intersection
Perry Creek Rd at Eaton Dwy/Wild Wood Forest Dr	Intersection
Perry Creek Rd at Clarks Fork Dr	Intersection
Perry Creek Rd at McGuire Dr	Intersection
Perry Creek Rd at Liston Dr/Filbin Creek Dr	Intersection
US 1 (Capital Blvd) at Mallinckrodt, Inc. Dwy/Thornton Rd	Intersection
Thornton Rd at Wadford Dr	Intersection
US 1 (Capital Blvd) at Pro Tire Dwy/River Haven Place	Intersection
US 1 (Capital Blvd) at U-Haul Dwy/Shearon Farms Ave	Intersection
US 1 (Capital Blvd) at Crossroads Ford Dwy/Burlington Mills Rd	Intersection
Burlington Mills Rd at Urial Dr	Intersection
Burlington Mills Rd at One World Way	Intersection
US 1 (Capital Blvd) at Falls of Neuse Rd/US 1A (Main St)	Intersection
Falls of Neuse Rd at Forest Pines Dr	Intersection
Falls of Neuse Rd at Wakefield Commons Entrance	Intersection
US 1A (Main St) at Star Rd	Intersection
US 1A (Main St) at Wake Dr/Golden Corral Dwy	Intersection
US 1A (Main St) at O2 Fitness Dwy/Walmart Dwy	Intersection
US 1A (Main St) at Ligon Mill Rd	Intersection
US 1 (Capital Blvd) at Popes Creek Dr/Walmart Access Rd	Intersection
US 1 (Capital Blvd) at Shoppes at Caveness Farms Connector	Intersection
US 1 (Capital Blvd) at Caveness Farms Ave/Corona Blvd	Intersection
US 1 (Capital Blvd) at NC 98 Bypass	Interchange
US 1 (Capital Blvd) at NC 98 Business	Interchange
US 1 (Capital Blvd) at Wake Union Church Rd/Lowes Foods Dwy	Intersection
Ponderosa Service Rd at Height Ln	Intersection
Forest Pines Dr at Common Oaks Dr (South)	Intersection
Forest Pines Dr at Commons Oaks Dr (North)	Intersection
Common Oaks Dr (North) at Popes Creek Dr	Intersection
Forest Pines Dr at Corona Blvd	Intersection
NC 98 Bypass at Wakefield Plantation Rd	Intersection
NC 98 Bypass at Retail Dr/Northpark Dr	Intersection
NC 98 Bypass at Galaxy Dr	Intersection
Galaxy Dr at Lowes Ave	Intersection

US 1 Freeway Upgrade (STIP Project U-5307)
Project Level Traffic Forecast Supplement

Location	Existing Configuration
NC 98 Business at Hampton Way/Retail Dr	Intersection
US 1 (Capital Blvd) at Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing	Intersection
US 1 (Capital Blvd) at Jenkins Rd/Stadium Dr	Intersection
US 1 (Capital Blvd) at Country Club Dr/Templeridge Rd	Intersection
US 1 (Capital Blvd) at St. Catherines Dr	Intersection
US 1 (Capital Blvd) at Club Villas Dr	Intersection
US 1 (Capital Blvd) at Purnell Rd/Harris Dr	Intersection
US 1 (Capital Blvd) at Wall Rd	Intersection
US 1 (Capital Blvd) at Sunset Rd/Rolling Acres Rd	Intersection
US 1 (Capital Blvd) at Holden Rd	Intersection
Stadium Dr at Wake Forest Crossing Rear Dwy	Intersection
Harris Rd at Wallridge Rd	Intersection

3.2 Methodology

The 2015 BYNB Conditions traffic forecasts were primarily developed using the project specific counts and historic AADT count data. Table 2-3 shows the current and historic AADT counts and the 2015 BYNB Conditions traffic forecasts for the study area roads. 2015 BYNB Conditions AADT volumes with peak-to-day factors, directional splits, and truck percentages are shown in Figure 2.

The project specific traffic count data was adjusted to develop AADT volumes using NCDOT seasonal factors. These seasonal factors provide an adjustment factor for each facility type and vary based on month and day of the field count. These factors also differ based on the facility usage purpose (coastal or mountain area recreational) and facility location (urban or rural region). The study area is not influenced by heavy recreational traffic and is located in an urban area; therefore, the NCDOT seasonal factors for Automatic Traffic Recorder (ATR) Group 4 were used.

The 16-hour intersection turning movement counts were converted into 24-hour volumes using the NCDOT's hour-to-day factors for different facility types, which are shown in Table 3-2. The hour-to-day factors provide the distribution of 24-hour traffic volumes by each hour of the day for different roadway types.

As shown in Table 2-5, the 2016 repeat traffic counts, after projection to 24-hours and seasonal adjustments, were approximately 18% higher than the 2015 adjusted traffic counts in the same locations. It is assumed that this increase is due to growth in the area, but the base year of the forecast remains 2015. Therefore, the 2016 traffic counts for the additional locations, after projection to 24-hours and seasonal adjustments, were reduced by 18% to be shown as 2015 traffic counts. This reduction factor also brings the 2016 traffic counts more in line with the historic AADT counts.

Appendices C and D present the 24-Hour and Peak Hour Turning Movement count data, respectively, in a diagram format. The NCDOT Traffic Forecast Utility (TFU) worksheets were developed for each study intersection and are included in Appendix E.

3.3 Design Factors

Table 3-3 compares the traffic factors developed from the project specific traffic counts, and other forecasts in the area, with the traffic factors selected for this forecast. The 2015 BYNB Conditions traffic factors were selected based on the travel patterns observed from the 2015 project specific traffic counts and supplemented by the other forecasts in the area.

The traffic forecasts and traffic factor estimates for the 2015 BYNB Conditions were developed based on current counts and historic Annual Average Daily Traffic (AADT) trends, from 2005 to 2013, projected to 2015. Table 2-3 shows the current and historic AADT counts and the 2015 BYNB Conditions traffic forecasts for the study area roads. 2015 BYNB Conditions AADT volumes with peak-to-day factors, directional splits, and truck percentages are shown in Figure 2.

As previously mentioned, after the 2015 BYNB Conditions traffic forecasts for the original study area locations were complete and approved in November 2015, the 2014 and 2015 Historic AADT volumes were published. These values have been added to Table 2-3 for comparison purposes only. As noted in the table footnotes, there are differences between the 2015 Historic AADT volumes and the selected 2015 BYNB Conditions traffic forecasts. The 2015 BYNB Conditions traffic forecasts were selected based on the best data available at the time, including all historic AADT volumes available as well as project specific traffic counts. While some locations along the project corridor have higher differences than others between the 2015 Historic AADT volumes and the selected 2015 BYNB Conditions traffic forecasts, making any adjustments to the forecasts at this time would not result in any major impact to the overall project.

Table 3-2 – Hour-to-Day Factors

Hour	US Highways*	NC Highways ⁺	Primary Roads**	Secondary Roads ⁺⁺
12:00 AM	1.00%	1.00%	1.10%	0.70%
1:00 AM	1.00%	1.00%	1.10%	0.70%
2:00 AM	1.00%	1.00%	1.10%	0.70%
3:00 AM	1.00%	1.00%	1.10%	0.70%
4:00 AM	1.00%	1.00%	1.10%	0.70%
5:00 AM	1.00%	1.00%	1.10%	0.70%
6:00 AM	5.90%	5.90%	5.80%	5.90%
7:00 AM	5.90%	5.90%	5.80%	5.90%
8:00 AM	5.90%	5.90%	5.80%	5.90%
9:00 AM	5.90%	5.90%	5.80%	5.90%
10:00 AM	5.90%	5.90%	5.80%	5.90%
11:00 AM	5.90%	5.90%	5.80%	5.90%
12:00 PM	6.10%	5.80%	5.70%	7.50%
1:00 PM	5.70%	6.10%	4.30%	5.90%
2:00 PM	6.30%	7.30%	5.50%	5.70%
3:00 PM	7.40%	6.00%	7.20%	7.50%
4:00 PM	5.90%	5.90%	5.80%	5.90%
5:00 PM	5.90%	5.90%	5.80%	5.90%
6:00 PM	5.90%	5.90%	5.80%	5.90%
7:00 PM	5.90%	5.90%	5.80%	5.90%
8:00 PM	4.30%	4.00%	5.90%	4.30%
9:00 PM	3.50%	3.70%	4.30%	4.10%
10:00 PM	1.00%	1.00%	1.10%	0.70%
11:00 PM	1.00%	1.00%	1.10%	0.70%

Source: NCDOT Traffic Survey Group

*Used for I-540 Ramps, US 1 (Capital Blvd), and US 401 (Louisburg Rd)

⁺Used for NC 98 Bypass, NC 98 Business

^{**}Used for Old Wake Forest Rd, Durant Rd, Perry Creek Rd, Burlington Mills Rd, Falls of Neuse Rd, US 1A (Main St), and Ligon Mill Rd

⁺⁺Used for all other study area roads

Table 3-3 - 2015 Base Year No Build Conditions Traffic Factors

Roadway	Location	Directional Split % (D)				Design Hourly Volume % (K)				Truck % (Duals/TTSTs)					
		2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value **	2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value**	2015 Mainline Counts*	2015 TMC+	Other Forecasts **	Selected Value **
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd	56%				55%	8%				8%	1%/4%	1%/1%		3%/2%
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	55%				55%	8%				8%		3%/1%		3%/2%
US 1 (Capital Blvd)	North of Old Wake Forest Rd	54%			55%	55%	8%			10%	8%		3%/2%	3%/2%	3%/2%
US 1 (Capital Blvd)	North of I-540	51%			60%	55%	8%			10%	8%		4%/2%	3%/2%	3%/2%
US 1 (Capital Blvd)	North of Gresham Lake Rd	56%				55%	8%				8%		3%/2%		3%/2%
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	55%				55%	8%				8%		4%/2%		3%/2%
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	54%				55%	8%				8%		4%/2%		3%/2%
US 1 (Capital Blvd)	North of Simms Creek Rd	55%				55%	8%				8%		4%, 2%		3%/2%
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	56%				55%	7%				8%		3%/3%		3%/2%
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	56%				55%	8%				8%		3%/3%		3%/2%
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	53%				55%	8%				8%		4%/2%		3%/2%
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	51%				55%	8%				8%		4%/2%		3%/2%
US 1 (Capital Blvd)	North of Burlington Mills Rd	58%				55%	7%				8%	1%/6%	5%, 2%		3%/2%
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	53%				55%	8%				8%		3%/3%		3%/2%
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	51%				55%	8%				8%		3%/2%		3%/2%
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	51%				55%	8%				8%		3%/2%		3%/2%
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	55%				55%	8%				8%		3%/2%		3%/2%
US 1 (Capital Blvd)	North of NC 98 Bypass	52%				55%	9%				8%		5%/1%		3%/2%
US 1 (Capital Blvd)	North of NC 98 Business	54%				55%	8%				8%		2%/3%		3%/2%
US 1 (Capital Blvd)	North of Wake Union Church Rd	56%	55%			55%	8%	7%			8%	1%/7%	2%/3%		3%/2%
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy		55%	55%		55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr		55%	54%		55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd		54%			55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of St. Catherines Dr					55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Club Villas Dr		54%			55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd		54%	53%		55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Wall Rd		52%	52%		55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd		54%	54%		55%		7%	7%		8%				3%/2%
US 1 (Capital Blvd)	North of Holden Rd		51%			55%		7%	7%		8%				3%/2%
Sumner Blvd Ext	West of US 1 (Capital Blvd)		60%			60%		8%			8%		1%/1%		1%/1%
Sumner Blvd	East of US 1 (Capital Blvd)	55%	55%			55%	7%	9%			9%	1%/1%	2%/1%		1%/1%
Old Wake Forest Rd	West of US 1 (Capital Blvd)	59%	53%			55%	7%	8%			8%	1%/2%	2%/1%		1%/1%
Old Wake Forest Rd	East of US 1 (Capital Blvd)	53%	50%			55%	8%	7%			7%	1%/1%	1%/1%		1%/1%
I-540	West of Falls of Neuse Rd				65%	65%				9%	9%			3%/2%	3%/2%
I-540	West of US 1 (Capital Blvd)				65%	65%				9%	9%			3%/2%	3%/2%
I-540	West of Triangle Town Blvd				65%	65%				10%	10%			4%/3%	4%/3%
I-540	West of US 401 (Louisburg Rd)				65%	65%				10%	10%			4%/3%	4%/3%
I-540	East of US 401 (Louisburg Rd)				65%	65%				10%	10%			4%/3%	4%/3%
Falls of Neuse Rd	South of Thorpshire Dr	51%	52%		55%	55%	6%	7%		9%	9%	1%/2%	1%/1%	2%/1%	2%/1%
Falls of Neuse Rd	South of I-540	51%	52%		55%	55%	6%	7%		9%	9%	1%/2%	2%/1%	2%/1%	2%/1%
Falls of Neuse Rd	North of I-540	57%	57%		60%	60%	8%	8%		9%	9%	1%/2%	2%/1%	2%/1%	2%/1%
Falls of Neuse Rd	North of Falls Valley Dr	57%	57%		60%	60%	8%	8%		9%	9%	1%/2%	2%/1%	2%/1%	2%/1%
Thorpshire Dr	East of Falls of Neuse Rd		72%			70%		9%			9%		2%/1%		2%/1%
Falls Valley Dr	East of Falls of Neuse Rd		52%			55%		8%			8%		1%/1%		2%/1%
Triangle Town Blvd	South of I-540	52%	51%		55%	55%	10%	10%		10%	10%	1%/1%	1%/1%	2%/1%	2%/1%

* - 2015 Project Specific 48-hour vehicle classification counts (PM value reported)

+ - 2015 Project Specific 13-hour and 16-hour turning movement counts (PM value reported)

** - Traffic Factors from past forecasts in the study area

** - Value selected for this Traffic Forecast

Table 3-3 - 2015 Base Year No Build Conditions Traffic Factors (Continued)

Roadway	Location	Directional Split % (D)				Design Hourly Volume % (K)				Truck % (Duals/TTSTs)					
		2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value **	2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value **	2015 Mainline Counts*	2015 TMC+	Other Forecasts **	Selected Value **
US 401 (Louisburg Rd)	South of I-540	59%			65%	60%	9%			11%	9%	1%/3%	2%/1%	3%/1%	3%/1%
US 401 (Louisburg Rd)	North of I-540	60%			65%, 70%	60%	9%			11%, 10%	9%		3%/1%	2%/1%, 4%/2%	3%/1%
US 401 (Louisburg Rd)	North of Fox Rd	66%			75%	65%	9%			10%	9%		2%/1%	4%/2%	3%/1%
Fox Rd	West of US 401 (Louisburg Rd)		57%		70%	60%		8%		9%	8%		2%/0%	2%/1%	2%/1%
Fox Rd	East of US 401 (Louisburg Rd)		69%			70%		6%			7%		3%/0%		2%/1%
Gresham Lake Rd	West of Capital Hills Dr	66%	69%			60%	9%	9%			9%	1%/5%	8%/2%		8%/2%
Gresham Lake Rd	East of Capital Hills Dr		64%			60%		9%			9%		9%/2%		8%/2%
Gresham Lake Rd	West of US 1 (Capital Blvd)		65%			60%		9%			9%		9%/2%		8%/2%
Capital Hills Dr	North of Gresham Lake Rd		55%			55%		9%			9%		7%/1%		6%/1%
Capital Hills Dr	North of Capital Hills Connector	67%	54%			60%	12%	8%			8%	1%/1%	6%/1%		6%/1%
Overlook Rd	South of Gresham Lake Rd		60%			60%		8%			8%		21%/3%		20%/3%
Cheviot Hills Dr	West of US 1 (Capital Blvd)		60%			60%		2%			7%		7%/1%		8%/2%
Jacqueline Ln	East of US 1 (Capital Blvd)		67%			65%		8%			8%		2%/1%		2%/1%
Capital Hills Connector	West of US 1 (Capital Blvd)	67%	51%			55%	12%	8%			8%		4%/1%		2%/1%
Homestead Dr	East of US 1 (Capital Blvd)		61%			60%		8%			8%		3%/1%		2%/1%
Simms Creek Rd	East of US 1 (Capital Blvd)		56%			55%		8%			8%		6%/1%		6%/1%
Durant Rd	West of Capital Hills Dr	56%	51%			55%	9%	8%			8%		4%/1%		4%/1%
Durant Rd	West of US 1 (Capital Blvd)		58%			55%		7%			8%	1%/3%	4%/1%		4%/1%
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr		65%			60%		10%			10%		3%/1%		3%/1%
Perry Creek Rd	West of Clarks Fork Dr		61%			60%		10%			10%		3%/1%		3%/1%
Perry Creek Rd	West of McGuire Dr		60%			60%		10%			10%		3%/1%		3%/1%
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr		62%			60%		10%			10%		4%/1%		3%/1%
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	51%	59%			60%	11%	10%			10%	1%/2%	3%/1%		3%/1%
Eaton Dwy	South of Perry Creek Rd		86%			75%		11%			10%		9%/36%		9%/36%
Wild Wood Forest Dr	North of Perry Creek Rd		67%			60%		9%			9%		3%/1%		2%/1%
Clarks Fork Dr	North of Perry Creek Rd		61%			60%		10%			10%		2%/1%		2%/1%
McGuire Dr	South of Perry Creek Rd		57%			60%		8%			8%		5%/0%		2%/1%
Liston Dr	South of Perry Creek Rd		59%			60%		8%			8%		9%/0%		2%/1%
Filbin Creek Dr	North of Perry Creek Rd		53%			55%		9%			9%		3%/1%		2%/1%
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)		69%			70%		9%			9%		4%/4%		4%/4%
Thornton Rd	East of US 1 (Capital Blvd)		51%			55%		7%			8%		5%/2%		5%/2%
Thornton Rd	West of Wadford Dr		58%			55%		8%			8%		1%/3%		1%/3%
Thornton Rd	East of Wadford Dr	60%	59%			55%	8%	8%			8%	1%/2%	1%/2%		1%/3%
Wadford Dr	South of Thornton Rd		58%			60%		11%			11%		1%/5%		1%/3%
Wadford Dr	North of Thornton Rd		57%			60%		10%			10%		1%/2%		1%/3%
Pro Tire Dwy	West of US 1 (Capital Blvd)		100%			65%		2%			8%		5%/8%		5%/8%
River Haven Pl	East of US 1 (Capital Blvd)		64%			65%		7%			7%		6%/1%		2%/1%
U-Haul Dwy	West of US 1 (Capital Blvd)		96%			75%		31%			12%		4%/3%		4%/3%
Shearon Farms Ave	East of US 1 (Capital Blvd)		92%			75%		11%			10%		3%/1%		3%/1%
Crossroads Ford Dwy	West of US 1 (Capital Blvd)		58%			60%		8%			8%		5%/1%		5%/1%
Burlington Mills Rd	West of Urial Dr		55%			60%		9%			9%		8%/2%		7%/2%
Burlington Mills Rd	West of One World Way		54%			60%		9%			9%		7%/2%		7%/2%
Burlington Mills Rd	East of One World Way	70%	69%			55%	9%	9%			9%	1%/2%	6%/1%		7%/2%
Urial Dr	South of Burlington Mills Rd		51%			55%		9%			9%		3%/1%		3%/1%
One World Way	North of Burlington Mills Rd		77%			70%		11%			10%		17%/6%		17%/6%
Height Ln	West of Ponderosa Service Rd					55%					9%				2%/1%
Height Ln	West of US 1 (Capital Blvd)					65%					9%				2%/1%

* - 2015 Project Specific 48-hour vehicle classification counts (PM value reported)
+ - 2015 Project Specific 13-hour and 16-hour turning movement counts (PM value reported)

** - Traffic Factors from past forecasts in the study area
++ - Value selected for this Traffic Forecast

Table 3-3 - 2015 Base Year No Build Conditions Traffic Factors (Continued)

Roadway	Location	Directional Split % (D)				Design Hourly Volume % (K)				Truck % (Duals/TTSTs)					
		2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value**	2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value**	2015 Mainline Counts*	2015 TMC+	Other Forecasts **	Selected Value**
Ponderosa Service Rd	North of Height Ln	53%				65%	9%				9%	0%/1%			2%/1%
Common Oaks Dr (South)	West of Forest Pines Dr					55%					9%				2%/1%
Falls of Neuse Rd	West of Forest Pines Dr	58%	58%			60%	8%	8%			8%	1%/4%	2%/1%		2%/1%
Falls of Neuse Rd	West of Wakefield Commons Entrance		61%			60%		7%			8%		2%/1%		2%/1%
Falls of Neuse Rd	West of US 1 (Capital Blvd)		59%			60%		7%			8%		2%/1%		2%/1%
US 1A (Main St)	West of Star Rd		60%			60%		8%			8%		2%/1%		2%/1%
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy		59%			60%		8%			8%		2%/1%		2%/1%
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy		58%			60%		7%			8%		2%/1%		2%/1%
US 1A (Main St)	West of Ligon Mill Rd		62%		55%	60%		8%		11%	8%		2%/1%	1%/2%	2%/1%
US 1A (Main St)	East of Ligon Mill Rd	58%	64%		55%	60%	8%	8%		11%	8%	1%/3%	2%/1%	1%/2%	2%/1%
Forest Pines Dr	South of Falls of Neuse Rd		60%			60%		8%			8%		2%/1%		2%/1%
Forest Pines Dr	North of Falls of Neuse Rd		51%			55%		7%			7%		2%/1%		2%/1%
Forest Pines Dr	North of Common Oaks Dr (North)		59%	64%		60%		9%	8%		9%		2%/1%		2%/1%
Forest Pines Dr	North of Corona Blvd		66%	66%		60%		8%	8%		9%		1%/1%		2%/1%
Common Oaks Dr (North)	West of Forest Pines Dr		51%			55%		9%			9%		1%/1%		2%/1%
Common Oaks Dr (North)	East of Forest Pines Dr		70%			70%		9%			9%		2%/1%		2%/1%
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd		63%			55%		10%			9%		2%/1%		2%/1%
Wakefield Commons Entrance	South of Falls of Neuse Rd		51%			55%		6%			7%		1%/1%		2%/1%
Star Rd	South of US 1A (Main St)		72%			70%		7%			7%		2%/2%		2%/1%
Wake Dr	South of US 1A (Main St)		62%			60%		9%			9%		2%/0%		2%/1%
Golden Corral Dwy	North of US 1A (Main St)		82%			75%		10%			10%		2%/1%		2%/1%
O2 Fitness Dwy	South of US 1A (Main St)		54%			55%		6%			7%		1%/0%		2%/1%
Walmart Dwy	North of US 1A (Main St)		56%			55%		8%			8%		1%/1%		2%/1%
Ligon Mill Rd	South of US 1A (Main St)		62%		55%	60%		10%		10%	10%		2%/1%	2%/1%	2%/1%
Ligon Mill Rd	North of US 1A (Main St)		55%			55%		9%			9%		1%/1%		2%/1%
Popes Creek Dr	West of US 1 (Capital Blvd)		67%			70%		8%			8%		1%/1%		2%/1%
Walmart Access Rd	East of US 1 (Capital Blvd)		56%			55%		9%			9%		1%/1%		2%/1%
Shoppes at Caveness Farms Connector	East of US 1 (Capital Blvd)		51%			55%		9%			9%		2%/1%		2%/1%
Corona Blvd	West of US 1 (Capital Blvd)		55%			55%		7%			7%		1%/1%		2%/1%
Caveness Farms Ave	East of US 1 (Capital Blvd)		56%			55%		8%			8%		2%/1%		2%/1%
NC 98 Bypass	West of Wakefield Plantation Dr		58%			60%		8%			9%		5%/1%		3%/1%
NC 98 Bypass	West of Retail Dr		60%	59%		60%		8%	8%		9%		4%/1%		3%/1%
NC 98 Bypass	West of US 1 (Capital Blvd)	62%	59%		60%	60%	9%	9%		10%	9%	1%/7%	3%/1%	3%/1%	3%/1%
NC 98 Bypass	West of Galaxy Dr	51%	56%			60%	9%	9%			9%	1%/7%	3%/1%		3%/1%
NC 98 Bypass	East of Galaxy Dr		53%			60%		7%			9%		3%/1%		3%/1%
Wakefield Plantation Dr	South of NC 98 Bypass	63%		66%		60%	9%		8%		9%	1%/3%			2%/1%
Northpark Dr	South of NC 98 Bypass		63%			65%		10%			10%		2%/1%		2%/1%
Retail Dr	North of NC 98 Bypass		61%			55%		7%			7%		1%/1%		2%/1%
Retail Dr	South of NC 98 Business		54%			55%		6%			7%		1%/1%		2%/1%
Hampton Way	North of NC 98 Business		50%			55%		13%			12%		1%/1%		2%/1%
Galaxy Dr	North of NC 98 Bypass	53%	53%	50%		55%	10%	9%	7%		9%	4%/1%	2%/1%		2%/1%
Galaxy Dr	North of Lowes Ave		52%			55%		11%			9%		2%/1%		2%/1%
Lowes Ave	East of Galaxy Dr		67%			65%		6%			7%		6%/2%		2%/1%
NC 98 Business	West of Hampton Way		51%			60%		9%			9%		3%/1%		2%/1%
NC 98 Business	West of US 1 (Capital Blvd)	57%	56%			60%	9%	8%			9%	1%/2%	2%/1%		2%/1%
NC 98 Business	East of US 1 (Capital Blvd)	62%	51%			60%	8%	8%			9%	1%/1%	2%/1%		2%/1%

* - 2015 Project Specific 48-hour vehicle classification counts (PM value reported)

+ - 2015 Project Specific 13-hour and 16-hour turning movement counts (PM value reported)

** - Traffic Factors from past forecasts in the study area

** - Value selected for this Traffic Forecast

Table 3-3 - 2015 Base Year No Build Conditions Traffic Factors (Continued)

Roadway	Location	Directional Split % (D)				Design Hourly Volume % (K)				Truck % (Duals/TTSTs)					
		2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value **	2015 Mainline Counts*	2015 TMC+		Other Forecasts **	Selected Value**	2015 Mainline Counts*	2015 TMC+	Other Forecasts **	Selected Value **
Wake Union Church Rd	West of US 1 (Capital Blvd)		65%			65%		10%			10%		1%/1%		2%/1%
Wake Union Church Rd	East of US 1 (Capital Blvd)		59%			60%		9%			9%		2%/1%		2%/1%
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)		67%			65%		2%			7%				2%/1%
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)		54%			55%		8%			8%				2%/1%
Jenkins Rd	West of US 1 (Capital Blvd)		52%			55%		6%			7%				2%/1%
Stadium Dr	East of US 1 (Capital Blvd)		53%	58%		55%		8%	8%		8%				2%/1%
Stadium Dr	East of Wake Forest Crossing Rear Dwy		60%			60%		8%			8%				2%/1%
Wake Forest Crossing Rear Dwy	South of Stadium Dr		54%			55%		11%			11%				2%/1%
Country Club Dr	West of US 1 (Capital Blvd)		53%			55%		8%			8%				3%/1%
Templeridge Rd	East of US 1 (Capital Blvd)		71%			70%		8%			8%				3%/1%
St Catherines Dr	East of US 1 (Capital Blvd)					65%					8%				2%/1%
Club Villas Dr	West of US 1 (Capital Blvd)					65%					8%				2%/1%
Purnell Rd	West of US 1 (Capital Blvd)		52%			55%		8%			9%				3%/1%
Harris Rd	East of US 1 (Capital Blvd)		55%	54%		55%		8%	7%		8%				2%/1%
Harris Rd	East of Wallridge Rd		55%			55%		9%			9%				2%/1%
Wallridge Rd	North of Harris Rd		50%			55%		7%			10%				3%/1%
Wall Rd	East of US 1 (Capital Blvd)		55%			55%		9%			9%				4%/1%
Sunset Dr	West of US 1 (Capital Blvd)		85%			70%		10%			11%				2%/1%
Rolling Acres Rd	East of US 1 (Capital Blvd)		53%			55%		7%			7%				3%/1%
Holden Rd	West of US 1 (Capital Blvd)		56%			55%		8%			9%				2%/1%
Holden Rd	East of US 1 (Capital Blvd)		60%			60%		7%			7%				2%/1%

* - 2015 Project Specific 48-hour vehicle classification counts (PM value reported)

+ - 2015 Project Specific 13-hour and 16-hour turning movement counts (PM value reported)

** - Traffic Factors from past forecasts in the study area

** - Value selected for this Traffic Forecast

4.0 GENERAL MODEL DATA

4.1 Model Information

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as the primary tool for developing the future year traffic forecasts. This regional model is guided and supported by CAMPO, DCHC MPO, NCDOT, and TTA. The model includes all of Wake, Durham, and Orange counties and encompasses parts of seven other surrounding counties. The model is used to forecast regional travel demand for transportation planning purposes.

The model used for this forecast is the official version of the TRM Version 5, as adopted in 2013. The model uses 2010, 2015, and 2040 as the base, interim, and future years, respectively. The highway network for the study area includes existing roadways, all of the proposed projects included in the Research Triangle Region 2040 MTP, dated May 8, 2013, which includes both CAMPO and DCHC MPO, and the current STIP projects funded for construction. Refer to the 2040 MTP for a list of the projects included in the model highway network.

The socioeconomic data used in the TRM is derived from multiple data sources including the US Census, state agencies, counties, area population and housing data, and the Research Triangle Region 2040 MTP. The model estimates the number of workers and non-workers in households within the Traffic Analysis Zones (TAZ) by income and vehicle ownership. The concentration of housing and employment, land use, and density are all key factors in determining trends and travel patterns.

When using the model data for a specific corridor, the model's ability to replicate travel demand in a smaller area requires verification. To accomplish this, the 2010 NCDOT AADT volumes were compared to the 2010 TRM base year model run, as shown in Table 4-1. In general, the TRM model is over predicting the volumes on US 1 (Capital Blvd) south of NC 98 Bypass (average of 18%) and on US 1 (Capital Blvd) north of NC 98 Bypass (average of 8%), so it can be concluded that the 2015 to 2040 growth rates from TRM for US 1 (Capital Blvd) represent lower than anticipated growth.

Table 4-1 - 2010 Base Year Model Estimates Comparison

Roadway	Location	2010 TRM Model Estimates	2010 Historic AADT	% Change in 2010 AADT vs Model Estimates
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd	47,600	-	-
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	55,800	44,500	25%
US 1 (Capital Blvd)	North of Old Wake Forest Rd	73,000	-	-
US 1 (Capital Blvd)	North of I-540	70,200	-	-
US 1 (Capital Blvd)	North of Gresham Lake Rd	70,200	55,000	28%
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	66,300	-	-
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	66,300	-	-
US 1 (Capital Blvd)	North of Simms Creek Rd	66,300	61,000	9%
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	64,100	54,000	19%
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	60,700	-	-
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	60,700	-	-
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	60,200	-	-
US 1 (Capital Blvd)	North of Burlington Mills Rd	54,400	47,000	16%
US 1 (Capital Blvd)	North of Height Ln	54,400	47,000	16%
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	46,200	42,000	10%
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	46,200	-	-
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	46,200	-	-
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	43,300	-	-
US 1 (Capital Blvd)	North of NC 98 Bypass	30,100	44,500	-32%
US 1 (Capital Blvd)	North of NC 98 Business	32,500	-	-
US 1 (Capital Blvd)	North of Wake Union Church Rd	39,600	40,000	-1%
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy	39,600	-	-
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr	37,100	-	-
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd	37,800	-	-
US 1 (Capital Blvd)	North of St. Catherines Dr	37,800	-	-
US 1 (Capital Blvd)	North of Club Villas Dr	37,700	35,000	8%
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	37,400	31,500	19%
US 1 (Capital Blvd)	North of Wall Rd	41,000	-	-
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd	39,400	-	-
US 1 (Capital Blvd)	North of Holden Rd	32,000	22,000	45%
Sumner Blvd Ext	West of US 1 (Capital Blvd)	5,200	-	-
Sumner Blvd	East of US 1 (Capital Blvd)	9,100	-	-
Old Wake Forest Rd	West of US 1 (Capital Blvd)	22,300	26,760	-17%
Old Wake Forest Rd	East of US 1 (Capital Blvd)	4,400	-	-
I-540	West of Falls of Neuse Rd	70,000	87,000	-20%
I-540	West of US 1 (Capital Blvd)	60,400	74,000	-18%
I-540	West of Triangle Town Blvd	40,600	61,000	-33%
I-540	West of US 401 (Louisburg Rd)	41,100	61,000	-33%
I-540	East of US 401 (Louisburg Rd)	43,900	54,000	-19%
Falls of Neuse Rd	South of Thorpshire Dr	27,200	32,000	-15%
Falls of Neuse Rd	South of I-540	27,200	32,000	-15%
Falls of Neuse Rd	North of I-540	40,900	43,000	-5%
Falls of Neuse Rd	North of Falls Valley Dr	40,900	43,000	-5%
Thorpshire Dr	East of Falls of Neuse Rd	3,900	-	-
Falls Valley Dr	East of Falls of Neuse Rd	-	-	-
Triangle Town Blvd	South of I-540	9,900	-	-
US 401 (Louisburg Rd)	South of I-540	48,000	-	-
US 401 (Louisburg Rd)	North of I-540	52,200	-	-
US 401 (Louisburg Rd)	North of Fox Rd	55,300	39,000	42%
Fox Rd	West of US 401 (Louisburg Rd)	7,300	-	-
Fox Rd	East of US 401 (Louisburg Rd)	-	-	-
Locations where the 2010 Model estimates are within 10% of the 2010 AADT				
Locations where the 2010 AADT are > 10% higher than the 2010 Model Estimates				
Locations where 2010 Model Estimates are >10% higher than the 2010 AADT				

Table 4-1 - 2010 Base Year Model Estimates Comparison (Continued)

Roadway	Location	2010 TRM Model Estimates	2010 Historic AADT	% Change in 2010 AADT vs Model Estimates
Gresham Lake Rd	West of Capital Hills Dr	13,900	-	-
Gresham Lake Rd	East of Capital Hills Dr	14,000	-	-
Gresham Lake Rd	West of US 1 (Capital Blvd)	15,600	8,700	79%
Capital Hills Dr	North of Gresham Lake Rd	400	-	-
Capital Hills Dr	North of Capital Hills Connector	-	-	-
Overlook Rd	South of Gresham Lake Rd	1,800	-	-
Cheviot Hills Dr	West of US 1 (Capital Blvd)	3,000	-	-
Jacqueline Ln	East of US 1 (Capital Blvd)	6,800	-	-
Capital Hills Connector	West of US 1 (Capital Blvd)	-	-	-
Homestead Dr	East of US 1 (Capital Blvd)	-	-	-
Simms Creek Rd	East of US 1 (Capital Blvd)	-	-	-
Durant Rd	West of Capital Hills Dr	17,500	-	-
Durant Rd	West of US 1 (Capital Blvd)	18,000	18,250	-1%
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr	11,800	17,500	-33%
Perry Creek Rd	West of Clarks Fork Dr	11,800	-	-
Perry Creek Rd	West of McGuire Dr	11,800	-	-
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr	11,800	-	-
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	18,200	-	-
Eaton Dwy	South of Perry Creek Rd	-	-	-
Wild Wood Forest Dr	North of Perry Creek Rd	-	-	-
Clarks Fork Dr	North of Perry Creek Rd	-	-	-
McGuire Dr	South of Perry Creek Rd	-	-	-
Liston Dr	South of Perry Creek Rd	6,200	-	-
Filbin Creek Dr	North of Perry Creek Rd	10,200	-	-
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)	700	-	-
Thornton Rd	East of US 1 (Capital Blvd)	14,800	-	-
Thornton Rd	West of Wadford Dr	14,800	-	-
Thornton Rd	East of Wadford Dr	14,800	-	-
Wadford Dr	South of Thornton Rd	-	-	-
Wadford Dr	North of Thornton Rd	-	-	-
Pro Tire Dwy	West of US 1 (Capital Blvd)	-	-	-
River Haven Pl	East of US 1 (Capital Blvd)	-	-	-
U-Haul Dwy	West of US 1 (Capital Blvd)	-	-	-
Shearon Farms Ave	East of US 1 (Capital Blvd)	1,300	-	-
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	700	-	-
Burlington Mills Rd	West of Urial Dr	6,400	11,000	-42%
Burlington Mills Rd	West of One World Way	6,400	-	-
Burlington Mills Rd	East of One World Way	7,500	8,200	-9%
Urial Dr	South of Burlington Mills Rd	200	-	-
One World Way	North of Burlington Mills Rd	900	-	-
Height Ln	West of Ponderosa Service Rd	-	-	-
Height Ln	West of US 1 (Capital Blvd)	-	-	-
Ponderosa Service Rd	North of Height Ln	-	-	-
Common Oaks Dr (South)	West of Forest Pines Dr	-	-	-
Falls of Neuse Rd	West of Forest Pines Dr	17,000	-	-
Falls of Neuse Rd	West of Wakefield Commons Entrance	22,600	-	-
Falls of Neuse Rd	West of US 1 (Capital Blvd)	22,600	-	-
US 1A (Main St)	West of Star Rd	31,300	-	-
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy	30,600	24,500	25%
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	30,600	-	-
US 1A (Main St)	West of Ligon Mill Rd	30,600	-	-
US 1A (Main St)	East of Ligon Mill Rd	26,700	-	-
Locations where the 2010 Model estimates are within 10% of the 2010 AADT				
Locations where the 2010 AADT are > 10% higher than the 2010 Model Estimates				
Locations where 2010 Model Estimates are >10% higher than the 2010 AADT				

Table 4-1 - 2010 Base Year Model Estimates Comparison (Continued)

Roadway	Location	2010 TRM Model Estimates	2010 Historic AADT	% Change in 2010 AADT vs Model Estimates
Forest Pines Dr	South of Falls of Neuse Rd	8,100	-	-
Forest Pines Dr	North of Falls of Neuse Rd	-	-	-
Forest Pines Dr	North of Common Oaks Dr (North)	-	-	-
Forest Pines Dr	North of Corona Blvd	-	-	-
Common Oaks Dr (North)	West of Forest Pines Dr	-	-	-
Common Oaks Dr (North)	East of Forest Pines Dr	-	-	-
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd	-	-	-
Wakefield Commons Entrance	South of Falls of Neuse Rd	-	-	-
Star Rd	South of US 1A (Main St)	2,100	-	-
Wake Dr	South of US 1A (Main St)	-	-	-
Golden Corral Dwy	North of US 1A (Main St)	-	-	-
O2 Fitness Dwy	South of US 1A (Main St)	-	-	-
Walmart Dwy	North of US 1A (Main St)	-	-	-
Ligon Mill Rd	South of US 1A (Main St)	9,900	7,100	39%
Ligon Mill Rd	North of US 1A (Main St)	-	-	-
Popes Creek Dr	West of US 1 (Capital Blvd)	-	-	-
Walmart Access Rd	East of US 1 (Capital Blvd)	-	-	-
Shoppes at Caveness Farms Connector	East of US 1 (Capital Blvd)	-	-	-
Corona Blvd	West of US 1 (Capital Blvd)	100	-	-
Caveness Farms Ave	East of US 1 (Capital Blvd)	12,000	-	-
NC 98 Bypass	West of Wakefield Plantation Dr	18,600	-	-
NC 98 Bypass	West of Retail Dr	-	-	-
NC 98 Bypass	West of US 1 (Capital Blvd)	24,500	-	-
NC 98 Bypass	West of Galaxy Dr	7,800	-	-
NC 98 Bypass	East of Galaxy Dr	7,900	-	-
Wakefield Plantation	South of NC 98 Bypass	13,900	-	-
Northpark Dr	South of NC 98 Bypass	-	-	-
Retail Dr	North of NC 98 Bypass	-	-	-
Retail Dr	South of NC 98 Business	-	-	-
Hampton Way	North of NC 98 Business	-	-	-
Galaxy Dr	North of NC 98 Bypass	-	-	-
Galaxy Dr	North of Lowes Ave	-	-	-
Lowes Ave	East of Galaxy Dr	-	-	-
NC 98 Business	West of Hampton Way	10,200	-	-
NC 98 Business	West of US 1 (Capital Blvd)	11,800	-	-
NC 98 Business	East of US 1 (Capital Blvd)	8,600	-	-
Wake Union Church Rd	West of US 1 (Capital Blvd)	8,000	-	-
Wake Union Church Rd	East of US 1 (Capital Blvd)	-	-	-
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)	-	-	-
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)	-	-	-
Jenkins Rd	West of US 1 (Capital Blvd)	3,700	4,450	-17%
Stadium Dr	East of US 1 (Capital Blvd)	5,400	5,350	1%
Stadium Dr	East of Wake Forest Crossing Rear Dwy	-	-	-
Wake Forest Crossing Rear Dwy	South of Stadium Dr	2,300	-	-
Country Club Dr	West of US 1 (Capital Blvd)	-	-	-
Templeridge Rd	East of US 1 (Capital Blvd)	700	-	-
St Catherines Dr	East of US 1 (Capital Blvd)	-	-	-
Club Villas Dr	West of US 1 (Capital Blvd)	500	-	-
Purnell Rd	West of US 1 (Capital Blvd)	4,000	3,950	1%
Harris Rd	East of US 1 (Capital Blvd)	2,600	3,250	-20%
Harris Rd	East of Wallridge Rd	2,200	2,300	-4%
Wallridge Rd	North of Harris Rd	400	-	-
Wall Rd	East of US 1 (Capital Blvd)	3,900	-	-
Sunset Dr	West of US 1 (Capital Blvd)	-	-	-
Rolling Acres Rd	East of US 1 (Capital Blvd)	5,100	-	-
Holden Rd	West of US 1 (Capital Blvd)	5,800	4,250	36%
Holden Rd	East of US 1 (Capital Blvd)	5,200	6,200	-16%
Locations where the 2010 Model estimates are within 10% of the 2010 AADT				
Locations where the 2010 AADT are > 10% higher than the 2010 Model Estimates				
Locations where 2010 Model Estimates are >10% higher than the 2010 AADT				

5.0 FUTURE YEAR NO BUILD FORECAST

5.1 Assumptions

For the 2040 FYNB Conditions, it was assumed that all fiscally constrained projects included in the Triangle Regional Travel Demand Model Version 5 (TRM) 2040 year run, aside from STIP Project U-5307, are assumed in place. Specifically, US 1 was analyzed in the existing conditions for the No Build analysis. Using the model output as a basis, growth rates for the study area roads were calculated between 2015 and 2040.

As part of the 2040 FYNB Conditions, the Triangle Town Blvd/Sumner Blvd Extension project and Ligon Mill Rd Extension project, from US 1 A (S. Main St) to NC 98 Bypass, are both assumed to be in place.

5.2 Methodology

The 2040 FYNB Conditions traffic forecasts were estimated by linearly extrapolating the 2015 BYNB Conditions traffic forecasts using the growth rates calculated based on the TRM model output, historic traffic and population growth rates, population and employment forecasts, and discussions with CAMPO staff to verify and understand TRM model assumptions and projected growth in the study area. Additional developments and travel pattern changes were taken into consideration for the 2040 FYNB Conditions traffic forecasts. Table 5-1 summarizes the growth rates used on the study area roads to compute the 2040 FYNB Conditions traffic forecasts.

Travel pattern changes in the study area due to the Triangle Town Blvd/Sumner Blvd Extension project are shown in Figure G-1, while travel pattern changes due to the Ligon Mill Rd Extension project are shown in Figure G-2. The 2040 FYNB Conditions AADT volumes with peak-to-day factors, directional splits, and truck percentages are shown in Figure 3.

To estimate the turning movements for the 2040 FYNB Conditions, the 2015 BYNB Conditions turning movements were used as a starting point. Growth rates were applied based on the cross street, then balanced. The known roadway projects of Triangle Town Blvd/Sumner Blvd Extension and Ligon Mill Rd Extension were applied and the daily volumes altered to account for shifts in travel patterns, based on the TRM travel pattern changes. The TFU worksheets were developed for each study intersection and are included in Appendix E.

Table 5-1 - 2040 Future Year No Build Conditions Annual Growth Rates

Location	Average TRM Annual Growth Rate without Triangle Town Blvd Ext (2015-2040) (%)	Average TRM Annual Growth Rate (2015-2040) (%)	Selected Annual Growth Rate (%)
US 1 (Capital Blvd) south of Jenkins Rd/Stadium Dr	0.7%	0.6%	1.0%
US 1 (Capital Blvd) north of Jenkins Rd/Stadium Dr	1.7%	1.7%	1.5%
Johnson Autoplex Dwy/Sumner Blvd	3.2%	2.4%	2.0%
Old Wake Forest Rd	13.7%	10.1%	5.0%
I-540 west of US 1 (Capital Blvd)	3.5%	3.5%	3.0%
I-540 east of US 1 (Capital Blvd)	5.4%	5.3%	5.0%
Falls of Neuse Rd and cross streets in the vicinity of I-540	1.5%	1.4%	1.5%
Triangle Town Blvd	6.4%	7.4%	6.0%
US 401 (Louisburg Rd)	1.3%	1.2%	1.5%
Fox Rd west of US 401 (Louisburg Rd)	9.4%	8.9%	9.0%
Fox Rd east of US 401 (Louisburg Rd)	7.5%	7.0%	7.5%
Gresham Lake Rd	1.3%	-0.3%	1.5%
Cross streets along Gresham Lake Rd	9.3%	6.3%	6.0%
Cross streets west of US 1 (Capital Blvd) between Gresham Lake Rd and Durant Rd	6.4%	6.8%	6.0%
Cross streets east of US 1 (Capital Blvd) between Gresham Lake Rd and Durant Rd	3.7%	-2.4%	3.5%
Durant Rd west of US 1 (Capital Blvd)	1.4%	1.7%	1.5%
Perry Creek Rd and cross streets east of US 1 (Capital Blvd)	2.8%	2.3%	2.5%
Mallinckrodt, Inc. Dwy	2.0%	2.0%	2.0%
Thornton Rd and cross streets	0.2%	0.1%	0.5%
Pro Tire Dwy/River Haven Pl/U-Haul Dwy	-	-	1.0%
Shearon Farms Ave	5.8%	5.8%	6.0%
Crossroads Ford Dwy	12.9%	12.9%	1.0%
Burlington Mills Rd	5.7%	5.6%	5.5%
Urial Dr	9.0%	9.0%	11.0%
One World Way	8.3%	8.3%	8.0%
Falls of Neuse Rd and cross streets in the vicinity of US 1 (Capital Blvd)	1.8%	1.8%	1.5%
US 1A (Main St) and cross streets	1.4%	1.4%	1.5%
Popes Creek Dr/Walmart Access Rd/Shoppes at Caveness Farms Connector	-	-	1.0%
Corona Blvd	8.0%	8.0%	5.0%
Caveness Farms Ave	-3.5%	-3.5%	2.0%
NC 98 Bypass	3.3%	3.3%	4.0%
NC 98 Business	1.4%	1.4%	2.0%
Wake Union Church Rd	5.7%	5.7%	5.5%
Wake Forest Presbyterian Church Dwy/Wake Forest Crossing Dwy	-	-	1.0%
Jenkins Rd	0.8%	0.8%	1.0%
Stadium Dr	2.8%	3.0%	3.0%
Wake Forest Crossing Rear Dwy	7.0%	7.0%	5.0%
Country Club Dr	-	-	5.0%
Templeridge Rd	2.1%	2.2%	2.0%
St Catherines Dr	-	-	2.0%
Club Villas Dr	5.4%	5.1%	5.0%
Purnell Rd	3.2%	3.3%	3.0%
Harris Rd	7.3%	7.3%	7.0%
Wallridge Rd	4.0%	5.0%	4.0%
Wall Rd	4.0%	4.1%	4.0%
Sunset Dr	-	-	1.0%
Rolling Acres Rd	5.6%	5.6%	5.0%
Holden Rd	0.5%	0.5%	2.0%

Table 5-2 - 2040 Future Year No Build Conditions Traffic Forecasts

Roadway	Location	2015 Base Year No Build Conditions Traffic Forecasts (AADT) (A)	Applied Annual Growth Rate (%) (B)	2040 Background Traffic Forecasts Without Adjustment (AADT) (C=A+(A*B*25))	Adjustment Due to Balancing (AADT) (D)	2040 Background Traffic Volumes without Road Extensions (AADT) (E=C+D)	Adjustment Due to Triangle Town Blvd Ext/ Sumner Blvd Ext (AADT) (F)	Adjustment Due to Ligon Mill Rd Ext (AADT) (G)	Adjustment Due to Balancing (AADT) (H)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (I=E+F+G+H)
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd	50,400	1.0%	63,000		63,000				63,000
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	48,000	1.0%	60,000		60,000	-600			59,400
US 1 (Capital Blvd)	North of Old Wake Forest Rd	61,100	1.0%	76,400		76,400	-2,000			74,400
US 1 (Capital Blvd)	North of I-540	65,400	1.0%	81,800		81,800	-20,400			61,400
US 1 (Capital Blvd)	North of Gresham Lake Rd	60,300	1.0%	75,400		75,400	-16,300			59,100
US 1 (Capital Blvd)	North of Triangle Town Blvd Ext	60,300	1.0%	75,400		75,400				75,400
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	60,300	1.0%	75,400		75,400				75,400
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	57,800	1.0%	72,300		72,300				72,300
US 1 (Capital Blvd)	North of Simms Creek Rd	57,800	1.0%	72,300		72,300				72,300
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	49,400	1.0%	61,800		61,800				61,800
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	48,300	1.0%	60,400		60,400				60,400
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	47,900	1.0%	59,900		59,900				59,900
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	47,800	1.0%	59,800		59,800				59,800
US 1 (Capital Blvd)	North of Burlington Mills Rd	46,000	1.0%	57,500		57,500				57,500
US 1 (Capital Blvd)	North of Height Ln	46,000	1.0%	57,500		57,500				57,500
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	45,300	1.0%	56,600		56,600		-700		55,900
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	46,900	1.0%	58,600		58,600		-1,600		57,000
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	48,300	1.0%	60,400		60,400		-2,200		58,200
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	49,200	1.0%	61,500		61,500		-3,300		58,200
US 1 (Capital Blvd)	North of NC 98 Bypass	41,300	1.0%	51,600		51,600				51,600
US 1 (Capital Blvd)	North of NC 98 Business	38,700	1.0%	48,400		48,400				48,400
US 1 (Capital Blvd)	North of Wake Union Church Rd	40,300	1.0%	50,400		50,400				50,400
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy	39,900	1.0%	49,900		49,900				49,900
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr	35,800	1.5%	49,200		49,200				49,200
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd	36,000	1.5%	49,500		49,500				49,500
US 1 (Capital Blvd)	North of St. Catherines Dr	36,000	1.5%	49,500		49,500				49,500
US 1 (Capital Blvd)	North of Club Villas Dr	36,000	1.5%	49,500		49,500				49,500
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	32,000	1.5%	44,000		44,000				44,000
US 1 (Capital Blvd)	North of Wall Rd	32,600	1.5%	44,800		44,800				44,800
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd	32,300	1.5%	44,400		44,400				44,400
US 1 (Capital Blvd)	North of Holden Rd	24,000	1.5%	33,000		33,000				33,000
Sumner Blvd Ext	West of US 1 (Capital Blvd)	1,800	2.0%	2,700		2,700	200			2,900
Sumner Blvd	East of US 1 (Capital Blvd)	8,200	2.0%	12,300		12,300	400			12,700
Old Wake Forest Rd	West of US 1 (Capital Blvd)	26,000	5.0%	58,500	100	58,600	-1,200			57,400
Old Wake Forest Rd	East of US 1 (Capital Blvd)	20,100	5.0%	45,200		45,200	-3,600			41,600
I-540	West of Falls of Neuse Rd	91,600	3.0%	160,300		160,300				160,300
I-540	West of US 1 (Capital Blvd)	76,000	3.0%	133,000		133,000	-1,300			131,700
I-540	West of Triangle Town Blvd	63,900	5.0%	143,800		143,800	-10,100			133,700
I-540	West of US 401 (Louisburg Rd)	63,500	5.0%	142,900		142,900	4,300			147,200
I-540	East of US 401 (Louisburg Rd)	55,800	5.0%	125,600	100	125,700				125,700
Falls of Neuse Rd	South of Thorpshire Dr	33,100	1.5%	45,500		45,500				45,500
Falls of Neuse Rd	South of I-540	34,400	1.5%	47,300	100	47,400				47,400
Falls of Neuse Rd	North of I-540	46,000	1.5%	63,300		63,300	-1,300			62,000
Falls of Neuse Rd	North of Falls Valley Dr	44,000	1.5%	60,500		60,500	-1,300			59,200
Thorpshire Dr	East of Falls of Neuse Rd	2,700	1.5%	3,700		3,700				3,700
Falls Valley Dr	East of Falls of Neuse Rd	4,200	1.5%	5,800		5,800				5,800

Table 5-2 - 2040 Future Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	2015 Base Year No Build Conditions Traffic Forecasts (AADT) (A)	Applied Annual Growth Rate (%) (B)	2040 Background Traffic Forecasts Without Adjustment (AADT) (C=A+(A*B*25))	Adjustment Due to Balancing (AADT) (D)	2040 Background Traffic Volumes without Road Extensions (AADT) (E=C+D)	Adjustment Due to Triangle Town Blvd Ext/ Sumner Blvd Ext (AADT) (F)	Adjustment Due to Ligon Mill Rd Ext (AADT) (G)	Adjustment Due to Balancing (AADT) (H)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (I=E+F+G+H)
Triangle Town Blvd	South of I-540	9,000	6.0%	22,500		22,500	2,300		100	24,900
Triangle Town Blvd Ext	North of I-540	0		0		0	22,600			22,600
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	0		0		0	22,300			22,300
Triangle Town Blvd Ext	North of Gresham Lake Rd	0		0		0	10,000			10,000
Triangle Town Blvd Ext	South of Gresham Lake Rd	0		0		0	3,500		100	3,600
US 401 (Louisburg Rd)	South of I-540	42,400	1.5%	58,300		58,300				58,300
US 401 (Louisburg Rd)	North of I-540	54,500	1.5%	74,900		74,900	4,300			79,200
US 401 (Louisburg Rd)	North of Fox Rd	53,600	1.5%	73,700		73,700				73,700
Fox Rd	West of US 401 (Louisburg Rd)	10,600	9.0%	34,500		34,500	-4,300			30,200
Fox Rd	East of US 401 (Louisburg Rd)	8,100	7.5%	23,300		23,300				23,300
Gresham Lake Rd	West of Capital Hills Dr	8,700	1.5%	12,000	100	12,100	1,100			13,200
Gresham Lake Rd	East of Capital Hills Dr	8,900	1.5%	12,200		12,200	1,100			13,300
Gresham Lake Rd	West of Overlook Rd	8,900	1.5%	12,200		12,200	-8,300			3,900
Gresham Lake Rd	West of US 1 (Capital Blvd)	9,300	1.5%	12,800		12,800	-8,300			4,500
Capital Hills Dr	North of Gresham Lake Rd	3,000	6.0%	7,500		7,500				7,500
Capital Hills Dr	North of Capital Hills Connector	3,400	6.0%	8,500		8,500				8,500
Overlook Rd	South of Gresham Lake Rd	1,200	6.0%	3,000		3,000				3,000
Cheviot Hills Dr	West of US 1 (Capital Blvd)	200	6.0%	500	-100	400				400
Jacqueline Ln	East of US 1 (Capital Blvd)	2,000	3.5%	3,800		3,800				3,800
Capital Hills Connector	West of US 1 (Capital Blvd)	3,000	6.0%	7,500	-100	7,400				7,400
Homestead Dr	East of US 1 (Capital Blvd)	1,100	3.5%	2,100		2,100				2,100
Simms Creek Rd	East of US 1 (Capital Blvd)	1,600	3.5%	3,000		3,000				3,000
Durant Rd	West of Capital Hills Dr	17,700	1.5%	24,300	100	24,400				24,400
Durant Rd	West of US 1 (Capital Blvd)	16,500	1.5%	22,700		22,700				22,700
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr	19,100	2.5%	31,000		31,000				31,000
Perry Creek Rd	West of Clarks Fork Dr	16,000	2.5%	26,000		26,000				26,000
Perry Creek Rd	West of McGuire Dr	13,900	2.5%	22,600		22,600				22,600
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr	13,200	2.5%	21,500		21,500				21,500
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	15,900	2.5%	25,800		25,800				25,800
Eaton Dwy	South of Perry Creek Rd	200	2.5%	300		300				300
Wild Wood Forest Dr	North of Perry Creek Rd	6,700	2.5%	10,900		10,900				10,900
Clarks Fork Dr	North of Perry Creek Rd	2,900	2.5%	4,700	100	4,800				4,800
McGuire Dr	South of Perry Creek Rd	1,700	2.5%	2,800	100	2,900				2,900
Liston Dr	South of Perry Creek Rd	800	2.5%	1,300	100	1,400				1,400
Filbin Creek Dr	North of Perry Creek Rd	4,500	2.5%	7,300		7,300				7,300
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)	800	2.0%	1,200	100	1,300				1,300
Thornton Rd	East of US 1 (Capital Blvd)	6,500	0.5%	7,300		7,300				7,300
Thornton Rd	West of Wadford Dr	4,600	0.5%	5,200		5,200				5,200
Thornton Rd	East of Wadford Dr	4,200	0.5%	4,700	100	4,800				4,800
Wadford Dr	South of Thornton Rd	1,200	0.5%	1,400		1,400				1,400
Wadford Dr	North of Thornton Rd	1,400	0.5%	1,600		1,600				1,600
Pro Tire Dwy	West of US 1 (Capital Blvd)	200	1.0%	300		300				300
River Haven Pl	East of US 1 (Capital Blvd)	600	1.0%	800		800				800
U-Haul Dwy	West of US 1 (Capital Blvd)	200	1.0%	300		300				300
Shearon Farms Ave	East of US 1 (Capital Blvd)	900	6.0%	2,300	100	2,400				2,400
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	1,100	1.0%	1,400	100	1,500				1,500
Burlington Mills Rd	West of Urial Dr	9,700	5.5%	23,000		23,000				23,000
Burlington Mills Rd	West of One World Way	9,500	5.5%	22,600		22,600				22,600
Burlington Mills Rd	East of One World Way	8,500	5.5%	20,200		20,200				20,200

Table 5-2 - 2040 Future Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	2015 Base Year No Build Conditions Traffic Forecasts (AADT) (A)	Applied Annual Growth Rate (%) (B)	2040 Background Traffic Forecasts Without Adjustment (AADT) (C=A+(A*B*25))	Adjustment Due to Balancing (AADT) (D)	2040 Background Traffic Volumes without Road Extensions (AADT) (E=C+D)	Adjustment Due to Triangle Town Blvd Ext/ Sumner Blvd Ext (AADT) (F)	Adjustment Due to Ligon Mill Rd Ext (AADT) (G)	Adjustment Due to Balancing (AADT) (H)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (I=E+F+G+H)
Urial Dr	South of Burlington Mills Rd	1,400	11.0%	5,300	-100	5,200				5,200
One World Way	North of Burlington Mills Rd	3,200	8.0%	9,600		9,600				9,600
Height Ln	West of Ponderosa Service Rd	500	6.0%	1,300		1,300				1,300
Height Ln	West of US 1 (Capital Blvd)	3,700	6.0%	9,300		9,300			-100	9,200
Ponderosa Service Rd	North of Height Ln	3,800	6.0%	9,500		9,500				9,500
Common Oaks Dr (South)	West of Forest Pines Dr	3,000	4.0%	6,000		6,000			200	6,200
Falls of Neuse Rd	West of Forest Pines Dr	21,400	1.5%	29,400	100	29,500				29,500
Falls of Neuse Rd	West of Wakefield Commons Entrance	21,900	1.5%	30,100		30,100				30,100
Falls of Neuse Rd	West of US 1 (Capital Blvd)	25,500	1.5%	35,100		35,100				35,100
US 1A (Main St)	West of Star Rd	26,000	1.5%	35,800		35,800		700		36,500
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy	26,100	1.5%	35,900		35,900		700		36,600
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	25,800	1.5%	35,500		35,500		700		36,200
US 1A (Main St)	West of Ligon Mill Rd	27,000	1.5%	37,100		37,100		700		37,800
US 1A (Main St)	East of Ligon Mill Rd	29,200	1.5%	40,200		40,200		-4,900		35,300
Forest Pines Dr	South of Falls of Neuse Rd	6,000	1.5%	8,300		8,300				8,300
Forest Pines Dr	North of Falls of Neuse Rd	7,900	1.5%	10,900		10,900				10,900
Forest Pines Dr	North of Common Oaks Dr (North)	6,800	1.5%	9,400		9,400				9,400
Forest Pines Dr	North of Corona Blvd	6,400	1.5%	8,800		8,800			100	8,900
Common Oaks Dr (North)	West of Forest Pines Dr	2,900	1.0%	3,600		3,600				3,600
Common Oaks Dr (North)	East of Forest Pines Dr	1,000	1.0%	1,300		1,300				1,300
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd	1,400	1.0%	1,800		1,800			100	1,900
Wakefield Commons Entrance	South of Falls of Neuse Rd	4,400	1.5%	6,100	100	6,200				6,200
Star Rd	South of US 1A (Main St)	700	1.5%	1,000	100	1,100				1,100
Wake Dr	South of US 1A (Main St)	1,600	1.5%	2,200		2,200				2,200
Golden Corral Dwy	North of US 1A (Main St)	900	1.5%	1,200		1,200				1,200
O2 Fitness Dwy	South of US 1A (Main St)	800	1.5%	1,100		1,100				1,100
Walmart Dwy	North of US 1A (Main St)	9,200	1.5%	12,700		12,700				12,700
Ligon Mill Rd	South of US 1A (Main St)	7,500	1.5%	10,300	100	10,400				10,400
Ligon Mill Rd	North of US 1A (Main St)	4,700	1.5%	6,500		6,500		5,600		12,100
Ligon Mill Rd Ext	South of NC 98 Bypass	0		0		0		6,300		6,300
Popes Creek Dr	West of US 1 (Capital Blvd)	1,400	1.0%	1,800		1,800				1,800
Walmart Access Rd	East of US 1 (Capital Blvd)	4,600	1.0%	5,800		5,800		-1,700		4,100
Shoppes at Caveness Farms Connector	East of US 1 (Capital Blvd)	2,000	1.0%	2,500	100	2,600		-800		1,800
Corona Blvd	West of US 1 (Capital Blvd)	2,400	5.0%	5,400	100	5,500				5,500
Caveness Farms Ave	East of US 1 (Capital Blvd)	3,300	2.0%	5,000		5,000		-1,500		3,500
NC 98 Bypass	West of Wakefield Plantation Dr	18,800	4.5%	40,000		40,000				40,000
NC 98 Bypass	West of Retail Dr	23,400	4.0%	46,800		46,800			-100	46,700
NC 98 Bypass	West of US 1 (Capital Blvd)	28,700	4.0%	57,400	100	57,500				57,500
NC 98 Bypass	West of Galaxy Dr	29,000	4.0%	58,000		58,000		3,300		61,300
NC 98 Bypass	East of Galaxy Dr	27,000	5.0%	60,800		60,800			500	61,300
NC 98 Bypass	East of Ligon Mill Rd Ext	29,000	4.0%	58,000		58,000				58,000
Wakefield Plantation Dr	South of NC 98 Bypass	6,400	1.5%	8,800		8,800			100	8,900
Northpark Dr	South of NC 98 Bypass	2,800	2.0%	4,200		4,200				4,200
Retail Dr	North of NC 98 Bypass	10,700	1.0%	13,400		13,400				13,400
Retail Dr	South of NC 98 Business	5,600	1.0%	7,000		7,000			-100	6,900
Hampton Way	North of NC 98 Business	2,600	1.0%	3,300		3,300				3,300
Galaxy Dr	North of NC 98 Bypass	2,400	1.0%	3,000		3,000				3,000
Galaxy Dr	North of Lowes Ave	1,900	1.0%	2,400		2,400			100	2,500
Lowes Ave	East of Galaxy Dr	700	1.0%	900		900				900

Table 5-2 - 2040 Future Year No Build Conditions Traffic Forecasts (Continued)

Roadway	Location	2015 Base Year No Build Conditions Traffic Forecasts (AADT) (A)	Applied Annual Growth Rate (%) (B)	2040 Background Traffic Forecasts Without Adjustment (AADT) (C=A+(A*B*25))	Adjustment Due to Balancing (AADT) (D)	2040 Background Traffic Volumes without Road Extensions (AADT) (E=C+D)	Adjustment Due to Triangle Town Blvd Ext/ Sumner Blvd Ext (AADT) (F)	Adjustment Due to Ligon Mill Rd Ext (AADT) (G)	Adjustment Due to Balancing (AADT) (H)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (I=E+F+G+H)
NC 98 Business	West of Hampton Way	16,400	2.0%	24,600		24,600				24,600
NC 98 Business	West of US 1 (Capital Blvd)	17,800	2.0%	26,700	100	26,800				26,800
NC 98 Business	East of US 1 (Capital Blvd)	14,400	2.0%	21,600		21,600				21,600
Wake Union Church Rd	West of US 1 (Capital Blvd)	6,100	5.5%	14,500		14,500				14,500
Wake Union Church Rd	East of US 1 (Capital Blvd)	5,300	1.5%	7,300		7,300				7,300
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)	300	1.0%	400		400				400
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)	1,300	1.0%	1,600	100	1,700				1,700
Jenkins Rd	West of US 1 (Capital Blvd)	5,400	1.0%	6,800		6,800				6,800
Stadium Dr	East of US 1 (Capital Blvd)	6,100	3.0%	10,700		10,700				10,700
Stadium Dr	East of Wake Forest Crossing Rear Dwy	6,600	3.0%	11,600	-100	11,500				11,500
Wake Forest Crossing Rear Dwy	South of Stadium Dr	3,100	5.0%	7,000		7,000				7,000
Country Club Dr	West of US 1 (Capital Blvd)	300	5.0%	700		700				700
Templeridge Rd	East of US 1 (Capital Blvd)	500	2.0%	800		800				800
St Catherines Dr	East of US 1 (Capital Blvd)	200	2.0%	300	100	400				400
Club Villas Dr	West of US 1 (Capital Blvd)	200	5.0%	500	100	600				600
Purnell Rd	West of US 1 (Capital Blvd)	4,400	3.0%	7,700		7,700				7,700
Harris Rd	East of US 1 (Capital Blvd)	4,800	7.0%	13,200		13,200				13,200
Harris Rd	East of Wallridge Rd	3,100	7.0%	8,500	100	8,600				8,600
Wallridge Rd	North of Harris Rd	2,500	4.0%	5,000		5,000				5,000
Wall Rd	East of US 1 (Capital Blvd)	4,000	4.0%	8,000		8,000				8,000
Sunset Dr	West of US 1 (Capital Blvd)	1,100	1.0%	1,400		1,400				1,400
Rolling Acres Rd	East of US 1 (Capital Blvd)	600	5.0%	1,400		1,400				1,400
Holden Rd	West of US 1 (Capital Blvd)	4,700	2.0%	7,100		7,100				7,100
Holden Rd	East of US 1 (Capital Blvd)	6,200	2.0%	9,300		9,300				9,300

5.3 Historic AADT and Model Forecasted Growth Rates

Table 5-3 provides the historic annual growth rates from the NCDOT AADT count data. The recent economic downturn is clearly reflected in the data, showing that the study area roads experienced a slowdown between 2009 and 2011, with growth increasing again in recent years. Generally, between 2005 and 2009, most of the study area roads experienced positive growth (average of approximately 3.7%, with major growth on I-540). Most of the study area roads continued to exhibit positive growth between 2009 and 2013; however, at a reduced average of approximately 0.8%.

In addition, the TRM model growth rates between 2015 and 2040 model year outputs with and without the Triangle Town Blvd Extension project are presented in Table 5-3. These growth rates show an average of approximately 3.1% annual growth without the Triangle Town Blvd Extension project and an average of approximately 2.8% annual growth with the Triangle Town Blvd Extension project along the roadways included in this forecast.

Table 5-4, Model Validation, compares 2010 AADT count data grown to 2040 volumes and the 2040 model volumes with the selected 2040 FYNB Conditions traffic forecasts. The 2040 extrapolated AADT volumes and 2040 model volumes are substantially different from the selected 2040 FYNB Conditions traffic forecasts for the following reasons:

- » As presented in Section 5.2, the 2040 traffic forecasts were developed using the 2015 BYNB Conditions traffic forecasts and future selected growth rates, based on the growth rates obtained from the model. With the future socioeconomic data input, the model growth rates better represent the future traffic volume changes.
- » With the economic slowdown, a generic 1.5% growth rate for the entire study area was selected to extrapolate historic AADT volumes to 2040.
- » As presented in Table 4-1, the 2015 model volumes at several locations differ substantially from the 2015 BYNB Conditions traffic forecast. This is a typical situation when considering specific locations of a traffic forecast. In general, TRM model output is more useful in projecting pattern changes along a corridor rather than for individual segments.

Table 5-3 - Growth Rates

Roadway	Location	Historic AADT Forecasted to 2015 ⁺ (A)	2015 BYNB Conditions Traffic Forecasts (AADT) (B)	Historic Annual Growth Rates ⁺ (%)		2015 TRM Model Volumes (AWDT) (E)	Model Annual Growth Rate (without Triangle Town Blvd Ext) * (%) [F=(I-E)/[E*(2040-2015)]]	Model Annual Growth Rate * (%) [G=(J-E)/[E*(2040-2015)]]	Applied Annual Growth Rate (%) [H=(K-B)/[B*(2040-2015)]]	2040 TRM Model Volumes (without Triangle Town Blvd Ext) (AWDT) (I)	2040 TRM Model Volumes (AWDT) (J)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (K)
				2005-2009 (C)	2009-2013 (D)							
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd		50,400			54,200	0.2%	0.2%	1.0%	57,100	57,100	63,000
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	42,500	48,000	-1.6%	-0.6%	63,700	0.0%	-0.1%	1.0%	63,600	62,800	59,400
US 1 (Capital Blvd)	North of Old Wake Forest Rd		61,100			80,400	0.8%	0.7%	0.9%	97,400	94,200	74,400
US 1 (Capital Blvd)	North of I-540		65,400			78,000	0.9%	-0.4%	-0.2%	95,100	70,200	61,400
US 1 (Capital Blvd)	North of Gresham Lake Rd	51,800	60,300	2.0%	-2.7%	78,000	0.9%	-0.4%	-0.1%	95,100	70,200	59,100
US 1 (Capital Blvd)	North of Triangle Town Blvd Ext		60,300			78,000	0.9%	0.7%	1.0%	95,100	91,300	75,400
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln		60,300			78,000	0.3%	0.7%	1.0%	84,500	90,900	75,400
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr		57,800			73,100	0.6%	1.0%	1.0%	84,500	90,900	72,300
US 1 (Capital Blvd)	North of Simms Creek Rd	61,300	57,800	0.4%	0.0%	73,100	0.6%	1.0%	1.0%	84,500	90,900	72,300
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	56,200	49,400	0.0%	1.4%	64,400	0.7%	0.8%	1.0%	76,300	76,700	61,800
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd		48,300			61,100	1.0%	1.0%	1.0%	75,900	76,500	60,400
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl		47,900			61,100	1.0%	1.0%	1.0%	75,900	76,500	59,900
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave		47,800			60,200	0.9%	1.0%	1.0%	74,400	75,000	59,800
US 1 (Capital Blvd)	North of Burlington Mills Rd	47,900	46,000	2.3%	-0.5%	52,600	0.9%	1.0%	1.0%	64,700	65,100	57,500
US 1 (Capital Blvd)	North of Height Ln	47,900	46,000	2.3%	-0.5%	52,600	0.9%	1.0%	1.0%	64,700	65,100	57,500
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	47,200	45,300	3.3%	2.3%	58,100	0.4%	0.4%	0.9%	64,100	64,300	55,900
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd		46,900			58,100	0.4%	0.4%	0.9%	64,100	64,300	57,000
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector		48,300			58,100	0.4%	0.4%	0.8%	64,100	64,300	58,200
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave		49,200			59,400	0.4%	0.4%	0.7%	64,900	65,000	58,200
US 1 (Capital Blvd)	North of NC 98 Bypass	42,500	41,300		-2.1%	32,300	1.5%	1.5%	1.0%	44,400	44,500	51,600
US 1 (Capital Blvd)	North of NC 98 Business		38,700			35,700	0.8%	0.8%	1.0%	43,100	43,000	48,400
US 1 (Capital Blvd)	North of Wake Union Church Rd	39,200	40,300	0.0%	-0.6%	42,200	1.5%	1.5%	1.0%	58,000	58,000	50,400
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy		39,900			42,200	1.5%	1.5%	1.0%	58,000	58,000	49,900
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr		35,800			40,100	1.7%	1.7%	1.5%	56,800	56,800	49,200
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd		36,000			40,900	1.7%	1.7%	1.5%	58,100	58,000	49,500
US 1 (Capital Blvd)	North of St. Catherines Dr		36,000			40,900	1.7%	1.7%	1.5%	58,100	58,000	49,500
US 1 (Capital Blvd)	North of Club Villas Dr	35,200	36,000	0.7%	0.7%	40,700	1.7%	1.7%	1.5%	57,900	57,900	49,500
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	31,700	32,000	0.8%	0.0%	40,400	1.6%	1.6%	1.5%	56,700	56,700	44,000
US 1 (Capital Blvd)	North of Wall Rd		32,600			44,600	1.8%	1.8%	1.5%	65,000	65,100	44,800
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd		32,300			42,400	1.6%	1.6%	1.5%	59,200	59,200	44,400
US 1 (Capital Blvd)	North of Holden Rd	17,000	24,000		-4.3%	34,800	2.0%	2.0%	1.5%	52,100	52,000	33,000
Sumner Blvd Ext	West of US 1 (Capital Blvd)		1,800			7,400	4.4%	3.2%	2.4%	15,600	13,300	2,900
Sumner Blvd	East of US 1 (Capital Blvd)		8,200			11,000	2.0%	1.5%	2.2%	16,400	15,200	12,700
Old Wake Forest Rd	West of US 1 (Capital Blvd)	29,000	26,000			21,700	4.8%	4.6%	4.8%	47,900	46,900	57,400
Old Wake Forest Rd	East of US 1 (Capital Blvd)		20,100			3,200	22.5%	15.5%	4.3%	21,200	15,600	41,600
I-540	West of Falls of Neuse Rd	96,500	91,600	6.8%	1.5%	77,500	3.1%	3.1%	3.0%	138,100	138,200	160,300
I-540	West of US 1 (Capital Blvd)	75,000	76,000	13.3%	1.0%	65,000	3.9%	3.8%	2.9%	128,600	127,300	131,700
I-540	West of Triangle Town Blvd	62,300	63,900	71.7%	1.3%	50,600	5.5%	4.8%	4.4%	120,500	111,600	133,700
I-540	West of US 401 (Louisburg Rd)	63,000	63,500		1.8%	51,500	5.7%	6.0%	5.3%	125,200	129,300	147,200
I-540	East of US 401 (Louisburg Rd)	57,300	55,800		2.5%	53,300	5.1%	5.2%	5.0%	120,800	122,000	125,700
Falls of Neuse Rd	South of Thorpshire Dr	34,400	33,100	1.7%	1.6%	30,200	1.7%	1.7%	1.5%	43,200	43,100	45,500
Falls of Neuse Rd	South of I-540	34,400	34,400	1.7%	1.6%	30,200	1.7%	1.7%	1.5%	43,200	43,100	47,400
Falls of Neuse Rd	North of I-540	46,700	46,000	1.3%	2.3%	45,200	1.8%	1.7%	1.4%	65,400	64,100	62,000
Falls of Neuse Rd	North of Falls Valley Dr	46,700	44,000	1.3%	2.3%	45,200	1.8%	1.7%	1.4%	65,400	64,100	59,200
Thorpshire Dr	East of Falls of Neuse Rd		2,700			4,100	0.8%	0.7%	1.5%	4,900	4,800	3,700
Falls Valley Dr	East of Falls of Neuse Rd		4,200			1,900	1.1%	1.1%	1.5%	2,400	2,400	5,800

⁺ Based on traffic counts obtained from NCDOT. Rates prior to 2005 are not applicable due to the opening of I-540.

* Annual Growth Rate based on volume changes between 2015 no build and 2040 no build runs from TRM V5

Table 5-3 - Growth Rates (Continued)

Roadway	Location	Historic AADT Forecasted to 2015 ⁺ (A)	2015 BYNB Conditions Traffic Forecasts (AADT) (B)	Historic Annual Growth Rates ⁺ (%)		2015 TRM Model Volumes (AWDT) (E)	Model Annual Growth Rate (without Triangle Town Blvd Ext) * (%) [F=(I-E)/[E*(2040-2015)]]	Model Annual Growth Rate * (%) [G=(J-E)/[E*(2040-2015)]]	Applied Annual Growth Rate (%) [H=(K-B)/[B*(2040-2015)]]	2040 TRM Model Volumes (without Triangle Town Blvd Ext) (AWDT) (I)	2040 TRM Model Volumes (AWDT) (J)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (K)
				2005-2009 (C)	2009-2013 (D)							
Triangle Town Blvd	South of I-540		9,000			10,300	6.4%	7.4%	7.1%	26,700	29,300	24,900
Triangle Town Blvd Ext	North of I-540		-			-	-	-	-	-	26,600	22,600
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)		-			-	-	-	-	-	26,500	22,300
Triangle Town Blvd Ext	North of Gresham Lake Rd		-			-	-	-	-	-	18,600	10,000
Triangle Town Blvd Ext	South of Gresham Lake Rd		-			-	-	-	-	-	4,200	3,600
US 401 (Louisburg Rd)	South of I-540		42,400			54,100	1.1%	1.1%	1.5%	68,700	68,500	58,300
US 401 (Louisburg Rd)	North of I-540		54,500			56,700	1.2%	1.1%	1.8%	73,500	72,000	79,200
US 401 (Louisburg Rd)	North of Fox Rd	41,400	53,600	2.9%	0.7%	56,000	1.5%	1.3%	1.5%	77,500	74,800	73,700
Fox Rd	West of US 401 (Louisburg Rd)		10,600			7,900	9.4%	8.9%	7.4%	26,400	25,500	30,200
Fox Rd	East of US 401 (Louisburg Rd)		8,100			2,300	7.5%	7.0%	7.5%	6,600	6,300	23,300
Gresham Lake Rd	West of Capital Hills Dr	9,300	8,700	-1.6%	3.4%	15,300	1.1%	1.6%	2.1%	19,500	21,400	13,200
Gresham Lake Rd	East of Capital Hills Dr		8,900			15,100	1.7%	-2.2%	2.0%	21,400	6,900	13,300
Gresham Lake Rd	West of Overlook Rd		8,900			15,300	1.1%	1.5%	-2.2%	19,500	21,200	3,900
Gresham Lake Rd	West of US 1 (Capital Blvd)		9,300			16,800	1.3%	-2.2%	-2.1%	22,200	7,700	4,500
Capital Hills Dr	North of Gresham Lake Rd		3,000			200	18.0%	12.0%	6.0%	1,100	800	7,500
Capital Hills Dr	North of Capital Hills Connector		3,400			-	-	-	6.0%	-	-	8,500
Overlook Rd	South of Gresham Lake Rd		1,200			1,900	0.6%	0.6%	6.0%	2,200	2,200	3,000
Cheviot Hills Dr	West of US 1 (Capital Blvd)		200			4,500	6.4%	6.8%	4.0%	11,700	12,100	400
Jacqueline Ln	East of US 1 (Capital Blvd)		2,000			8,100	3.7%	-2.4%	3.6%	15,500	3,200	3,800
Capital Hills Connector	West of US 1 (Capital Blvd)		3,000			-	-	-	5.9%	-	-	7,400
Homestead Dr	East of US 1 (Capital Blvd)		1,100			-	-	-	3.6%	-	-	2,100
Simms Creek Rd	East of US 1 (Capital Blvd)		1,600			-	-	-	3.5%	-	-	3,000
Durant Rd	West of Capital Hills Dr		17,700			19,200	1.4%	1.7%	1.5%	26,100	27,400	24,400
Durant Rd	West of US 1 (Capital Blvd)	18,000	16,500			20,000	1.4%	1.7%	1.5%	27,100	28,500	22,700
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr	19,300	19,100			16,900	3.5%	2.8%	2.5%	31,700	28,900	31,000
Perry Creek Rd	West of Clarks Fork Dr		16,000			16,900	3.5%	2.8%	2.5%	31,700	28,900	26,000
Perry Creek Rd	West of McGuire Dr		13,900			16,900	3.5%	2.8%	2.5%	31,700	28,900	22,600
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr		13,200			16,900	3.5%	2.8%	2.5%	31,700	28,900	21,500
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr		15,900			22,600	2.7%	2.0%	2.5%	37,900	33,700	25,800
Eaton Dwy	South of Perry Creek Rd		200			-	-	-	2.0%	-	-	300
Wild Wood Forest Dr	North of Perry Creek Rd		6,700			-	-	-	2.5%	-	-	10,900
Clarks Fork Dr	North of Perry Creek Rd		2,900			-	-	-	2.6%	-	-	4,800
McGuire Dr	South of Perry Creek Rd		1,700			-	-	-	2.8%	-	-	2,900
Liston Dr	South of Perry Creek Rd		800			6,400	0.5%	0.5%	3.0%	7,200	7,200	1,400
Filbin Creek Dr	North of Perry Creek Rd		4,500			12,200	2.2%	2.3%	2.5%	18,800	19,300	7,300
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)		800			800	2.0%	2.0%	2.5%	1,200	1,200	1,300
Thornton Rd	East of US 1 (Capital Blvd)		6,500			14,500	0.2%	0.1%	0.5%	15,100	14,700	7,300
Thornton Rd	West of Wadford Dr		4,600			14,500	0.2%	0.1%	0.5%	15,100	14,700	5,200
Thornton Rd	East of Wadford Dr		4,200			14,500	0.2%	0.1%	0.6%	15,100	14,700	4,800
Wadford Dr	South of Thornton Rd		1,200			-	-	-	0.7%	-	-	1,400
Wadford Dr	North of Thornton Rd		1,400			-	-	-	0.6%	-	-	1,600
Pro Tire Dwy	West of US 1 (Capital Blvd)		200			-	-	-	2.0%	-	-	300
River Haven Pl	East of US 1 (Capital Blvd)		600			-	-	-	1.3%	-	-	800
U-Haul Dwy	West of US 1 (Capital Blvd)		200			-	-	-	2.0%	-	-	300
Shearon Farms Ave	East of US 1 (Capital Blvd)		900			1,800	5.8%	5.8%	6.7%	4,400	4,400	2,400
Crossroads Ford Dwy	West of US 1 (Capital Blvd)		1,100			1,700	12.9%	12.9%	1.5%	7,200	7,200	1,500
Burlington Mills Rd	West of Urial Dr	9,800	9,700	-5.4%	0.0%	9,600	5.5%	5.4%	5.5%	22,800	22,600	23,000
Burlington Mills Rd	West of One World Way		9,500		0.3%	9,600	5.5%	5.4%	5.5%	22,800	22,600	22,600
Burlington Mills Rd	East of One World Way	8,500	8,500			11,200	6.0%	5.9%	5.5%	27,900	27,700	20,200

⁺ Based on traffic counts obtained from NCDOT. Rates prior to 2005 are not applicable due to the opening of I-540.

* Annual Growth Rate based on volume changes between 2015 no build and 2040 no build runs from TRM V5

Table 5-3 - Growth Rates (Continued)

Roadway	Location	Historic AADT Forecasted to 2015 ⁺ (A)	2015 BYNB Conditions Traffic Forecasts (AADT) (B)	Historic Annual Growth Rates ⁺ (%)		2015 TRM Model Volumes (AWDT) (E)	Model Annual Growth Rate (without Triangle Town Blvd Ext) * (%) [F=(I-E)/[E*(2040-2015)]]	Model Annual Growth Rate * (%) [G=(J-E)/[E*(2040-2015)]]	Applied Annual Growth Rate (%) [H=(K-B)/[B*(2040-2015)]]	2040 TRM Model Volumes (without Triangle Town Blvd Ext) (AWDT) (I)	2040 TRM Model Volumes (AWDT) (J)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (K)
				2005-2009 (C)	2009-2013 (D)							
Urial Dr	South of Burlington Mills Rd		1,400			400	9.0%	9.0%	10.9%	1,300	1,300	5,200
One World Way	North of Burlington Mills Rd		3,200			1,200	8.3%	8.3%	8.0%	3,700	3,700	9,600
Height Ln	West of Ponderosa Service Rd		500			1,500	6.1%	6.1%	6.4%	3,800	3,800	1,300
Height Ln	West of US 1 (Capital Blvd)		3,700			-	-	-	5.9%	-	-	9,200
Ponderosa Service Rd	North of Height Ln		3,800			200	14.0%	14.0%	6.0%	900	900	9,500
Common Oaks Dr (South)	West of Forest Pines Dr		3,000			-	-	-	4.3%	-	-	6,200
Falls of Neuse Rd	West of Forest Pines Dr		21,400			24,800	1.6%	1.7%	1.5%	35,000	35,200	29,500
Falls of Neuse Rd	West of Wakefield Commons Entrance		21,900			29,600	1.6%	1.6%	1.5%	41,500	41,700	30,100
Falls of Neuse Rd	West of US 1 (Capital Blvd)		25,500			29,600	1.6%	1.6%	1.5%	41,500	41,700	35,100
US 1A (Main St)	West of Star Rd		26,000			21,800	1.2%	1.2%	1.6%	28,500	28,500	36,500
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy	24,900	26,100	1.0%	0.0%	21,400	1.3%	1.3%	1.6%	28,300	28,300	36,600
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy		25,800			21,400	1.3%	1.3%	1.6%	28,300	28,300	36,200
US 1A (Main St)	West of Ligon Mill Rd		27,000			21,400	1.3%	1.3%	1.6%	28,300	28,300	37,800
US 1A (Main St)	East of Ligon Mill Rd		29,200			20,400	2.6%	2.5%	0.8%	33,800	33,200	35,300
Forest Pines Dr	South of Falls of Neuse Rd		6,000			9,200	2.1%	2.1%	1.5%	14,000	14,000	8,300
Forest Pines Dr	North of Falls of Neuse Rd		7,900			-	-	-	1.5%	-	-	10,900
Forest Pines Dr	North of Common Oaks Dr (North)		6,800			-	-	-	1.5%	-	-	9,400
Forest Pines Dr	North of Corona Blvd		6,400			100	8.0%	8.0%	1.6%	300	300	8,900
Common Oaks Dr (North)	West of Forest Pines Dr		2,900			-	-	-	1.0%	-	-	3,600
Common Oaks Dr (North)	East of Forest Pines Dr		1,000			-	-	-	1.2%	-	-	1,300
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd		1,400			-	-	-	1.4%	-	-	1,900
Wakefield Commons Entrance	South of Falls of Neuse Rd		4,400			-	-	-	1.6%	-	-	6,200
Star Rd	South of US 1A (Main St)		700			2,200	0.2%	0.2%	2.3%	2,300	2,300	1,100
Wake Dr	South of US 1A (Main St)		1,600			-	-	-	1.5%	-	-	2,200
Golden Corral Dwy	North of US 1A (Main St)		900			-	-	-	1.3%	-	-	1,200
O2 Fitness Dwy	South of US 1A (Main St)		800			-	-	-	1.5%	-	-	1,100
Walmart Dwy	North of US 1A (Main St)		9,200			-	-	-	1.5%	-	-	12,700
Ligon Mill Rd	South of US 1A (Main St)	7,600	7,500	-1.1%	2.7%	10,300	1.7%	1.7%	1.5%	14,600	14,700	10,400
Ligon Mill Rd	North of US 1A (Main St)		4,700			-	-	-	6.3%	11,900	12,600	12,100
Ligon Mill Rd Ext	South of NC 98 Bypass		-			-	-	-	-	7,800	7,900	6,300
Popes Creek Dr	West of US 1 (Capital Blvd)		1,400			-	-	-	1.1%	-	-	1,800
Walmart Access Rd	East of US 1 (Capital Blvd)		4,600			-	-	-	-0.4%	-	-	4,100
Shoppes at Caveness Farms Connector	East of US 1 (Capital Blvd)		2,000			-	-	-	-0.4%	-	-	1,800
Corona Blvd	West of US 1 (Capital Blvd)		2,400			100	8.0%	8.0%	5.2%	300	300	5,500
Caveness Farms Ave	East of US 1 (Capital Blvd)		3,300			8,500	-3.5%	-3.5%	0.2%	1,100	1,100	3,500
NC 98 Bypass	West of Wakefield Plantation Dr	17,000	18,800			8,400	10.3%	10.3%	4.5%	30,000	30,000	40,000
NC 98 Bypass	West of Retail Dr		23,400			22,900	2.7%	2.7%	4.0%	38,200	38,200	46,700
NC 98 Bypass	West of US 1 (Capital Blvd)		28,700			27,800	2.3%	2.3%	4.0%	44,100	44,100	57,500
NC 98 Bypass	West of Galaxy Dr	27,000	29,000			25,000	4.4%	4.4%	4.5%	52,300	52,600	61,300
NC 98 Bypass	East of Galaxy Dr		27,000			24,900	3.2%	3.2%	5.1%	44,900	45,100	61,300
NC 98 Bypass	East of Ligon Mill Rd Ext		29,000			25,000	3.2%	3.2%	4.0%	45,000	45,100	58,000
Wakefield Plantation Dr	South of NC 98 Bypass		6,400			100	8.0%	8.0%	1.6%	300	300	8,900
Northpark Dr	South of NC 98 Bypass		2,800			-	-	-	2.0%	-	-	4,200
Retail Dr	North of NC 98 Bypass		10,700			4,800	1.0%	1.0%	1.0%	6,000	6,000	13,400
Retail Dr	South of NC 98 Business		5,600			3,200	0.9%	0.9%	0.9%	3,880	3,880	6,900
Hampton Way	North of NC 98 Business		2,600			3,400	1.1%	1.1%	1.1%	4,300	4,300	3,300
Galaxy Dr	North of NC 98 Bypass		2,400			-	-	-	1.0%	-	-	3,000
Galaxy Dr	North of Lowes Ave		1,900			-	-	-	1.3%	-	-	2,500
Lowes Ave	East of Galaxy Dr		700			-	-	-	1.1%	-	-	900

⁺ Based on traffic counts obtained from NCDOT. Rates prior to 2005 are not applicable due to the opening of I-540.

* Annual Growth Rate based on volume changes between 2015 no build and 2040 no build runs from TRM V5

Table 5-3 - Growth Rates (Continued)

Roadway	Location	Historic AADT Forecasted to 2015 ⁺ (A)	2015 BYNB Conditions Traffic Forecasts (AADT) (B)	Historic Annual Growth Rates ⁺ (%)		2015 TRM Model Volumes (AWDT) (E)	Model Annual Growth Rate (without Triangle Town Blvd Ext) * (%) [F=(I-E)/[E*(2040-2015)]]	Model Annual Growth Rate * (%) [G=(J-E)/[E*(2040-2015)]]	Applied Annual Growth Rate (%) [H=(K-B)/[B*(2040-2015)]]	2040 TRM Model Volumes (without Triangle Town Blvd Ext) (AWDT) (I)	2040 TRM Model Volumes (AWDT) (J)	2040 Future Year No Build Conditions Traffic Forecasts (AADT) Selected Value (K)
				2005-2009 (C)	2009-2013 (D)							
NC 98 Business	West of Hampton Way	16,000	16,400	-1.4%		10,900	-4.0%	-0.4%	2.0%	9,900	9,700	24,600
NC 98 Business	West of US 1 (Capital Blvd)		17,800			12,600	0.0%	-0.1%	2.0%	12,500	12,400	26,800
NC 98 Business	East of US 1 (Capital Blvd)		14,400			8,900	2.8%	2.8%	2.0%	15,200	15,200	21,600
Wake Union Church Rd	West of US 1 (Capital Blvd)		6,100			7,900	5.7%	5.7%	5.5%	19,100	19,200	14,500
Wake Union Church Rd	East of US 1 (Capital Blvd)		5,300			-	-	-	1.5%	-	-	7,300
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)		300			-	-	-	1.3%	-	-	400
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)		1,300			-	-	-	1.2%	-	-	1,700
Jenkins Rd	West of US 1 (Capital Blvd)	4,400	5,400	0.6%	-0.6%	3,900	0.8%	0.8%	1.0%	4,700	4,700	6,800
Stadium Dr	East of US 1 (Capital Blvd)	7,300	6,100		10.3%	5,900	2.7%	2.7%	3.0%	9,900	9,900	10,700
Stadium Dr	East of Wake Forest Crossing Rear Dwy		6,600			4,800	4.7%	3.3%	3.0%	10,400	8,700	11,500
Wake Forest Crossing Rear Dwy	South of Stadium Dr		3,100			3,400	7.1%	7.1%	5.0%	9,400	9,400	7,000
Country Club Dr	West of US 1 (Capital Blvd)		300			-	-	-	5.3%	1,300	-	700
Templeridge Rd	East of US 1 (Capital Blvd)		500			800	-	2.5%	2.4%	-	1,300	800
St Catherines Dr	East of US 1 (Capital Blvd)		200			-	-	-	4.0%	7,900	-	400
Club Villas Dr	West of US 1 (Capital Blvd)		200			700	5.1%	5.1%	8.0%	1,600	1,600	600
Purnell Rd	West of US 1 (Capital Blvd)	3,800	4,400	0.0%		4,400	-	3.3%	3.0%	-	8,000	7,700
Harris Rd	East of US 1 (Capital Blvd)	3,900	4,800	-1.7%		2,900	7.0%	7.0%	7.0%	8,000	8,000	13,200
Harris Rd	East of Wallridge Rd	2,700	3,100	-2.4%	5.6%	2,300	7.7%	7.7%	7.1%	6,700	6,700	8,600
Wallridge Rd	North of Harris Rd		2,500			400	5.0%	5.0%	4.0%	900	900	5,000
Wall Rd	East of US 1 (Capital Blvd)		4,000			4,600	4.1%	4.1%	4.0%	9,300	9,300	8,000
Sunset Dr	West of US 1 (Capital Blvd)		1,100			-	-	-	1.1%	-	-	1,400
Rolling Acres Rd	East of US 1 (Capital Blvd)		600			6,600	5.6%	5.6%	5.3%	15,800	15,800	1,400
Holden Rd	West of US 1 (Capital Blvd)	5,000	4,700	5.4%		6,200	0.9%	0.9%	2.0%	7,600	7,600	7,100
Holden Rd	East of US 1 (Capital Blvd)	6,600	6,200			5,500	0.1%	0.1%	2.0%	5,600	5,700	9,300

⁺ Based on traffic counts obtained from NCDOT. Rates prior to 2005 are not applicable due to the opening of I-540.

* Annual Growth Rate based on volume changes between 2015 no build and 2040 no build runs from TRM V5

Table 5-4 - Model Validation

Roadway	Location	Base Year Volumes				Historic Growth Rate (%) (B)	Future Year Volumes		
		2010 Historic AADT Counts ⁺ (AADT) (A)	2010 TRM Model Volumes* (AWDT)	2015 TRM Model Volumes* (AWDT)	2015 Base Year No Build Conditions Selected Volumes^ (AADT)		2040 Extrapolated Volumes (AADT) (C=A+(A*B*30))	2040 TRM Model Volumes* (AWDT)	2040 Future Year No Build Conditions Selected Volumes^ (AADT)
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd	-	47,600	54,200	50,400	1.5%	-	57,100	63,000
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	44,500	55,800	63,700	48,000	1.5%	64,500	62,800	59,400
US 1 (Capital Blvd)	North of Old Wake Forest Rd	-	73,000	80,400	61,100	1.5%	-	94,200	74,400
US 1 (Capital Blvd)	North of I-540	-	70,200	78,000	65,400	1.5%	-	70,200	61,400
US 1 (Capital Blvd)	North of Gresham Lake Rd	55,000	70,200	78,000	60,300	1.5%	79,800	70,200	59,100
US 1 (Capital Blvd)	North of Triangle Town Blvd Ext	-	70,200	78,000	-	1.5%	-	91,300	75,400
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	-	66,300	78,000	60,300	1.5%	-	90,900	75,400
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	-	66,300	73,100	57,800	1.5%	-	90,900	72,300
US 1 (Capital Blvd)	North of Simms Creek Rd	61,000	66,300	73,100	57,800	1.5%	88,500	90,900	72,300
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	54,000	64,100	64,400	49,400	1.5%	78,300	76,700	61,800
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	-	60,700	61,100	48,300	1.5%	-	76,500	60,400
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	-	60,700	61,100	47,900	1.5%	-	76,500	59,900
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	-	60,200	60,200	47,800	1.5%	-	75,000	59,800
US 1 (Capital Blvd)	North of Burlington Mills Rd	47,000	54,400	52,600	46,000	1.5%	68,200	65,100	57,500
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	42,000	46,200	58,100	45,300	1.5%	60,900	64,300	55,900
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	-	46,200	58,100	46,900	1.5%	-	64,300	57,000
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	-	46,200	58,100	48,300	1.5%	-	64,300	58,200
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	-	43,300	59,400	49,200	1.5%	-	65,000	58,200
US 1 (Capital Blvd)	North of NC 98 Bypass	44,500	30,100	32,300	41,300	1.5%	64,500	44,500	51,600
US 1 (Capital Blvd)	North of NC 98 Business	-	32,500	35,700	38,700	1.5%	-	43,000	48,400
US 1 (Capital Blvd)	North of Wake Union Church Rd	40,000	39,600	42,200	40,300	1.5%	58,000	58,000	50,400
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy	-	39,600	42,200	39,900	1.5%	-	58,000	49,900
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr	-	37,100	40,100	35,800	1.5%	-	56,800	49,200
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd	-	37,800	40,900	36,000	1.5%	-	58,000	49,500
US 1 (Capital Blvd)	North of St. Catherines Dr	-	37,800	40,900	36,000	1.5%	-	58,000	49,500
US 1 (Capital Blvd)	North of Club Villas Dr	35,000	37,700	40,700	36,000	1.5%	50,800	57,900	49,500
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	31,500	37,400	40,400	32,000	1.5%	45,700	56,700	44,000
US 1 (Capital Blvd)	North of Wall Rd	-	41,000	44,600	32,600	1.5%	-	65,100	44,800
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd	-	39,400	42,400	32,300	1.5%	-	59,200	44,400
US 1 (Capital Blvd)	North of Holden Rd	22,000	32,000	34,800	24,000	1.5%	31,900	52,000	33,000
Sumner Blvd Ext	West of US 1 (Capital Blvd)	-	5,200	7,400	1,800	1.5%	-	13,300	2,900
Sumner Blvd	East of US 1 (Capital Blvd)	-	9,100	11,000	8,200	1.5%	-	15,200	12,700
Old Wake Forest Rd	West of US 1 (Capital Blvd)	26,760	22,300	21,700	26,000	1.5%	38,800	46,900	57,400
Old Wake Forest Rd	East of US 1 (Capital Blvd)	-	4,400	3,200	20,100	1.5%	-	15,600	41,600
I-540	West of Falls of Neuse Rd	87,000	70,000	77,500	91,600	1.5%	126,200	138,200	160,300
I-540	West of US 1 (Capital Blvd)	74,000	60,400	65,000	76,000	1.5%	107,300	127,300	131,700
I-540	West of Triangle Town Blvd	61,000	40,600	50,600	63,900	1.5%	88,500	111,600	133,700
I-540	West of US 401 (Louisburg Rd)	61,000	41,100	51,500	63,500	1.5%	88,500	129,300	147,200
I-540	East of US 401 (Louisburg Rd)	54,000	43,900	53,300	55,800	1.5%	78,300	122,000	125,700
Falls of Neuse Rd	South of Thorpshire Dr	32,000	27,200	30,200	33,100	1.5%	-	43,100	45,500
Falls of Neuse Rd	South of I-540	32,000	27,200	30,200	34,400	1.5%	46,400	43,100	47,400
Falls of Neuse Rd	North of I-540	43,000	40,900	45,200	46,000	1.5%	62,400	64,100	62,000
Falls of Neuse Rd	North of Falls Valley Dr	43,000	40,900	45,200	44,000	1.5%	-	64,100	59,200
Thorpshire Dr	East of Falls of Neuse Rd	-	3,900	4,100	2,700	1.5%	-	4,800	3,700
Falls Valley Dr	East of Falls of Neuse Rd	-	-	1,900	4,200	1.5%	-	2,400	5,800

+ - Traffic counts obtained from NCDOT

* - Volumes from TRM V5

^ - Volumes selected in this report

Table 5-4 - Model Validation (Continued)

Roadway	Location	Base Year Volumes				Historic Growth Rate (%) (B)	Future Year Volumes		
		2010 Historic AADT Counts ⁺ (AADT) (A)	2010 TRM Model Volumes* (AWDT)	2015 TRM Model Volumes* (AWDT)	2015 Base Year No Build Conditions Selected Volumes^ (AADT)		2040 Extrapolated Volumes (AADT) (C=A+(A*B*30))	2040 TRM Model Volumes* (AWDT)	2040 Future Year No Build Conditions Selected Volumes^ (AADT)
Triangle Town Blvd	South of I-540	-	9,900	10,300	9,000	1.5%	-	29,300	24,900
Triangle Town Blvd Ext	North of I-540	-	-	-	-	1.5%	-	26,600	22,600
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	-	-	-	-	1.5%	-	26,500	22,300
Triangle Town Blvd Ext	North of Gresham Lake Rd	-	-	-	-	1.5%	-	18,600	10,000
Triangle Town Blvd Ext	South of Gresham Lake Rd	-	-	-	-	1.5%	-	4,200	3,600
US 401 (Louisburg Rd)	South of I-540	-	48,000	54,100	42,400	1.5%	-	68,500	58,300
US 401 (Louisburg Rd)	North of I-540	-	52,200	56,700	54,500	1.5%	-	72,000	79,200
US 401 (Louisburg Rd)	North of Fox Rd	39,000	55,300	56,000	53,600	1.5%	56,600	74,800	73,700
Fox Rd	West of US 401 (Louisburg Rd)	-	7,300	7,900	10,600	1.5%	-	25,500	30,200
Fox Rd	East of US 401 (Louisburg Rd)	-	-	2,300	8,100	1.5%	-	6,300	23,300
Gresham Lake Rd	West of Capital Hills Dr	-	13,900	15,300	8,700	1.5%	-	21,400	13,200
Gresham Lake Rd	East of Capital Hills Dr	-	14,000	15,100	8,900	1.5%	-	6,900	13,300
Gresham Lake Rd	West of Overlook Rd	-	14,000	15,300	8,900	1.5%	-	21,200	3,900
Gresham Lake Rd	West of US 1 (Capital Blvd)	8,700	15,600	16,800	9,300	1.5%	12,600	7,700	4,500
Capital Hills Dr	North of Gresham Lake Rd	-	400	200	3,000	1.5%	-	800	7,500
Capital Hills Dr	North of Capital Hills Connector	-	-	-	3,400	1.5%	-	-	8,500
Overlook Rd	South of Gresham Lake Rd	-	1,800	1,900	1,200	1.5%	-	2,200	3,000
Cheviot Hills Dr	West of US 1 (Capital Blvd)	-	3,000	4,500	200	1.5%	-	12,100	400
Jacqueline Ln	East of US 1 (Capital Blvd)	-	6,800	8,100	2,000	1.5%	-	3,200	3,800
Capital Hills Connector	West of US 1 (Capital Blvd)	-	-	-	3,000	1.5%	-	-	7,400
Homestead Dr	East of US 1 (Capital Blvd)	-	-	-	1,100	1.5%	-	-	2,100
Simms Creek Rd	East of US 1 (Capital Blvd)	-	-	-	1,600	1.5%	-	-	3,000
Durant Rd	West of Capital Hills Dr	-	17,500	19,200	17,700	1.5%	-	27,400	24,400
Durant Rd	West of US 1 (Capital Blvd)	18,250	18,000	20,000	16,500	1.5%	26,500	28,500	22,700
Perry Creek Rd	West of Eaton Dwy/Wild Wood Forest Dr	17,500	11,800	16,900	19,100	1.5%	25,400	28,900	31,000
Perry Creek Rd	West of Clarks Fork Dr	-	11,800	16,900	16,000	1.5%	-	28,900	26,000
Perry Creek Rd	West of McGuire Dr	-	11,800	16,900	13,900	1.5%	-	28,900	22,600
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr	-	11,800	16,900	13,200	1.5%	-	28,900	21,500
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	-	18,200	22,600	15,900	1.5%	-	33,700	25,800
Eaton Dwy	South of Perry Creek Rd	-	-	-	200	1.5%	-	-	300
Wild Wood Forest Dr	North of Perry Creek Rd	-	-	-	6,700	1.5%	-	-	10,900
Clarks Fork Dr	North of Perry Creek Rd	-	-	-	2,900	1.5%	-	-	4,800
McGuire Dr	South of Perry Creek Rd	-	-	-	1,700	1.5%	-	-	2,900
Liston Dr	South of Perry Creek Rd	-	6,200	6,400	800	1.5%	-	7,200	1,400
Filbin Creek Dr	North of Perry Creek Rd	-	10,200	12,200	4,500	1.5%	-	19,300	7,300
Mallinckrodt, Inc. Dwy	West of US 1 (Capital Blvd)	-	700	800	800	1.5%	-	1,200	1,300
Thornton Rd	East of US 1 (Capital Blvd)	-	14,800	14,500	6,500	1.5%	-	14,700	7,300
Thornton Rd	West of Wadford Dr	-	14,800	14,500	4,600	1.5%	-	14,700	5,200
Thornton Rd	East of Wadford Dr	-	14,800	14,500	4,200	1.5%	-	14,700	4,800
Wadford Dr	South of Thornton Rd	-	-	-	1,200	1.5%	-	-	1,400
Wadford Dr	North of Thornton Rd	-	-	-	1,400	1.5%	-	-	1,600
Pro Tire Dwy	West of US 1 (Capital Blvd)	-	-	-	200	1.5%	-	-	300
River Haven Pl	East of US 1 (Capital Blvd)	-	-	-	600	1.5%	-	-	800
U-Haul Dwy	West of US 1 (Capital Blvd)	-	-	-	200	1.5%	-	-	300
Shearon Farms Ave	East of US 1 (Capital Blvd)	-	1,300	1,800	900	1.5%	-	4,400	2,400
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	-	700	1,700	1,100	1.5%	-	7,200	1,500
Burlington Mills Rd	West of Urial Dr	11,000	6,400	9,600	9,700	1.5%	16,000	22,600	23,000
Burlington Mills Rd	West of One World Way	-	6,400	9,600	9,500	1.5%	-	22,600	22,600
Burlington Mills Rd	East of One World Way	8,200	7,500	11,200	8,500	1.5%	11,900	27,700	20,200
Urial Dr	South of Burlington Mills Rd	-	200	400	1,400	1.5%	-	1,300	5,200

+ - Traffic counts obtained from NCDOT

* - Volumes from TRM V5

^ - Volumes selected in this report

Table 5-4 - Model Validation (Continued)

Roadway	Location	Base Year Volumes				Historic Growth Rate (%) (B)	Future Year Volumes		
		2010 Historic AADT Counts ⁺ (AADT) (A)	2010 TRM Model Volumes* (AWDT)	2015 TRM Model Volumes* (AWDT)	2015 Base Year No Build Conditions Selected Volumes^ (AADT)		2040 Extrapolated Volumes (AADT) (C=A+(A*B*30))	2040 TRM Model Volumes* (AWDT)	2040 Future Year No Build Conditions Selected Volumes^ (AADT)
One World Way	North of Burlington Mills Rd	-	900	1,200	3,200	1.5%	-	3,700	9,600
Height Ln	West of Ponderosa Service Rd	-	-	1,500	500	1.5%	-	3,800	1,300
Height Ln	West of US 1 (Capital Blvd)	-	-	-	3,700	1.5%	-	-	9,200
Ponderosa Service Rd	North of Height Ln	-	-	200	3,800	1.5%	-	900	9,500
Common Oaks Dr (South)	West of Forest Pines Dr	-	-	-	3,000	1.5%	-	-	6,200
Falls of Neuse Rd	West of Forest Pines Dr	-	17,000	24,800	21,400	1.5%	-	35,200	29,500
Falls of Neuse Rd	West of Wakefield Commons Entrance	-	22,600	29,600	21,900	1.5%	-	41,700	30,100
Falls of Neuse Rd	West of US 1 (Capital Blvd)	-	22,600	29,600	25,500	1.5%	-	41,700	35,100
US 1A (Main St)	West of Star Rd	-	31,300	21,800	26,000	1.5%	-	28,500	36,500
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy	24,500	30,600	21,400	26,100	1.5%	35,500	28,300	36,600
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	-	30,600	21,400	25,800	1.5%	-	28,300	36,200
US 1A (Main St)	West of Ligon Mill Rd	-	30,600	21,400	27,000	1.5%	-	28,300	37,800
US 1A (Main St)	East of Ligon Mill Rd	-	26,700	20,400	29,200	1.5%	-	33,200	35,300
Forest Pines Dr	South of Falls of Neuse Rd	-	8,100	9,200	6,000	1.5%	-	14,000	8,300
Forest Pines Dr	North of Falls of Neuse Rd	-	-	-	7,900	1.5%	-	-	10,900
Forest Pines Dr	North of Common Oaks Dr (North)	-	-	-	6,800	1.5%	-	-	9,400
Forest Pines Dr	North of Corona Blvd	-	-	100	6,400	1.5%	-	300	8,900
Common Oaks Dr (North)	West of Forest Pines Dr	-	-	-	2,900	1.5%	-	-	3,600
Common Oaks Dr (North)	East of Forest Pines Dr	-	-	-	1,000	1.5%	-	-	1,300
Common Oaks Dr (North)	North of Popes Creek Dr/Walmart Access Rd	-	-	-	1,400	1.5%	-	-	1,900
Wakefield Commons Entrance	South of Falls of Neuse Rd	-	-	-	4,400	1.5%	-	-	6,200
Star Rd	South of US 1A (Main St)	-	2,100	2,200	700	1.5%	-	2,300	1,100
Wake Dr	South of US 1A (Main St)	-	-	-	1,600	1.5%	-	-	2,200
Golden Corral Dwy	North of US 1A (Main St)	-	-	-	900	1.5%	-	-	1,200
O2 Fitness Dwy	South of US 1A (Main St)	-	-	-	800	1.5%	-	-	1,100
Walmart Dwy	North of US 1A (Main St)	-	-	-	9,200	1.5%	-	-	12,700
Ligon Mill Rd	South of US 1A (Main St)	7,100	9,900	10,300	7,500	1.5%	10,300	14,700	10,400
Ligon Mill Rd	North of US 1A (Main St)	-	-	-	4,700	1.5%	-	12,600	12,100
Ligon Mill Rd Ext	South of NC 98 Bypass	-	-	-	-	1.5%	-	7,900	6,300
Popes Creek Dr	West of US 1 (Capital Blvd)	-	-	-	1,400	1.5%	-	-	1,800
Walmart Access Rd	East of US 1 (Capital Blvd)	-	-	-	4,600	1.5%	-	-	4,100
Shoppes at Caveness Farms Connecto	East of US 1 (Capital Blvd)	-	-	-	2,000	1.5%	-	-	1,800
Corona Blvd	West of US 1 (Capital Blvd)	-	100	100	2,400	1.5%	-	300	5,500
Caveness Farms Ave	East of US 1 (Capital Blvd)	-	12,000	8,500	3,300	1.5%	-	1,100	3,500
NC 98 Bypass	West of Wakefield Plantation Dr	-	18,600	8,400	18,800	1.5%	-	30,000	40,000
NC 98 Bypass	West of Retail Dr	-	-	22,900	23,400	1.5%	-	38,200	46,700
NC 98 Bypass	West of US 1 (Capital Blvd)	-	24,500	27,800	28,700	1.5%	-	44,100	57,500
NC 98 Bypass	West of Galaxy Dr	-	7,800	25,000	29,000	1.5%	-	52,600	61,300
NC 98 Bypass	East of Galaxy Dr	-	7,900	24,900	27,000	1.5%	-	45,100	61,300
NC 98 Bypass	East of Ligon Mill Rd Ext	-	-	25,000	29,000	1.5%	-	45,100	58,000
Wakefield Plantation Dr	South of NC 98 Bypass	-	13,900	100	6,400	1.5%	-	300	8,900
Northpark Dr	South of NC 98 Bypass	-	-	-	2,800	1.5%	-	-	4,200
Retail Dr	North of NC 98 Bypass	-	-	4,800	10,700	1.5%	-	6,000	13,400
Retail Dr	South of NC 98 Business	-	-	3,200	5,600	1.5%	-	3,880	6,900
Hampton Way	North of NC 98 Business	-	-	3,400	2,600	1.5%	-	4,300	3,300
Galaxy Dr	North of NC 98 Bypass	-	-	-	2,400	1.5%	-	-	3,000
Galaxy Dr	North of Lowes Ave	-	-	-	1,900	1.5%	-	-	2,500
Lowes Ave	East of Galaxy Dr	-	-	-	700	1.5%	-	-	900

+ - Traffic counts obtained from NCDOT

* - Volumes from TRM V5

^ - Volumes selected in this report

Table 5-4 - Model Validation (Continued)

Roadway	Location	Base Year Volumes				Historic Growth Rate (%) (B)	Future Year Volumes		
		2010 Historic AADT Counts ⁺ (AADT) (A)	2010 TRM Model Volumes* (AWDT)	2015 TRM Model Volumes* (AWDT)	2015 Base Year No Build Conditions Selected Volumes^ (AADT)		2040 Extrapolated Volumes (AADT) (C=A+(A*B*30))	2040 TRM Model Volumes* (AWDT)	2040 Future Year No Build Conditions Selected Volumes^ (AADT)
NC 98 Business	West of Hampton Way	-	10,200	10,900	16,400	1.5%	-	9,700	24,600
NC 98 Business	West of US 1 (Capital Blvd)	-	11,800	12,600	17,800	1.5%	-	12,400	26,800
NC 98 Business	East of US 1 (Capital Blvd)	-	8,600	8,900	14,400	1.5%	-	15,200	21,600
Wake Union Church Rd	West of US 1 (Capital Blvd)	-	8,000	7,900	6,100	1.5%	-	19,200	14,500
Wake Union Church Rd	East of US 1 (Capital Blvd)	-	-	-	5,300	1.5%	-	-	7,300
Wake Forest Presbyterian Church Dwy	West of US 1 (Capital Blvd)	-	-	-	300	1.5%	-	-	400
Wake Forest Crossing Dwy	East of US 1 (Capital Blvd)	-	-	-	1,300	1.5%	-	-	1,700
Jenkins Rd	West of US 1 (Capital Blvd)	4,450	3,700	3,900	5,400	1.5%	6,500	4,700	6,800
Stadium Dr	East of US 1 (Capital Blvd)	5,350	5,400	5,900	6,100	1.5%	7,800	9,900	10,700
Stadium Dr	East of Wake Forest Crossing Rear Dwy	-	-	4,800	6,600	1.5%	-	8,700	11,500
Wake Forest Crossing Rear Dwy	South of Stadium Dr	-	2,300	3,400	3,100	1.5%	-	9,400	7,000
Country Club Dr	West of US 1 (Capital Blvd)	-	-	-	300	1.5%	-	-	700
Templeridge Rd	East of US 1 (Capital Blvd)	-	700	800	500	1.5%	-	1,300	800
St Catherines Dr	East of US 1 (Capital Blvd)	-	-	-	200	1.5%	-	-	400
Club Villas Dr	West of US 1 (Capital Blvd)	-	500	700	200	1.5%	-	1,600	600
Purnell Rd	West of US 1 (Capital Blvd)	3,950	4,000	4,400	4,400	1.5%	5,700	8,000	7,700
Harris Rd	East of US 1 (Capital Blvd)	3,250	2,600	2,900	4,800	1.5%	4,700	8,000	13,200
Harris Rd	East of Wallridge Rd	2,300	2,200	2,300	3,100	1.5%	3,300	6,700	8,600
Wallridge Rd	North of Harris Rd	-	400	400	2,500	1.5%	-	900	5,000
Wall Rd	East of US 1 (Capital Blvd)	-	3,900	4,600	4,000	1.5%	-	9,300	8,000
Sunset Dr	West of US 1 (Capital Blvd)	-	-	-	1,100	1.5%	-	-	1,400
Rolling Acres Rd	East of US 1 (Capital Blvd)	-	5,100	6,600	600	1.5%	-	15,800	1,400
Holden Rd	West of US 1 (Capital Blvd)	4,250	5,800	6,200	4,700	1.5%	6,200	7,600	7,100
Holden Rd	East of US 1 (Capital Blvd)	6,200	5,200	5,500	6,200	1.5%	9,000	5,700	9,300

+ - Traffic counts obtained from NCDOT

* - Volumes from TRM V5

^ - Volumes selected in this report

5.4 Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYNB Conditions were assumed to remain the same as those for the 2015 BYNB Conditions at all study locations, with the exception of the factors along the roads shown in Table 5-5. The changes in traffic factors along these roads – I-540, Triangle Town Blvd Extension, Fox Rd, Gresham Lake Rd, Ligon Mill Rd Extension, and NC 98 Bypass – are due to the shifts in traffic related to travel pattern changes associated with the additions of the Triangle Town Blvd/Sumner Blvd Extension and Ligon Mill Rd Extension projects. Changes to other roadways are the result of grown traffic naturally shifting with new volumes.

Table 5-5 - 2015 Base Year and 2040 Future Year No Build Design Factors

Roadway	Location	2015 Base Year No Build Conditions			2040 Future Year No Build Conditions		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Sumner Blvd Ext	West of US 1 (Capital Blvd)	60%	8%	EB	55%	9%	EB
I-540	West of Triangle Town Blvd	65%	10%	EB	65%	9%	EB
I-540	West of US 401 (Louisburg Rd)	65%	10%	EB	65%	9%	EB
Triangle Town Blvd	South of I-540	55%	10%	NB	55%	9%	NB
Triangle Town Blvd Ext	North of I-540	-	-	-	55%	9%	NB
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	-	-	-	55%	9%	WB
Triangle Town Blvd Ext	North of Gresham Lake Rd	-	-	-	55%	9%	EB
Triangle Town Blvd Ext	South of Gresham Lake Rd	-	-	-	55%	9%	SB
Fox Rd	East of US 401 (Louisburg Rd)	70%	7%	WB	60%	7%	WB
Gresham Lake Rd	East of Capital Hills Dr	60%	9%	EB	55%	9%	EB
Gresham Lake Rd	West of Overlook Rd	60%	9%	EB	55%	9%	EB
Durant Rd	West of US 1 (Capital Blvd)	55%	8%	EB	60%	8%	EB
Burlington Mills Rd	West of Urial Dr	60%	9%	EB	55%	9%	EB
Burlington Mills Rd	West of One World Way	60%	9%	EB	55%	9%	EB
One World Way	North of Burlington Mills Rd	70%	10%	NB	55%	10%	NB
Common Oaks Dr (South)	West of Forest Pines Dr	55%	9%	WB	60%	9%	WB
Ligon Mill Rd Ext	South of NC 98 Bypass	-	-	-	55%	9%	NB
Wakefield Plantation Dr	South of NC 98 Bypass	60%	9%	NB	65%	9%	NB
Lowes Ave	East of Galaxy Dr	65%	7%	WB	60%	7%	WB
Wake Union Church Rd	West of US 1 (Capital Blvd)	65%	10%	EB	60%	10%	EB

For locations not included above, no change in traffic factors from 2015 BYNB Conditions to 2040 FYNB Conditions would occur.

6.0 FUTURE YEAR BUILD FORECAST

6.1 2040 Future Year Build Conditions Scenario A

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2040 FYB Conditions Scenario A, the following changes to the roadway network were assumed:

- » Upgrade US 1 (Capital Blvd) to a freeway with six or eight lanes (three or four lanes in each direction).
- » Provide interchanges along US 1 (Capital Blvd) at the following locations:
 - I-540 (existing interchange)
 - Durant Rd/Perry Creek Rd
 - Burlington Mills Rd
 - Falls of Neuse Rd/US 1A (Main St)
 - NC 98 Bypass (existing interchange)
 - NC 98 Business (existing interchange)
 - Purnell Rd/Harris Rd
- » Provide grade separations along US 1 (Capital Blvd) at the following locations:
 - Triangle Town Blvd Extension
 - Jenkins Rd/Stadium Dr
- » Provide service roads along either side of US 1 (Capital Blvd) to give access to properties and roadways between interchanges.
 - Between I-540 and Durant Rd/Perry Creek Rd interchanges:
 - From Gresham Lake Rd to Durant Rd, west of US 1 (Capital Blvd), Capital Hills Dr would function as the service road.
 - From Triangle Town Blvd Extension to Perry Creek Rd, east of US 1 (Capital Blvd), Simms Creek Rd would be extended and function as the service road. Access to Simms Creek Rd would be provided via Simms Creek Rd Connector and Eaton Driveway would be realigned to intersect with Simms Creek Rd.
 - Between Durant Rd/Perry Creek Rd and Burlington Mills Rd interchanges:

- From Durant Rd to Burlington Mills Rd, west of US 1 (Capital Blvd), Capital Hills Dr would be extended and function as the service road.
- From Perry Creek Rd to Burlington Mills Rd, east of US 1 (Capital Blvd), Wadford Rd would be re-routed and extended to function as the service road. Wild Wood Forest Dr would be realigned and intersect with Wadford Rd.
- Between Burlington Mills Rd and Falls of Neuse Rd/US 1A (Main St) interchanges:
 - From Burlington Mills Rd to Falls of Neuse Rd, west of US 1 (Capital Blvd), Ponderosa Service Rd would be extended to connect with Burlington Mills Rd. Ponderosa Service Rd and Forest Pines Dr would function as the service road.
 - From Burlington Mills Rd to US 1A (Main St), east of US 1 (Capital Blvd), Wake Dr would be extended and function as the service road. Star Rd would be realigned and intersect with Wake Dr.
- Between Falls of Neuse Rd/US 1A (Main St) and NC 98 Bypass interchanges:
 - From Falls of Neuse Rd to NC 98 Bypass, west of US 1 (Capital Blvd), Forest Pines Dr and Wakefield Plantation Rd would function as the service road.
 - From US 1A (Main St) to Caveness Farms Ave, east of US 1 (Capital Blvd), Ligon Mill Rd Extension would function as the service road. From Caveness Farms Ave to NC 98 Bypass, Galaxy Dr would be extended and function as the service road.
- Between NC 98 Bypass and NC 98 Business interchanges:
 - From NC 98 Bypass to NC 98 Business, west of US 1 (Capital Blvd), Retail Dr would function as the service road.
 - From NC 98 Bypass to NC 98 Business, east of US 1 (Capital Blvd), Galaxy Dr would be extended to Richland Dr, Richland Dr would be rerouted to connect to Ligon Mill Rd Extension, and Galaxy Dr, Richland Dr, and Ligon Mill Rd Extension would together function as the service road.
- Between NC 98 Business and Purnell Rd/Harris Rd interchanges:
 - From NC 98 Business to Purnell Rd, west of US 1 (Capital Blvd), Hampton Way and Wake Union Church Rd would together function as the service road. Wake Union Church Rd would be extended to Purnell Rd. Additionally, west of US 1 (Capital Blvd), a new local road would be added to provide access from the service road to Jenkins Rd.

- From NC 98 Business to Harris Rd, east of US 1 (Capital Blvd), a new service road would be built.
- » Provide access to Gresham Lake Rd from southbound US 1 and to US 1 from Gresham Lake Rd. Provide access to Triangle Town Blvd Extension from US 1 northbound.
- » Provide bridges for the service roads over the Neuse River.
- » Provide bridges for the service roads over the CSX Railroad.
- » Assume Height Ln is in place and has a grade separation at US 1 (Capital Blvd).
- » Assume Ligon Mill Rd Extension is in place between NC 98 Bypass and Stadium Dr. While this section of Ligon Mill Rd Extension is not included as part of the improvements of the U-5307 project, it was decided by stakeholders after the 2040 FYNB Conditions Traffic Forecast was approved that this roadway is assumed to be extended the entire length in the 2040 FYNB Conditions. Through discussions with TPD, it was agreed that for the purposes of this traffic forecast, this change in assumptions would have a negligible impact on the 2040 FYB Conditions and is not necessary to revise the approved 2040 FYNB Conditions in order to determine the impacts of this extension on the U-5307 project.

Table 6-1 – Build Conditions Scenarios

Proposed Improvement	Scenario				
	A	B	C	D	E
Upgrade US 1	✓	✓	✓	✓	✓
Four new Interchanges along US 1	✓	✓	✓	✓	✓
New Grade Separations at Triangle Town Blvd Ext and Jenkins Rd/Stadium Dr	✓	✓	✓	✓	✓
New Service Roads	✓	✓	✓	✓	✓
Access to/from Gresham Lake Rd/ Triangle Town Blvd Ext	✓	X	✓	✓	✓
Service Road bridge over Neuse River	✓	✓	X	✓	✓
Service Road bridge over CSX Railroad	✓	✓	✓	X	✓
Height Ln Grade Separation	✓	✓	✓	✓	X
Ligon Mill Rd Ext	✓	✓	✓	✓	✓

It should be noted that as the 2040 FYB Conditions Scenario A traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

As part of the Build Conditions memo submitted to TPD in March 2017, TRM model volumes for the 6-lane option are similar to the 8-lane option along US 1 (Capital Blvd). This indicates that the anticipated traffic demand reaches its threshold under the 8-lane option. Based on this conclusion, the traffic forecast volumes for the 2040 Future Year Conditions 6-lane option would

be very similar to the 8-lane option. This observation was discussed with the STFE. It was determined that the forecast for 2040 FYB Conditions Scenario A be used going forward for both the 6-lane and 8-lane options.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040.

Methodology

The 2040 FYB Conditions traffic forecasts were primarily developed using the changes in travel patterns obtained by comparing the TRM Version 5 model output of 2040 No Build and Build Scenario A Conditions.

When using the model data for a specific corridor, the model's ability to replicate travel demand in a smaller area requires verification. To accomplish this, the 2010 NCDOT AADT volumes were compared to the 2010 TRM base year model run as shown in Table 4-1. In general, the TRM model is over predicting the volumes on US 1 (Capital Blvd) south of NC 98 Bypass (average of 18%) and US 1 (Capital Blvd) north of NC 98 Bypass (average of 8%), so it can be concluded that the TRM growth rates between 2015 and 2040 for US 1 (Capital Blvd) may represent lower than anticipated growth. In general, TRM model output is more useful in projecting pattern changes along a corridor rather than for individual segments. Therefore, the output results were used with caution to predict segment by segment travel pattern changes for this project and a corridor wide approach was used in the application of travel pattern changes observed from TRM.

Figure 4 visually depicts the changes in daily traffic volumes from the 2040 FYNB Conditions TRM model run and the 2040 FYB Conditions Scenario A TRM model run. The following is a summary of the changes in traffic volumes between the 2040 FYNB Conditions and the 2040 FYB Conditions Scenario A TRM model runs along the project corridor and the major alternate routes.

- » US 1 (Capital Blvd) shows an increase of 26,400 to 57,100 vpd from I-540 to NC 98 Bypass. North of NC 98 Bypass to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd), US 1 (Capital Blvd) shows an increase of 15,400 to 29,400 vpd.
- » West of the project corridor, the following travel pattern changes are predicted. These travel pattern changes account for approximately 50% of the increase along US 1 (Capital Blvd).

- I-540 shows an increase of approximately 3,500 to 8,300 vpd from NC 50 (Creedmoor Rd) to US 1 (Capital Blvd).
- NC 50 (Creedmoor Rd) shows a decrease of approximately 5,600 to 6,500 vpd from I-540 to NC 98.
- Six Forks Rd shows a decrease of approximately 800 to 1,400 vpd from I-540 to NC 98.
- Falls of Neuse Rd shows a decrease of approximately 9,300 to 16,200 vpd from I-540 to Old Falls of Neuse Rd.
- Old Falls of Neuse Rd shows a decrease of approximately 9,000 to 9,500 vpd from Falls of Neuse Rd to NC 98 Bypass.
- NC 98 from shows a decrease of approximately 5,000 to 7,300 vpd from NC 50 (Creedmoor Rd) to NC 98 Business/NC 98 Bypass.
- » East of the project corridor, the following travel pattern changes are predicted. These travel pattern changes account for approximately 15% of the increase along US 1 (Capital Blvd).
 - I-540 shows an increase of approximately 900 to 28,800 vpd from US 1 (Capital Blvd) to Buffaloe Rd.
 - US 401 (Louisburg Rd) shows a decrease of approximately 3,300 to 8,100 vpd from I-540 to US 401 Business (S. Main St).
- » The remaining 35% increase along US 1 (Capital Blvd) comes from areas south of I-540 and from the direct cross streets that will have interchanges along the project corridor.

The 2040 FYB Conditions Scenario A traffic forecast volumes were obtained as follows:

- » *Step 1 - Compare TRM model run output volumes:* The 2040 No Build TRM model network was modified to include network changes on US 1 (Capital Blvd) to account for additional lanes and incorporation of service roads along US 1 (Capital Blvd) associated with 2040 Build Conditions Scenario A. Model coding was extended beyond the limits of the project to account for planned access points, as well as beginning and ending points.
- » *Step 2 – Determine rate of change between TRM model runs:* An estimated rate of change in the traffic volumes for each study segment was calculated by comparing the model volumes for the 2040 No Build and 2040 Build Scenario A output as shown on Table 6-2.

- » *Step 3 – Select rate of change for project corridors:* The rates of change in the travel patterns as computed in Step 2 were reviewed based on engineering judgement. Then rates of change were selected along corridors, rather than segment by segment.
- » *Step 4 – Apply selected rate of change to segments and select initial volumes:* The selected rates of change were applied to the 2040 FYNB Conditions traffic forecast volumes and the volumes were reviewed and selected. For example, along US 1 (Capital Blvd) between Triangle Town Blvd and Durant Rd/Perry Creek Rd, the computed volumes were reviewed for that section of roadway and one volume was selected based on the available data and engineering judgement.
- » *Step 5 – Reroute volumes for access changes:* For locations where traffic would be re-routed due to roadway network changes (for example, converting the intersection of Triangle Town Blvd Extension at US 1 (Capital Blvd) to a grade separation), adjustments to the volumes were manually calculated.
- » *Step 6 – Calculate volumes for service roads and cross streets:* Traffic forecast volumes for the service roads were estimated based on the 2040 FYNB Conditions traffic forecast volumes for the roads that would connect to the service roads, rather than US 1 (Capital Blvd). For the cross streets along the project corridor, the volumes for the western-most and eastern-most segments were selected first and held constant, then segment volumes were calculated based on the Service Road volumes and other intersections along the road.
- » *Step 7 – Determine turning movements and balance volumes:* After the segment volumes were selected and calculated in Steps 4 through 6, the turning movements were determined based on anticipated access changes and the volumes were balanced along the corridor.
- » *Step 8 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 7 traffic volumes with both the 2040 FYNB Conditions traffic forecast volumes as well as the 2040 FYB Conditions Scenario A traffic forecast volumes, the 2040 FYB Conditions Scenario A traffic forecasts were finalized as shown on Table 6-2.

Figure G-3 depicts the volume changes from the 2040 FYNB Conditions traffic forecasts to the 2040 FYB Conditions Scenario A traffic forecasts. Figure 5 shows the 2040 FYB Conditions Scenario A AADT volumes with peak-to-day factors, directional splits, and truck percentages.

Table 6-2 - 2040 Future Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2040 No Build Conditions TRM Model Volume (vpd)	2040 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2040 No Build TRM Model to 2040 Build Scenario A TRM Model (vpd)	Percent Change from 2040 No Build TRM Model Volume to 2040 Build Scenario A TRM Model Volume (%)	2040 No Build Conditions Traffic Forecasts (AADT)	Selected Change in Volume from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (AADT)	Selected Percent Change from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (%)	Calculated 2040 Build Scenario A Volumes based on TRM Selected Percent Change (AADT)	Adjustments based on Travel Pattern Changes Unaccounted for TRM Model and/or Balancing (AADT)	Selected 2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Applied Percent Change from 2040 No Build Forecasts to 2040 Build Sce A Forecasts (%)
US 1 (Capital Blvd)	South of Sumner Blvd Ext/Sumner Blvd	57,100	66,200	9,100	16%	63,000	-	16%	-	-	70,800	12%
US 1 (Capital Blvd)	North of Sumner Blvd Ext/Sumner Blvd	62,800	70,700	7,900	13%	59,400	7,700	13%	67,100	14,700	81,800	38%
US 1 (Capital Blvd)	North of Old Wake Forest Rd	94,200	103,600	9,400	10%	74,400	7,400	10%	81,800	15,000	96,800	30%
US 1 (Capital Blvd)	North of I-540	77,100	123,800	46,700	61%	61,400	37,500	61%	98,900	4,800	103,700	69%
US 1 (Capital Blvd)	North of Triangle Town Blvd Ramp	77,100	103,500	26,400	34%	61,400	20,900	34%	82,300	18,000	100,300	63%
US 1 (Capital Blvd)	North of Gresham Lake Rd	70,300	127,400	57,100	81%	59,100	47,900	81%	107,000	-14,200	92,800	57%
US 1 (Capital Blvd)	North of Triangle Town Blvd Ext	91,400	127,400	36,000	39%	75,400	29,400	39%	104,800	-12,000	92,800	23%
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	90,900	127,400	36,500	40%	75,400	30,200	40%	105,600	-12,800	92,800	23%
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	90,900	127,400	36,500	40%	72,300	28,900	40%	101,200	-8,400	92,800	28%
US 1 (Capital Blvd)	North of Simms Creek Rd	90,900	127,400	36,500	40%	72,300	28,900	40%	101,200	-8,400	92,800	28%
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	76,700	131,100	54,400	71%	61,800	43,900	71%	105,700	-600	105,100	70%
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	76,700	131,100	54,400	71%	60,400	42,900	71%	103,300	1,800	105,100	74%
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	76,700	131,100	54,400	71%	59,900	42,500	71%	102,400	2,700	105,100	75%
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	76,700	131,100	54,400	71%	59,800	42,500	71%	102,300	2,800	105,100	76%
US 1 (Capital Blvd)	North of Crossroads Ford Dwy/Burlington Mills Rd	65,100	116,600	51,500	79%	57,500	45,400	79%	102,900	1,100	104,000	81%
US 1 (Capital Blvd)	North of Height Ln	65,100	116,600	51,500	79%	57,500	45,400	79%	102,900	1,100	104,000	81%
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	64,300	106,600	42,300	66%	55,900	36,900	66%	92,800	6,100	98,900	77%
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	64,300	106,600	42,300	66%	57,000	37,600	66%	94,600	4,300	98,900	74%
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	64,300	106,600	42,300	66%	58,200	38,400	66%	96,600	2,300	98,900	70%
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	64,300	106,600	42,300	66%	58,200	38,400	66%	96,600	2,300	98,900	70%
US 1 (Capital Blvd)	North of NC 98 Bypass	44,500	73,900	29,400	66%	51,600	34,100	66%	85,700	1,800	87,500	70%
US 1 (Capital Blvd)	North of NC 98 Business	43,100	73,400	30,300	70%	48,400	33,900	70%	82,300	0	82,300	70%
US 1 (Capital Blvd)	North of Wake Union Church Rd/Lowes Foods Dwy	43,100	73,400	30,300	70%	50,400	35,300	70%	85,700	-3,400	82,300	63%
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/ Wake Forest Crossing Dwy	58,000	73,400	15,400	27%	49,900	13,500	27%	63,400	18,900	82,300	65%
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr	56,800	73,400	16,600	29%	49,200	14,300	29%	63,500	18,800	82,300	67%
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd	58,000	73,400	15,400	27%	49,500	13,400	27%	62,900	19,400	82,300	66%
US 1 (Capital Blvd)	North of St. Catherines Dr	58,000	73,400	15,400	27%	49,500	13,400	27%	62,900	19,400	82,300	66%
US 1 (Capital Blvd)	North of Club Villas Dr	57,900	73,400	15,500	27%	49,500	13,400	27%	62,900	19,400	82,300	66%
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	56,700	68,000	11,300	20%	44,000	8,800	20%	52,800	4,400	57,200	30%
US 1 (Capital Blvd)	North of Wall Rd	65,100	72,500	7,400	11%	44,800	4,900	11%	49,700	6,700	56,400	26%
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd	59,200	64,500	5,300	9%	44,400	4,000	9%	48,400	7,600	56,000	26%
US 1 (Capital Blvd)	North of Holden Rd	52,000	55,600	3,600	7%	33,000	2,300	7%	35,300	9,300	44,600	35%
Sumner Blvd Ext	West of US 1 (Capital Blvd)	8,200	10,100	1,900	23%	2,900	700	23%	3,600	3,100	6,700	131%
Sumner Blvd	East of US 1 (Capital Blvd)	15,200	15,500	300	2%	12,700	300	2%	13,000	1,500	14,500	14%
Old Wake Forest Rd	West of US 1 (Capital Blvd)	46,900	47,200	300	1%	57,400	600	1%	58,000	-600	57,400	0%
Old Wake Forest Rd	East of US 1 (Capital Blvd)	15,600	17,700	2,100	13%	41,600	5,400	13%	47,000	-5,400	41,600	0%
I-540	West of Falls of Neuse Rd	138,200	142,000	3,800	3%	160,300	4,800	3%	165,100	-500	164,600	3%
I-540	West of US 1 (Capital Blvd)	127,300	135,600	8,300	7%	131,700	9,200	7%	140,900	2,000	142,900	9%
I-540	West of Triangle Town Blvd	92,600	121,400	28,800	31%	133,700	41,400	31%	175,100	-32,700	142,400	7%
I-540	West of US 401 (Louisburg Rd)	129,300	130,200	900	1%	147,200	1,500	1%	148,700	4,100	152,800	4%
I-540	East of US 401 (Louisburg Rd)	122,000	123,600	1,600	1%	125,700	1,300	1%	127,000	300	127,300	1%
Falls of Neuse Rd	South of Thorpshire Dr	40,300	38,400	-1,900	-5%	45,500	-2,300	-5%	43,200	-100	43,100	-5%
Falls of Neuse Rd	South of I-540	43,100	41,000	-2,100	-5%	47,400	-2,400	-5%	45,000	0	45,000	-5%
Falls of Neuse Rd	North of I-540	64,100	54,400	-9,700	-15%	62,000	-9,300	-15%	52,700	0	52,700	-15%
Falls of Neuse Rd	North of Falls Valley Dr	64,100	54,400	-9,700	-15%	59,200	-8,900	-15%	50,300	-400	49,900	-16%
Thorpshire Dr	East of Falls of Neuse Rd	4,800	4,700	-100	-2%	3,700	-100	-2%	3,600	100	3,700	0%
Falls Valley Dr	East of Falls of Neuse Rd	2,400	2,400	0	0%	5,800	0	0%	5,800	0	5,800	0%
Triangle Town Blvd	South of I-540	29,300	30,400	1,100	4%	24,900	1,000	4%	25,900	-7,300	18,600	-25%
Triangle Town Blvd Ext	North of I-540	26,600	24,000	-2,600	-10%	22,600	-2,300	-10%	20,300	-7,100	13,200	-42%
Triangle Town Blvd Ext	West of Simms Creek Service Rd	26,500	19,200	-7,300	-28%	22,300	-6,200	-28%	16,100	-7,500	8,600	-61%
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	26,500	19,200	-7,300	-28%	22,300	-6,200	-28%	16,100	-13,900	2,200	-90%
Triangle Town Blvd Ext	North of Gresham Lake Rd	18,600	22,200	3,600	19%	10,000	1,900	19%	11,900	-9,700	2,200	-78%
Triangle Town Blvd Ext	South of Gresham Lake Rd	4,200	8,000	3,800	90%	3,600	3,200	90%	6,800	200	7,000	94%

Table 6-2 - 2040 Future Year Build Conditions Scenario A Traffic Forecasts (Continued)

Roadway	Location	2040 No Build Conditions TRM Model Volume (vpd)	2040 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2040 No Build TRM Model to 2040 Build Scenario A TRM Model (vpd)	Percent Change from 2040 No Build TRM Model Volume to 2040 Build Scenario A TRM Model Volume (%)	2040 No Build Conditions Traffic Forecasts (AADT)	Selected Change in Volume from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (AADT)	Selected Percent Change from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (%)	Calculated 2040 Build Scenario A Volumes based on TRM Selected Percent Change (AADT)	Adjustments based on Travel Pattern Changes Unaccounted for TRM Model and/or Balancing (AADT)	Selected 2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Applied Percent Change from 2040 No Build Forecasts to 2040 Build Sce A Forecasts (%)
US 401 (Louisburg Rd)	South of I-540	68,500	69,300	800	1%	58,300	600	1%	58,900	-600	58,300	0%
US 401 (Louisburg Rd)	North of I-540	72,000	67,900	-4,100	-6%	79,200	-4,800	-6%	74,400	800	75,200	-5%
US 401 (Louisburg Rd)	North of Fox Rd	74,800	71,500	-3,300	-4%	73,700	-2,900	-4%	70,800	-1,100	69,700	-5%
Fox Rd	West of US 401 (Louisburg Rd)	25,500	24,800	-700	-3%	30,200	-900	-3%	29,300	900	30,200	0%
Fox Rd	East of US 401 (Louisburg Rd)	6,300	4,200	-2,100	-33%	23,300	-7,700	-33%	15,600	7,700	23,300	0%
Gresham Lake Rd	West of Capital Hills Dr (Service Rd)	21,400	21,400	0	0%	13,200	0	0%	13,200	0	13,200	0%
Gresham Lake Rd	East of Capital Hills Dr	21,200	28,000	6,800	32%	13,300	4,300	32%	17,600	-3,700	13,900	5%
Gresham Lake Rd	East of Triangle Town Blvd Ext	6,900	9,600	2,700	39%	3,900	1,500	39%	5,400	3,700	9,100	133%
Gresham Lake Rd	West of US 1 (Capital Blvd)	7,700	8,600	900	12%	4,500	500	12%	5,000	3,500	8,500	89%
Capital Hills Dr (Service Rd)	North of Gresham Lake Rd	800	7,900	7,100	888%	7,500	66,600	888%	74,100	-66,000	8,100	8%
Capital Hills Dr (Service Rd)	North of Cheviot Hills Dr	-	9,300	9,300	-	7,500	-	-	-	-	8,100	8%
Capital Hills Dr (Service Rd)	North of Capital Hills Connector	-	9,300	9,300	-	8,500	-	-	-	-	13,300	56%
Overlook Rd	South of Gresham Lake Rd	2,200	2,200	0	0%	3,000	0	0%	3,000	0	3,000	0%
Cheviot Hills Dr	East of Capital Hills Dr (Service Rd)	-	-	-	-	400	-	-	-	-	400	0%
Capital Hills Connector	East of Capital Hills Dr (Service Rd)	-	-	-	-	7,400	-	-	-	-	11,600	57%
Triangle Town Blvd Ramp	South of Triangle Town Blvd Ext	-	4,200	4,200	-	-	-	-	-	-	3,400	-
Simms Creek Rd (Service Rd)	North of Triangle Town Blvd Ext	-	3,600	3,600	-	-	-	-	-	-	11,200	-
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	-	6,700	6,700	-	-	-	-	-	-	8,400	-
Simms Creek Rd (Service Rd)	North of Homestead Dr	-	6,700	6,700	-	-	-	-	-	-	8,300	-
Simms Creek Rd (Service Rd)	North of Simms Creek Connector	-	5,600	5,600	-	-	-	-	-	-	7,300	-
Jacqueline Ln	East of Simms Creek Rd (Service Rd)	3,200	3,200	0	0%	3,800	0	0%	3,800	0	3,800	0%
Homestead Dr	East of Simms Creek Rd (Service Rd)	-	-	-	-	2,100	-	-	-	-	2,100	0%
Simms Creek Connector	East of Simms Creek Rd (Service Rd)	-	1,900	1,900	-	3,000	-	-	-	-	3,000	0%
Durant Rd	West of Capital Hills Dr (Service Rd)	27,400	30,100	2,700	10%	24,400	2,400	10%	26,800	500	27,300	12%
Durant Rd	West of US 1 (Capital Blvd)	28,500	36,300	7,800	27%	22,700	6,100	27%	28,800	2,000	30,800	36%
Perry Creek Rd	West of Wild Wood Forest Dr (Service Rd)	28,900	36,200	7,300	25%	31,000	7,800	25%	38,800	12,100	50,900	64%
Perry Creek Rd	West of Clarks Fork Dr	28,900	35,700	6,800	24%	26,000	6,200	24%	32,200	400	32,600	25%
Perry Creek Rd	West of McGuire Dr	28,900	35,700	6,800	24%	22,600	5,400	24%	28,000	1,200	29,200	29%
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr	28,900	35,700	6,800	24%	21,500	5,200	24%	26,700	1,400	28,100	31%
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	33,700	33,800	100	0%	25,800	0	0%	25,800	6,600	32,400	26%
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	-	1,200	1,200	-	-	-	-	-	-	3,600	-
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	-	1,400	1,400	-	-	-	-	-	-	2,500	-
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	-	1,400	1,400	-	-	-	-	-	-	2,400	-
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	-	1,400	1,400	-	-	-	-	-	-	2,400	-
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	-	1,400	1,400	-	-	-	-	-	-	2,500	-
Mallinckrodt, Inc. Dwy	West of Capital Hills Dr (Service Rd)	1,200	200	-1,000	-83%	1,300	-1,100	-83%	200	1,100	1,300	0%
Pro Tire Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	-	300	-	-	-	-	300	0%
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	-	300	-	-	-	-	300	0%
Simms Creek Rd (Service Rd)*	North of Eaton Dwy	-	5,600	5,600	-	300	-	-	-	-	7,600	2433%
Wadford Dr (Service Rd)*	North of Perry Creek Rd	-	1,800	1,800	-	10,900	-	-	-	-	19,700	81%
Wadford Dr (Service Rd)	North of Wild Wood Forest Dr	-	1,800	1,800	-	1,400	-	-	-	-	9,400	571%
Wadford Dr (Service Rd)	North of Thornton Rd	-	6,500	6,500	-	1,600	-	-	-	-	4,700	194%
Wadford Dr (Service Rd)	North of River Haven Pl	-	6,500	6,500	-	-	-	-	-	-	4,100	-
Wadford Dr (Service Rd)	South of Shearon Farms Ave	-	6,500	6,500	-	-	-	-	-	-	4,100	-
Wadford Dr (Service Rd)	North of Shearon Farms Ave	-	5,400	5,400	-	-	-	-	-	-	10,900	-
Eaton Dwy*	West of Simms Creek Rd (Service Rd)	-	-	-	-	300	-	-	-	-	300	0%
Wild Wood Forest Dr*	East of Wadford Dr (Service Rd)	-	-	-	-	10,900	-	-	-	-	10,900	0%
Thornton Rd	West of Wadford Dr (Service Rd)	-	-	-	-	5,200	-	-	-	-	7,300	40%
Thornton Rd	East of Wadford Dr (Service Rd)	14,700	5,000	-9,700	-66%	4,800	-3,200	-66%	1,600	3,200	4,800	0%
River Haven Pl	East of Wadford Dr (Service Rd)	-	-	-	-	800	-	-	-	-	800	0%
Shearon Farms Ave	East of Wadford Dr (Service Rd)	4,400	2,200	-2,200	-50%	2,400	-1,200	-50%	1,200	6,400	7,600	217%
Clarks Fork Dr	North of Perry Creek Rd	-	-	-	-	4,800	-	-	-	-	4,800	0%
McGuire Dr	South of Perry Creek Rd	-	-	-	-	2,900	-	-	-	-	2,900	0%
Liston Dr	South of Perry Creek Rd	7,200	5,300	-1,900	-26%	1,400	-400	-26%	1,000	400	1,400	0%
Filbin Creek Dr	North of Perry Creek Rd	19,300	28,800	9,500	49%	7,300	3,600	49%	10,900	-3,600	7,300	0%

* Realignment exists between 2040 BYNB Conditions and 2040 FYB Scenario A Conditions at these locations

Table 6-2 - 2040 Future Year Build Conditions Scenario A Traffic Forecasts (Continued)

Roadway	Location	2040 No Build Conditions TRM Model Volume (vpd)	2040 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2040 No Build TRM Model to 2040 Build Scenario A TRM Model (vpd)	Percent Change from 2040 No Build TRM Model Volume to 2040 Build Scenario A TRM Model Volume (%)	2040 No Build Conditions Traffic Forecasts (AADT)	Selected Change in Volume from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (AADT)	Selected Percent Change from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (%)	Calculated 2040 Build Scenario A Volumes based on TRM Selected Percent Change (AADT)	Adjustments based on Travel Pattern Changes Unaccounted for TRM Model and/or Balancing (AADT)	Selected 2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Applied Percent Change from 2040 No Build Forecasts to 2040 Build Sce A Forecasts (%)
Crossroads Ford Dwy	West of Capital Hills Dr (Service Rd)	7,200	7,300	100	1%	1,500	0	1%	1,500	0	1,500	0%
Burlington Mills Rd	West of US 1 (Capital Blvd)	7,200	8,900	1,700	24%	1,500	400	24%	1,900	6,800	8,700	480%
Burlington Mills Rd	West of Wadford Dr (Service Rd)	22,600	43,600	21,000	93%	23,000	21,400	93%	44,400	-8,400	36,000	57%
Burlington Mills Rd	West of One World Way	22,600	36,800	14,200	63%	22,600	14,200	63%	36,800	-6,900	29,900	32%
Burlington Mills Rd	West of Ligon Mill Rd	26,000	34,200	8,200	32%	20,200	6,500	32%	26,700	800	27,500	36%
Capital Hills Dr (Service Rd)	North of Crossroads Ford Dwy/Burlington Mills Rd	-	1,200	1,200	-	-	-	-	-	-	9,100	-
Ponderosa Service Rd	South of Height Ln	-	1,200	1,200	-	-	-	-	-	-	9,100	-
Ponderosa Service Rd	North of Height Ln	900	1,200	300	33%	9,500	3,100	33%	12,600	-400	12,200	28%
Common Oaks Dr (South)	West of Ponderosa Service Rd	900	100	-800	-89%	9,500	-8,500	-89%	1,000	11,200	12,200	28%
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	-	2,300	2,300	-	6,200	-	-	-	-	4,200	-32%
Common Oaks Dr (South)	West of Height Ln	-	1,400	1,400	-	6,200	-	-	-	-	5,900	-5%
Height Ln	South of Common Oaks Dr	-	3,600	3,600	-	-	-	-	-	-	3,300	-
Height Ln	West of Ponderosa Service Rd	-	-	-	-	1,300	-	-	-	-	3,300	154%
Height Ln	West of US 1 (Capital Blvd)	3,800	-	-	-	9,200	-	-	-	-	6,000	-35%
Height Ln	East of Wake Dr (Service Rd)	-	-	-	-	-	-	-	-	-	4,500	-
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (South)	13,100	14,900	1,800	14%	8,300	1,200	14%	9,500	3,500	13,000	57%
Wadford Dr (Service Rd)	North of Burlington Mills Rd	-	13,400	13,400	-	-	-	-	-	-	2,600	-
Wake Dr (Service Rd)	South of Height Ln	-	4,200	4,200	-	-	-	-	-	-	2,600	-
Wake Dr (Service Rd)	North of Height Ln	-	4,200	4,200	-	-	-	-	-	-	3,500	-
Wake Dr (Service Rd)*	North of Star Rd	-	9,000	9,000	-	2,200	-	-	-	-	3,500	59%
Star Rd*	West of Wake Dr (Service Rd)	2,300	1,600	-700	-30%	1,100	-300	-30%	800	-600	200	-82%
One World Way	North of Burlington Mills Rd	3,700	700	-3,000	-81%	9,600	-7,800	-81%	1,800	7,800	9,600	0%
Ligon Mill Rd	South of Height Ln Connector	13,900	16,000	2,100	15%	10,400	1,600	15%	12,000	-100	11,900	14%
Ligon Mill Rd	North of Height Ln Connector	14,700	8,700	-6,000	-41%	10,400	-4,300	-41%	6,100	5,300	11,400	10%
Falls of Neuse Rd	West of Forest Pines Dr (Service Rd)	35,200	28,900	-6,300	-18%	29,500	-5,300	-18%	24,200	-500	23,700	-20%
Falls of Neuse Rd	West of Wakefield Commons Entrance	41,700	39,600	-2,100	-5%	30,100	-1,500	-5%	28,600	-3,900	24,700	-18%
Falls of Neuse Rd	West of US 1 (Capital Blvd)	41,700	39,600	-2,100	-5%	35,100	-1,800	-5%	33,300	-3,600	29,700	-15%
US 1A (Main St)	West of Wake Dr (Service Rd)/Golden Corral Dwy	28,500	38,400	9,900	35%	36,500	12,800	35%	49,300	-5,500	43,800	20%
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	28,500	32,200	3,700	13%	36,200	4,700	13%	40,900	3,200	44,100	22%
US 1A (Main St)	West of Ligon Mill Rd	28,300	31,600	3,300	12%	37,800	4,500	12%	42,300	400	42,700	13%
US 1A (Main St)	East of Ligon Mill Rd	33,200	35,500	2,300	7%	35,300	2,500	7%	37,800	0	37,800	7%
Forest Pines Dr (Service Rd)	North of Falls of Neuse Rd	-	1,100	1,100	-	10,900	-	-	-	-	12,800	17%
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (North)	-	3,600	3,600	-	9,400	-	-	-	-	11,300	20%
Forest Pines Dr (Service Rd)	North of Corona Blvd	-	3,600	3,600	-	8,900	-	-	-	-	10,200	15%
Common Oaks Dr (North)	West of Forest Pines Dr (Service Rd)	-	2,600	2,600	-	3,600	-	-	-	-	3,600	0%
Common Oaks Dr (North)	East of Forest Pines Dr (Service Rd)	-	-	-	-	1,300	-	-	-	-	1,300	0%
Common Oaks Dr (North)	North of Popes Creek Dr	-	-	-	-	1,900	-	-	-	-	1,900	0%
Popes Creek Dr	East of Forest Pines Dr (Service Rd)	-	-	-	-	1,800	-	-	-	-	1,800	0%
Corona Blvd	East of Forest Pines Dr (Service Rd)	-	-	-	-	5,500	-	-	-	-	5,500	0%
Wakefield Commons Entrance	South of Falls of Neuse Rd	-	-	-	-	6,200	-	-	-	-	6,200	0%
Golden Corral Dwy	North of US 1A (Main St)	-	-	-	-	1,200	-	-	-	-	1,200	0%
O2 Fitness Dwy	South of US 1A (Main St)	2,300	2,000	-300	-13%	1,100	-100	-13%	1,000	100	1,100	0%
Walmart Dwy	North of US 1A (Main St)	-	-	-	-	12,700	-	-	-	-	15,700	24%
Ligon Mill Rd	North of US 1A (Main St)	12,600	9,500	-3,100	-25%	12,100	-3,000	-25%	9,100	7,400	16,500	36%
Ligon Mill Rd Ext	North of Caveness Farms Ave	7,900	3,200	-4,700	-59%	6,300	-3,700	-59%	2,600	6,300	8,900	41%
Galaxy Dr (Service Rd)	South of Shoppes at Caveness Farms Connector	-	-	-	-	-	-	-	-	-	1,100	-
Galaxy Dr (Service Rd)	North of Shoppes at Caveness Farms Connector	-	-	-	-	-	-	-	-	-	8,300	-
Galaxy Dr (Service Rd)	North of Caveness Farms Ave	-	900	900	-	-	-	-	-	-	5,100	-
Shoppes at Caveness Farms Connector	East of Galaxy Dr (Service Rd)	-	-	-	-	1,800	-	-	-	-	7,600	322%
Caveness Farms Ave	East of Galaxy Dr (Service Rd)	1,100	900	-200	-18%	3,500	-600	-18%	2,900	7,700	10,600	203%
NC 98 Bypass	West of Wakefield Plantation Dr (Service Rd)	30,000	26,700	-3,300	-11%	40,000	-4,400	-11%	35,600	0	35,600	-11%
NC 98 Bypass	West of Retail Dr (Service Rd)	38,200	38,500	300	1%	46,700	500	1%	47,200	-3,400	43,800	-6%
NC 98 Bypass	West of US 1 (Capital Blvd)	44,100	44,900	800	2%	57,500	1,200	2%	58,700	-4,600	54,100	-6%
NC 98 Bypass	West of Galaxy Dr (Service Rd)	52,500	51,900	-600	-1%	61,300	-600	-1%	60,700	3,200	63,900	4%
NC 98 Bypass	West of Ligon Mill Rd Ext	52,500	48,600	-3,900	-7%	61,300	-4,300	-7%	57,000	3,100	60,100	-2%
NC 98 Bypass	East of Ligon Mill Rd Ext	45,100	46,900	1,800	4%	58,000	2,300	4%	60,300	0	60,300	4%

* Realignment exists between 2040 BYNB Conditions and 2040 FYB Scenario A Conditions at these locations

Table 6-2 - 2040 Future Year Build Conditions Scenario A Traffic Forecasts (Continued)

Roadway	Location	2040 No Build Conditions TRM Model Volume (vpd)	2040 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2040 No Build TRM Model to 2040 Build Scenario A TRM Model (vpd)	Percent Change from 2040 No Build TRM Model Volume to 2040 Build Scenario A TRM Model Volume (%)	2040 No Build Conditions Traffic Forecasts (AADT)	Selected Change in Volume from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (AADT)	Selected Percent Change from 2040 No Build Forecasts to 2040 Build Scenario A based on TRM Model Volumes (%)	Calculated 2040 Build Scenario A Volumes based on TRM Selected Percent Change (AADT)	Adjustments based on Travel Pattern Changes Unaccounted for TRM Model and/or Balancing (AADT)	Selected 2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Applied Percent Change from 2040 No Build Forecasts to 2040 Build Sce A Forecasts (%)
Wakefield Plantation Dr (Service Rd)	South of NC 98 Bypass	-	3,600	3,600	-	8,900	-	-	-	-	10,200	15%
Northpark Dr	South of NC 98 Bypass	-	-	-	-	4,200	-	-	-	-	4,200	0%
Retail Dr (Service Rd)	North of NC 98 Bypass	6,000	7,200	1,200	20%	13,400	2,700	20%	16,100	-2,200	13,900	4%
Retail Dr (Service Rd)	South of NC 98 Business	-	-	-	-	6,900	-	-	-	-	7,400	7%
Hampton Way (Service Rd)	North of NC 98 Business	4,300	4,600	300	7%	3,300	200	7%	3,500	4,700	8,200	148%
Galaxy Dr	North of NC 98 Bypass	-	2,400	2,400	-	3,000	-	-	-	-	5,700	90%
Galaxy Dr	North of Lowes Ave	-	1,800	1,800	-	2,500	-	-	-	-	4,800	92%
Richland Dr (Service Rd)	West of Ligon Mill Rd Ext	-	1,800	1,800	-	-	-	-	-	-	4,800	-
Lowes Ave	East of Galaxy Dr (Service Rd)	-	500	500	-	900	-	-	-	-	1,300	44%
Lowes Ave	East of Ligon Mill Rd Ext	-	2,100	2,100	-	-	-	-	-	-	500	-
Ligon Mill Rd Ext	North of NC 98 Bypass	-	1,400	1,400	-	-	-	-	-	-	8,300	-
Ligon Mill Rd Ext	North of Lowes Ave	-	3,000	3,000	-	-	-	-	-	-	8,700	-
Ligon Mill Rd Ext	North of Richland Dr (Service Rd)	-	4,700	4,700	-	-	-	-	-	-	7,700	-
Ligon Mill Rd Ext	North of NC 98 Business	-	1,900	1,900	-	-	-	-	-	-	15,200	-
Ligon Mill Rd Ext	North of New Service Rd	-	2,100	2,100	-	-	-	-	-	-	8,200	-
NC 98 Business	West of Hampton Way	9,700	14,000	4,300	44%	24,600	10,800	44%	35,400	-3,400	32,000	30%
NC 98 Business	West of US 1 (Capital Blvd)	12,400	16,800	4,400	35%	26,800	9,400	35%	36,200	2,800	39,000	46%
NC 98 Business	East of US 1 (Capital Blvd)	15,200	17,800	2,600	17%	21,600	3,700	17%	25,300	-500	24,800	15%
NC 98 Business	East of Ligon Mill Rd Ext	11,100	12,100	1,000	9%	21,600	1,900	9%	23,500	-400	23,100	7%
New Service Rd	West of Ligon Mill Rd Ext	-	200	200	-	-	-	-	-	-	8,000	-
Wake Forest Presbyterian Church Dwy	West of Wake Union Church Rd (Service Rd)	-	-	-	-	-	-	-	-	-	400	-
Wake Forest Crossing Dwy	East of New Service Rd	-	-	-	-	-	-	-	-	-	1,400	-
Frontage Rd	South of Wake Forest Presbyterian Church Dwy	-	100	-	-	-	-	-	-	-	2,200	-
Frontage Rd	South of Jenkins Rd	-	3,200	-	-	-	-	-	-	-	2,200	-
Wake Union Church Rd (Service Rd)	North of Wake Forest Presbyterian Church Dwy	-	2,400	-	-	-	-	-	-	-	8,200	-
Wake Union Church Rd (Service Rd)	North of Jenkins Rd	-	2,400	-	-	-	-	-	-	-	8,200	-
Wake Union Church Rd (Service Rd)	North of Country Club Dr	-	2,400	-	-	-	-	-	-	-	8,100	-
Wake Union Church Rd (Service Rd)	North of Club Villas Dr	-	3,200	-	-	-	-	-	-	-	8,100	-
New Service Rd	North of Wake Forest Crossing Dwy	-	200	-	-	-	-	-	-	-	6,800	-
New Service Rd	North of Stadium Dr	-	200	-	-	-	-	-	-	-	6,800	-
New Service Rd	North of Templeridge Rd	-	1,500	-	-	-	-	-	-	-	7,200	-
New Service Rd	North of St Catherines Dr	-	1,500	-	-	-	-	-	-	-	7,200	-
Jenkins Rd	West of Frontage Rd	4,025	3,200	-825	-20%	6,800	-1,400	-20%	5,400	0	5,400	-21%
Jenkins Rd	West of Wake Union Church Rd (Service Rd)	4,705	4,700	-5	0%	6,800	0	0%	6,800	-600	6,200	-9%
Stadium Dr	East of New Service Rd	8,679	4,700	-3,979	-46%	10,700	-4,900	-46%	5,800	400	6,200	-42%
Stadium Dr	East of Wake Forest Crossing Rear Dwy	8,679	6,568	-2,111	-24%	11,500	-2,800	-24%	8,700	-2,000	6,700	-42%
Stadium Dr	East of Ligon Mill Rd Ext	10,400	5,200	-5,200	-50%	11,500	-5,800	-50%	5,700	2,600	8,300	-28%
Wake Forest Crossing Rear Dwy	South of Stadium Dr	9,400	0	-9,400	-100%	7,000	-7,000	-100%	0	7,300	7,300	4%
Country Club Dr	West of Wake Union Church Rd (Service Rd)	-	-	-	-	700	-	-	-	-	700	0%
Templeridge Rd	East of New Service Rd	1,269	1,200	-69	-5%	800	0	-5%	800	0	800	0%
St. Catherines Dr	East of New Service Rd	-	-	-	-	400	-	-	-	-	400	0%
Club Villas Dr	West of Wake Union Church Rd (Service Rd)	1,550	1,600	50	3%	600	0	3%	600	0	600	0%
Purnell Rd	West of Wake Union Church Rd (Service Rd)	7,986	9,124	1,138	14%	7,700	1,100	14%	8,800	2,900	11,700	52%
Purnell Rd	West of US 1 (Capital Blvd)	8,000	11,800	3,800	48%	7,700	3,700	48%	11,400	2,600	14,000	82%
Harris Rd	East of US 1 (Capital Blvd)	8,000	15,100	7,100	89%	13,200	11,700	89%	24,900	-1,600	23,300	77%
Harris Rd	East of Wallridge Rd	6,700	12,900	6,200	93%	8,600	8,000	93%	16,600	-300	16,300	90%
Wallridge Rd	North of Harris Rd	900	1,200	300	33%	5,000	1,700	33%	6,700	-1,700	5,000	0%
Wall Rd	East of US 1 (Capital Blvd)	9,300	6,000	-3,300	-35%	8,000	-2,800	-35%	5,200	-400	4,800	-40%
Sunset Dr	West of US 1 (Capital Blvd)	-	-	-	-	1,400	-	-	-	-	1,400	0%
Rolling Acres Rd	East of US 1 (Capital Blvd)	15,800	16,600	800	5%	1,400	100	5%	1,500	-100	1,400	0%
Holden Rd	West of US 1 (Capital Blvd)	7,600	8,300	700	9%	7,100	600	9%	7,700	100	7,800	10%
Holden Rd	East of US 1 (Capital Blvd)	5,700	6,300	600	11%	9,300	1,000	11%	10,300	-100	10,200	10%

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYB Conditions Scenario A were assumed to remain the same as those for the 2040 FYNB Conditions at all study locations, with the exception of the factors along the roads shown in Table 6-3. The changes in traffic factors along these roads – I-540, Triangle Town Blvd Extension, Fox Rd, Gresham Lake Rd, Ligon Mill Rd Extension, and NC 98 Bypass – are due to the shifts in traffic related to travel pattern changes associated with the additions of the Triangle Town Blvd/Sumner Blvd Extension and Ligon Mill Rd Extension projects. Changes to other roadways are the result of grown traffic naturally shifting with new volumes.

Table 6-3 - 2040 Future Year Build Conditions Scenario A Traffic Factors

Roadway	Location	2040 Future Year No Build Conditions			2040 Future Year Build Conditions Scenario A		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Sumner Blvd Ext	West of US 1 (Capital Blvd)	55%	9%	EB	55%	9%	WB
Falls Valley Dr	East of Falls of Neuse Rd	55%	8%	WB	55%	8%	EB
Triangle Town Blvd Ext	North of I-540	55%	9%	NB	55%	9%	SB
Triangle Town Blvd Ext	East of Triangle Town Connector	55%	9%	WB	55%	9%	EB
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	55%	9%	WB	55%	9%	EB
Triangle Town Blvd Ext	South of Gresham Lake Rd	55%	9%	SB	55%	9%	NB
Gresham Lake Rd	West of Overlook Rd	55%	9%	EB	60%	9%	EB
Capital Hills Dr (Service Rd)	North of Capital Hills Connector	60%	8%	NB	60%	9%	NB
Overlook Rd	South of Gresham Lake Rd	60%	8%	NB	55%	8%	NB
Capital Hills Connector	East of Capital Hills Dr (Service Rd)	55%	8%	WB	60%	8%	WB
Triangle Town Connector	South of Triangle Town Blvd Ext	-	-	-	100%	9%	NB
Simms Creek Rd (Service Rd)	North of Triangle Town Blvd Ext	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Homestead Dr	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Simms Creek Connector	-	-	-	55%	9%	NB
Jacqueline Ln	East of Simms Creek Rd (Service Rd)	65%	8%	EB	55%	8%	EB
Homestead Dr	East of Simms Creek Rd (Service Rd)	60%	8%	EB	55%	8%	EB
Durant Rd	West of Capital Hills Dr (Service Rd)	55%	8%	EB	60%	8%	EB
Durant Rd	West of US 1 (Capital Blvd)	60%	8%	EB	65%	8%	EB
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	-	-	-	55%	9%	NB
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	-	-	-	55%	9%	NB
Mallinckrodt, Inc. Dwy	West of Capital Hills Dr (Service Rd)	70%	9%	EB	55%	9%	EB
Pro Tire Dwy	West of Capital Hills Dr (Service Rd)	65%	8%	EB	55%	8%	EB
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	75%	12%	WB	65%	12%	WB
Simms Creek Rd (Service Rd)	North of Eaton Dwy	75%	10%	SB	55%	9%	NB
Wadford Dr (Service Rd)	North of Perry Creek Rd	-	-	-	60%	9%	NB
Wadford Dr (Service Rd)	North of Wild Wood Forest Dr	60%	11%	NB	55%	9%	NB
Wadford Dr (Service Rd)	North of Thornton Rd	60%	10%	NB	70%	9%	NB
Wadford Dr (Service Rd)	North of River Haven Pl	-	-	-	70%	9%	NB
Wadford Dr (Service Rd)	South of Shearon Farms Ave	-	-	-	70%	9%	NB
Wadford Dr (Service Rd)	North of Shearon Farms Ave	-	-	-	55%	9%	NB
Thornton Rd	West of Wadford Dr (Service Rd)	55%	8%	EB	60%	8%	EB
Shearon Farms Ave/Urial Dr	East of Wadford Dr (Service Rd)	75%	10%	EB	55%	10%	EB
Ponderosa Service Rd	North of Burlington Mills Rd	-	-	-	55%	9%	SB
Ponderosa Service Rd	South of Height Ln	-	-	-	55%	9%	SB
Ponderosa Service Rd	South of Common Oaks Dr (South)	65%	9%	NB	55%	9%	SB
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	65%	9%	WB	55%	9%	EB
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	60%	9%	WB	55%	9%	EB
Common Oaks Dr (South)	West of Height Ln	60%	9%	WB	60%	9%	EB
Height Ln	South of Common Oaks Dr (South)	-	-	-	65%	8%	SB
Height Ln	West of Ponderosa Service Rd	55%	9%	EB	65%	8%	EB
Height Ln	West of Wake Dr (Service Rd)	65%	9%	WB	65%	8%	EB
Height Ln Connector	West of Ligon Mill Rd	-	-	-	60%	8%	EB

Note: " - " indicates no factors for this location

For locations not included above, no change in traffic factors from 2040 FYNB Conditions to 2040 FYB Conditions Scenario A would occur.

Table 6-3 - 2040 Future Year Build Conditions Scenario A Traffic Factors (Continued)

Roadway	Location	2040 Future Year No Build Conditions			2040 Future Year Build Conditions Scenario A		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (South)	60%	8%	NB	55%	9%	SB
Wake Dr (Service Rd)	North of Burlington Mills Rd	-	-	-	55%	9%	NB
Wake Dr (Service Rd)	South of Height Ln	-	-	-	55%	9%	NB
Wake Dr (Service Rd)	South of Star Rd	-	-	-	65%	9%	NB
Wake Dr (Service Rd)	North of Star Rd	60%	9%	NB	65%	9%	NB
Star Rd	West of Wake Dr (Service Rd)	70%	7%	NB	65%	7%	SB
Ligon Mill Rd	South of US 1A (Main St)	60%	10%	NB	65%	10%	NB
Falls of Neuse Rd	West of Forest Pines Dr (Service Rd)	60%	8%	EB	65%	8%	EB
Forest Pines Dr (Service Rd)	North of Falls of Neuse Rd	55%	7%	NB	55%	9%	NB
Forest Pines Dr (Service Rd)	North of Corona Blvd	65%	9%	NB	60%	8%	NB
Corona Blvd	East of Forest Pines Dr (Service Rd)	55%	7%	WB	55%	8%	EB
Ligon Mill Rd	North of US 1A (Main St)	55%	9%	NB	65%	9%	NB
Ligon Mill Rd Ext	North of Caveness Farms Ave	55%	9%	NB	60%	9%	NB
Galaxy Dr (Service Rd)	South of Shoppes at Caveness Farms Connector	-	-	-	65%	9%	SB
Galaxy Dr (Service Rd)	North of Shoppes at Caveness Farms Connector	-	-	-	65%	9%	SB
Galaxy Dr (Service Rd)	North of Caveness Farms Ave	-	-	-	55%	9%	NB
Shoppes at Caveness Farms Connector	East of Galaxy Dr (Service Rd)	55%	9%	EB	65%	9%	EB
Caveness Farms Ave	East of Galaxy Dr (Service Rd)	55%	8%	EB	65%	8%	WB
Wakefield Plantation Dr	South of NC 98 Bypass	65%	9%	NB	60%	8%	NB
Retail Dr (Service Rd)	North of NC 98 Bypass	55%	7%	NB	55%	9%	NB
Retail Dr (Service Rd)	South of NC 98 Business	55%	7%	NB	55%	9%	NB
Hampton Way (Service Rd)	North of NC 98 Business	55%	12%	NB	55%	9%	NB
Galaxy Dr (Service Rd)	North of NC 98 Bypass	55%	9%	SB	55%	9%	NB
Galaxy Dr (Service Rd)	North of Lowes Ave	55%	9%	SB	55%	9%	NB
Richland Dr (Service Rd)	West of Ligon Mill Rd Ext	-	-	-	55%	9%	EB
Lowes Ave	West of Ligon Mill Rd Ext	60%	7%	WB	60%	9%	EB
Lowes Ave	East of Ligon Mill Rd Ext	60%	7%	WB	60%	9%	EB
Ligon Mill Rd Ext	North of NC 98 Bypass	-	-	-	55%	9%	NB
Ligon Mill Rd Ext	North of Lowes Ave	-	-	-	55%	9%	NB
Ligon Mill Rd Ext	North of Richland Dr (Service Rd)	-	-	-	60%	9%	NB
Ligon Mill Rd Ext	North of NC 98 Business	-	-	-	55%	9%	NB
Ligon Mill Rd Ext	North of New Service Rd	-	-	-	60%	9%	NB
New Service Rd	West of Ligon Mill Rd Ext	60%	9%	EB	55%	9%	EB
Frontage Rd	South of Wake Forest Presbyterian Church Dwy	-	-	-	55%	8%	NB
Frontage Rd	South of Jenkins Rd	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Wake Forest Presbyterian Church Dwy	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Jenkins Rd	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Country Club Dr	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Club Villas Dr	-	-	-	55%	8%	NB

Note: " - " indicates no factors for this location

For locations not included above, no change in traffic factors from 2040 FYNB Conditions to 2040 FYB Conditions Scenario A would occur.

Table 6-3 - 2040 Future Year Build Conditions Scenario A Traffic Factors (Continued)

Roadway	Location	2040 Future Year No Build Conditions			2040 Future Year Build Conditions Scenario A		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
New Service Rd	North of Wake Forest Crossing Dwy	-	-	-	55%	9%	SB
New Service Rd	North of Stadium Dr	-	-	-	55%	9%	SB
New Service Rd	North of Templeridge Rd	-	-	-	55%	9%	SB
New Service Rd	North of St Catherines Dr	-	-	-	55%	9%	SB
Jenkins Rd	West of Wake Union Church Rd (Service Rd)	55%	7%	EB	55%	8%	EB
Jenkins Rd	West of US 1 (Capital Blvd)	55%	7%	EB	55%	8%	EB
Stadium Dr	East of Ligon Mill Rd Ext	60%	8%	EB	70%	8%	EB
Harris Rd	East of US 1 (Capital Blvd)	55%	8%	EB	55%	9%	EB

Note: " - " indicates no factors for this location
For locations not included above, no change in traffic factors from 2040 FYNB Conditions to 2040 FYB Conditions Scenario A would occur.

6.2 2040 Future Year Build Conditions Scenario B

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2040 FYB Conditions Scenario B, all improvements included in the 2040 FYB Conditions Scenario A were included with the exception of the following:

- » No access from southbound US 1 to Gresham Lake Rd.
- » No access from Gresham Lake Rd to southbound US 1.
- » No access from northbound US 1 to Triangle Town Blvd Extension.

It should be noted that as the 2040 FYB Conditions Scenario B traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more substantially.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040.

Methodology

The 2040 FYB Conditions Scenario B traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2040 FYB Conditions Scenario A traffic forecast volumes as a basis for the 2040 FYB Conditions Scenario B traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 6-4.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2040 FYNB Conditions traffic forecast volumes as well

as the 2040 FYB Conditions Scenario A traffic forecast volumes, the 2040 FYB Conditions Scenario B traffic forecasts were finalized as shown on Table 6-4.

Figure G-4 depicts the volume changes from the 2040 FYB Conditions Scenario A traffic forecasts to the 2040 FYB Conditions Scenario B traffic forecasts. Figure 6 shows the 2040 FYB Conditions Scenario B AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2040 FYB Conditions Scenario A traffic forecasts.

Table 6-4 - 2040 Future Year Build Conditions Scenario B Traffic Forecasts

Roadway	Location	2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments based on Travel Pattern Changes Due to Balancing (AADT)	Selected 2040 Build Conditions Scenario B Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Sumner Blvd Ext/Sumner Blvd	81,800	-1,700	80,100
US 1 (Capital Blvd)	North of Old Wake Forest Rd	96,800	-1,700	95,100
US 1 (Capital Blvd)	North of I-540	103,700	-10,900	92,800
US 1 (Capital Blvd)	North of Triangle Town Blvd Ramp	100,300	-7,500	92,800
Sumner Blvd Ext	West of US 1 (Capital Blvd)	6,700	2,700	9,400
I-540	West of Triangle Town Blvd	142,400	1,200	143,600
Triangle Town Blvd Ext	North of I-540	13,200	9,200	22,400
Triangle Town Blvd Ext	East of Simms Creek Service Rd	8,600	9,100	17,700
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	2,200	9,900	12,100
Triangle Town Blvd Ext	North of Gresham Lake Rd	2,200	9,900	12,100
Triangle Town Blvd Ext	South of Gresham Lake Rd	7,000	2,800	9,800
Gresham Lake Rd	East of Triangle Town Blvd Ext	9,100	-6,100	3,000
Gresham Lake Rd	West of US 1 (Capital Blvd)	8,500	-8,500	0

For locations not included above, no change in traffic forecasted volume from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario B would occur.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYB Conditions Scenario B were assumed to remain the same as those for the 2040 FYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 6-5. The changes in traffic factors along these roads - Triangle Town Blvd Extension and Overlook Rd – are due to the travel pattern changes associated with the change in access to Gresham Lake Rd from US 1 (Capital Blvd).

Table 6-5 - 2040 Future Year Build Conditions Scenario B Traffic Factors

Roadway	Location	2040 Future Year Build Conditions Scenario A			2040 Future Year Build Conditions Scenario B		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Triangle Town Blvd Ext	East of US 1 (Capital Blvd)	55%	9%	EB	60%	9%	EB
Triangle Town Blvd Ext	North of Gresham Lake Rd	55%	9%	EB	60%	9%	EB
Overlook Rd	South of Gresham Lake Rd	55%	8%	NB	60%	9%	SB

For locations not included above, no change in traffic factors from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario B would occur.

6.3 2040 Future Year Build Conditions Scenario C

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2040 FYB Conditions Scenario C, all improvements included in the 2040 FYB Conditions Scenario A were included with the exception of the following:

- » No bridges for the services roads over the Neuse River.

It should be noted that as the 2040 FYB Conditions Scenario C traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040.

Methodology

The 2040 FYB Conditions Scenario C traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2040 FYB Conditions Scenario A traffic forecast volumes as a basis for the 2040 FYB Conditions Scenario C traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 6-6
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2040 FYNB Conditions traffic forecast volumes as well as the 2040 FYB Conditions Scenario A traffic forecast volumes, the 2040 FYB Conditions Scenario C traffic forecasts were finalized as shown on Table 6-6.

Figure G-5 depicts the volume changes from the 2040 FYB Conditions Scenario A traffic forecasts to the 2040 FYB Conditions Scenario C traffic forecasts. Figure 7 shows the 2040 FYB Conditions Scenario C AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2040 FYB Conditions Scenario A traffic forecasts.

Table 6-6 - 2040 Future Year Build Conditions Scenario C Traffic Forecasts

Roadway	Location	2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments based on Travel Pattern Changes Due to Balancing (AADT)	Selected 2040 Build Conditions Scenario C Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	105,100	3,100	108,200
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	105,100	3,100	108,200
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	105,100	3,100	108,200
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	105,100	3,100	108,200
Durant Rd	West of US 1 (Capital Blvd)	30,800	-200	30,600
Perry Creek Rd	West of Wild Wood Forest Dr (Service Rd)	50,900	1,100	52,000
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	3,600	-2,000	1,600
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	2,500	-2,200	300
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	2,400	-2,400	0
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	2,400	-2,400	0
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	2,500	-2,200	300
Wadford Dr (Service Rd)	North of Perry Creek Rd	19,700	1,700	21,400
Wadford Dr (Service Rd)	North of Wild Wood Forest Dr	9,400	1,700	11,100
Wadford Dr (Service Rd)	North of Thornton Rd	4,700	-3,900	800
Wadford Dr (Service Rd)	North of River Haven Pl	4,100	-4,100	0
Wadford Dr (Service Rd)	South of Shearon Farms Ave	4,100	-4,100	0
Wadford Dr (Service Rd)	North of Shearon Farms Ave	10,900	-3,300	7,600
Burlington Mills Rd	West of US 1 (Capital Blvd)	8,700	1,800	10,500
Burlington Mills Rd	West of Wadford Dr (Service Rd)	36,000	-1,300	34,700

For locations not included above, no change in traffic forecasted volume from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario C would occur.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYB Conditions Scenario C were assumed to remain the same as those for the 2040 FYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 6-7. The changes in traffic factors along these roads are due to the travel pattern changes associated with the removal of access over the Neuse River on the service roads parallel to US 1 (Capital Blvd).

Table 6-7 - 2040 Future Year Build Conditions Scenario C Traffic Factors

Major Roadway	Location	2040 Future Year Build Conditions Scenario A			2040 Future Year Build Conditions Scenario C		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Durant Rd	West of Capital Hills Dr (Service Rd)	60%	8%	EB	60%	9%	EB
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	55%	9%	NB	55%	9%	SB
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	60%	9%	NB	55%	9%	SB
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	60%	9%	NB	-	-	-
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	60%	9%	NB	-	-	-
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	55%	9%	NB	65%	12%	NB
Pro Tire Dwy	West of Capital Hills Dr (Service Rd)	55%	8%	EB	55%	9%	EB
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	65%	12%	WB	65%	12%	EB
Wadford Dr (Service Rd)	North of Thornton Rd	70%	9%	NB	65%	7%	NB
Wadford Dr (Service Rd)	North of River Haven Pl	70%	9%	NB	-	-	-
Wadford Dr (Service Rd)	South of Shearon Farms Ave	70%	9%	NB	-	-	-
Wadford Dr (Service Rd)	North of Shearon Farms Ave	55%	9%	NB	55%	10%	SB
Thornton Rd	West of Wadford Dr (Service Rd)	60%	8%	EB	55%	8%	EB
Thornton Rd	East of Wadford Dr (Service Rd)	55%	8%	EB	65%	9%	EB
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	60%	8%	EB	55%	8%	EB

For locations not included above, no change in traffic factors from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario C would occur.

6.4 2040 Future Year Build Conditions Scenario D

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2040 FYB Conditions Scenario D, all improvements included in the 2040 FYB Conditions Scenario A were included with the exception of the following:

- » No bridges for the services roads over the CSX Railroad.

It should be noted that as the 2040 FYB Conditions Scenario D traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040.

Methodology

The 2040 FYB Conditions Scenario D traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2040 FYB Conditions Scenario A traffic forecast volumes as a basis for the 2040 FYB Conditions Scenario D traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 6-8
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2040 FYNB Conditions traffic forecast volumes as well as the 2040 FYB Conditions Scenario A traffic forecast volumes, the 2040 FYB Conditions Scenario D traffic forecasts were finalized as shown on Table 6-8.

Figure G-6 depicts the volume changes from the 2040 FYB Conditions Scenario A traffic forecasts to the 2040 FYB Conditions Scenario D traffic forecasts. Figure 8 shows the 2040 FYB Conditions Scenario D AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2040 FYB Conditions Scenario A traffic forecasts.

Table 6-8 - 2040 Future Year Build Conditions Scenario D Traffic Forecasts

Roadway	Location	2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments based on Travel Pattern Changes Due to Balancing (AADT)	Selected 2040 Build Conditions Scenario D Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Crossroads Ford Dwy/Burlington Mills Rd	104,000	1,400	105,400
Burlington Mills Rd	West of US 1 (Capital Blvd)	8,700	-4,900	3,800
Burlington Mills Rd	West of Wadford Dr (Service Rd)	36,000	1,700	37,700
Burlington Mills Rd	West of One World Way	29,900	1,700	31,600
Burlington Mills Rd	West of Ligon Mill Rd	27,500	1,700	29,200
Capital Hills Dr (Service Rd)	North of Crossroads Ford Dwy/Burlington Mills Rd	9,100	-9,100	0
Ponderosa Service Rd	South of Height Ln	9,100	-9,100	0
Ponderosa Service Rd	North of Height Ln	12,200	-7,100	5,100
Common Oaks Dr (South)	West of Ponderosa Service Rd	12,200	-7,100	5,100
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	4,200	800	5,000
Height Ln	South of Common Oaks Dr	3,300	-800	2,500
Height Ln	West of Ponderosa Service Rd	3,300	-800	2,500
Height Ln	East of Wake Dr (Service Rd)	4,500	-1,700	2,800
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (South)	13,000	-6,900	6,100
Wadford Dr (Service Rd)	North of Burlington Mills Rd	2,600	-2,600	0
Wake Dr (Service Rd)	South of Height Ln	2,600	-2,600	0
Wake Dr (Service Rd)	North of Height Ln	3,500	300	3,800
Wake Dr (Service Rd)	North of Star Rd	3,500	300	3,800
Ligon Mill Rd	South of Height Ln Connector	11,900	900	12,800
Falls of Neuse Rd	West of Wakefield Commons Entrance	24,700	8,500	33,200
Falls of Neuse Rd	West of US 1 (Capital Blvd)	29,700	8,500	38,200
US 1A (Main St)	West of Wake Dr (Service Rd)/Golden Corral Dwy	43,800	1,100	44,900

For locations not included above, no change in traffic forecasted volume from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario D would occur.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYB Conditions Scenario D were assumed to remain the same as those for the 2040 FYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 6-9. The changes in traffic factors along these roads – Ponderosa Service Rd, Common Oaks Dr (South), and Wake Dr (Service Rd) – are due to the travel pattern changes associated with the removal of access over the CSX Railroad on the service roads parallel to US 1 (Capital Blvd).

Table 6-9 - 2040 Future Year Build Conditions Scenario D Traffic Factors

Roadway	Location	2040 Future Year Build Conditions Scenario A			2040 Future Year Build Conditions Scenario D		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Capital Hills Dr (Service Rd)	North of Burlington Mills Rd	55%	9%	SB	-	-	-
Capital Hills Dr (Service Rd)	South of Height Ln	55%	9%	SB	-	-	-
Ponderosa Service Rd	South of Common Oaks Dr (South)	55%	9%	SB	60%	9%	SB
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	55%	9%	EB	60%	9%	EB
Wake Dr (Service Rd)	North of Burlington Mills Rd	55%	9%	NB	-	-	-
Wake Dr (Service Rd)	South of Height Ln	55%	9%	NB	-	-	-

For locations not included above, no change in traffic factors from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario D would occur.

6.5 2040 Future Year Build Conditions Scenario E

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2040 FYB Conditions Scenario E, all improvements included in the 2040 FYB Conditions Scenario A were included with the exception of the following:

- » No grade separation at Height Ln across US 1 (Capital Blvd). Height Ln would end west of US 1 (Capital Blvd) at Ponderosa Service Rd.

It should be noted that as the 2040 FYB Conditions Scenario E traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040.

Methodology

The 2040 FYB Conditions Scenario E traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2040 FYB Conditions Scenario A traffic forecast volumes as a basis for the 2040 FYB Conditions Scenario E traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 6-10.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2040 FYNB Conditions traffic forecast volumes as well

as the 2040 FYB Conditions Scenario A traffic forecast volumes, the 2040 FYB Conditions Scenario E traffic forecasts were finalized as shown on Table 6-10.

Figure G-7 depicts the volume changes from the 2040 FYB Conditions Scenario A traffic forecasts to the 2040 FYB Conditions Scenario E traffic forecasts. Figure 9 shows the 2040 FYB Conditions Scenario E AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2040 FYB Conditions Scenario A traffic forecasts.

Table 6-10 - 2040 Future Year Build Conditions Scenario E Traffic Forecasts

Roadway	Location	2040 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments based on Travel Pattern Changes Due to Balancing (AADT)	Selected 2040 Build Conditions Scenario E Traffic Forecasts (AADT)
Burlington Mills Rd	West of US 1 (Capital Blvd)	8,700	600	9,300
Burlington Mills Rd	West of Wadford Dr (Service Rd)	36,000	600	36,600
Capital Hills Dr (Service Rd)	North of Crossroads Ford Dwy/Burlington Mills Rd	9,100	-600	8,500
Ponderosa Service Rd	South of Height Ln	9,100	-600	8,500
Ponderosa Service Rd	North of Height Ln	12,200	-3,700	8,500
Common Oaks Dr (South)	West of Ponderosa Service Rd	12,200	-3,700	8,500
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	4,200	900	5,100
Height Ln	South of Common Oaks Dr	3,300	-1,700	1,600
Height Ln	West of Ponderosa Service Rd	3,300	-1,700	1,600
Height Ln	West of US 1 (Capital Blvd)	6,000	-6,000	0
Height Ln	East of Wake Dr (Service Rd)	4,500	-4,500	0
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (South)	13,000	-1,000	12,000
Wadford Dr (Service Rd)	North of Burlington Mills Rd	2,600	600	3,200
Wake Dr (Service Rd)	South of Height Ln	2,600	600	3,200
Wake Dr (Service Rd)	North of Height Ln	3,500	-300	3,200
Wake Dr (Service Rd)	North of Star Rd	3,500	-300	3,200
Ligon Mill Rd	North of Height Ln Connector	11,400	500	11,900
Falls of Neuse Rd	West of Wakefield Commons Entrance	24,700	5,400	30,100
Falls of Neuse Rd	West of US 1 (Capital Blvd)	29,700	5,400	35,100
US 1A (Main St)	West of Wake Dr (Service Rd)/Golden Corral Dwy	43,800	5,400	49,200
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	44,100	4,900	49,000
US 1A (Main St)	West of Ligon Mill Rd	42,700	4,900	47,600

For locations not included above, no change in traffic forecasted volume from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario E would occur.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2040 FYB Conditions Scenario E were assumed to remain the same as those for the 2040 FYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 6-11. The changes in traffic factors along these roads are a result of ending Height Ln at Ponderosa Service Rd, west of US 1 (Capital Blvd). A grade separation will not be provided at Height Ln and US 1 (Capital Blvd) as shown in 2040 FYB Scenario A and Height Ln will not be extended east of US 1 (Capital Blvd).

Table 6-11 - 2040 Future Year Build Conditions Scenario E Traffic Factors

Roadway	Location	2040 Future Year Build Conditions Scenario A			2040 Future Year Build Conditions Scenario E		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	55%	9%	EB	55%	9%	WB
Common Oaks Dr (South)	West of Height Ln	60%	9%	EB	55%	9%	WB
Height Ln	South of Common Oaks Dr (South)	65%	8%	SB	55%	8%	SB
Height Ln	West of Ponderosa Service Rd	65%	8%	EB	55%	8%	EB
Height Ln	West of Wake Dr (Service Rd)	65%	8%	EB	-	-	-
Height Ln Connector	West of Ligon Mill Rd	60%	8%	EB	-	-	-
Wake Dr (Service Rd)	South of Star Rd	65%	9%	NB	55%	9%	NB
Wake Dr (Service Rd)	North of Star Rd	65%	9%	NB	55%	9%	NB
Ligon Mill Rd	South of Height Ln Connector	60%	10%	NB	65%	10%	NB
Falls of Neuse Rd	West of Wakefield Commons Entrance	60%	8%	EB	55%	8%	EB
Falls of Neuse Rd	West of US 1 (Capital Blvd)	60%	8%	EB	55%	8%	EB
US 1A (Main St)	West of Wake Dr (Service Rd)/Golden Corral Dwy	60%	8%	EB	55%	8%	EB
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	60%	8%	EB	55%	8%	EB
US 1A (Main St)	West of Ligon Mill Rd	60%	8%	EB	55%	8%	EB
US 1A (Main St)	East of Ligon Mill Rd	60%	8%	EB	55%	8%	EB

For locations not included above, no change in traffic factors from 2040 FYB Conditions Scenario A to 2040 FYB Conditions Scenario E would occur.

7.0 BASE YEAR BUILD FORECAST

7.1 2015 Base Year Build Conditions Scenario A

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2015 BYB Conditions Scenario A, the following changes to the roadway network were assumed:

- » Upgrade US 1 (Capital Blvd) to a freeway with eight lanes (four lanes in each direction).
- » Provide interchanges along US 1 (Capital Blvd) at the following locations:
 - I-540 (existing interchange)
 - Durant Rd/Perry Creek Rd
 - Burlington Mills Rd
 - Falls of Neuse Rd/US 1A (Main St)
 - NC 98 Bypass (existing interchange)
 - NC 98 Business (existing interchange)
 - Purnell Rd/Harris Rd
- » Provide grade separations along US 1 (Capital Blvd) at the following locations:
 - Jenkins Rd/Stadium Dr
- » Provide service roads along either side of US 1 (Capital Blvd) to give access to properties and roadways between interchanges.
 - Between I-540 and Durant Rd/Perry Creek Rd interchanges:
 - From Gresham Lake Rd to Durant Rd, west of US 1 (Capital Blvd), Capital Hills Dr would function as the service road.
 - From Triangle Town Connector to Perry Creek Rd, east of US 1 (Capital Blvd), Simms Creek Rd would be extended and function as the service road. Access to Simms Creek Rd would be provided via Simms Creek Rd Connector and Eaton Driveway would be realigned to intersect with Simms Creek Rd.
 - Between Durant Rd/Perry Creek Rd and Burlington Mills Rd interchanges:
 - From Durant Rd to Crossroads Ford Dwy, west of US 1 (Capital Blvd), Capital Hills Dr would be extended and function as the service road.
 - From Perry Creek Rd to Burlington Mills Rd, east of US 1 (Capital Blvd), Wadford Rd would be re-routed and extended to function as the service

- road. Wild Wood Forest Dr would be realigned and intersect with Wadford Rd.
- Between Crossroads Ford Dwy/Burlington Mills Rd and Falls of Neuse Rd/US 1A (Main St) interchanges:
 - From Crossroads Ford Dwy to Falls of Neuse Rd, west of US 1 (Capital Blvd), Capital Hills Dr (Service Road) would be extended to connect with Ponderosa Service Rd. Capital Hills Dr (Service Rd), Ponderosa Service Rd, and Forest Pines Dr would function as the service road.
 - From Burlington Mills Rd to US 1A (Main St), east of US 1 (Capital Blvd), Wake Dr would be extended and function as the service road. Star Rd would be realigned and intersect with Wake Dr.
- Between Falls of Neuse Rd/US 1A (Main St) and NC 98 Bypass interchanges:
 - From Falls of Neuse Rd to NC 98 Bypass, west of US 1 (Capital Blvd), Forest Pines Dr and Wakefield Plantation Dr would function as the service road.
 - From Shoppes at Caveness Farms Connector to NC 98 Bypass, Galaxy Dr would be extended and function as the service road.
- Between NC 98 Bypass and NC 98 Business interchanges:
 - From NC 98 Bypass to NC 98 Business, west of US 1 (Capital Blvd), Retail Dr would function as the service road.
 - From NC 98 Bypass to NC 98 Business, east of US 1 (Capital Blvd), Galaxy Dr would function as the service road.
- Between NC 98 Business and Purnell Rd/Harris Rd interchanges:
 - From NC 98 Business to Purnell Rd, west of US 1 (Capital Blvd), Hampton Way and Wake Union Church Rd would together function as the service road. Wake Union Church Rd would be extended to Purnell Rd. Additionally, west of US 1 (Capital Blvd), a new local road would be added to provide access from the service road to Jenkins Rd.
 - Beginning north of NC 98 Business to Harris Rd, east of US 1 (Capital Blvd), a new service road would be built.
- » Provide access to Gresham Lake Rd from southbound US 1 and to US 1 southbound from Gresham Lake Rd. Provide access to Triangle Town Connector from northbound US 1.
- » Provide bridges for the service roads over the Neuse River.
- » Provide bridges for the service roads over the CSX Railroad.
- » Assume Height Ln is in place and has a grade separation at US 1 (Capital Blvd).

Table 7-1 – Base Year Build Conditions Scenarios

Proposed Improvement	Scenario				
	A	B	C	D	E
Upgrade US 1	✓	✓	✓	✓	✓
Four new Interchanges along US 1	✓	✓	✓	✓	✓
New Grade Separations at Jenkins Rd/ Stadium Dr	✓	✓	✓	✓	✓
New Service Roads	✓	✓	✓	✓	✓
Access to/from Gresham Lake Rd	✓	X	✓	✓	✓
Service Road bridge over Neuse River	✓	✓	X	✓	✓
Service Road bridge over CSX Railroad	✓	✓	✓	X	✓
Height Ln Grade Separation	✓	✓	✓	✓	X

It should be noted that as the 2015 BYB Conditions Scenario A traffic forecast volumes are based upon the assumptions listed, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040, which is the same as the future year of this forecast.

Methodology

The 2015 BYB Conditions traffic forecasts were primarily developed using the changes in travel patterns obtained by comparing the TRM Version 5 output of 2015 No Build and Build Scenario

A Conditions. General steps involved are similar to the steps used for the 2040 FYB Conditions traffic forecast development and are further described below:

- » *Step 1 - Compare TRM model run output volumes:* The 2015 Base Year No Build TRM model network was modified to include network changes on US 1 (Capital Blvd) to account for additional lanes and incorporation of service roads along US 1 (Capital Blvd) associated with 2015 Build Conditions Scenario A. Model coding was extended beyond the limits of the project to account for planned access points, as well as beginning and ending points.
- » *Step 2 – Determine rate of change between TRM model runs:* An estimated rate of change in the traffic volumes for each study segment was calculated by comparing the model volumes for the 2015 No Build and 2015 Build Scenario A output as shown on Table 7-2.
- » *Step 3 – Select rate of change for project corridors:* The rates of change in the travel patterns as computed in Step 2 were reviewed based on engineering judgement. Then rates of change were selected along corridors, rather than segment by segment.
- » *Step 4 – Apply selected rate of change to segments and select initial volumes:* The selected rates of change were applied to the 2015 BYNB Conditions traffic forecast volumes and the volumes were reviewed and selected. For example, along US 1 (Capital Blvd) between Gresham Lake Rd and Durant Rd/Perry Creek Rd, the computed volumes were reviewed for that section of roadway and one volume was selected based on the available data and engineering judgement.
- » *Step 5 – Reroute volumes for access changes:* For locations where traffic would be re-routed due to roadway network changes (for example, converting the intersection of Jenkins Rd/Stadium Dr at US 1 (Capital Blvd) to a grade separation), adjustments to the volumes were manually calculated.
- » *Step 6 – Calculate volumes for service roads and cross streets:* Traffic forecast volumes for the service roads were estimated based on the 2015 BYNB Conditions traffic forecast volumes for the roads that would connect to the service roads, rather than US 1 (Capital Blvd). For the cross streets along the project corridor, the volumes for the western-most and eastern-most segments were selected first and held constant, then segment volumes were calculated based on the service road volumes and other intersections along the road.
- » *Step 7 – Determine turning movements and balance volumes:* After the segment volumes were selected and calculated in Steps 4 through 6, the turning movements were determined based on anticipated access changes and the volumes were balanced along the corridor.

- » *Step 8 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 7 traffic volumes with the 2015 BYNB Conditions traffic forecast volumes, the 2015 BYB Conditions Scenario A traffic forecasts were finalized as shown on Table 7-2.

Figure 10 shows the 2015 BYB Conditions Scenario A AADT volumes with peak-to-day factors, directional splits, and truck percentages.

Table 7-2 - 2015 Base Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2015 No Build Conditions TRM Model Volume (vpd)	2015 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2015 No Build TRM Model to 2015 Build Scenario A TRM Model (vpd) (A)	2015 No Build Conditions Traffic Forecasts (AADT) (B)	Calculated 2015 Build Scenario A Volumes based on TRM Volume Difference (AADT) (C=A+B)	Adjustments due to Balancing and/or Travel Pattern Changes Unaccounted for in the TRM Model (AADT) (D)	Selected 2015 Build Conditions Scenario A Traffic Forecasts (AADT) (E=C+D)
US 1 (Capital Blvd)	South of Johnson Autoplex Dwy/Sumner Blvd	54,202	58,678	4,476	50,400	54,900	1,200	56,100
US 1 (Capital Blvd)	North of Johnson Autoplex Dwy/Sumner Blvd	63,694	68,223	4,529	48,000	52,500	1,200	53,700
US 1 (Capital Blvd)	North of Old Wake Forest Rd	80,442	86,042	5,600	61,100	66,700	100	66,800
US 1 (Capital Blvd)	North of I-540	77,384	102,573	25,189	65,400	90,600	0	90,600
US 1 (Capital Blvd)	North of Triangle Town Connector	77,384	85,580	8,196	65,400	73,600	9,400	83,000
US 1 (Capital Blvd)	North of Gresham Lake Rd	78,017	102,189	25,041 ⁺	60,300	85,341	-3,041	82,300
US 1 (Capital Blvd)	North of Triangle Town Blvd Ext	78,017	102,189					
US 1 (Capital Blvd)	North of Cheviot Hills Dr/Jacqueline Ln	73,074	102,189					
US 1 (Capital Blvd)	North of Capital Hills Connector/Homestead Dr	73,074	102,189					
US 1 (Capital Blvd)	North of Simms Creek Rd	73,074	102,189					
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	64,427	93,065	31,368 ⁺	49,400	80,768	-6,568	74,200
US 1 (Capital Blvd)	North of Mallinckrodt, Inc. Dwy/Thornton Rd	61,079	93,065					
US 1 (Capital Blvd)	North of Pro Tire Dwy/River Haven Pl	61,079	93,065					
US 1 (Capital Blvd)	North of U-Haul Dwy/Shearon Farms Ave	60,203	93,065					
US 1 (Capital Blvd)	North of Burlington Mills Rd	52,365	85,372	33208 ⁺	46,000	79,209	92	79,300
US 1 (Capital Blvd)	North of Height Ln	51,962	85,372					
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	58,036	80,336	21961 ⁺	45,300	67,261	2,239	69,500
US 1 (Capital Blvd)	North of Popes Creek Dr/Walmart Access Rd	58,036	80,336					
US 1 (Capital Blvd)	North of Shoppes at Caveness Farms Connector	58,036	80,336					
US 1 (Capital Blvd)	North of Corona Blvd/Caveness Farms Ave	59,391	80,336					
US 1 (Capital Blvd)	North of NC 98 Bypass	32,331	50,314	17,983	41,300	59,300	0	59,300
US 1 (Capital Blvd)	North of NC 98 Business	35,680	49,261	8873 ⁺	38,700	47,573	-173	47,400
US 1 (Capital Blvd)	North of Wake Union Church Rd	42,221	49,261					
US 1 (Capital Blvd)	North of Wake Forest Presbyterian Church Dwy/Wake Forest Crossing Dwy	42,221	49,261					
US 1 (Capital Blvd)	North of Jenkins Rd/Stadium Dr	40,086	49,261					
US 1 (Capital Blvd)	North of Country Club Dr/Templeridge Rd	40,900	49,261					
US 1 (Capital Blvd)	North of St. Catherines Dr	40,900	49,261					
US 1 (Capital Blvd)	North of Club Villas Dr	40,705	49,261					
US 1 (Capital Blvd)	North of Purnell Rd/Harris Rd	39,969	47,226	7,257	32,000	39,300	-400	38,900
US 1 (Capital Blvd)	North of Wall Rd	44,599	50,353	5,754	32,600	38,400	-700	37,700
US 1 (Capital Blvd)	North of Sunset Dr/Rolling Acres Rd	42,418	47,562	5,144	32,300	37,400	0	37,400
US 1 (Capital Blvd)	North of Holden Rd	34,759	37,814	3,055	24,000	27,100	0	27,100
Johnson Autoplex Dwy/Sumner Blvd	West of US 1 (Capital Blvd)	7,361	6,882	-479	1,800	1,300	500	1,800
Sumner Blvd	East of US 1 (Capital Blvd)	11,022	11,409	387	8,200	8,600	-400	8,200
Old Wake Forest Rd	West of US 1 (Capital Blvd)	21,682	23,359	1,677	26,000	27,700	-1,700	26,000
Old Wake Forest Rd	East of US 1 (Capital Blvd)	3,155	3,593	438	20,100	20,500	-400	20,100
I-540	West of Falls of Neuse Rd	77,486	78,799	1,313	91,600	92,900	100	93,000
I-540	West of US 1 (Capital Blvd)	65,008	72,555	7,547	76,000	83,500	0	83,500
I-540	West of Triangle Town Blvd	45,878	46,441	563	63,900	64,500	0	64,500
I-540	West of US 401 (Louisburg Rd)	51,481	52,106	625	63,500	64,100	0	64,100
I-540	East of US 401 (Louisburg Rd)	53,228	53,205	-23	55,800	55,800	0	55,800
Falls of Neuse Rd	South of Thorpshire Dr	30,207	30,356	149	33,100	33,200	-100	33,100
Falls of Neuse Rd	South of I-540	30,207	30,356	149	34,400	34,500	-100	34,400
Falls of Neuse Rd	North of I-540	33,723	29,786	-3,937	46,000	42,100	-2,400	39,700
Falls of Neuse Rd	North of Falls Valley Dr	45,203	38,835	-6,368	44,000	37,600	100	37,700

Table 7-2 - 2015 Base Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2015 No Build Conditions TRM Model Volume (vpd)	2015 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2015 No Build TRM Model to 2015 Build Scenario A TRM Model (vpd) (A)	2015 No Build Conditions Traffic Forecasts (AADT) (B)	Calculated 2015 Build Scenario A Volumes based on TRM Volume Difference (AADT) (C=A+B)	Adjustments due to Balancing and/or Travel Pattern Changes Unaccounted for in the TRM Model (AADT) (D)	Selected 2015 Build Conditions Scenario A Traffic Forecasts (AADT) (E=C+D)
Thorpshire Dr	East of Falls of Neuse Rd	0	0	0	2,700	2,700	0	2,700
Falls Valley Dr	East of Falls of Neuse Rd	0	0	0	4,200	4,200	0	4,200
Triangle Town Blvd	South of I-540	10,321	11,052	731	9,000	9,700	-700	9,000
US 401 (Louisburg Rd)	South of I-540	54,081	52,629	-1,452	42,400	40,900	1,500	42,400
US 401 (Louisburg Rd)	North of I-540	56,651	50,947	-5,704	54,500	48,800	5,700	54,500
US 401 (Louisburg Rd)	North of Fox Rd	56,030	50,090	-5,940	53,600	47,700	5,900	53,600
Fox Rd	West of US 401 (Louisburg Rd)	7,895	7,227	-668	10,600	9,900	700	10,600
Fox Rd	East of US 401 (Louisburg Rd)	2,281	1,799	-482	8,100	7,600	500	8,100
Gresham Lake Rd	West of Capital Hills Dr (Service Rd)	15,300	13,223	-2,077	8,700	6,600	2,100	8,700
Gresham Lake Rd	West of Overlook Rd	16,716	9,399	-7,317	8,900	1,600	4,900	6,500
Gresham Lake Rd	West of US 1 (Capital Blvd)	16,834	9,418	-7,416	9,300	1,900	4,600	6,500
Capital Hills Dr (Service Rd)	North of Gresham Lake Rd	0	1,908	1,908	3,000	4,900	900	5,800
Capital Hills Dr (Service Rd)	North of Cheviot Hills Dr	0	7,187	7,187	3,000	10,200	-4,400	5,800
Capital Hills Dr (Service Rd)	North of Capital Hills Connector	0	7,187	7,187	3,400	10,600	-2,700	7,900
Overlook Rd	South of Gresham Lake Rd	128	127	-1	1,200	1,200	0	1,200
Cheviot Hills Dr	East of Capital Hills Dr (Service Rd)	4,535	2,857	-1,678	200	-1,500	1,700	200
Capital Hills Connector	East of Capital Hills Dr (Service Rd)	0	0	0	3,000	3,000	1,700	4,700
Triangle Town Connector	East of US 1 (Capital Blvd)	0	3,284	3,284	-	-	-	7,600
Simms Creek Rd (Service Rd)	South of Jacqueline Ln	0	3,284	3,284	-	-	-	7,600
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	0	1,490	1,490	-	-	-	6,200
Simms Creek Rd (Service Rd)	North of Homestead Dr	0	0	0	-	-	-	5,500
Simms Creek Rd (Service Rd)	North of Simms Creek Connector	0	3,286	3,286	-	-	-	4,300
Jacqueline Ln	East of Simms Creek Rd (Service Rd)	0	0	0	2,000	2,000	0	2,000
Homestead Dr	East of Simms Creek Rd (Service Rd)	0	0	0	1,100	1,100	0	1,100
Simms Creek Connector	East of Simms Creek Rd (Service Rd)	0	1,005	1,005	1,600	2,600	-1,000	1,600
Durant Rd	West of Capital Hills Dr (Service Rd)	19,200	20,049	849	17,700	18,500	100	18,600
Durant Rd	West of US 1 (Capital Blvd)	19,970	27,285	7,315	16,500	23,800	-1,800	22,000
Perry Creek Rd	West of Simms Creek Rd (Service Rd)/Wadford Dr (Service Rd)	16,898	28,991	12,093	19,100	31,200	-2,100	29,100
Perry Creek Rd	West of Clarks Fork Dr	16,898	25,839	8,941	16,000	24,900	-8,500	16,400
Perry Creek Rd	West of McGuire Dr	16,898	25,839	8,941	13,900	22,800	-8,500	14,300
Perry Creek Rd	West of Liston Dr/Filbin Creek Dr	16,898	25,839	8,941	13,200	22,100	-8,500	13,600
Perry Creek Rd	East of Liston Dr/Filbin Creek Dr	22,616	23,037	421	15,900	16,300	0	16,300
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	0	23	23	-	-	-	1,900
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	0	73	73	-	-	-	1,500
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	0	73	73	-	-	-	1,500
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	0	73	73	-	-	-	1,500
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	0	73	73	-	-	-	1,500
Mallinckrodt, Inc. Dwy	West of Capital Hills Dr (Service Rd)	756	49	-707	800	100	700	800
Pro Tire Dwy	West of Capital Hills Dr (Service Rd)	0	0	0	200	200	0	200
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	0	0	0	200	200	0	200
Simms Creek Rd (Service Rd)	North of Eaton Dwy	0	5,459	5,459	-	-	-	4,300
Wadford Dr (Service Rd)	North of Perry Creek Rd	0	283	283	-	-	-	15,600
Wadford Dr (Service Rd)	South of Thornton Rd	0	283	283	1,200	1,500	7,800	9,300
Wadford Dr (Service Rd)	North of Thornton Rd	0	3,239	3,239	1,400	4,600	400	5,000
Wadford Dr (Service Rd)	North of River Haven Pl	0	3,239	3,239	-	-	-	4,600
Wadford Dr (Service Rd)	South of Shearon Farms Ave	0	3,239	3,239	-	-	-	4,600
Wadford Dr (Service Rd)	North of Shearon Farms Ave	0	3,801	3,801	-	-	-	5,500
Eaton Dwy	West of Simms Creek Rd (Service Rd)	0	0	0	200	200	0	200

Table 7-2

Table 7-2 - 2015 Base Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2015 No Build Conditions TRM Model Volume (vpd)	2015 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2015 No Build TRM Model to 2015 Build Scenario A TRM Model (vpd) (A)	2015 No Build Conditions Traffic Forecasts (AADT) (B)	Calculated 2015 Build Scenario A Volumes based on TRM Volume Difference (AADT) (C=A+B)	Adjustments due to Balancing and/or Travel Pattern Changes Unaccounted for in the TRM Model (AADT) (D)	Selected 2015 Build Conditions Scenario A Traffic Forecasts (AADT) (E=C+D)
Wild Wood Forest Dr	North of Perry Creek Rd	0	0	0	6,700	6,700	0	6,700
Thornton Rd	West of Wadford Dr (Service Rd)	14,500	0	-14,500	4,600	-9,900	16,400	6,500
Thornton Rd	East of Wadford Dr (Service Rd)	14,500	2,958	-11,542	4,200	-7,300	11,500	4,200
River Haven Pl	East of Wadford Dr (Service Rd)	0	0	0	600	600	0	600
Shearon Farms Ave	East of Wadford Dr (Service Rd)	0	8,136	8,136	900	9,000	-6,700	2,300
Clarks Fork Dr	North of Perry Creek Rd	0	0	0	2,900	2,900	0	2,900
McGuire Dr	South of Perry Creek Rd	0	0	0	1,700	1,700	0	1,700
Liston Dr	South of Perry Creek Rd	6,447	5,412	-1,035	800	-200	1,000	800
Filbin Creek Dr	North of Perry Creek Rd	0	0	0	4,500	4,500	0	4,500
Crossroads Ford Dwy	West of Capital Hills Dr (Service Rd)	1,672	2,189	517	1,100	1,600	-500	1,100
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	1,672	2,189	517	1,100	1,600	2,300	3,900
Burlington Mills Rd	West of Wadford Dr (Service Rd)	9,567	20,573	11,006	9,700	20,700	-3,500	17,200
Burlington Mills Rd	West of One World Way	9,567	14,809	5,242	9,500	14,700	-1,600	13,100
Burlington Mills Rd	East of One World Way	11,162	14,806	3,644	8,500	12,100	0	12,100
Capital Hills Dr (Service Rd)	North of Burlington Mills Rd	0	506	506	-	-	-	2,500
Capital Hills Dr (Service Rd)	South of Height Ln	0	506	506	-	-	-	2,500
Ponderosa Service Rd	North of Height Ln	225	9	-216	3,800	3,600	800	4,400
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	0	6,463	6,463	3,800	10,300	-5,900	4,400
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	0	6,463	6,463	3,000	9,500	-6,800	2,700
Common Oaks Dr (South)	West of Height Ln	0	487	487	3,000	3,500	-500	3,000
Height Ln	South of Common Oaks Dr (South)	0	1,243	1,243	-	-	-	500
Height Ln	West of Ponderosa Service Rd	455	1,517	1,062	500	1,600	-1,100	500
Height Ln	West of US 1 (Capital Blvd)	0	0	0	3,700	3,700	-1,300	2,400
Height Ln Connector	West of Ligon Mill Rd	0	47,542	47,542	-	-	-	1,700
Wake Dr (Service Rd)	North of Burlington Mills Rd	0	7,539	7,539	-	-	-	1,800
Wake Dr (Service Rd)	South of Height Ln	0	1,954	1,954	-	-	-	1,800
Wake Dr (Service Rd)	North of Height Ln	0	1,954	1,954	-	-	-	2,500
Wake Dr (Service Rd)	North of Star Rd	0	7,187	7,187	1,600	8,800	-6,300	2,500
Star Rd	West of Wake Dr (Service Rd)	2,200	950	-1,250	700	-600	800	200
One World Way	North of Burlington Mills Rd	1,243	0	-1,243	3,200	2,000	1,200	3,200
Ligon Mill Rd	South of Height Ln Connector	0	0	0	7,500	7,500	-1,200	6,300
Ligon Mill Rd	South of US 1A (Main St)	10,313	9,249	-1,064	7,500	6,400	0	6,400
Falls of Neuse Rd	West of Forest Pines Dr (Service Rd)	24,800	22,537	-2,263	21,400	19,100	0	19,100
Falls of Neuse Rd	West of Wakefield Commons Entrance	29,593	28,537	-1,056	21,900	20,800	500	21,300
Falls of Neuse Rd	West of US 1 (Capital Blvd)	29,593	28,537	-1,056	25,500	24,400	500	24,900
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy (Service Rd)	21,823	26,104	4,281	26,100	30,400	-1,700	28,700
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	21,823	26,104	4,281	25,800	30,100	-1,800	28,300
US 1A (Main St)	West of Ligon Mill Rd	21,358	26,233	4,875	27,000	31,900	-2,000	29,900
US 1A (Main St)	East of Ligon Mill Rd	20,362	23,806	3,444	29,200	32,600	0	32,600
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	0	0	0	6,000	6,000	900	6,900
Forest Pines Dr (Service Rd)	North of Falls of Neuse Rd	0	13,693	13,693	7,900	21,600	-12,900	8,700
Forest Pines Dr (Service Rd)	North of Common Oaks Dr (North)	0	2,102	2,102	6,800	8,900	-1,600	7,300
Forest Pines Dr (Service Rd)	North of Corona Blvd	0	2,102	2,102	6,400	8,500	-2,400	6,100
Common Oaks Dr (North)	West of Forest Pines Dr (Service Rd)	0	767	767	2,900	3,700	-800	2,900
Common Oaks Dr (North)	East of Forest Pines Dr (Service Rd)	0	0	0	1,000	1,000	300	1,300
Common Oaks Dr (North)	North of Popes Creek Dr	0	0	0	1,400	1,400	0	1,400
Wakefield Commons Entrance	South of Falls of Neuse Rd	8,974	8,899	-75	4,400	4,300	100	4,400
Popes Creek Dr	East of Common Oaks Dr (North)	0	0	0	1,400	1,400	700	2,100

Table 7-2 - 2015 Base Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2015 No Build Conditions TRM Model Volume (vpd)	2015 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2015 No Build TRM Model to 2015 Build Scenario A TRM Model (vpd) (A)	2015 No Build Conditions Traffic Forecasts (AADT) (B)	Calculated 2015 Build Scenario A Volumes based on TRM Volume Difference (AADT) (C=A+B)	Adjustments due to Balancing and/or Travel Pattern Changes Unaccounted for in the TRM Model (AADT) (D)	Selected 2015 Build Conditions Scenario A Traffic Forecasts (AADT) (E=C+D)
Corona Blvd	East of Forest Pines Dr (Service Rd)	0	0	0	2,400	2,400	1,200	3,600
Golden Corral Dwy	North of US 1A (Main St)	0	0	0	900	900	0	900
O2 Fitness Dwy	South of US 1A (Main St)	2,164	2,098	-66	800	700	100	800
Walmart Dwy	North of US 1A (Main St)	0	0	0	9,200	9,200	3,800	13,000
Ligon Mill Rd	North of US 1A (Main St)	0	2,022	2,022	4,700	6,700	-2,000	4,700
Galaxy Dr (Service Rd)	South of Shoppes at Caveness Farms Connector	0	0	0	-	-	-	800
Galaxy Dr (Service Rd)	North of Shoppes at Caveness Farms Connector	0	0	0	-	-	-	2,600
Galaxy Dr (Service Rd)	North of Caveness Farms Ave	0	0	0	-	-	-	5,700
Shoppes at Caveness Farms Connector	East of Galaxy Dr (Service Rd)	0	0	0	2,000	2,000	0	2,000
Caveness Farms Ave	East of Galaxy Dr (Service Rd)	0	0	0	3,300	3,300	0	3,300
NC 98 Bypass	West of Wakefield Plantation Dr (Service Rd)	16,480	14,305	-2,175	18,800	16,600	0	16,600
NC 98 Bypass	West of Retail Dr (Service Rd)/Northpark Dr	22,892	24,038	1,146	23,400	24,500	-3,400	21,100
NC 98 Bypass	West of US 1 (Capital Blvd)	27,726	28,866	1,140	28,700	29,800	-2,800	27,000
NC 98 Bypass	West of Galaxy Dr (Service Rd)	24,941	34,010	9,069	29,000	38,100	4,700	42,800
NC 98 Bypass	East of Galaxy Dr (Service Rd)	24,941	33,429	8,488	27,000	35,500	0	35,500
Wakefield Plantation Dr (Service Rd)	South of NC 98 Bypass	15,051	13,625	-1,426	6,400	5,000	1,100	6,100
Northpark Dr	South of NC 98 Bypass	0	0	0	2,800	2,800	0	2,800
Retail Dr (Service Rd)	North of NC 98 Bypass	4,800	5,569	769	10,700	11,500	-200	11,300
Retail Dr (Service Rd)	South of NC 98 Business	3,200	0	-3,200	5,600	2,400	3,700	6,100
Hampton Way (Service Rd)	North of NC 98 Business	3,400	2,333	-1,067	2,600	1,500	11,200	12,700
Galaxy Dr (Service Rd)	North of NC 98 Bypass	0	1,561	1,561	2,400	4,000	-1,600	2,400
Galaxy Dr (Service Rd)	North of Lowes Ave	0	1,561	1,561	1,900	3,500	-1,600	1,900
Lowes Ave	East of Galaxy Dr (Service Rd)	0	0	0	700	700	0	700
NC 98 Business	West of Hampton Way/Retail Dr (Service Rd)	7,853	8,347	494	16,400	16,900	0	16,900
NC 98 Business	West of US 1 (Capital Blvd)	12,649	12,752	103	17,800	17,900	10,000	27,900
NC 98 Business	East of US 1 (Capital Blvd)	8,866	11,322	2,456	14,400	16,900	-300	16,600
New Service Rd	South of Wake Forest Crossing Dwy	0	1,577	1,577	5,300	6,900	-1,600	5,300
New Service Rd	North of Wake Forest Crossing Dwy	0	17	17	-	-	-	7,700
New Service Rd	North of Stadium Dr	0	17	17	-	-	-	7,700
New Service Rd	North of Templeridge Rd	0	734	734	-	-	-	8,200
New Service Rd	North of St Catherines Dr	0	734	734	-	-	-	8,400
Wake Union Church Rd (Service Rd)	South of Wake Forest Presbyterian Church Dwy	0	0	0	-	-	-	12,700
Wake Union Church Rd (Service Rd)	North of Wake Forest Presbyterian Church Dwy	0	1,391	1,391	-	-	-	9,700
Wake Union Church Rd (Service Rd)	North of Jenkins Rd	0	521	521	-	-	-	9,700
Wake Union Church Rd (Service Rd)	North of Country Club Dr	0	521	521	-	-	-	9,600
Wake Union Church Rd (Service Rd)	North of Club Villas Dr	0	896	896	-	-	-	9,600
Wake Forest Presbyterian Church Dwy	West of Wake Union Church Rd (Service Rd)	0	2,161	2,161	300	2,500	3,500	6,000
Wake Forest Crossing Dwy	East of New Service Rd	0	0	0	1,300	1,300	1,300	2,600
Frontage Rd	South of Wake Forest Presbyterian Church Dwy	0	0	0	-	-	-	200
Frontage Rd	South of Jenkins Rd	0	1,391	1,391	-	-	-	6,000
Jenkins Rd	West of Frontage Rd	3,910	2,476	-1,434	5,400	4,000	-400	3,600
Jenkins Rd	West of Wake Union Church Rd (Service Rd)	3,910	2,476	-1,434	5,400	4,000	-800	3,200
Stadium Dr	East of New Service Rd	5,886	2,457	-3,429	6,100	2,700	500	3,200
Stadium Dr	East of Wake Forest Crossing Rear Dwy	5,886	2,457	-3,429	6,600	3,200	200	3,400
Wake Forest Crossing Rear Dwy	South of Stadium Dr	3,417	2,118	-1,299	3,100	1,800	0	1,800
Country Club Dr	West of Wake Union Church Rd (Service Rd)	0	0	0	300	300	0	300

Table 7-2 - 2015 Base Year Build Conditions Scenario A Traffic Forecasts

Roadway	Location	2015 No Build Conditions TRM Model Volume (vpd)	2015 Build Conditions Scenario A TRM Model Volume (vpd)	Change in Volume from 2015 No Build TRM Model to 2015 Build Scenario A TRM Model (vpd) (A)	2015 No Build Conditions Traffic Forecasts (AADT) (B)	Calculated 2015 Build Scenario A Volumes based on TRM Volume Difference (AADT) (C=A+B)	Adjustments due to Balancing and/or Travel Pattern Changes Unaccounted for in the TRM Model (AADT) (D)	Selected 2015 Build Conditions Scenario A Traffic Forecasts (AADT) (E=C+D)
Templeridge Rd	East of New Service Rd	838	715	-123	500	400	100	500
St. Catherines Dr	East of New Service Rd	0	0	0	200	200	0	200
Club Villas Dr	West of Wake Union Church Rd (Service Rd)	659	659	0	200	200	0	200
Purnell Rd	West of Wake Union Church Rd (Service Rd)	4,432	6,050	1,618	4,400	6,000	100	6,100
Purnell Rd	West of US 1 (Capital Blvd)	4,432	6,833	2,401	4,400	6,800	2,100	8,900
Harris Rd	East of US 1 (Capital Blvd)	2,887	5,371	2,484	4,800	7,300	5,700	13,000
Harris Rd	East of Wallridge Rd	2,333	4,207	1,874	3,100	5,000	0	5,000
Wallridge Rd	North of Harris Rd	444	551	107	2,500	2,600	0	2,600
Wall Rd	East of US 1 (Capital Blvd)	4,624	3,859	-765	4,000	3,200	0	3,200
Sunset Dr	West of US 1 (Capital Blvd)	0	0	0	1,100	1,100	0	1,100
Rolling Acres Rd	East of US 1 (Capital Blvd)	6,629	6,912	283	600	900	-300	600
Holden Rd	West of US 1 (Capital Blvd)	6,173	6,798	625	4,700	5,300	100	5,400
Holden Rd	East of US 1 (Capital Blvd)	5,479	7,027	1,548	6,200	7,700	0	7,700

* TRM Change in Volume was averaged at these locations as access along US 1 is fully controlled under the 2015 BYB Conditions.

Note: Eaton Dwy and Wildwood Forest Dr are assumed to be realigned to connect with the service road.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2015 BYB Conditions Scenario A were assumed to remain the same as those for the 2015 BYNB Conditions at all study locations, with the exception of the factors along the roads shown in Table 7-3. The changes in traffic factors along these roads – Wadford Dr, Common Oaks Dr (South), Height Ln, Forest Pines Dr, Corona Blvd, Retail Dr, and Hampton Way – are due to the shifts in traffic related to travel pattern changes associated with the addition of service roads.

Table 7-3 - 2015 Base Year Build Conditions Scenario A Traffic Factors

Roadway	Location	2015 Base Year No Build Conditions			2015 Base Year Build Conditions Scenario A		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
US 1 (Capital Blvd)	North of Triangle Town Connector	-	-	-	55%	8%	NB
Capital Hills Dr (Service Rd)	North of Cheviot Hills Dr	-	-	-	55%	9%	NB
Cheviot Hills Dr	East of Capital Hills Dr (Service Rd)	-	-	-	60%	7%	WB
Triangle Town Connector	East of US 1 (Capital Blvd)	-	-	-	100%	9%	EB
Simms Creek Rd (Service Rd)	South of Jacqueline Ln	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Homestead Dr	-	-	-	55%	9%	NB
Simms Creek Rd (Service Rd)	North of Simms Creek Connector	-	-	-	55%	9%	NB
Jacqueline Ln	East of Simms Creek Rd (Service Rd)	-	-	-	65%	8%	EB
Homestead Dr	East of Simms Creek Rd (Service Rd)	-	-	-	60%	8%	EB
Simms Creek Connector	East of Simms Creek Rd (Service Rd)	-	-	-	55%	8%	EB
Perry Creek Rd	West of Simms Creek Rd (Service Rd)/Wadford Dr (Service Rd)	-	-	-	60%	10%	EB
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	-	-	-	55%	9%	NB
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	-	-	-	60%	9%	NB
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	-	-	-	55%	9%	NB
Mallinckrodt, Inc. Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	55%	9%	EB
Pro Tire Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	65%	8%	EB
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	65%	12%	WB
Simms Creek Rd (Service Rd)	North of Eaton Dwy	-	-	-	55%	9%	NB
Wadford Dr (Service Rd)	North of Perry Creek Rd	-	-	-	60%	9%	NB
Wadford Dr (Service Rd)	South of Thornton Rd	60%	11%	NB	55%	9%	NB
Wadford Dr (Service Rd)	North of Thornton Rd	60%	10%	NB	60%	9%	NB
Wadford Dr (Service Rd)	North of River Haven Pl	-	-	-	60%	9%	NB
Wadford Dr (Service Rd)	South of Shearon Farms Ave	-	-	-	60%	9%	NB
Wadford Dr (Service Rd)	North of Shearon Farms Ave	-	-	-	55%	9%	NB
Eaton Dwy	West of Simms Creek Rd (Service Rd)	-	-	-	75%	10%	WB
River Haven Pl	East of Wadford Dr (Service Rd)	-	-	-	65%	7%	EB
Shearon Farms Ave	East of Wadford Dr (Service Rd)	-	-	-	55%	10%	EB
Crossroads Ford Dwy	West of Capital Hills Dr (Service Rd)	-	-	-	60%	8%	EB
Burlington Mills Rd	West of Wadford Dr (Service Rd)	-	-	-	60%	9%	EB
Capital Hills Dr (Service Rd)	North of Burlington Mills Rd	-	-	-	55%	9%	SB
Capital Hills Dr (Service Rd)	South of Height Ln	-	-	-	55%	9%	SB
Ponderosa Service Rd	North of Height Ln	65%	9%	NB	55%	9%	SB
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	65%	9%	WB	55%	9%	EB
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	55%	9%	WB	55%	9%	EB
Common Oaks Dr (South)	West of Height Ln	-	-	-	60%	9%	EB
Height Ln	South of Common Oaks Dr (South)	-	-	-	55%	9%	SB
Height Ln	West of US 1 (Capital Blvd)	65%	9%	WB	65%	8%	EB
Height Ln Connector	West of Ligon Mill Rd	-	-	-	60%	8%	EB
Wake Dr (Service Rd)	North of Burlington Mills Rd	-	-	-	55%	9%	NB

Table 7-3 - 2015 Base Year Build Conditions Scenario A Traffic Factors

Roadway	Location	2015 Base Year No Build Conditions			2015 Base Year Build Conditions Scenario A		
		Directional Factor (%)	Peak-to-Day Factor (%)	Direction	Directional Factor (%)	Peak-to-Day Factor (%)	Direction
Wake Dr (Service Rd)	South of Height Ln	-	-	-	55%	9%	NB
Wake Dr (Service Rd)	North of Height Ln	-	-	-	65%	9%	NB
Wake Dr (Service Rd)	North of Star Rd	-	-	-	65%	9%	NB
Star Rd	West of Wake Dr (Service Rd)	-	-	-	65%	7%	EB
Ligon Mill Rd	South of Height Ln Connector	-	-	-	60%	10%	NB
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	60%	8%	NB	55%	9%	SB
Galaxy Dr (Service Rd)	South of Shoppes at Caveness Farms Connector	-	-	-	65%	9%	SB
Galaxy Dr (Service Rd)	North of Shoppes at Caveness Farms Connector	-	-	-	65%	9%	SB
Galaxy Dr (Service Rd)	North of Caveness Farms Ave	-	-	-	55%	9%	SB
Shoppes at Caveness Farms Connector	East of Galaxy Dr (Service Rd)	-	-	-	65%	9%	EB
Caveness Farms Ave	East of Galaxy Dr (Service Rd)	-	-	-	55%	8%	EB
Retail Dr (Service Rd)	North of NC 98 Bypass	55%	7%	NB	55%	9%	NB
Retail Dr (Service Rd)	South of NC 98 Business	55%	7%	NB	60%	8%	NB
Hampton Way (Service Rd)	North of NC 98 Business	55%	12%	NB	55%	9%	NB
New Service Rd	South of Wake Forest Crossing Dwy	-	-	-	55%	9%	SB
New Service Rd	North of Wake Forest Crossing Dwy	-	-	-	55%	9%	SB
New Service Rd	North of Stadium Dr	-	-	-	55%	9%	SB
New Service Rd	North of Templeridge Rd	-	-	-	55%	9%	SB
New Service Rd	North of St Catherines Dr	-	-	-	55%	9%	SB
Wake Union Church Rd (Service Rd)	South of Wake Forest Presbyterian Church Dwy	-	-	-	55%	9%	NB
Wake Union Church Rd (Service Rd)	North of Wake Forest Presbyterian Church Dwy	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Jenkins Rd	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Country Club Dr	-	-	-	55%	8%	NB
Wake Union Church Rd (Service Rd)	North of Club Villas Dr	-	-	-	55%	8%	NB
Wake Forest Presbyterian Church Dwy	West of Wake Union Church Rd (Service Rd)	-	-	-	65%	7%	WB
Wake Forest Crossing Dwy	East of New Service Rd	-	-	-	55%	8%	EB
Frontage Rd	South of Wake Forest Presbyterian Church Dwy	-	-	-	55%	8%	NB
Frontage Rd	South of Jenkins Rd	-	-	-	60%	8%	NB
Jenkins Rd	West of Frontage Rd	-	-	-	55%	7%	EB
Jenkins Rd	West of Wake Union Church Rd (Service Rd)	-	-	-	55%	8%	EB
Stadium Dr	East of New Service Rd	-	-	-	55%	8%	EB
Country Club Dr	West of Wake Union Church Rd (Service Rd)	-	-	-	55%	8%	WB
Templeridge Rd	East of New Service Rd	-	-	-	70%	8%	EB
St. Catherines Dr	East of New Service Rd	-	-	-	65%	8%	EB
Club Villas Dr	West of Wake Union Church Rd (Service Rd)	-	-	-	65%	8%	WB
Purnell Rd	West of Wake Union Church Rd (Service Rd)	-	-	-	55%	9%	EB

For locations not included above, the traffic factors would remain the same as the 2015 BYNB Conditions.

7.2 2015 Base Year Build Conditions Scenario B

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2015 BYB Conditions Scenario B, all improvements included in the 2015 BYB Conditions Scenario A were included with the exception of the following:

- » No access from southbound US 1 to Gresham Lake Rd.
- » No access from Gresham Lake Rd to southbound US 1.
- » No access from northbound US 1 to Triangle Town Connector.

It should be noted that as the 2015 BYB Conditions Scenario B traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more substantially.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040, which is the same as the future year of this forecast.

Methodology

The 2015 BYB Conditions Scenario B traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2015 BYB Conditions Scenario A traffic forecast volumes as a basis for the 2015 BYB Conditions Scenario B traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 7-4.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2015 BYNB Conditions traffic forecast volumes as well

as the 2015 BYB Conditions Scenario A traffic forecast volumes, the 2015 BYB Conditions Scenario B traffic forecasts were finalized as shown on Table 7-4.

Figure 11 shows the 2015 BYB Conditions Scenario B AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2015 BYB Conditions Scenario A traffic forecasts.

Table 7-4 - 2015 Base Year Build Conditions Scenario B Traffic Forecasts

Roadway	Location	2015 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments due to Travel Pattern Changes and/or Balancing (AADT)	Selected 2015 Build Conditions Scenario B Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Gresham Lake Rd	82,300	8,300	90,600
Gresham Lake Rd	West of Overlook Rd	6,500	-5,400	1,100
Gresham Lake Rd	West of US 1 (Capital Blvd)	6,500	-6,500	0
Capital Hills Dr (Service Rd)	North of Gresham Lake Rd	5,800	3,800	9,600
Capital Hills Dr (Service Rd)	North of Cheviot Hills Dr	5,800	3,800	9,600
Capital Hills Dr (Service Rd)	North of Capital Hills Connector	7,900	6,200	14,100
Overlook Rd	South of Gresham Lake Rd	1,200	-100	1,100
Triangle Town Connector	East of US 1 (Capital Blvd)	7,600	-7,600	0
Simms Creek Rd (Service Rd)	South of Jacqueline Ln	7,600	-7,300	300
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	6,200	-4,100	2,100
Simms Creek Rd (Service Rd)	North of Homestead Dr	5,500	-2,500	3,000
Simms Creek Rd (Service Rd)	North of Simms Creek Connector	4,300	100	4,400
Durant Rd	West of US 1 (Capital Blvd)	22,000	6,000	28,000
Perry Creek Rd	West of Simms Creek Rd (Service Rd)/Wadford Dr (Service Rd)	29,100	100	29,200
Simms Creek Rd (Service Rd)	North of Eaton Dwy	4,300	100	4,400

For locations not included above, the traffic forecast would remain the same as the 2015 BYB Conditions Scenario A.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2015 BYB Conditions Scenario B were assumed to remain the same as those for the 2015 BYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 7-5. The changes in traffic factors along these roads – Simms Creek Service Rd, Jacqueline Ln, Cheviot Hills Dr, and Overlook Rd – are due to the travel pattern changes associated with the change in access to Gresham Lake Rd from US 1 (Capital Blvd) and the removal of the Triangle Town Connector providing access to Simms Creek Service Rd.

Table 7-5 - 2015 Base Year Build Conditions Scenario B Traffic Factors

Roadway	Location	2015 Base Year Build Conditions Scenario A			2015 Base Year Build Conditions Scenario B		
		Peak-to-Day Factor (%)	Directional Factor (%)	Direction	Peak-to-Day Factor (%)	Directional Factor (%)	Direction
Overlook Rd	South of Gresham Lake Rd	60%	8%	NB	60%	8%	SB
Cheviot Hills Dr	East of Capital Hills Dr (Service Rd)	60%	7%	WB	60%	7%	EB
Simms Creek Rd (Service Rd)	South of Jacqueline Ln	55%	9%	NB	60%	9%	NB
Simms Creek Rd (Service Rd)	North of Jacqueline Ln	55%	9%	NB	60%	9%	NB
Jacqueline Ln	East of Simms Creek Rd (Service Rd)	65%	8%	EB	65%	8%	WB

For locations not included above, the traffic factors would remain the same as the 2015 BYB Scenario A Conditions.

7.3 2015 Base Year Build Conditions Scenario C

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2015 BYB Conditions Scenario C, all improvements included in the 2015 BYB Conditions Scenario A were included with the exception of the following:

- » No bridges for the services roads over the Neuse River.

It should be noted that as the 2015 BYB Conditions Scenario C traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040, which is the same as the future year of this forecast.

Methodology

The 2015 BYB Conditions Scenario C traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2015 BYB Conditions Scenario A traffic forecast volumes as a basis for the 2015 BYB Conditions Scenario C traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 7-6.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2015 BYNB Conditions traffic forecast volumes as well as the 2015 BYB Conditions Scenario A traffic forecast volumes, the 2015 BYB Conditions Scenario C traffic forecasts were finalized as shown on Table 7-6.

Figure 12 shows the 2015 BYB Conditions Scenario C AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2015 BYB Conditions Scenario A traffic forecasts.

Table 7-6 - 2015 Base Year Build Conditions Scenario C Traffic Forecasts

Roadway	Location	2015 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments due to Travel Pattern Changes and/or Balancing (AADT)	Selected 2015 Build Conditions Scenario C Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Durant Rd/Perry Creek Rd	74,200	5,300	79,500
Durant Rd	West of US 1 (Capital Blvd)	22,000	700	22,700
Perry Creek Rd	West of Simms Creek Rd (Service Rd)/Wadford Dr (Service Rd)	29,100	2,400	31,500
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	1,900	-900	1,000
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	1,500	-1,300	200
Capital Hills Dr (Service Rd)	North of Pro Tire Dwy	1,500	-1,500	0
Capital Hills Dr (Service Rd)	South of U-Haul Dwy	1,500	-1,500	0
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	1,500	-1,300	200
Wadford Dr (Service Rd)	North of Perry Creek Rd	15,600	1,800	17,400
Wadford Dr (Service Rd)	South of Thornton Rd	9,300	1,600	10,900
Wadford Dr (Service Rd)	North of Thornton Rd	5,000	-4,400	600
Wadford Dr (Service Rd)	North of River Haven Pl	4,600	-4,600	0
Wadford Dr (Service Rd)	South of Shearon Farms Ave	4,600	-4,600	0
Wadford Dr (Service Rd)	North of Shearon Farms Ave	5,500	-3,200	2,300
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	3,900	-500	3,400
Burlington Mills Rd	West of Wadford Dr (Service Rd)	17,200	-1,800	15,400
Burlington Mills Rd	West of One World Way	13,100	-200	12,900
Burlington Mills Rd	East of One World Way	12,100	-200	11,900

For locations not included above, the traffic forecast would remain the same as the 2015 BYB Conditions Scenario A.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2015 BYB Conditions Scenario C were assumed to remain the same as those for the 2015 BYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 7-7. The changes in traffic factors along these roads – Capital Hills Dr (Service Rd), Wadford Dr (Service Rd), and Durant Rd - are due to the travel pattern changes associated with the removal of access over the Neuse River on the service roads parallel to US 1 (Capital Blvd).

Table 7-7 - 2015 Base Year Build Conditions Scenario C Traffic Factors

Roadway	Location	2015 Base Year Build Conditions Scenario A			2015 Base Year Build Conditions Scenario C		
		Peak-to-Day Factor (%)	Directional Factor (%)	Direction	Peak-to-Day Factor (%)	Directional Factor (%)	Direction
Durant Rd	West of Capital Hills Dr (Service Rd)	55%	8%	EB	60%	8%	EB
Durant Rd	West of US 1 (Capital Blvd)	55%	8%	EB	65%	8%	EB
Capital Hills Dr (Service Rd)	North of Capital Hills Connector	60%	8%	NB	60%	9%	NB
Capital Hills Dr (Service Rd)	North of Durant Rd/Perry Creek Rd	55%	9%	NB	55%	9%	SB
Capital Hills Dr (Service Rd)	North of Mallinckrodt, Inc. Dwy	60%	9%	NB	60%	9%	SB
Capital Hills Dr (Service Rd)	North of U-Haul Dwy	55%	9%	NB	65%	12%	NB
U-Haul Dwy	West of Capital Hills Dr (Service Rd)	65%	12%	WB	65%	12%	EB
Wadford Dr (Service Rd)	North of Shearon Farms Ave	55%	9%	NB	55%	10%	SB
Thornton Rd	East of Wadford Dr (Service Rd)	55%	8%	EB	65%	9%	EB

For locations not included above, the traffic factors would remain the same as the 2015 BYB Scenario A Conditions.

7.4 2015 Base Year Build Conditions Scenario D

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2015 BYB Conditions Scenario D, all improvements included in the 2015 BYB Conditions Scenario A were included with the exception of the following:

- » No bridges for the services roads over the CSX Railroad.

It should be noted that as the 2015 BYB Conditions Scenario D traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040, which is the same as the future year of this forecast.

Methodology

The 2015 BYB Conditions Scenario D traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2015 BYB Conditions Scenario A traffic forecast volumes as a basis for the 2015 BYB Conditions Scenario D traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 7-8.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2015 BYNB Conditions traffic forecast volumes as well as the 2015 BYB Conditions Scenario A traffic forecast volumes, the 2015 BYB Conditions Scenario D traffic forecasts were finalized as shown on Table 7-8.

Figure 13 shows the 2015 BYB Conditions Scenario D AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2015 BYB Conditions Scenario A traffic forecasts.

Table 7-8 - 2015 Base Year Build Conditions Scenario D Traffic Forecasts

Roadway	Location	2015 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments due to Travel Pattern Changes and/or Balancing (AADT)	Selected 2015 Build Conditions Scenario D Traffic Forecasts (AADT)
US 1 (Capital Blvd)	North of Burlington Mills Rd	79,300	2,700	82,000
Crossroads Ford Dwy	West of US 1 (Capital Blvd)	3,900	-1,500	2,400
Burlington Mills Rd	West of Wadford Dr (Service Rd)	17,200	400	17,600
Capital Hills Dr (Service Rd)	North of Burlington Mills Rd	2,500	-2,500	0
Capital Hills Dr (Service Rd)	South of Height Ln	2,500	-2,500	0
Ponderosa Service Rd	North of Height Ln	4,400	-2,100	2,300
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	4,400	-2,100	2,300
Wake Dr (Service Rd)	North of Burlington Mills Rd	1,800	-1,800	0
Wake Dr (Service Rd)	South of Height Ln	1,800	-1,800	0
Wake Dr (Service Rd)	North of Height Ln	2,500	-400	2,100
Wake Dr (Service Rd)	North of Star Rd	2,500	-400	2,100
Falls of Neuse Rd	West of Wakefield Commons Entrance	21,300	700	22,000
Falls of Neuse Rd	West of US 1 (Capital Blvd)	24,900	700	25,600
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy (Service Rd)	28,700	600	29,300
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	6,900	-2,100	4,800

For locations not included above, the traffic forecast would remain the same as the 2015 BYB Conditions Scenario A.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2015 BYB Conditions Scenario D were assumed to remain the same as those for the 2015 BYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 7-9. The changes in traffic factors along these roads – Capital Hills Dr (Service Rd), Wake Dr (Service Rd), Ponderosa Service Rd, and Common Oaks Dr (South) – are due to the travel pattern changes associated with the removal of access over the CSX Railroad on the service roads parallel to US 1 (Capital Blvd).

Table 7-9 - 2015 Base Year Build Conditions Scenario D Traffic Factors

Roadway	Location	2015 Base Year Build Conditions Scenario A			2015 Base Year Build Conditions Scenario D		
		Peak-to-Day Factor (%)	Directional Factor (%)	Direction	Peak-to-Day Factor (%)	Directional Factor (%)	Direction
Ponderosa Service Rd	North of Height Ln	55%	9%	SB	60%	9%	SB
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	55%	9%	EB	60%	9%	EB
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	55%	9%	EB	60%	9%	EB
Height Ln	South of Common Oaks Dr (South)	55%	9%	SB	65%	8%	SB
Height Ln	West of Ponderosa Service Rd	55%	9%	EB	65%	8%	EB
Height Ln	West of US 1 (Capital Blvd)	65%	8%	EB	65%	8%	EB
Wake Dr (Service Rd)	North of Height Ln	65%	9%	NB	60%	9%	NB
Wake Dr (Service Rd)	North of Star Rd	65%	9%	NB	60%	9%	NB
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	55%	9%	SB	55%	9%	NB

For locations not included above, the traffic factors would remain the same as the 2015 BYB Scenario A Conditions.

7.5 2015 Base Year Build Conditions Scenario E

Assumptions

The Triangle Regional Travel Demand Model Version 5 (TRM) was used as a tool to aid in the forecast development. The projects relevant to the study area are shown in the CAMPO 2040 MTP and are included in the model.

For the 2015 BYB Conditions Scenario E, all improvements included in the 2015 BYB Conditions Scenario A were included with the exception of the following:

- » No grade separation at Height Ln across US 1 (Capital Blvd). Height Ln would end west of US 1 (Capital Blvd) at Ponderosa Service Rd.

It should be noted that as the 2015 BYB Conditions Scenario E traffic forecast volumes are based upon the assumptions listed above, any change in access could result in a change in traffic forecast volumes. While access changes would not likely have a major impact on the US 1 (Capital Blvd) traffic forecast volumes, service road traffic forecast volumes would be affected more significantly.

Fiscal Constraint

Based on the current STIP, this project is fiscally constrained and assumed to be constructed by the year 2040, which is the same as the future year of this forecast.

Methodology

The 2015 BYB Conditions Scenario E traffic forecast volumes were obtained as follows:

- » *Step 1 – Reroute volumes for access changes:* Use the 2015 BYB Conditions Scenario A traffic forecast volumes as a basis for the 2015 BYB Conditions Scenario E traffic forecast volumes. For locations where traffic would be re-routed due to roadway network changes noted in the assumptions, adjustments to the volumes were manually calculated for the segment volumes as well as the turning movement volumes. The change in segment volumes is shown on Table 7-10.
- » *Step 2 – Balance volumes:* After the segment volumes and turning movement volumes were rerouted, the volumes were balanced along the corridor.
- » *Step 3 – Review and finalize traffic forecasts:* After careful review and comparison of the Step 2 traffic volumes with both the 2015 BYNB Conditions traffic forecast volumes as well as the 2015 BYB Conditions Scenario A traffic forecast volumes, the 2015 BYB Conditions Scenario E traffic forecasts were finalized as shown on Table 7-10.

Figure 14 shows the 2015 BYB Conditions Scenario E AADT volumes with peak-to-day factors, directional splits, and truck percentages for those locations that differ from the 2015 BYB Conditions Scenario A traffic forecasts.

Table 7-10 - 2015 Base Year Build Conditions Scenario E Traffic Forecasts

Roadway	Location	2015 Build Conditions Scenario A Traffic Forecasts (AADT)	Adjustments due to Travel Pattern Changes and/or Balancing (AADT)	Selected 2015 Build Conditions Scenario E Traffic Forecasts (AADT)
Ponderosa Service Rd	North of Height Ln	4,400	-1,900	2,500
Common Oaks Dr (South)	East of Forest Pines Dr (Service Rd)	4,400	-1,900	2,500
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	2,700	300	3,000
Height Ln	South of Common Oaks Dr (South)	500	-300	200
Height Ln	West of Ponderosa Service Rd	500	-300	200
Height Ln	West of US 1 (Capital Blvd)	2,400	-2,400	0
Height Ln Connector	West of Ligon Mill Rd	1,700	-1,700	0
Wake Dr (Service Rd)	North of Star Rd	2,500	-700	1,800
Ligon Mill Rd	South of US 1A (Main St)	6,400	-100	6,300
Falls of Neuse Rd	West of Wakefield Commons Entrance	21,300	1,200	22,500
Falls of Neuse Rd	West of US 1 (Capital Blvd)	24,900	1,200	26,100
US 1A (Main St)	West of Wake Dr/Golden Corral Dwy (Service Rd)	28,700	1,200	29,900
US 1A (Main St)	West of O2 Fitness Dwy/Walmart Dwy	28,300	1,300	29,600
US 1A (Main St)	West of Ligon Mill Rd	29,900	1,300	31,200
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	6,900	-1,400	5,500

For locations not included above, the traffic forecast would remain the same as the 2015 BYB Conditions Scenario A.

Design Factors

The peak-to-day, trucks (duals and TTSTs), and directional factors for the 2015 BYB Conditions Scenario E were assumed to remain the same as those for the 2015 BYB Conditions Scenario A at all study locations, with the exception of the factors along the roads shown in Table 7-11. The changes in traffic factors along these roads – Wake Dr (Service Rd), Height Ln, and Common Oaks Dr (South) - are a result of ending Height Ln at Ponderosa Service Rd, west of US 1 (Capital Blvd). A grade separation will not be provided at Height Ln and US 1 (Capital Blvd) as shown in 2015 BYB Scenario A and Height Ln will not be extended east of US 1 (Capital Blvd).

Table 7-11 - 2015 Base Year Build Conditions Scenario E Traffic Factors

Roadway	Location	2015 Base Year Build Conditions Scenario A			2015 Base Year Build Conditions Scenario E		
		Peak-to-Day Factor (%)	Directional Factor (%)	Direction	Peak-to-Day Factor (%)	Directional Factor (%)	Direction
Common Oaks Dr (South)	West of Forest Pines Dr (Service Rd)	55%	9%	EB	60%	9%	EB
Wake Dr (Service Rd)	North of Burlington Mills Rd	55%	9%	NB	65%	9%	NB
Forest Pines Dr (Service Rd)	South of Falls of Neuse Rd	55%	9%	SB	55%	9%	NB

For locations not included above, the traffic factors would remain the same as the 2015 BYB Scenario A Conditions.

8.0 COMPARISON OF PAST FORECASTS

There are a total of five relevant past traffic forecasts for other major roadway improvement projects in the study area. Each of these related forecasts were reviewed in the development of this forecast. However, because only FS-1305A was based on the current version of the Triangle Regional Travel Demand Model Version 5 (TRM), these were the only growth rates considered. The following are detailed descriptions of each related forecast and its application to this forecast. Table 8-1 provides a comparison of the key study locations and the associated traffic forecast volumes and growth rates for these past forecasts.

R-3600: Feasibility Project US 1A from US 1 (Capital Blvd) to proposed NC 98 Bypass

The 1996 traffic forecast for project R-3600 provides projections for a base year of 1996 using The Highway Emulator (THE) comprehensive projection, the project R-2809 traffic forecast, project specific traffic counts, and site visits to determine traffic patterns. The future year, 2020, projections were based primarily on the project R-2809 2018 traffic forecast. This forecast was based on an outdated projection model; therefore, the growth rates it produced were not considered.

B-5318: Replacement of Bridge #126 on Ligon Mill Rd over Smith's Creek

The traffic forecast for B-5318 was developed in 2011 using project specific traffic counts, historic trends, and the TRM V4-2008 to predict future traffic for 2035. With a base year of 2011 and 2035 as the future year, the annual growth rate for the road common with this project, Ligon Mill Rd, is 4.4%. This forecast was based on an outdated projection model; therefore, the growth rates it produced were not considered.

FS-1205D: Widening of NC 50 (Creedmoor Rd) from I-540 to north of NC 98

The 2012 traffic forecast for FS-1205D was prepared using historic AADT trend data and project specific traffic counts. The TRM V4 data was evaluated but not used to determine the BYNB forecast. With a base year of 2012 and 2035 as the future year, annual growth rates for the roads common with this project, I-540 and NC 98, range from approximately 1% to 2%. This forecast was based on an outdated projection model; therefore, the growth rates it produced were not considered.

FS-1205B: Interchange construction at US 401 (Louisburg Rd), Ligon Mill Rd and Mitchell Mill Rd

The 2013 traffic forecast for FS-1205B provides projections for a base year of 2013 using project specific traffic counts and historic traffic counts and trends. The TRM V4 was reviewed and used only as a tool in the development of the forecast. The future year, 2020, projections were based primarily on model growth, historic traffic trends and land use expectations. Annual growth rates for roads common with this project range from approximately 2.5% to 3.2%. This forecast was based on an outdated projection model; therefore, the growth rates it produced were not considered.

FS-1305A: I-540 Managed Lanes Feasibility Study from NC 147 to US 64/264

The 2014 feasibility study for FS-1305A was prepared using historic annual average daily traffic (AADT) volumes and project specific traffic counts. The TRM Version 5 data was used to establish traffic patterns and future growth. With a base year of 2013 and 2040 as the future year, annual growth rates for the roads common with this project: I-540, Falls of Neuse Rd, Gresham Lake Rd, US 1 (Capital Blvd), Triangle Town Blvd, Fox Rd, and US 401 (Louisburg Rd), range from approximately 1% to 7%. This data was considered in determining growth rates and future travel patterns for this project.

Table 8-1

Table 8-1 - Comparison of Past Forecasts

Roadway	Location	Annual Average Daily Traffic Volume Forecasts														
		R-3600 June 1996			B-5318 June 2011			FS-1205D December 2012			FS-1205B February 2013			FS-1305A June 2014		
		1996 BYB	2020 FYB	Annual Growth Rate (%) (1996-2020)	2011 BYNB	2035 FYB	Annual Growth Rate (%) (2011-2035)	2012 BYNB	2035 FYNB	Annual Growth Rate (%) (2012-2035)	2012 BYNB	2035 FYB	Annual Growth Rate (%) (2012-2035)	2013 BYNB	2040 FYNB	Annual Growth Rate (%) (2013-2040)
US 1 (Capital Blvd)	North of Old Wake Forest Rd													65,500	85,600	1.1%
US 1 (Capital Blvd)	North of I-540													62,000	97,800	2.1%
US 1 (Capital Blvd)	North of Burlington Mills Rd	25,200	49,600	4.0%												
US 1 (Capital Blvd)	North of Falls of Neuse Rd/US 1A (Main St)	19,000	35,500	3.6%												
I-540	West of Falls of Neuse Rd							98,200	123,400	1.1%				89,100	172,800	3.5%
I-540	West of US 1 (Capital Blvd)													78,700	175,200	4.5%
I-540	West of Triangle Town Blvd													52,700	152,100	7.0%
I-540	West of US 401 (Louisburg Rd)													52,700	152,100	7.0%
I-540	East of US 401 (Louisburg Rd)													47,600	124,300	6.0%
Falls of Neuse Rd	South of I-540													34,400	52,300	1.9%
Falls of Neuse Rd	North of I-540													47,200	61,500	1.1%
Triangle Town Blvd	South of I-540													10,200	28,600	6.7%
US 401 (Louisburg Rd)	South of I-540													44,800	64,200	1.6%
US 401 (Louisburg Rd)	North of I-540										47,100	74,300	2.5%	52,900	68,800	1.1%
US 401 (Louisburg Rd)	North of Fox Rd										44,200	69,700	2.5%			
Fox Rd	West of US 401 (Louisburg Rd)										8,100	14,100	3.2%			
US 1A (Main St)	West of Ligon Mill Rd	10,200	23,100	5.3%												
US 1A (Main St)	East of Ligon Mill Rd	10,000	22,800	5.3%												
Ligon Mill Rd	South of US 1A (Main St)	1,400	2,500	3.3%	8,900	18,300	4.4%									
NC 98 Bypass	West of US 1 (Capital Blvd)							16,800	23,600	1.8%						

Appendices

Appendix A: Traffic Forecast Diagrams

- Figure 1: U-5307 Study Area
- Figure 2: 2015 Base Year No Build Conditions Annual Average Daily Traffic Forecasts
- Figure 3: 2040 Future Year No Build Conditions Annual Average Daily Traffic Forecasts
- Figure 4: TRM Daily Traffic Volume Differences from 2040 Future Year No Build Conditions to 2040 Future Year Build Conditions Scenario A
- Figure 5: 2040 Future Year Build Conditions Scenario A Annual Average Daily Traffic Forecasts
- Figure 6: 2040 Future Year Build Conditions Scenario B Annual Average Daily Traffic Forecasts
- Figure 7: 2040 Future Year Build Conditions Scenario C Annual Average Daily Traffic Forecasts
- Figure 8: 2040 Future Year Build Conditions Scenario D Annual Average Daily Traffic Forecasts
- Figure 9: 2040 Future Year Build Conditions Scenario E Annual Average Daily Traffic Forecasts
- Figure 10: 2015 Base Year Build Conditions Scenario A Annual Average Daily Traffic Forecasts
- Figure 11: 2015 Base Year Build Conditions Scenario B Annual Average Daily Traffic Forecasts
- Figure 12: 2015 Base Year Build Conditions Scenario C Annual Average Daily Traffic Forecasts
- Figure 13: 2015 Base Year Build Conditions Scenario D Annual Average Daily Traffic Forecasts
- Figure 14: 2015 Base Year Build Conditions Scenario E Annual Average Daily Traffic Forecasts

Appendix B: Traffic Count Data

Appendix C: 24-Hour Turning Movement Spreadsheet

Appendix D: Peak Hour Turning Movement Spreadsheet

Appendix E: Traffic Forecast Utility Worksheets

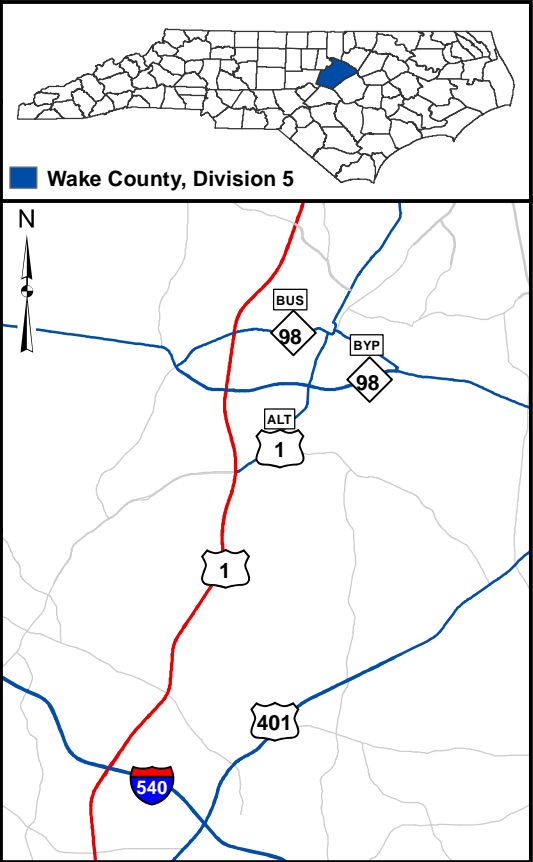
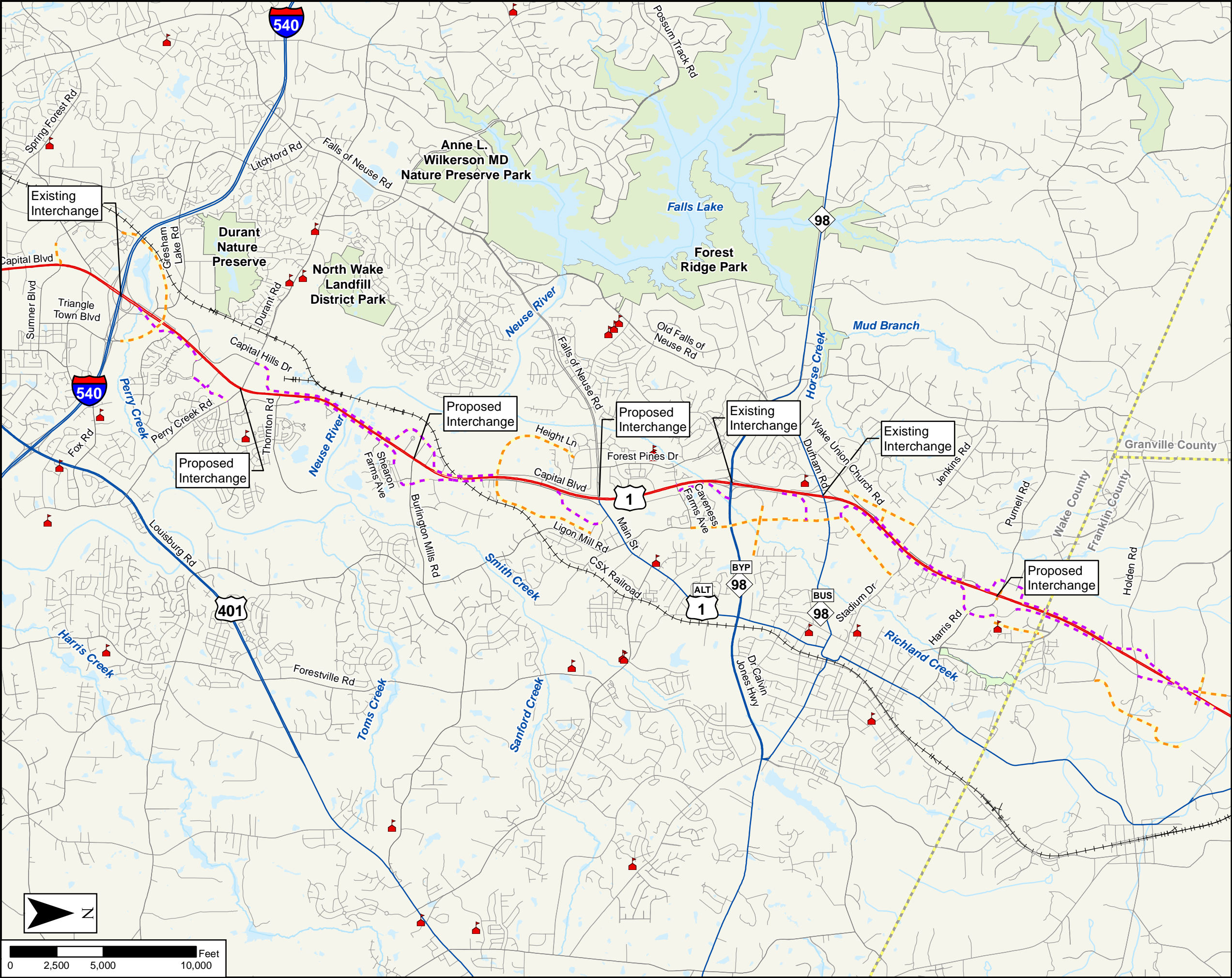
Appendix F: U-5307 Traffic Forecast Memos

Appendix G: Travel Pattern Changes Diagrams

- Figure G-1: 2040 Future Year No Build Travel Pattern Changes due to Triangle Town Blvd/Sumner Blvd Extension
- Figure G-2: 2040 Future Year No Build Travel Pattern Changes due to Ligon Mill Rd Extension
- Figure G-3: 2040 Travel Pattern Changes from Future Year No Build Conditions to Future Year Build Conditions Scenario A
- Figure G-4: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario B
- Figure G-5: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario C
- Figure G-6: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario D
- Figure G-7: 2040 Travel Pattern Changes from Future Year Build Conditions Scenario A to Future Year Build Conditions Scenario E

Appendices B through G are included electronically in the CD attached to the back cover.

Appendix A:
Traffic Forecast Diagrams



U-5307 STUDY AREA
FIGURE 1 SHEET 1 of 1

LEGEND

- County Boundaries
- School
- Proposed Service Road
- Proposed Local Road
- Railroad
- River/Creek
- Park/Public Space

TIP: U-5307 WBS: 47027.1.1

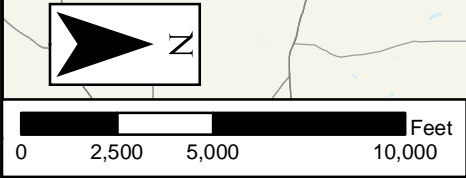
COUNTY: Wake DIVISION: 5

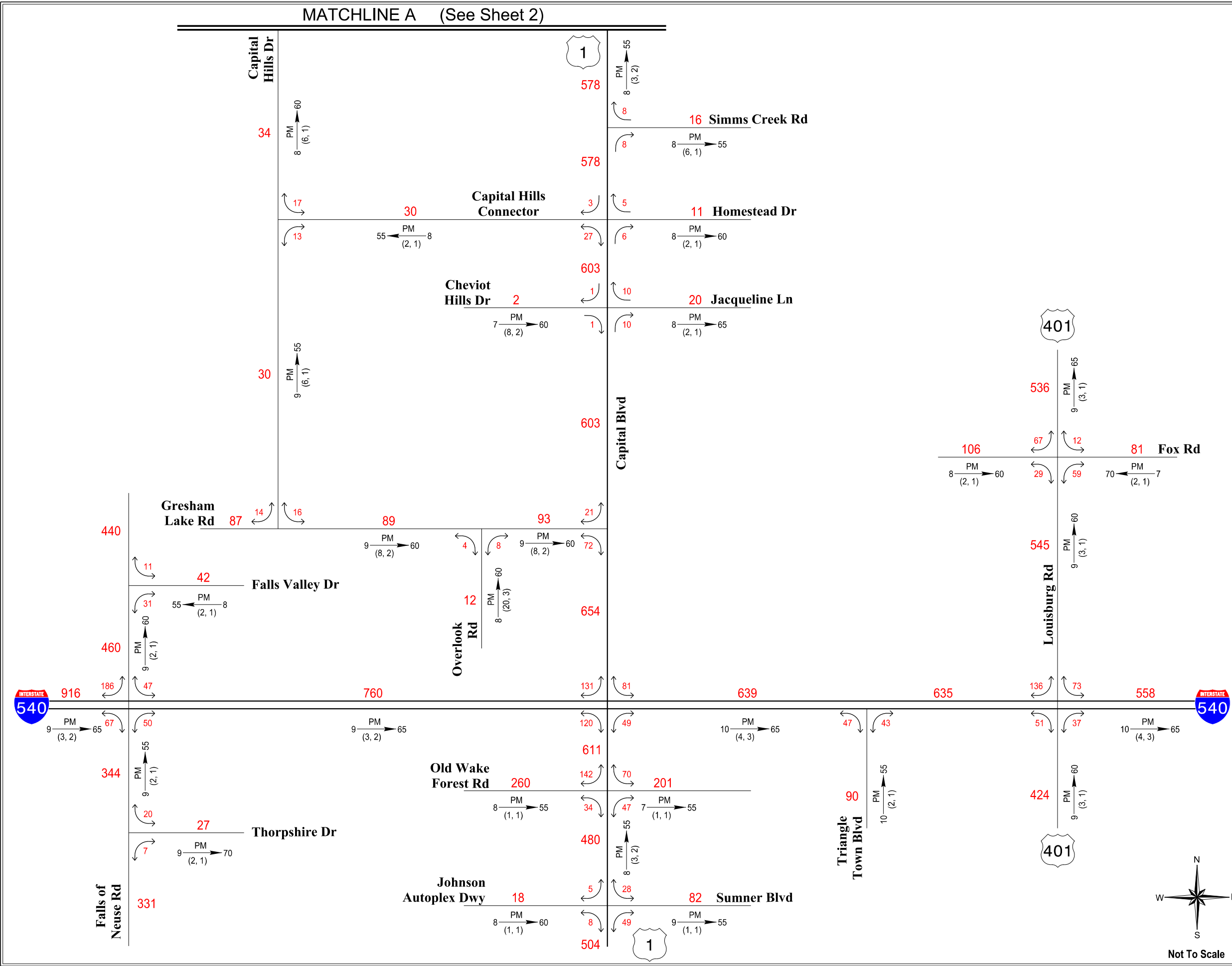
DATE: June 2017

PREPARED BY: RS&H

LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





Wake County, Div. 5

N

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
BASE YEAR
NO BUILD CONDITIONS
FIGURE 2 SHEET 1 of 7

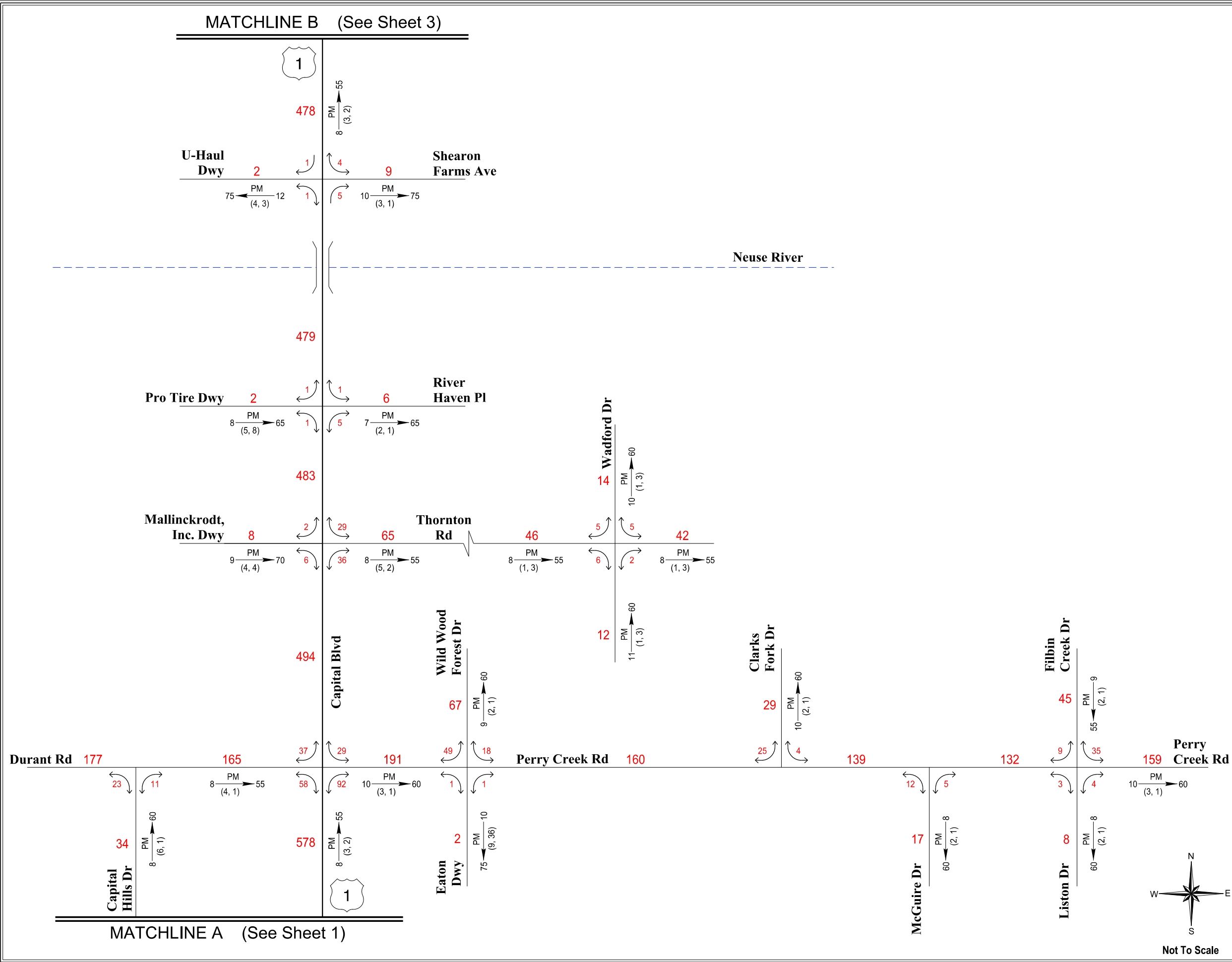
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale



Wake County, Div. 5

N

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
BASE YEAR
NO BUILD CONDITIONS
FIGURE 2 SHEET 2 of 7

LEGEND

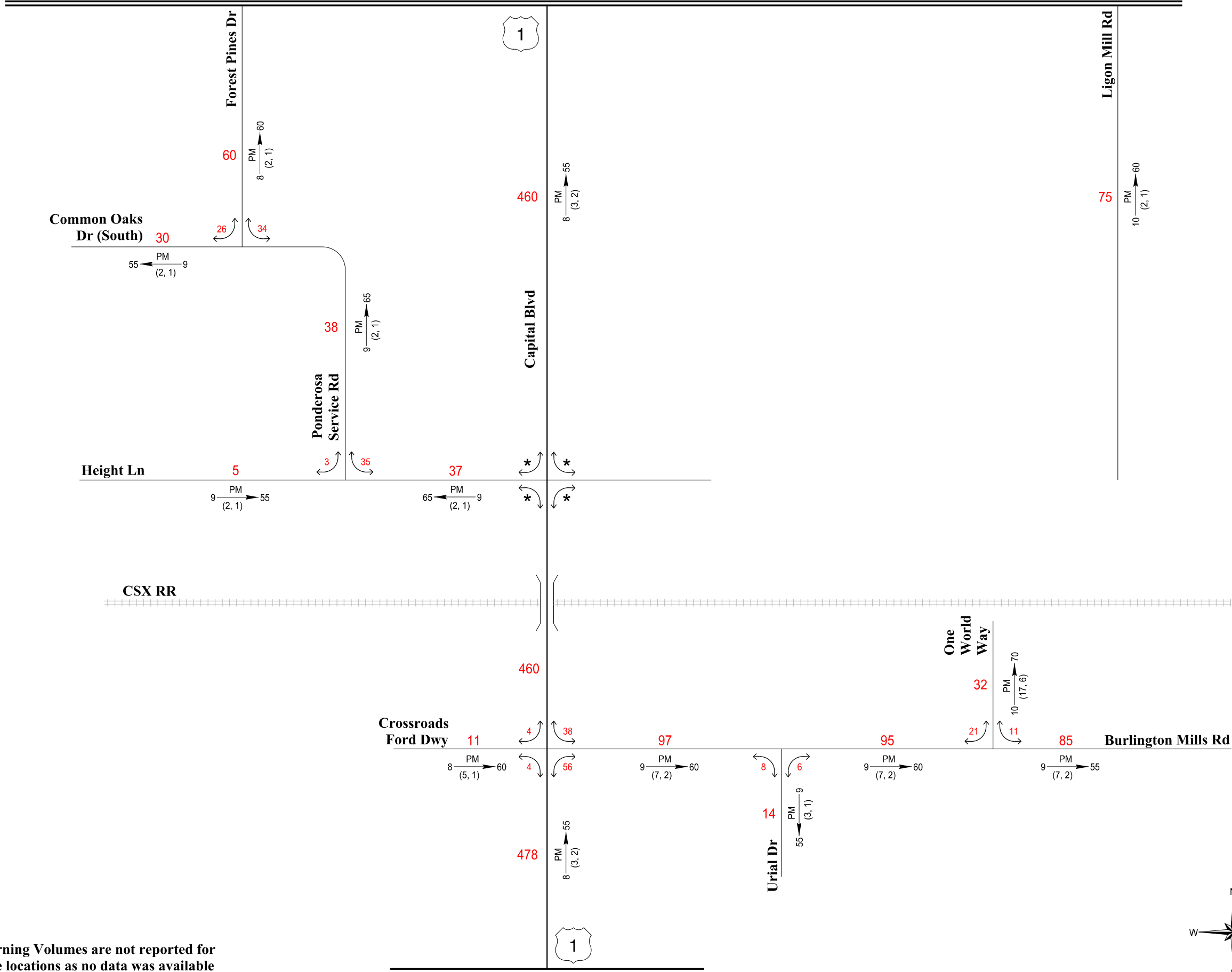
DHV $\xrightarrow{\text{PM (d,t)}}$ D

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
 \rightarrow Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

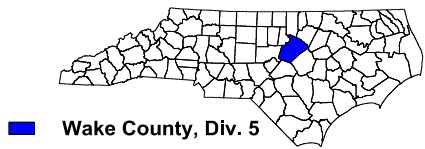
Not To Scale

MATCHLINE C (See Sheet 4)



*Turning Volumes are not reported for these locations as no data was available at the time of this traffic forecast

MATCHLINE B (See Sheet 2)



2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
BASE YEAR
NO BUILD CONDITIONS
FIGURE 2 SHEET 3 of 7

LEGEND

- DHV $\xrightarrow{\text{PM (d,t)}} D$
- 000 No. of Vehicles Per Day in 100's
 - DHV Design Hourly Volume (%)
 - D Peak Hour Directional Split (%)
 - PM PM Peak Period
 - \rightarrow Direction of D
 - (d,t) Duals, TT-ST's (%)

TIP: U-5307 WBS: 47027.1.1

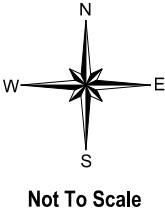
COUNTY: Wake DIVISION: 5

DATE: June 2017

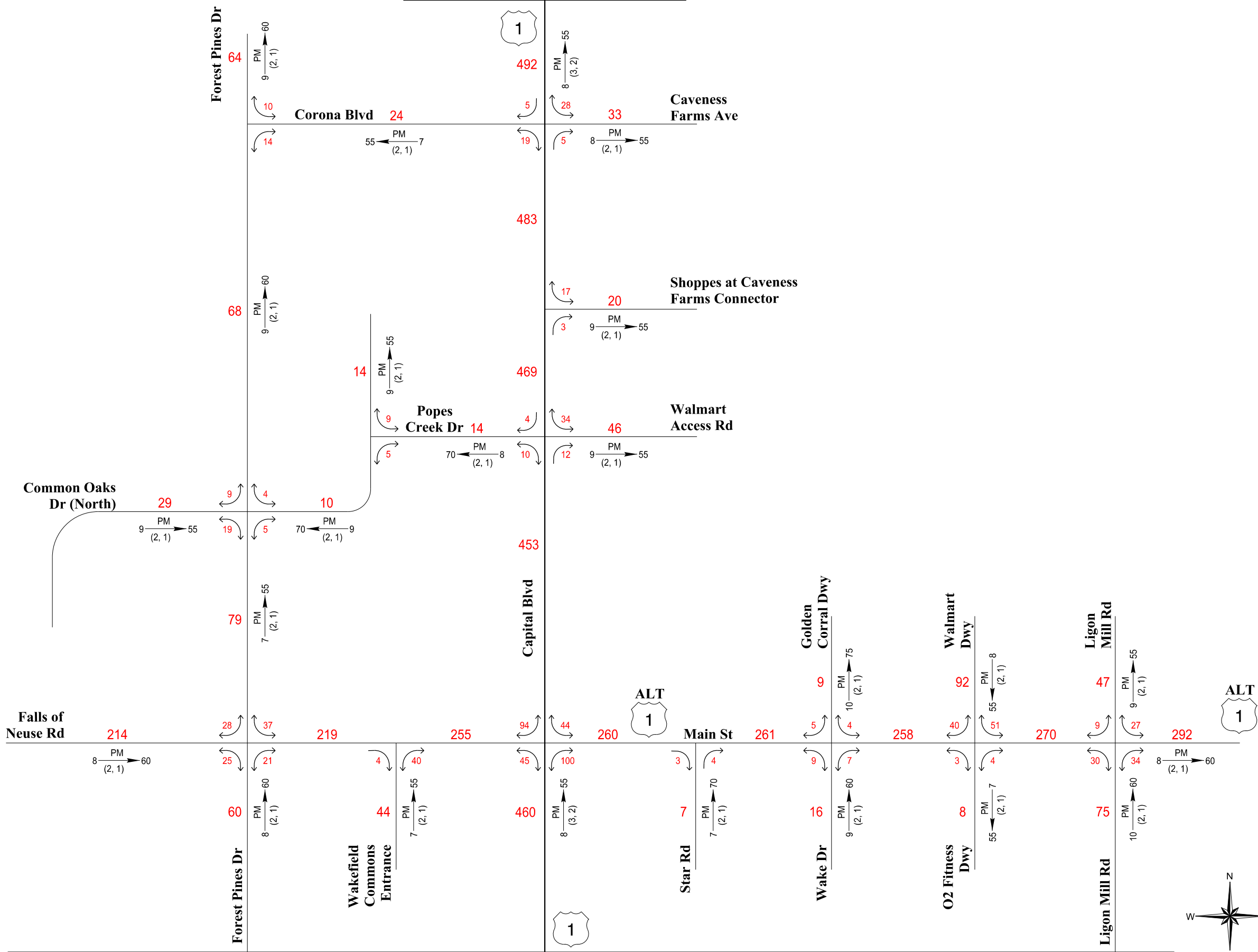
PREPARED BY: RS&H

LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

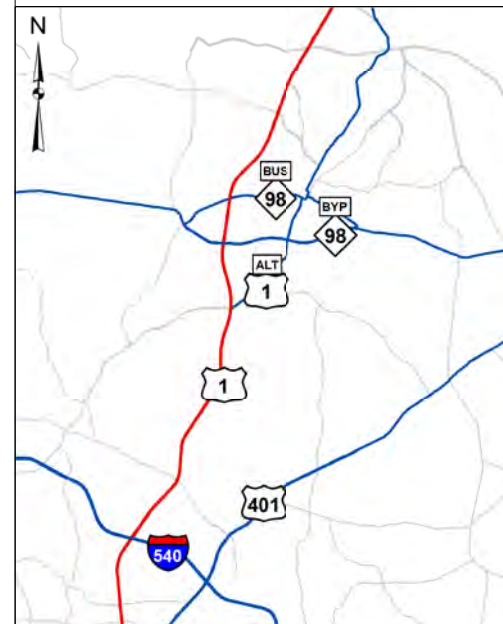
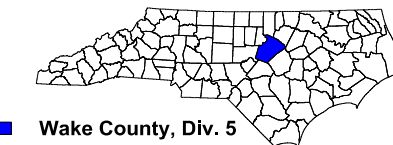
PROJECT:
US 1 (Capital Blvd) Freeway Upgrade



MATCHLINE D (See Sheet 5)



MATCHLINE C (See Sheet 3)



2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

BASE YEAR
NO BUILD CONDITIONS

FIGURE 2 SHEET 4 of 7

LEGEND

DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)

- 000 No. of Vehicles Per Day in 100's
- DHV Design Hourly Volume (%)
- D Peak Hour Directional Split (%)
- PM PM Peak Period
- \rightarrow Direction of D
- (d,t) Duals, TT-ST's (%)

TIP: U-5307 WBS: 47027.1.1

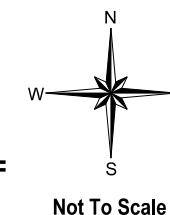
COUNTY: Wake DIVISION: 5

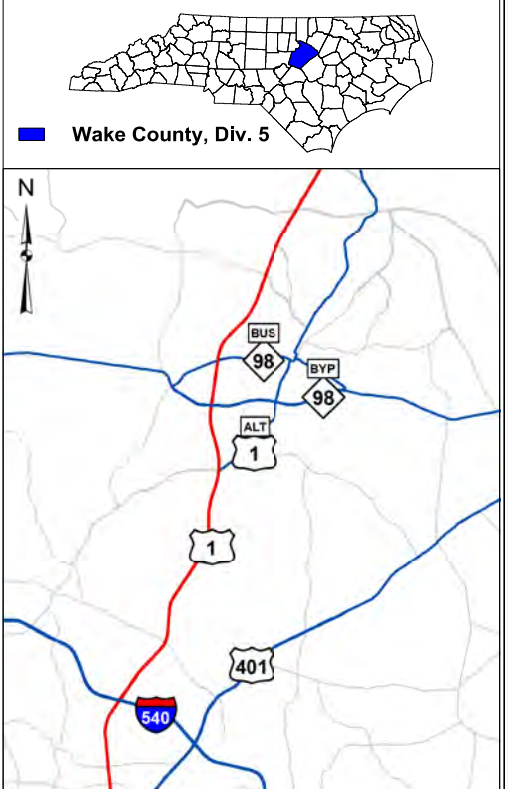
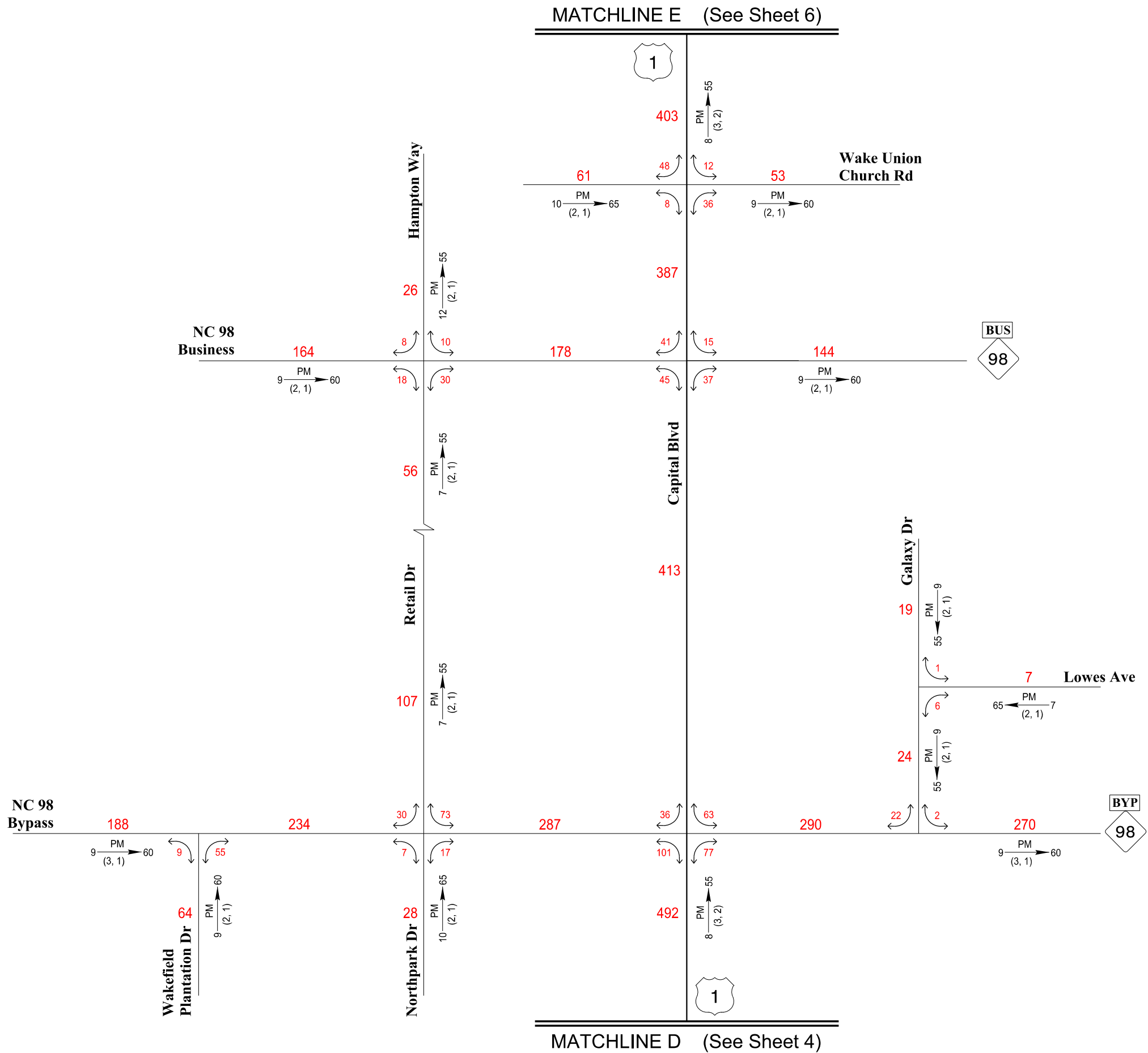
DATE: June 2017

PREPARED BY: RS&H

LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





2015

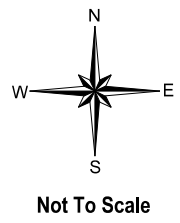
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
BASE YEAR
NO BUILD CONDITIONS
FIGURE 2 SHEET 5 of 7

LEGEND

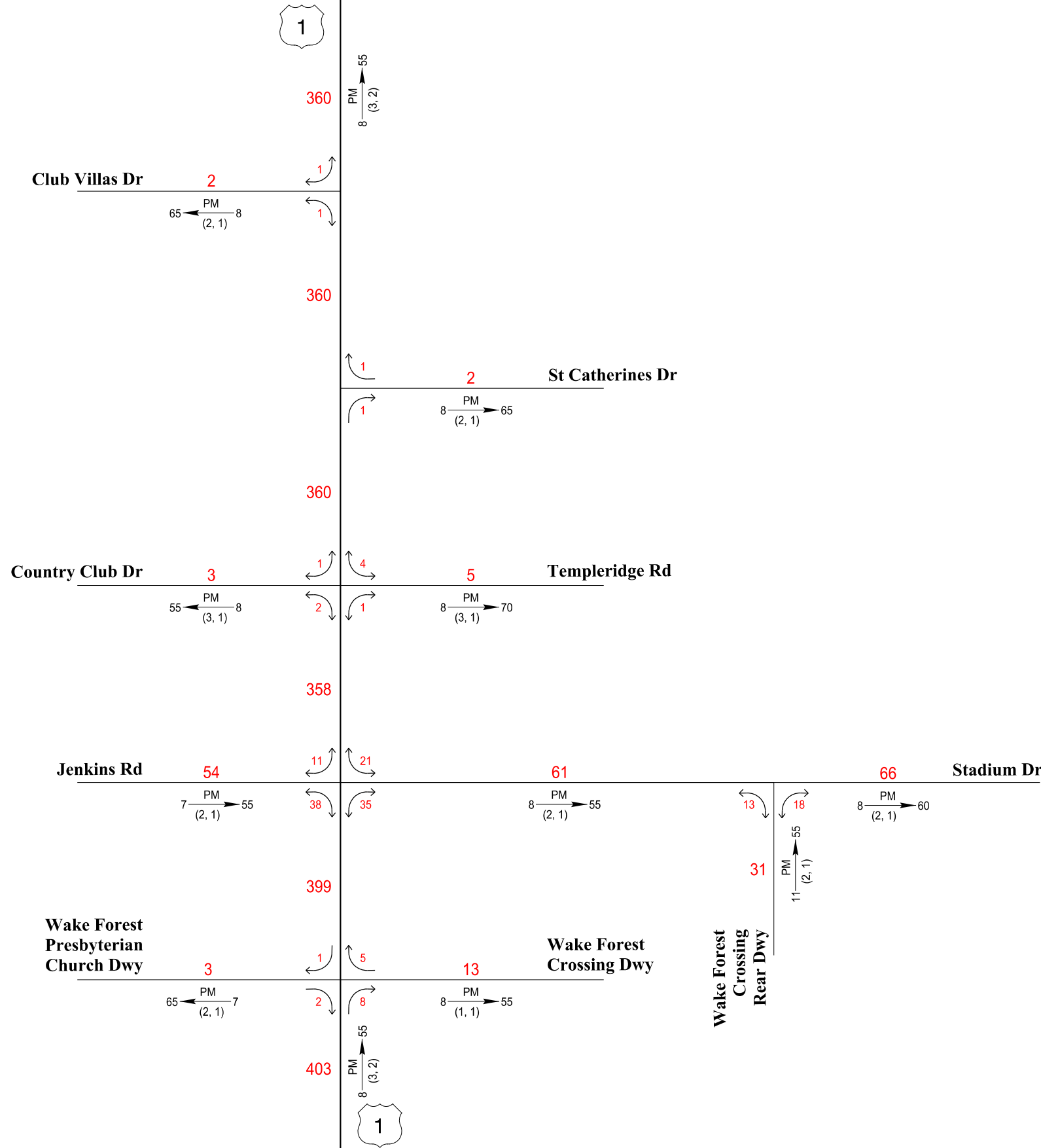
DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
 \rightarrow Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

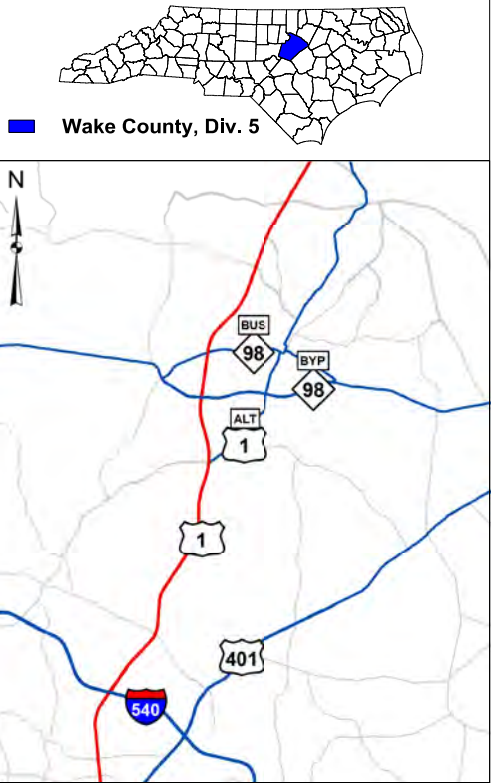


MATCHLINE F (See Sheet 7)



MATCHLINE E (See Sheet 5)

Locations added in the
Extended Study Area



2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
BASE YEAR
NO BUILD CONDITIONS
FIGURE 2 SHEET 6 of 7

LEGEND

- DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)
- 000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307 WBS: 47027.1.1

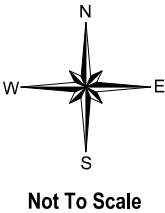
COUNTY: Wake DIVISION: 5

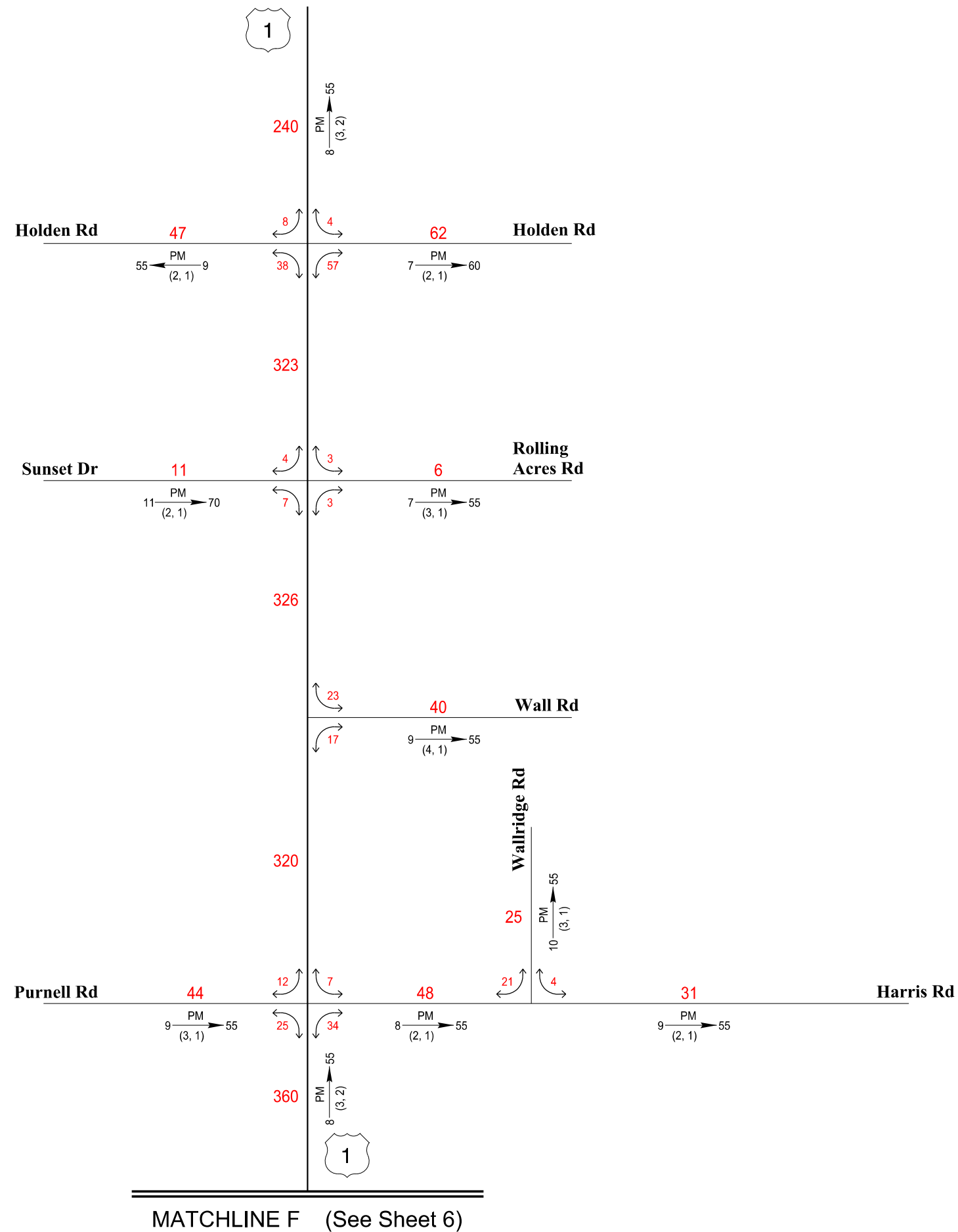
DATE: June 2017

PREPARED BY: RS&H

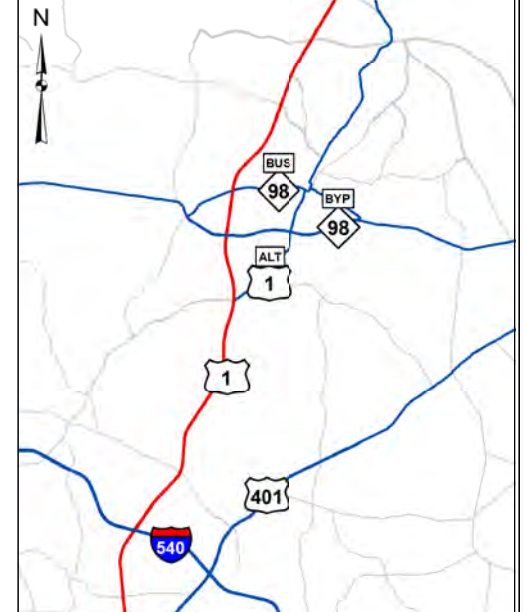
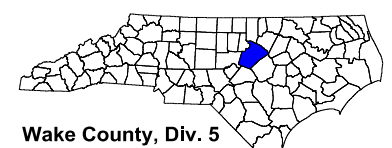
LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





Locations added in the
Extended Study Area



2015

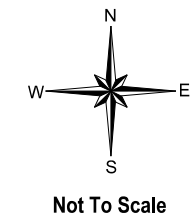
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**BASE YEAR
NO BUILD CONDITIONS**
FIGURE 2 SHEET 7 of 7

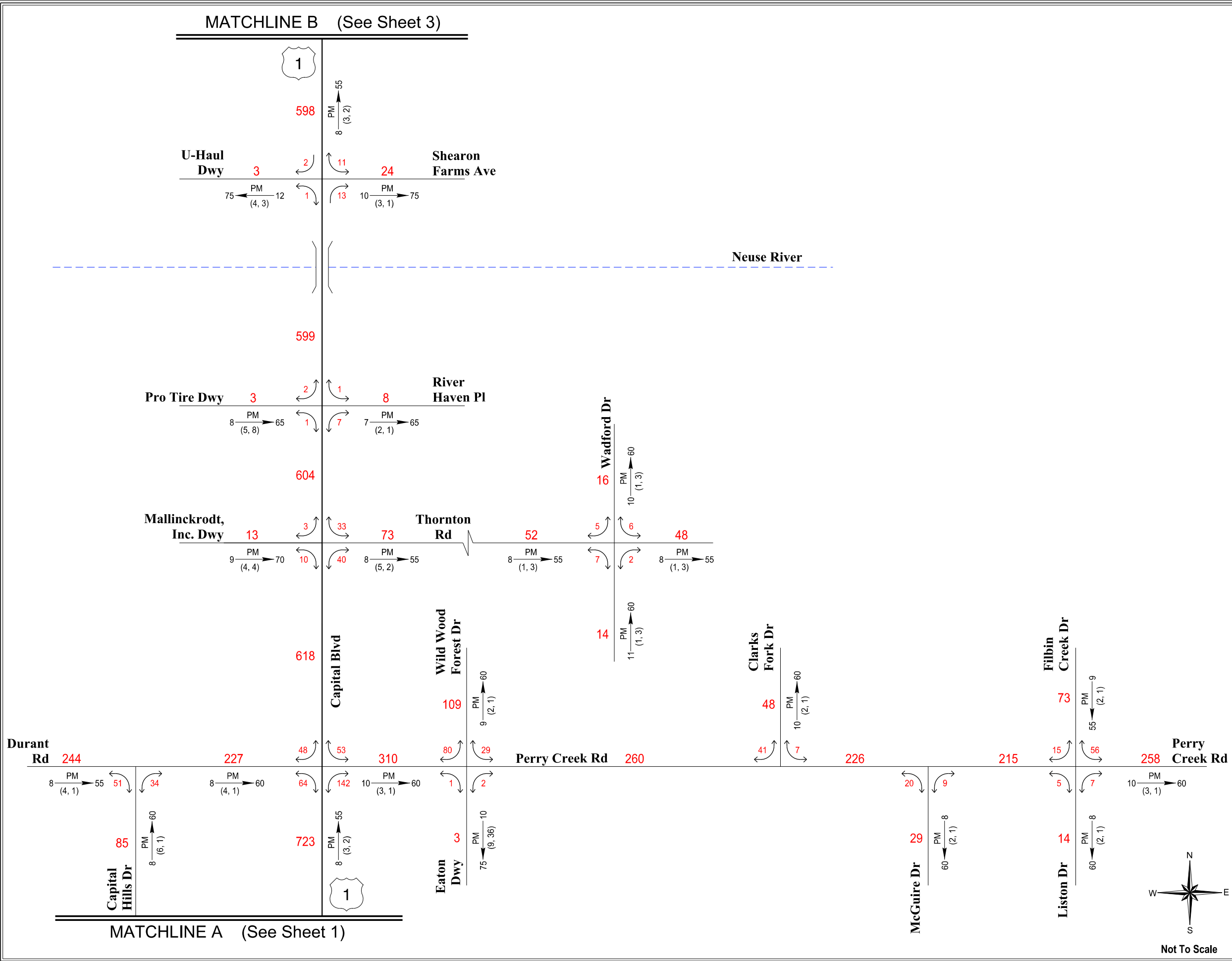
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}}$ D

- 000 No. of Vehicles Per Day in 100's
- DHV Design Hourly Volume (%)
- D Peak Hour Directional Split (%)
- PM PM Peak Period
- Direction of D
- (d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	





Wake County, Div. 5

2040

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

**FUTURE YEAR
NO BUILD CONDITIONS**

FIGURE 3 SHEET 2 of 7

LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

D Peak Hour Directional Split (%)

PM PM Peak Period

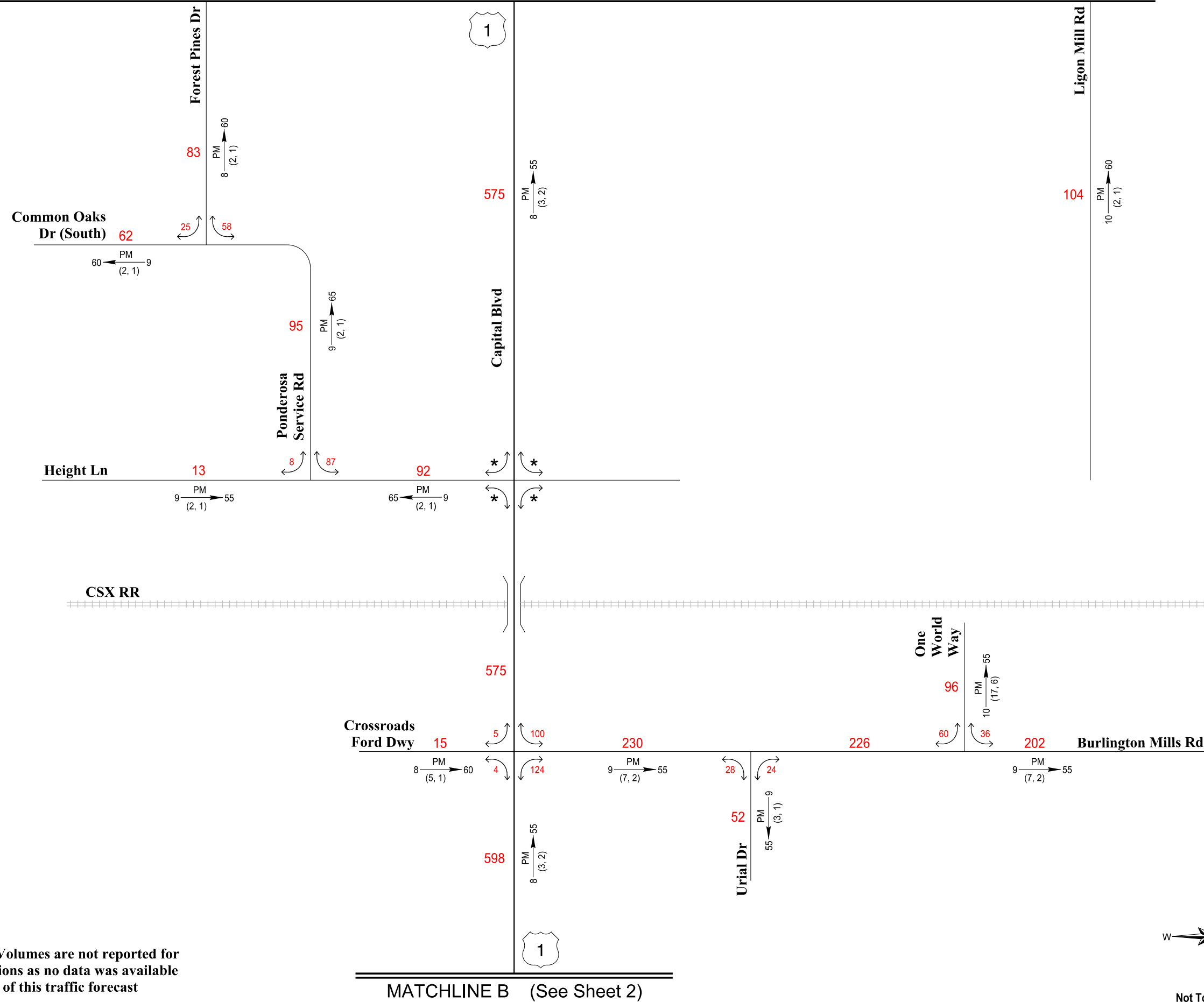
\rightarrow Direction of D

(d,t) Duals, TT-ST's (%)

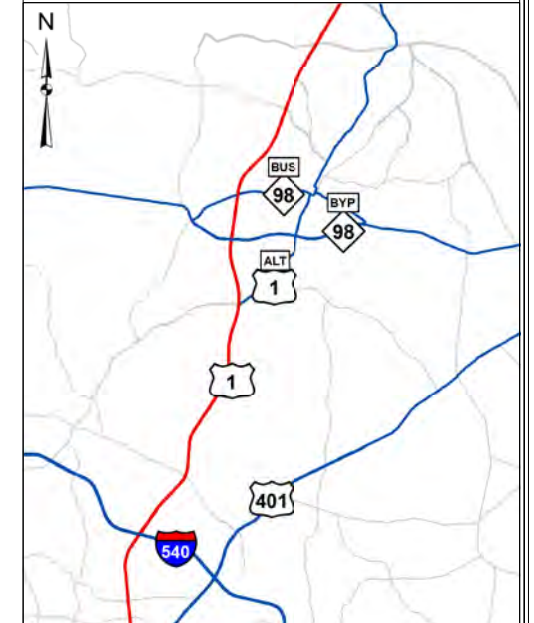
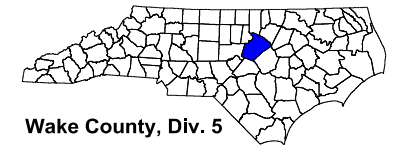
TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale

MATCHLINE C (See Sheet 4)



***Turning Volumes are not reported for these locations as no data was available at the time of this traffic forecast**



2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
FUTURE YEAR
NO BUILD CONDITIONS
FIGURE 3 SHEET 3 of 7

LEGEND

$$\text{DHV} \xrightarrow[\text{(d,t)}]{\text{PM}} \text{D}$$

000	No. of Vehicles Per Day in 100's
DHV	Design Hourly Volume (%)
D	Peak Hour Directional Split (%)
PM	PM Peak Period
→	Direction of D
(d,t)	Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
--------------------	-----------------------

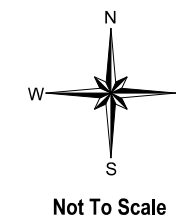
COUNTY: Wake	DIVISION: 5
---------------------	--------------------

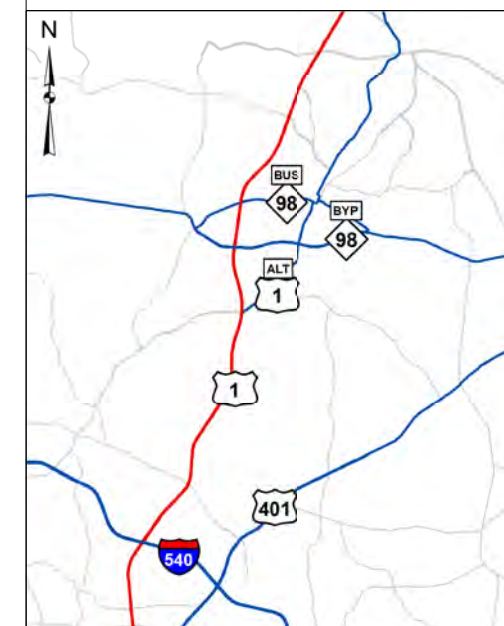
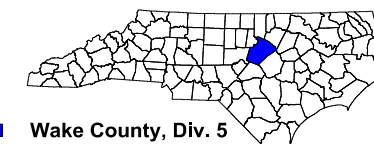
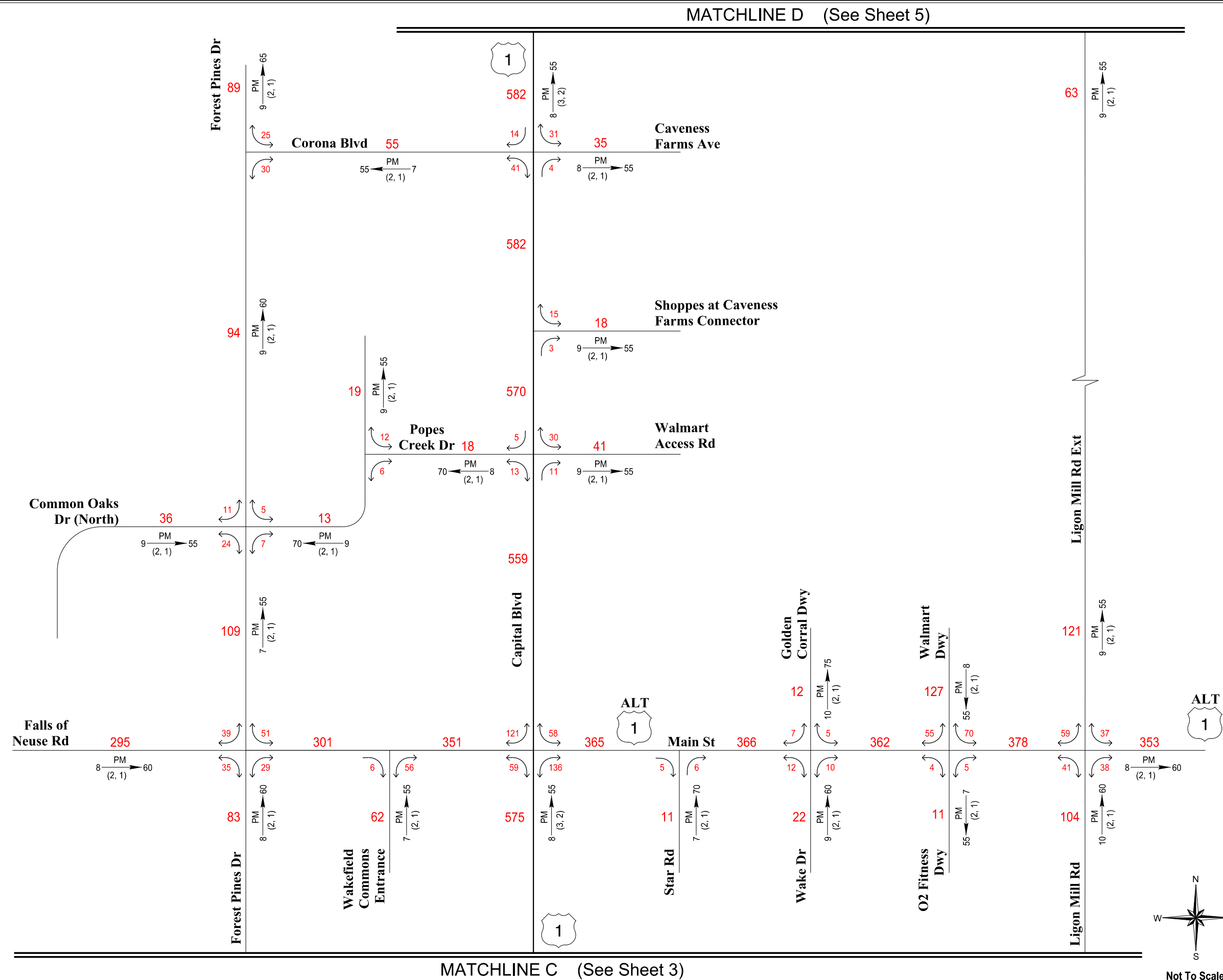
DATE: June 2017

PREPARED BY: RS&H

E	LOCATION:	US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)
---	------------------	---

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





2040

ANNUAL AVERAGE DAILY TRAFFIC FORECASTS

**FUTURE YEAR
NO BUILD CONDITIONS**

FIGURE 3 SHEET 4 of 7

LEGEND

$$\text{DHV} \xrightarrow[(d,t)]{\text{PM}} \text{D}$$

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

D Peak Hour Directional Split (%)

PM	PM Peak Period
----	----------------

→ Direction of D

Direction of \mathbf{E}	
(d,t)	Duals, TT-ST's (%)

TIP: U-5307

WBS: 47027.1.1

COUNTY: Wake

DIVISION: 5

DATE: June 2017

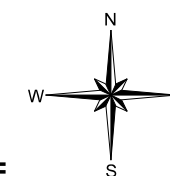
PREPARED BY: RS&H

LOCATION:

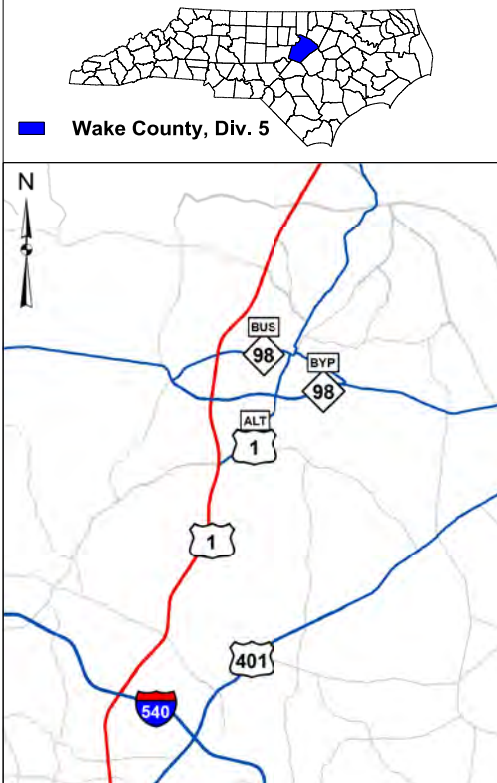
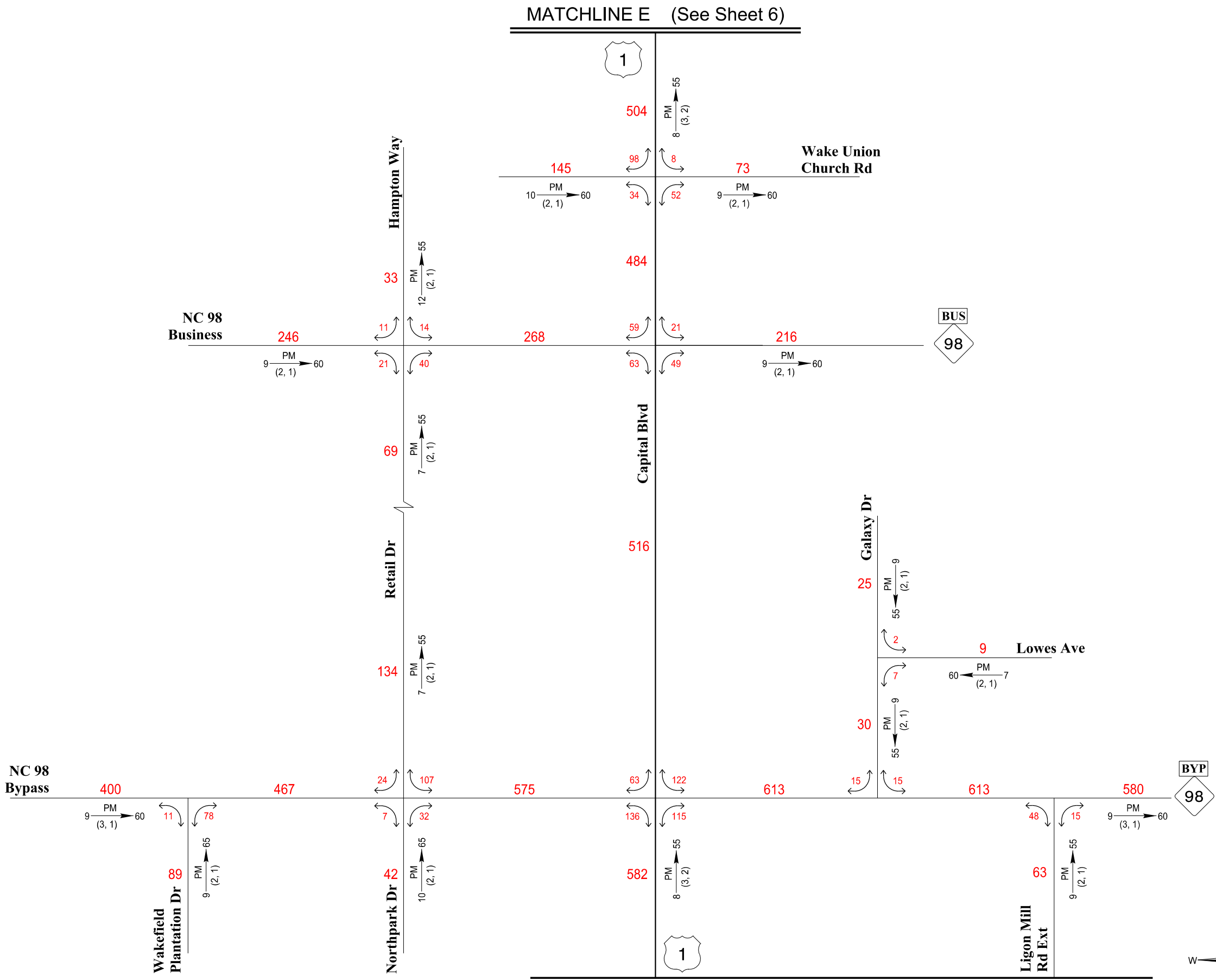
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:

US 1 (Capital Blvd) Freeway Upgrade



Not To Scale



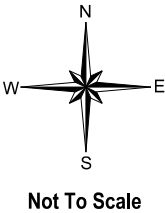
2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**FUTURE YEAR
NO BUILD CONDITIONS**
FIGURE 3 SHEET 5 of 7

LEGEND

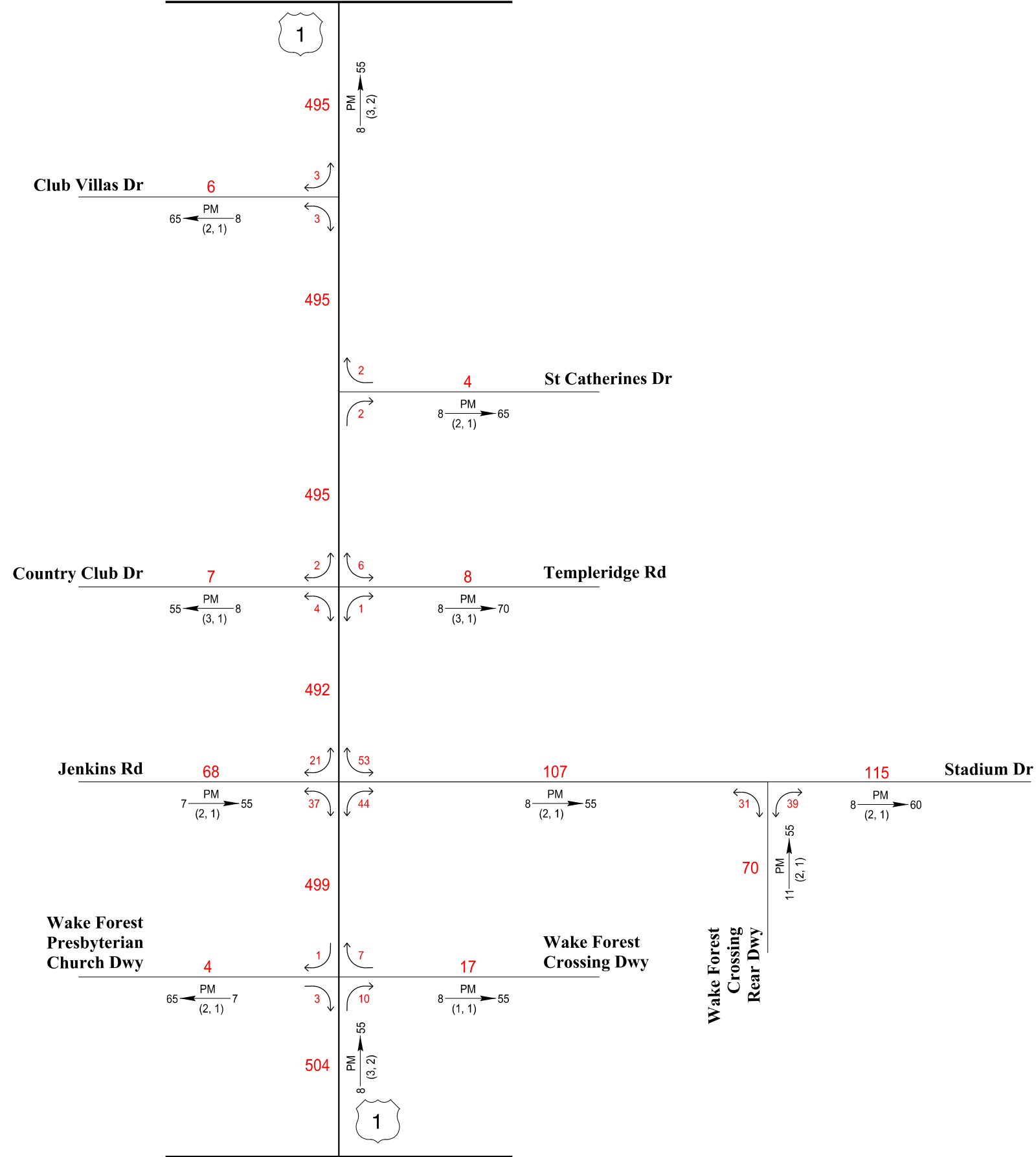
DHV $\xrightarrow[\text{(d,t)}]{\text{PM}}$ D

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

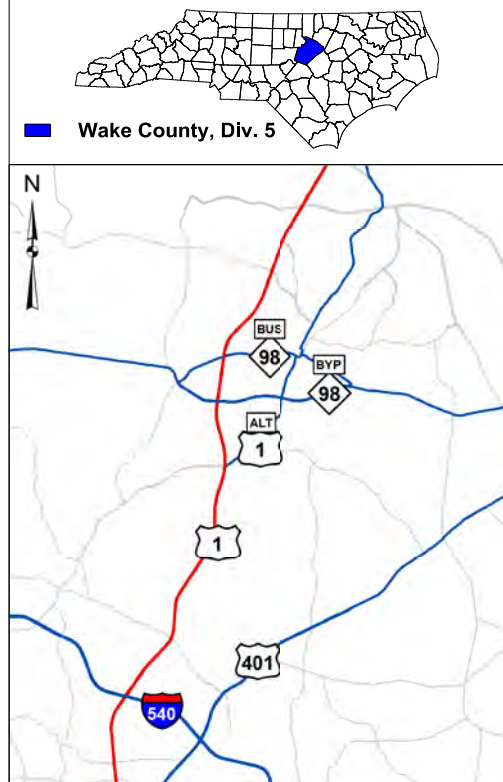


MATCHLINE F (See Sheet 7)



MATCHLINE E (See Sheet 5)

Locations added in the Extended Study Area



2040

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**FUTURE YEAR
NO BUILD CONDITIONS**
FIGURE 3 SHEET 6 of 7

LEGEND

- DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)
- 000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
 \rightarrow Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307 WBS: 47027.1.1

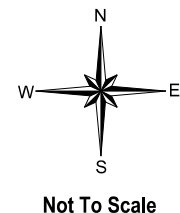
COUNTY: Wake DIVISION: 5

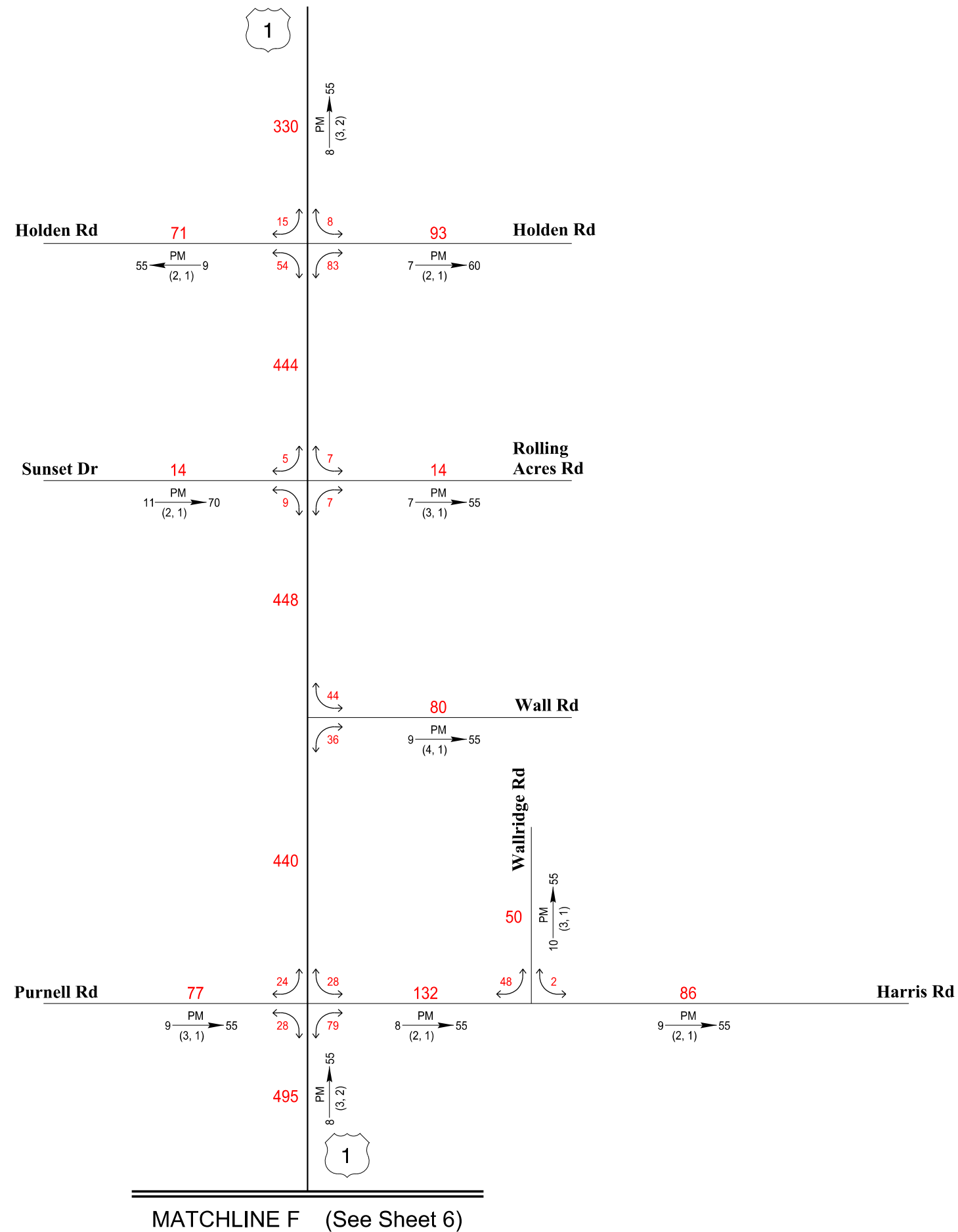
DATE: June 2017

PREPARED BY: RS&H

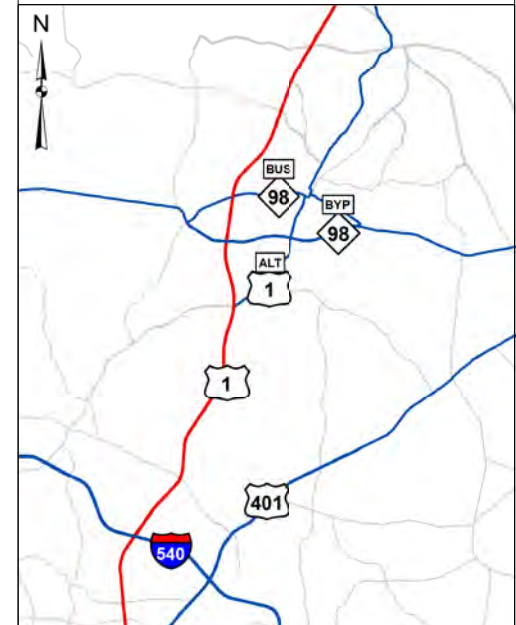
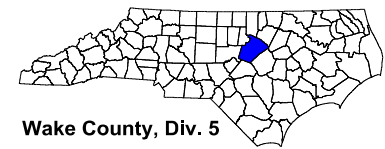
LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





Locations added in the
Extended Study Area



2040

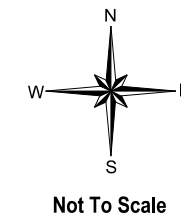
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**FUTURE YEAR
NO BUILD CONDITIONS**
FIGURE 3 SHEET 7 of 7

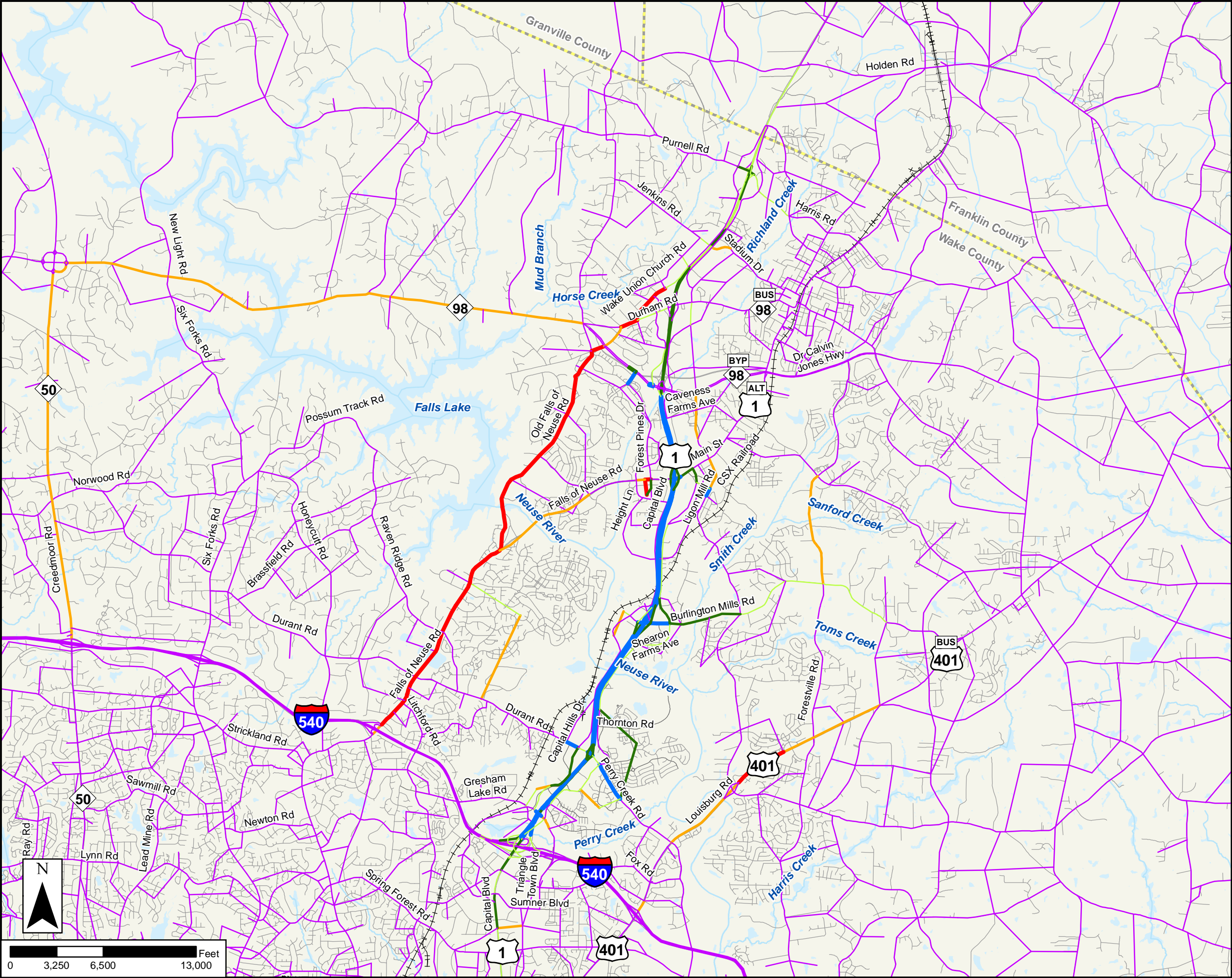
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}}$ D

- 000 No. of Vehicles Per Day in 100's
- DHV Design Hourly Volume (%)
- D Peak Hour Directional Split (%)
- PM PM Peak Period
- Direction of D
- (d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	





Wake County, Division 5

N

**TRM DAILY TRAFFIC
VOLUME DIFFERENCES FROM
2040 FYNB TO FYB SCE A**

FIGURE 4 SHEET 1 of 1

LEGEND

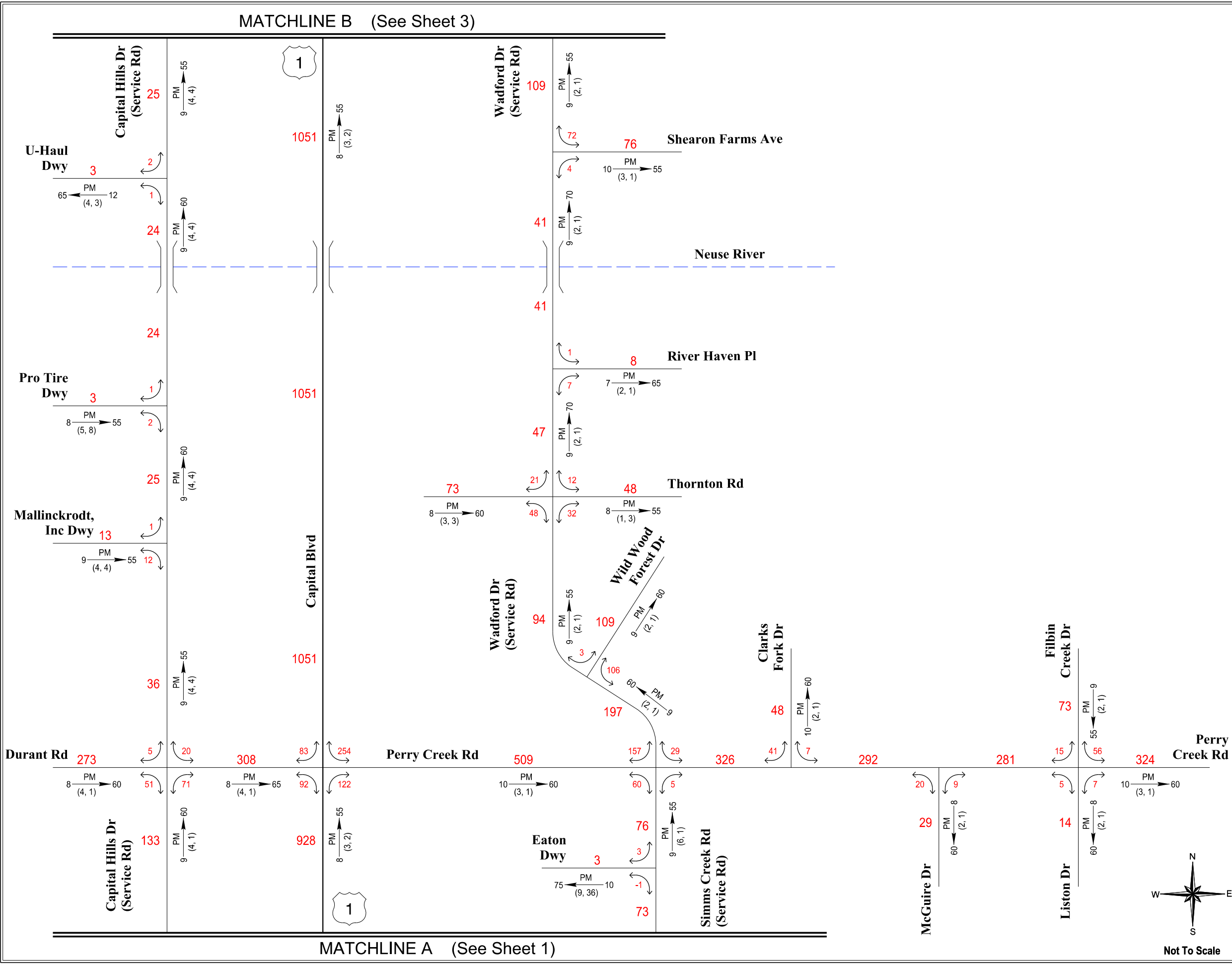
Volume Differences (vpd)

- 17,000 to -8,000
- 7,999 to -4,000
- 3,999 to 4,000
- 4,001 to 8,000
- 8,001 to 16,000
- 16,001 to 67,500

--- Railroad

— River/Creek

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1331 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	



Wake County, Div. 5

2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
Future Year Build
Conditions Scenario A
FIGURE 5 SHEET 2 of 7

LEGEND

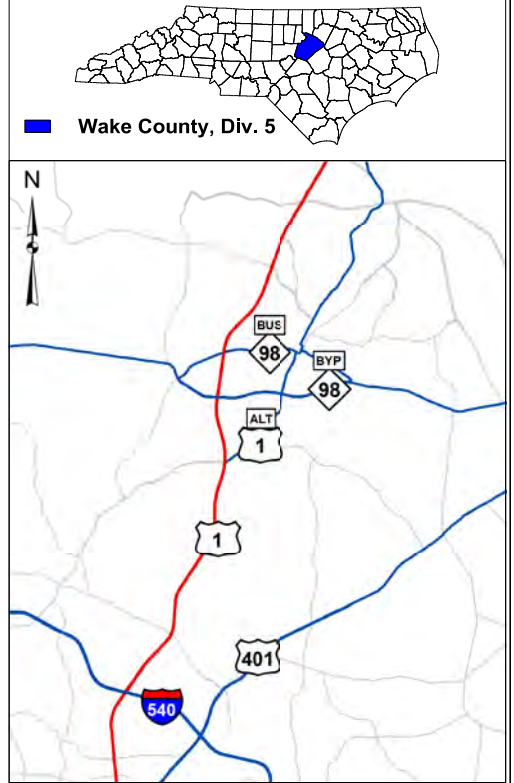
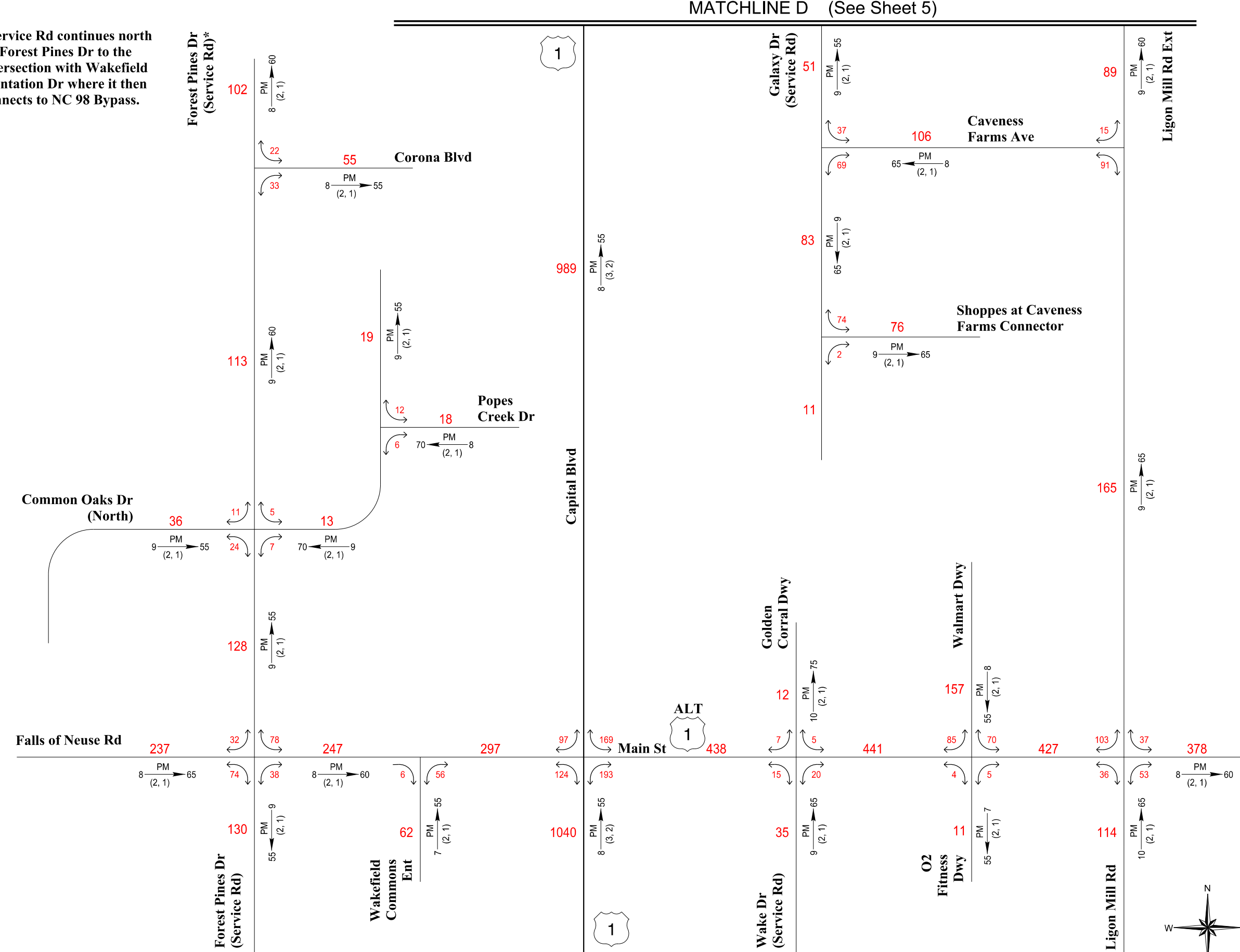
DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
 \rightarrow Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale

*Service Rd continues north on Forest Pines Dr to the intersection with Wakefield Plantation Dr where it then connects to NC 98 Bypass.



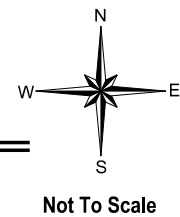
2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Future Year Build
Conditions Scenario A**
FIGURE 5 SHEET 4 of 7

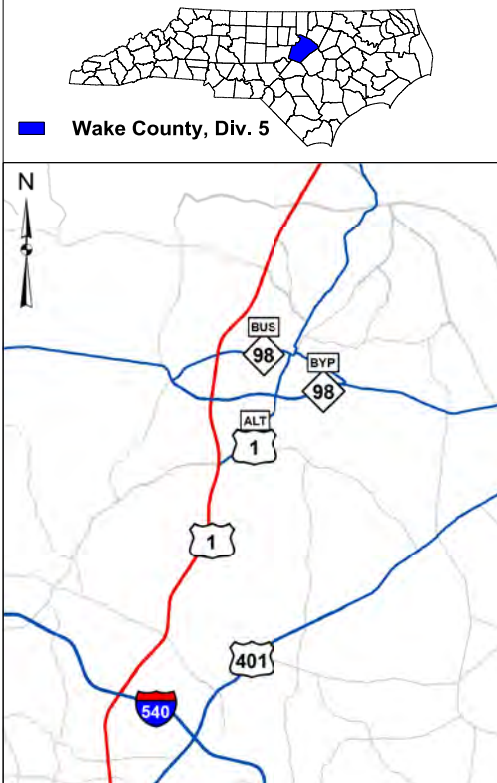
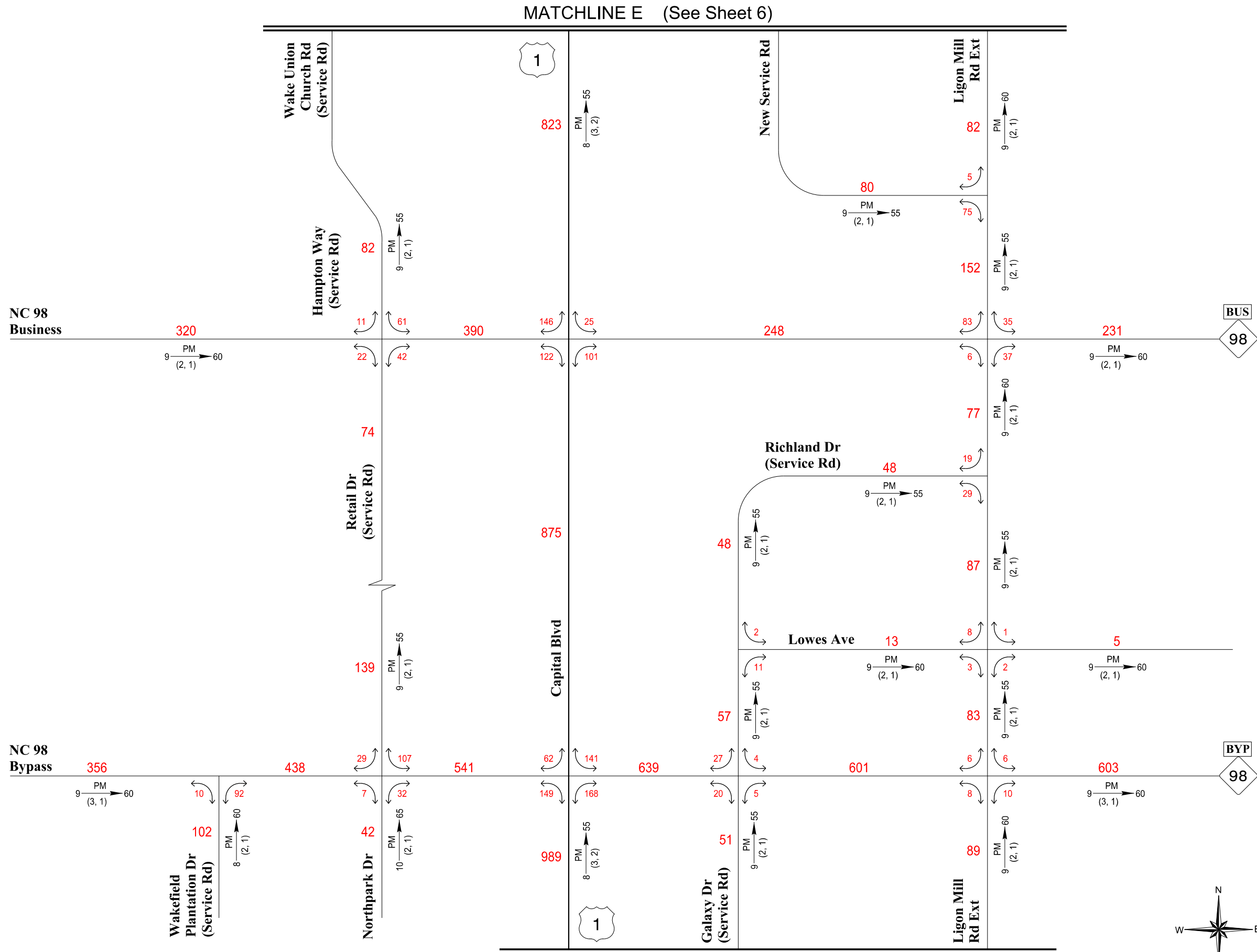
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

- 000 No. of Vehicles Per Day in 100's
- DHV Design Hourly Volume (%)
- D Peak Hour Directional Split (%)
- PM PM Peak Period
- \rightarrow Direction of D
- (d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	





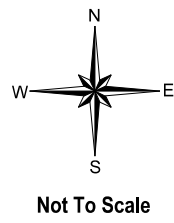
2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Future Year Build
Conditions Scenario A**
FIGURE 5 SHEET 5 of 7

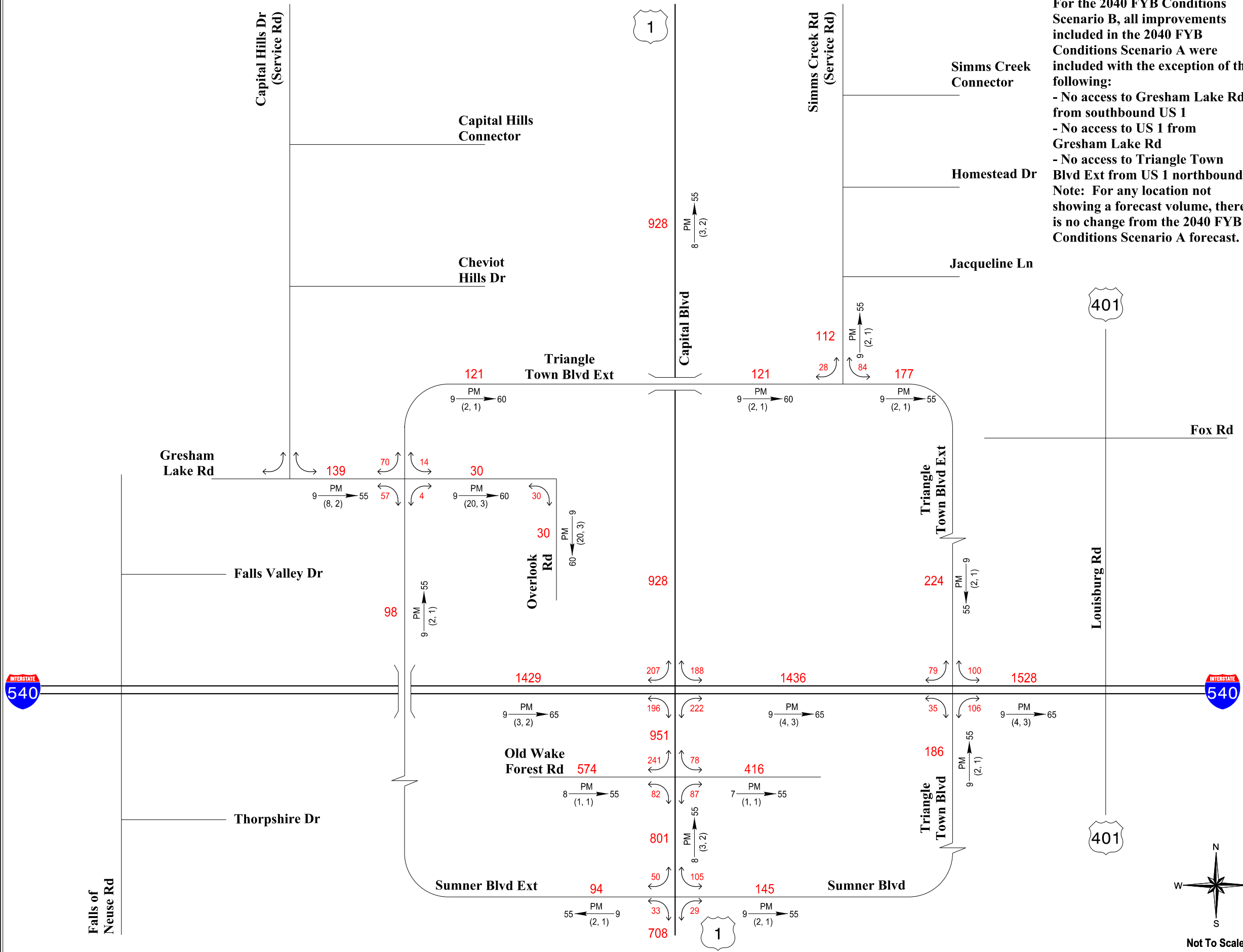
LEGEND

DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
 \rightarrow Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

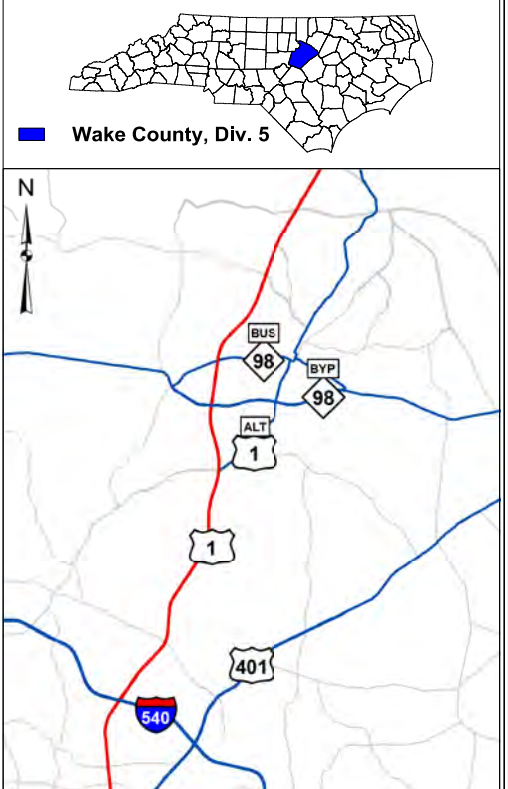




For the 2040 FYB Conditions Scenario B, all improvements included in the 2040 FYB Conditions Scenario A were included with the exception of the following:

- No access to Gresham Lake Rd from southbound US 1
- No access to US 1 from Gresham Lake Rd
- No access to Triangle Town Blvd Ext from US 1 northbound

Note: For any location not showing a forecast volume, there is no change from the 2040 FYB Conditions Scenario A forecast.

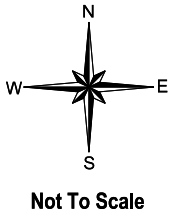


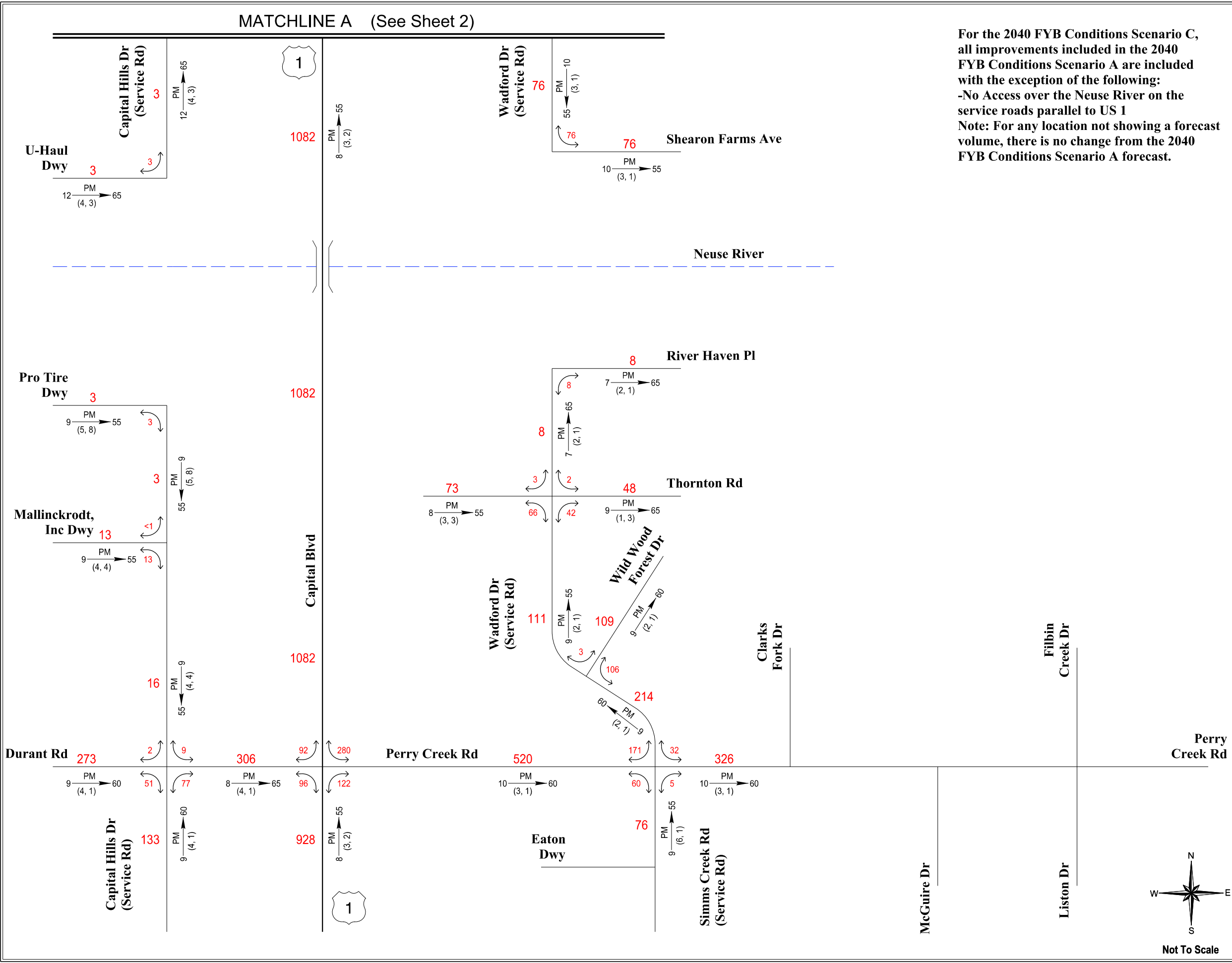
2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Future Year Build
Conditions Scenario B**
FIGURE 6 SHEET 1 of 1

LEGEND

- DHV $\xrightarrow{\text{PM (d,t)}} D$
- 000 No. of Vehicles Per Day in 100's
 - DHV Design Hourly Volume (%)
 - D Peak Hour Directional Split (%)
 - PM PM Peak Period
 - \rightarrow Direction of D
 - (d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	





Wake County, Div. 5

2040

ANNUAL AVERAGE DAILY TRAFFIC FORECASTS

Future Year Build Conditions Scenario C

FIGURE 7 SHEET 1 of 2

LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

D Peak Hour Directional Split (%)

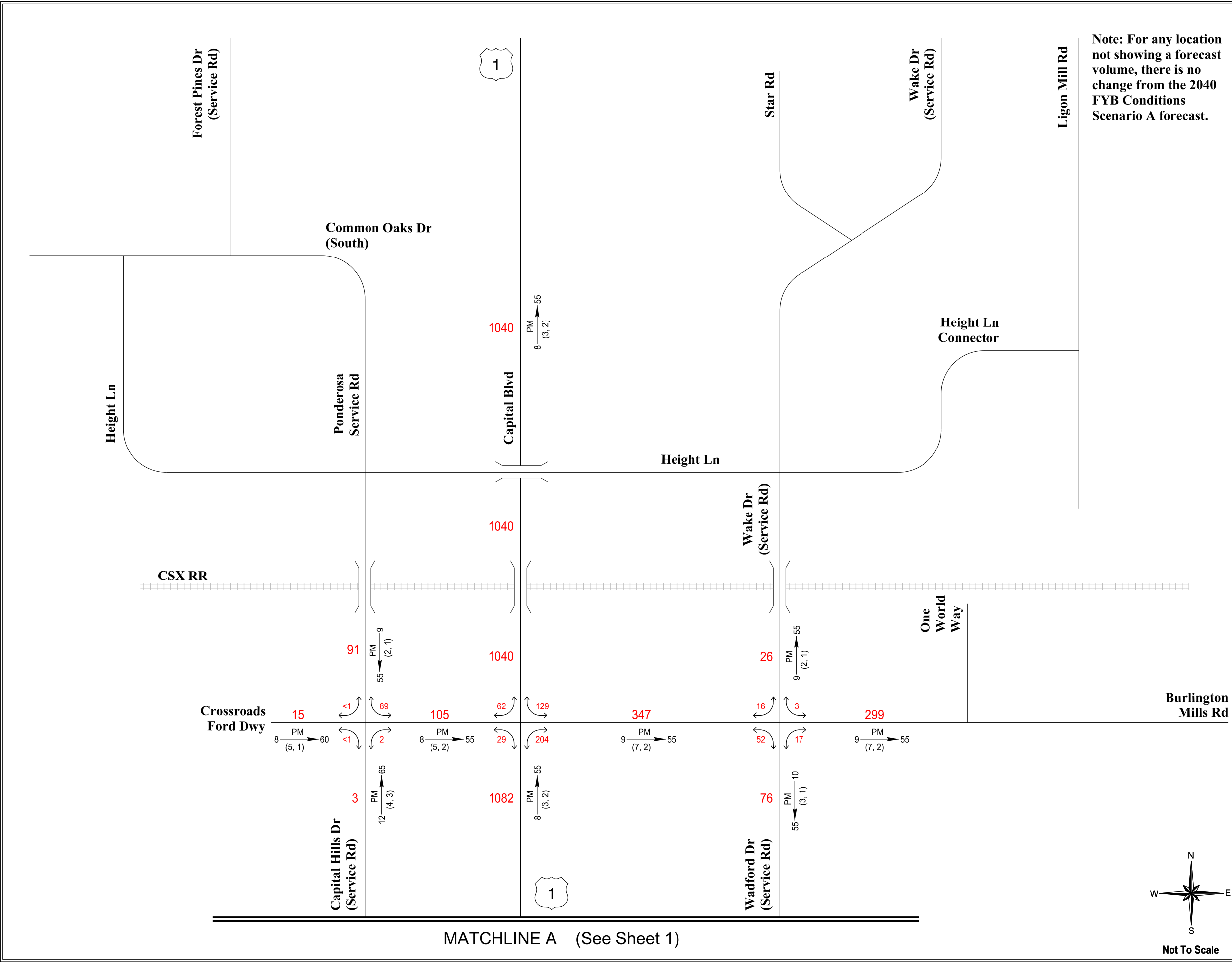
PM PM Peak Period

\rightarrow Direction of D

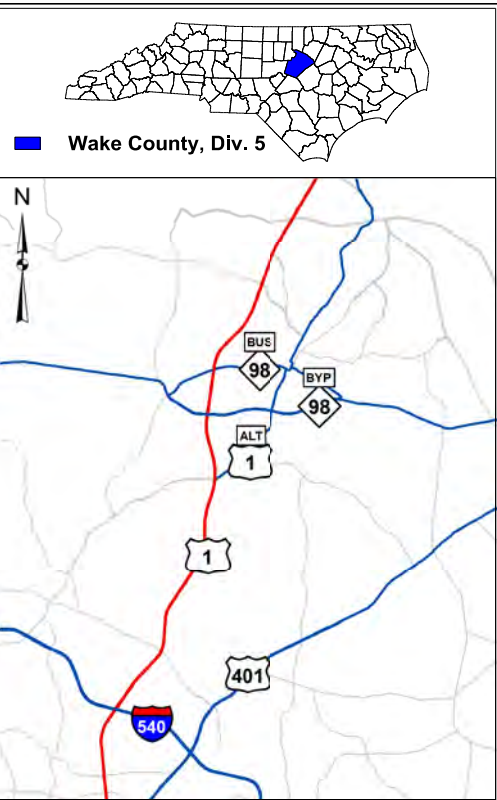
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale



Note: For any location not showing a forecast volume, there is no change from the 2040 FYB Conditions Scenario A forecast.



2040

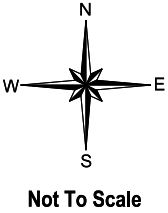
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
Future Year Build
Conditions Scenario C
FIGURE 7 SHEET 2 of 2

LEGEND

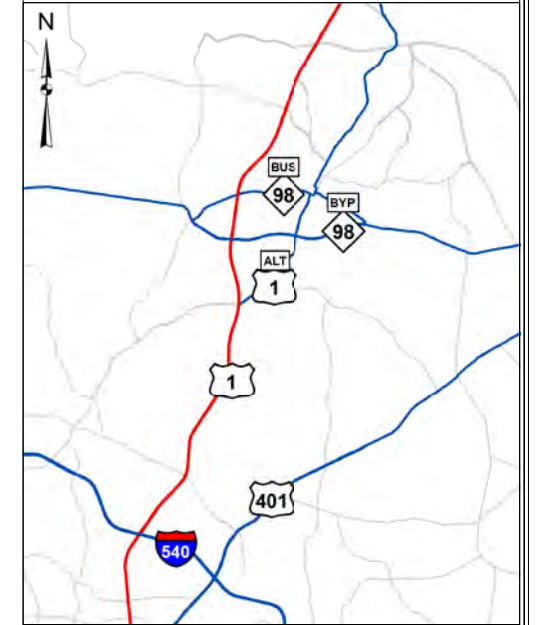
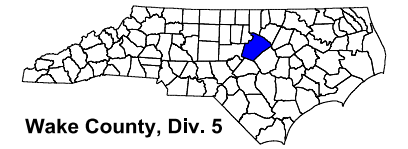
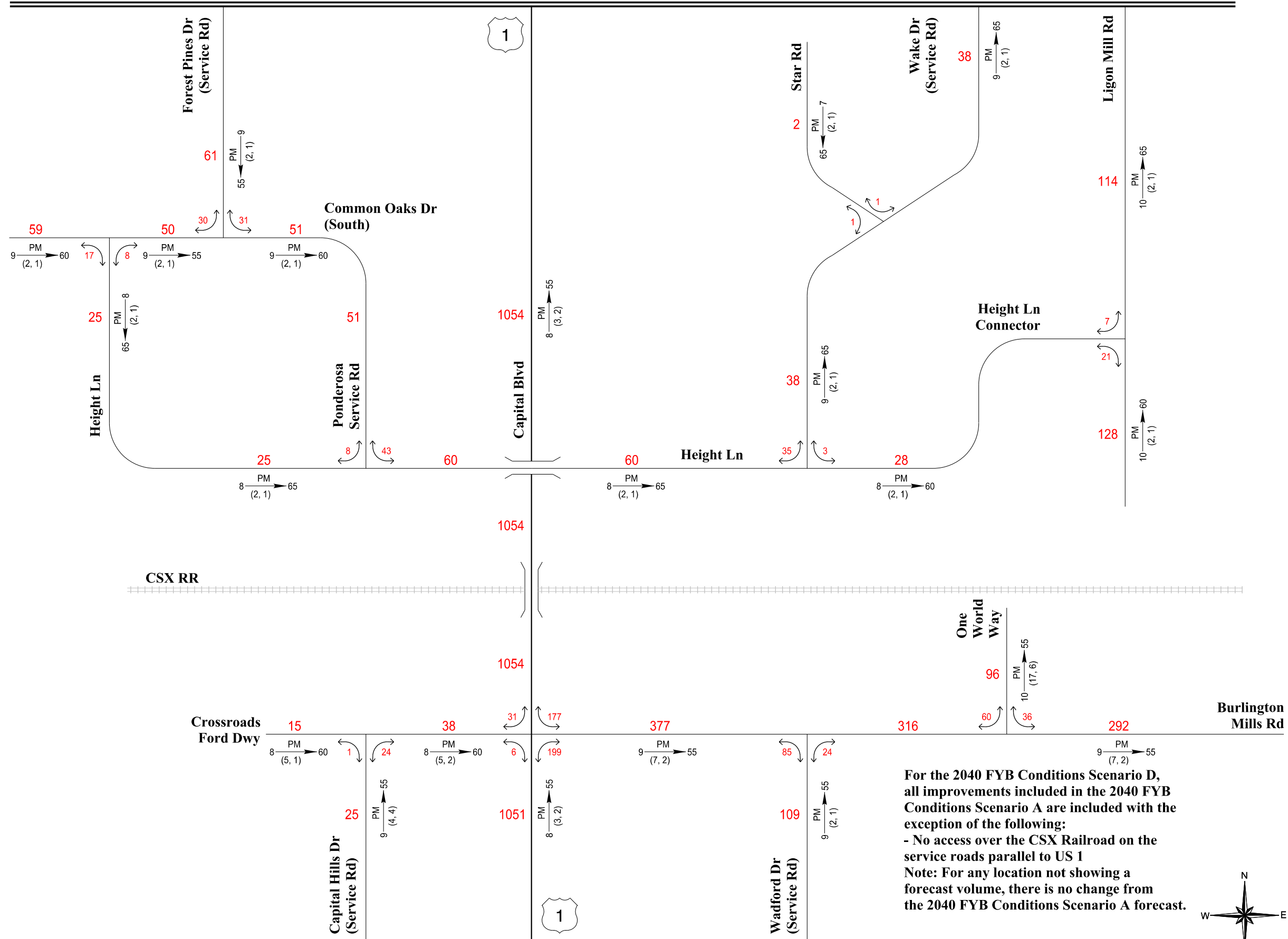
DHV $\xrightarrow[\text{(d,t)}]{\text{PM}}$ D

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	



MATCHLINE A (See Sheet 2)



2040
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Future Year Build
Conditions Scenario D**

FIGURE 8 SHEET 1 of 2

LEGEND

$$\text{DHV} \xrightarrow[\text{(d,t)}]{\text{PM}} \text{D}$$

000	No. of Vehicles Per Day in 100's
DHV	Design Hourly Volume (%)
D	Peak Hour Directional Split (%)
PM	PM Peak Period
→	Direction of D
(d,t)	Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
--------------------	-----------------------

COUNTY: Wake	DIVISION: 5
---------------------	--------------------

DATE: June 2017

PREPARED BY: RS&H

E	LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)
---	---

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade

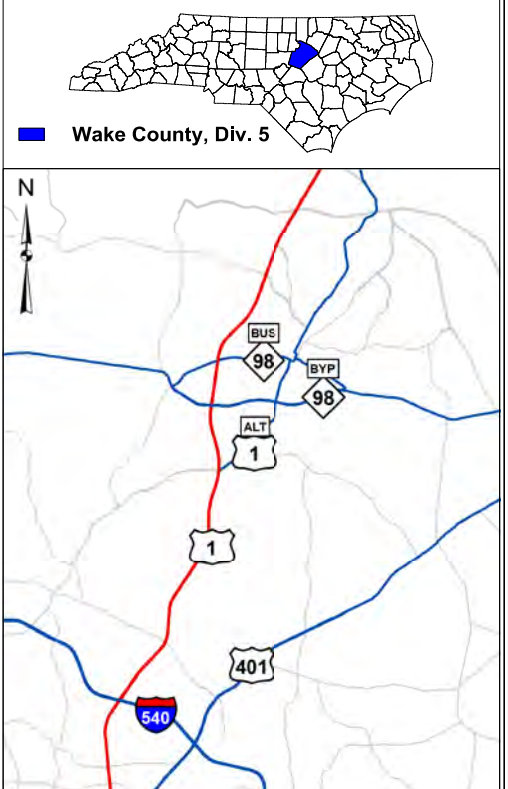
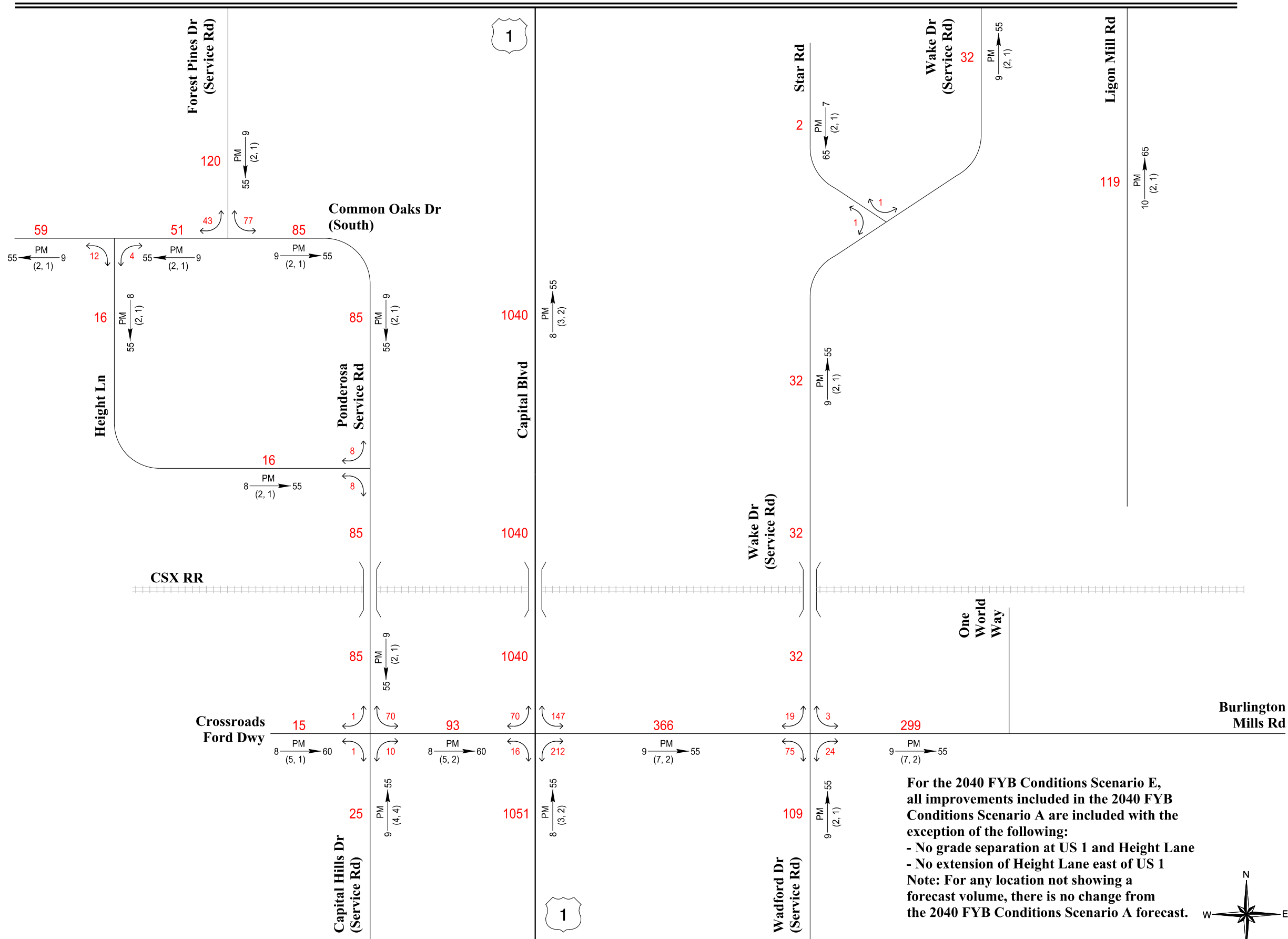
For the 2040 FYB Conditions Scenario D, all improvements included in the 2040 FYB Conditions Scenario A are included with the exception of the following:

- No access over the CSX Railroad on the service roads parallel to US 1**

Note: For any location not showing a forecast volume, there is no change from the 2040 FYB Conditions Scenario A forecast.



MATCHLINE A (See Sheet 2)



2040

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
Future Year Build
Conditions Scenario E
FIGURE 9 SHEET 1 of 2

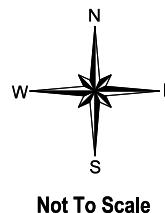
LEGEND

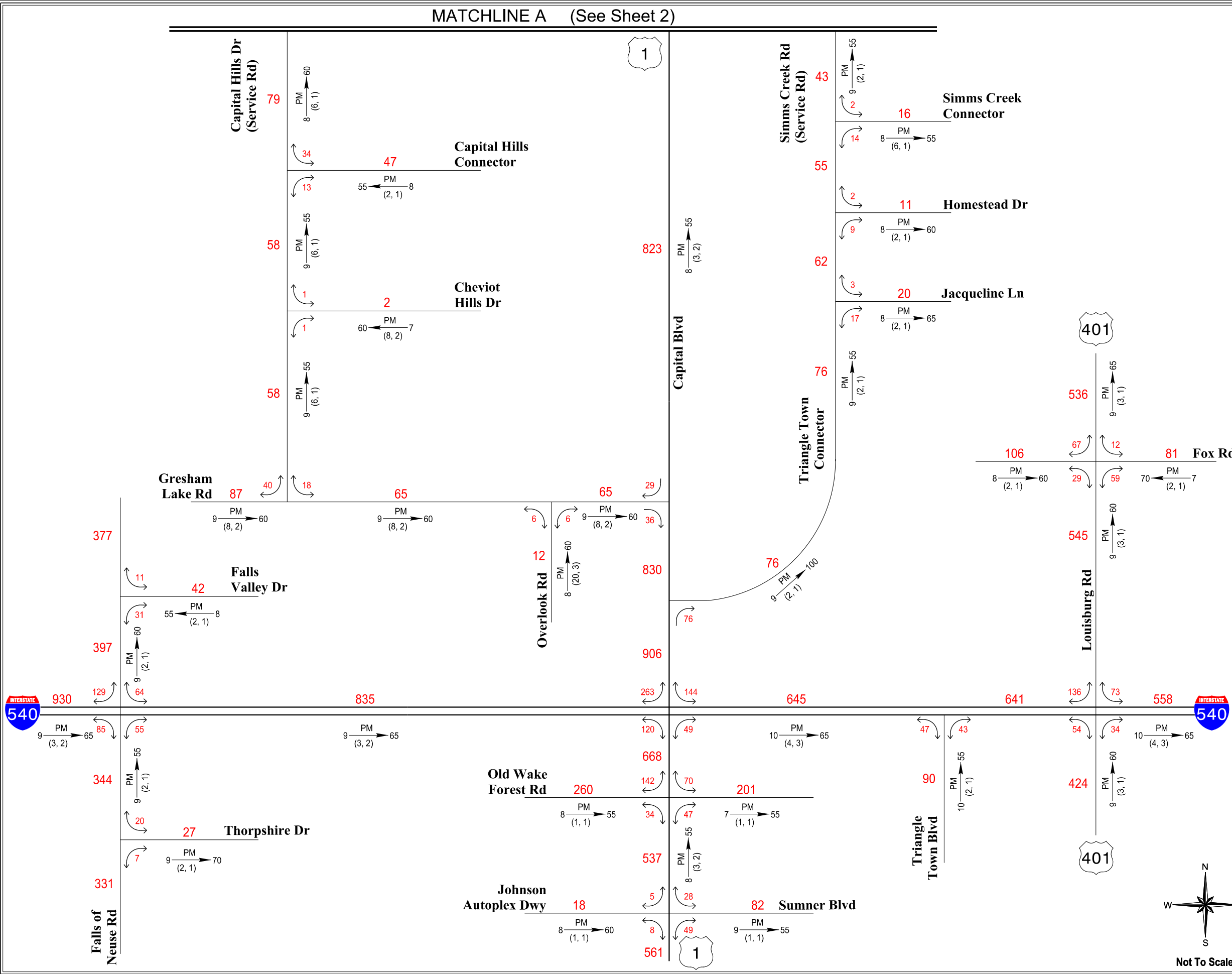
DHV $\xrightarrow[\text{(d,t)}]{\text{PM}}$ D

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: June 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

For the 2040 FYB Conditions Scenario E,
all improvements included in the 2040 FYB
Conditions Scenario A are included with the
exception of the following:
- No grade separation at US 1 and Height Lane
- No extension of Height Lane east of US 1
Note: For any location not showing a
forecast volume, there is no change from
the 2040 FYB Conditions Scenario A forecast.





Wake County, Div. 5

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

**Base Year Build
Conditions Scenario A**

FIGURE 10 SHEET 1 of 7

LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

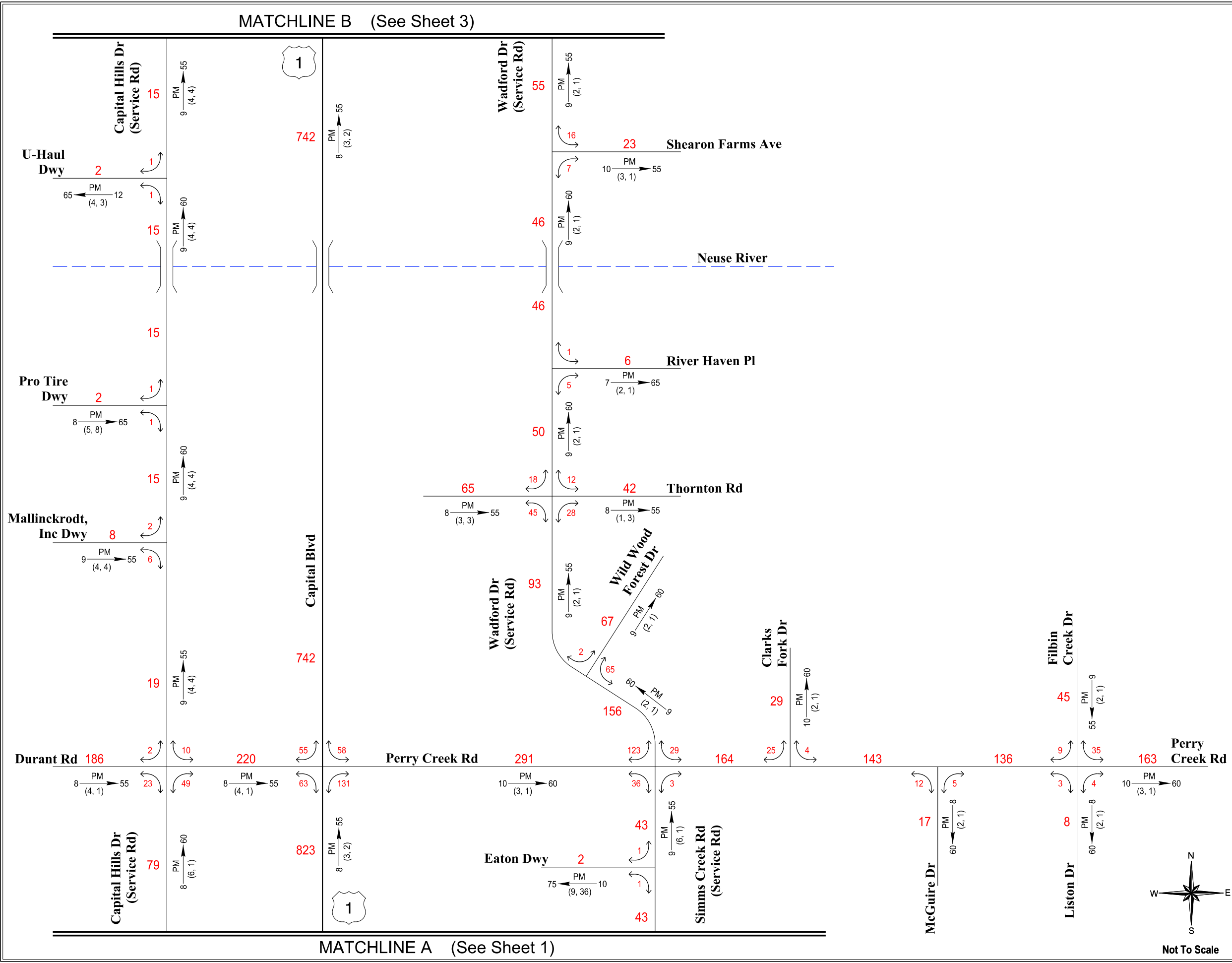
D Peak Hour Directional Split (%)

PM PM Peak Period

\rightarrow Direction of D

(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	



Wake County, Div. 5

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

Base Year Build
Conditions Scenario A

FIGURE 10 SHEET 2 of 7

LEGEND

DHV $\xrightarrow{\text{PM}} \text{D}$
(d,t)

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

D Peak Hour Directional Split (%)

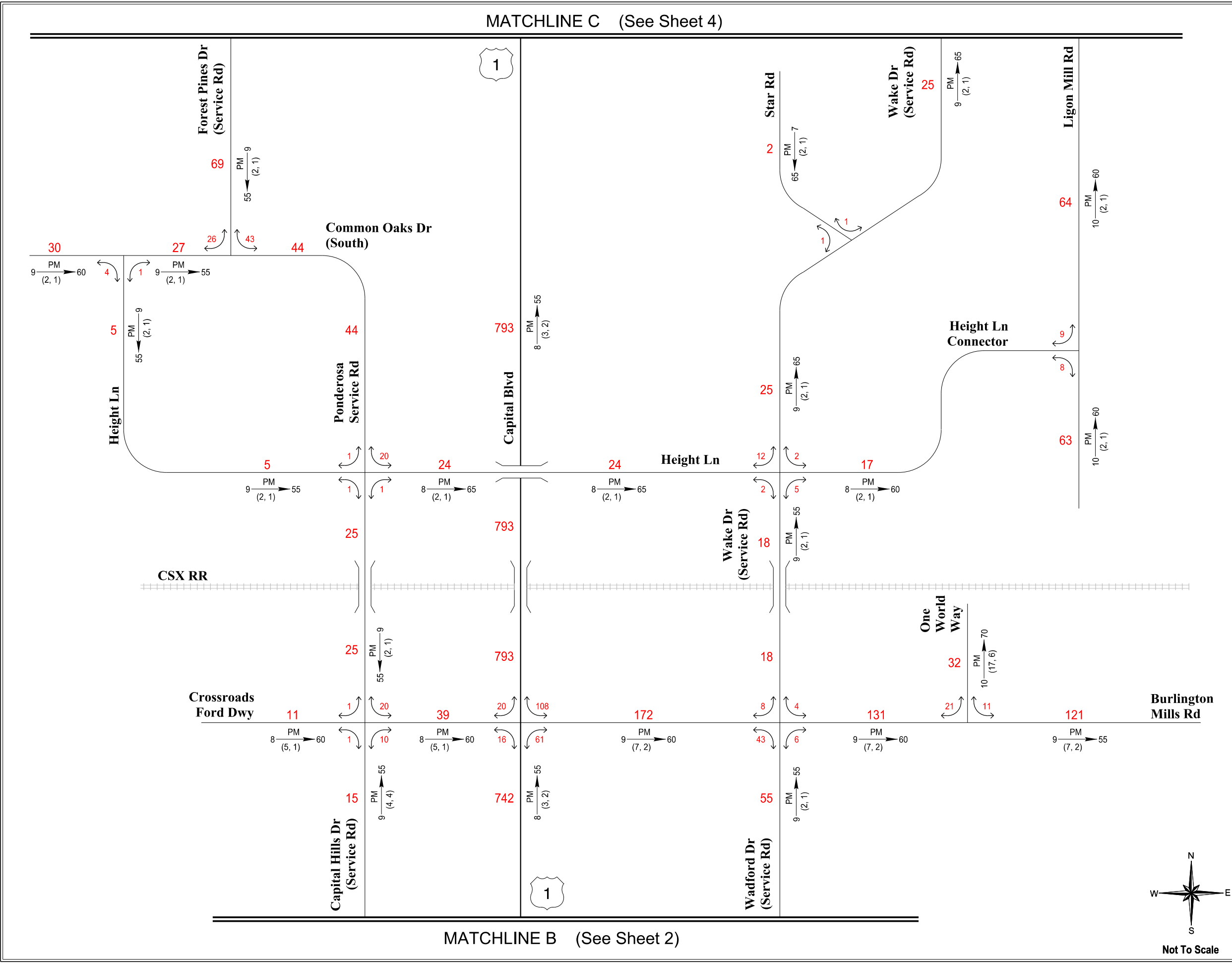
PM PM Peak Period

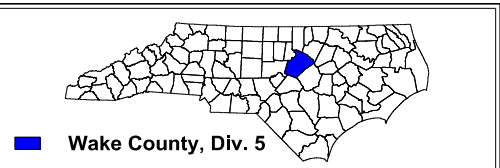
\rightarrow Direction of D

(d,t) Duals, TT-ST's (%)


TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale





Wake County, Div. 5



N

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

**Base Year Build
Conditions Scenario A**

FIGURE 10 SHEET 3 of 7

LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

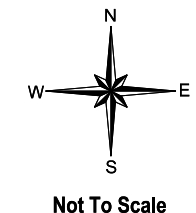
D Peak Hour Directional Split (%)

PM PM Peak Period

\rightarrow Direction of D

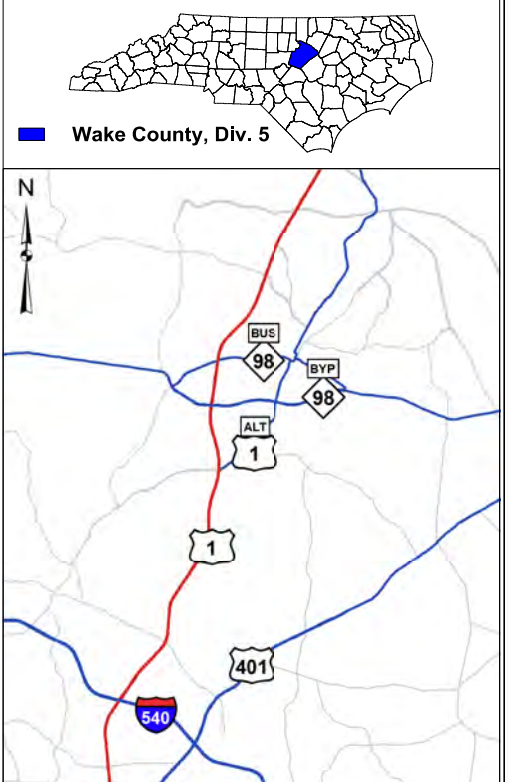
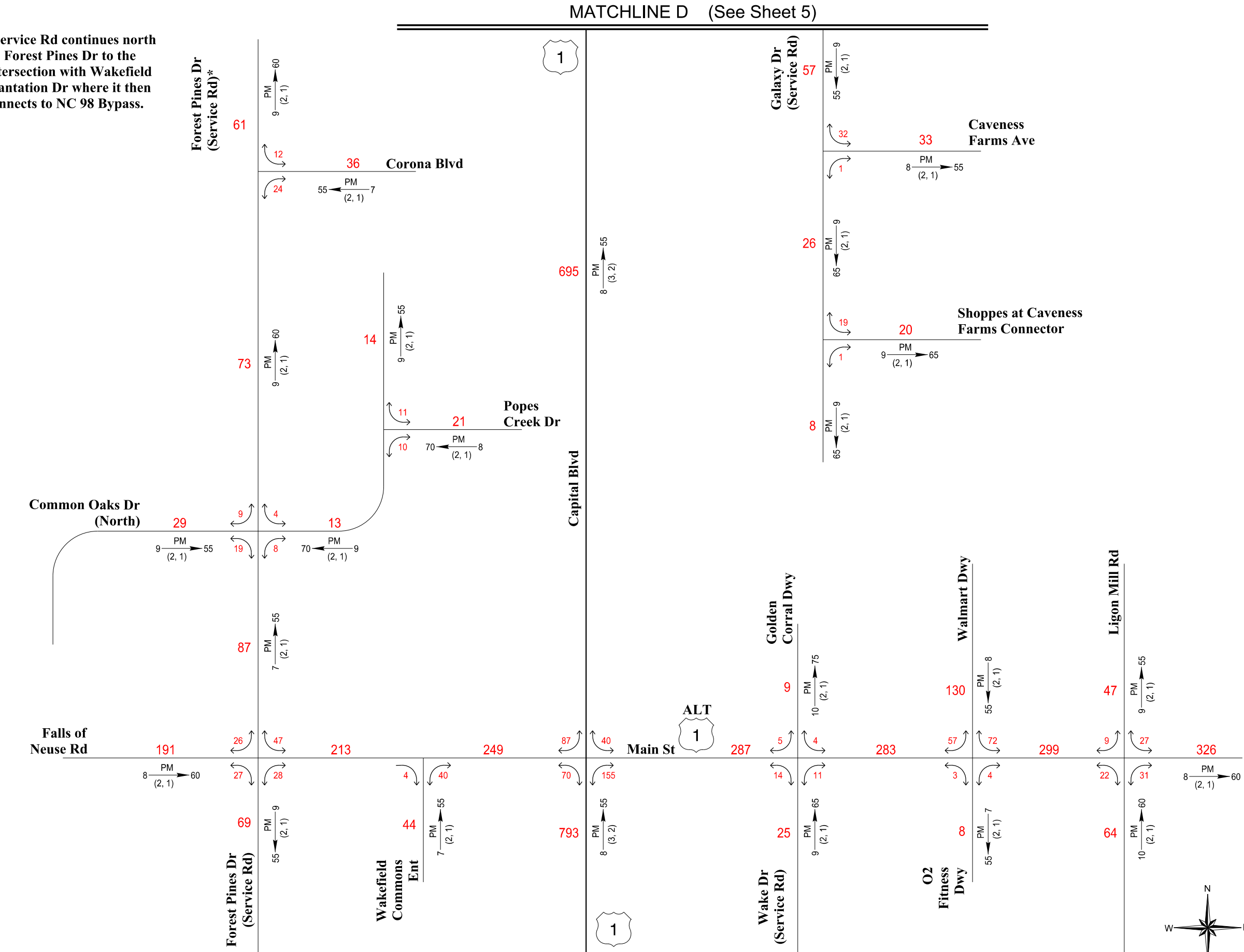
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	



Not To Scale

*Service Rd continues north on Forest Pines Dr to the intersection with Wakefield Plantation Dr where it then connects to NC 98 Bypass.



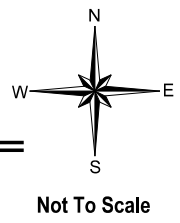
2015
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Base Year Build
Conditions Scenario A**
FIGURE 10 SHEET 4 of 7

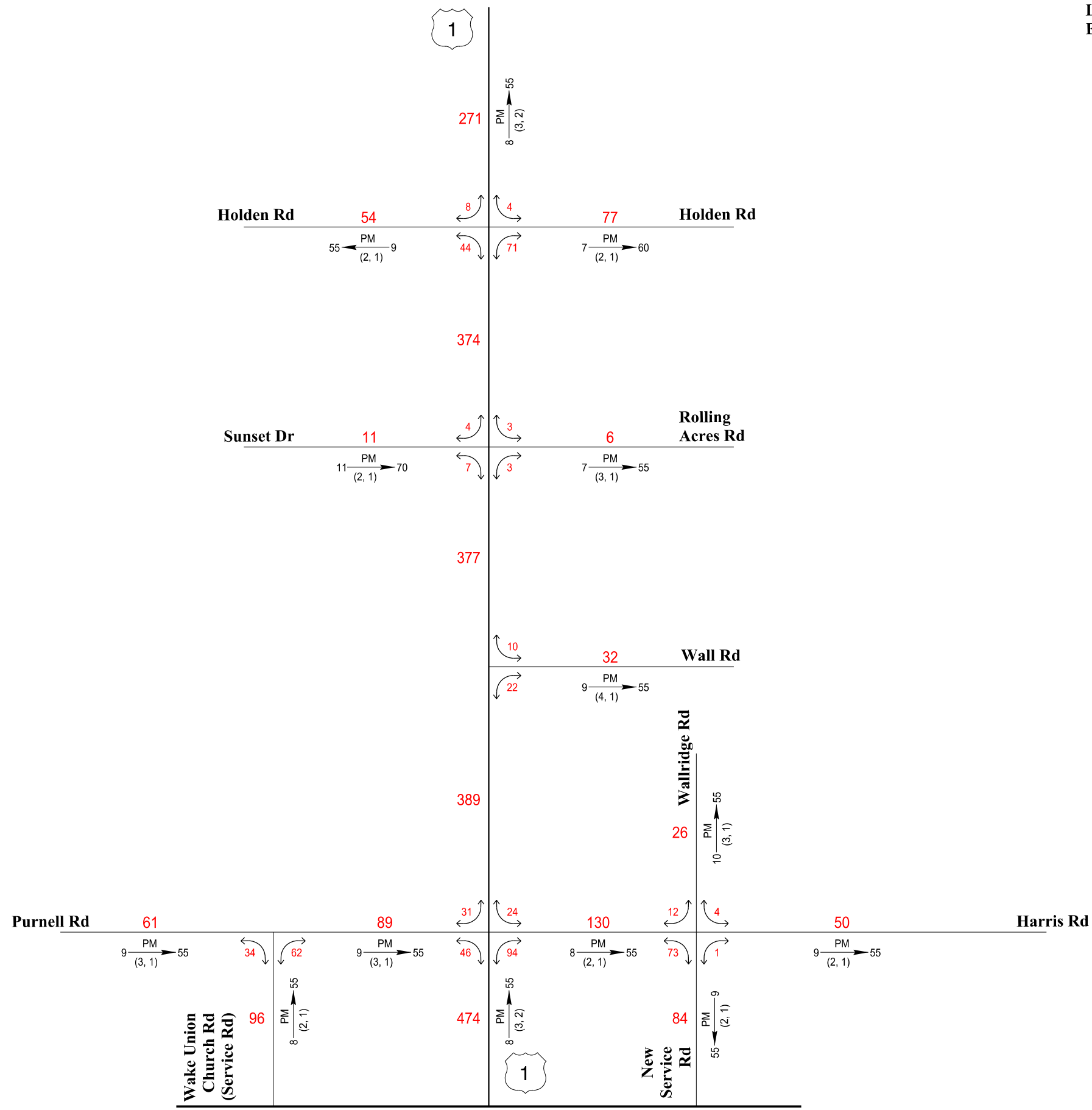
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

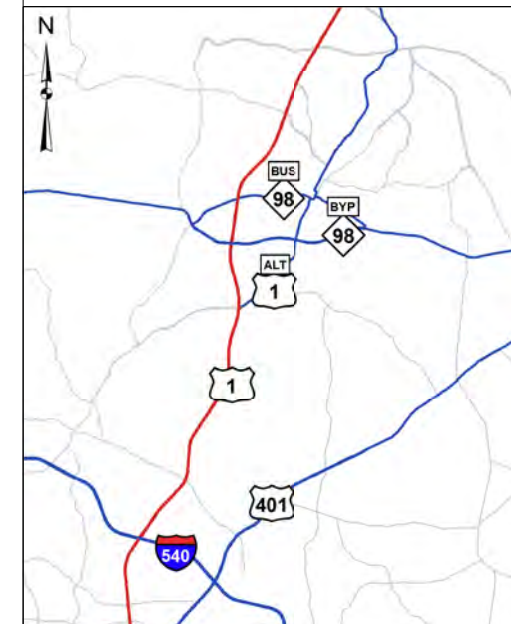
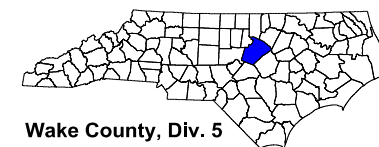
000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	





Locations added in the
Extended Study Area



2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

**Base Year Build
Conditions Scenario A**

FIGURE 10 SHEET 7 of 7

LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

- 000 No. of Vehicles Per Day in 100's
- DHV Design Hourly Volume (%)
- D Peak Hour Directional Split (%)
- PM PM Peak Period
- \rightarrow Direction of D
- (d,t) Duals, TT-ST's (%)

TIP: U-5307 **WBS:** 47027.1.1

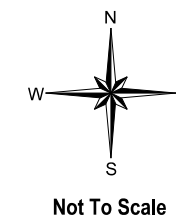
COUNTY: Wake **DIVISION:** 5

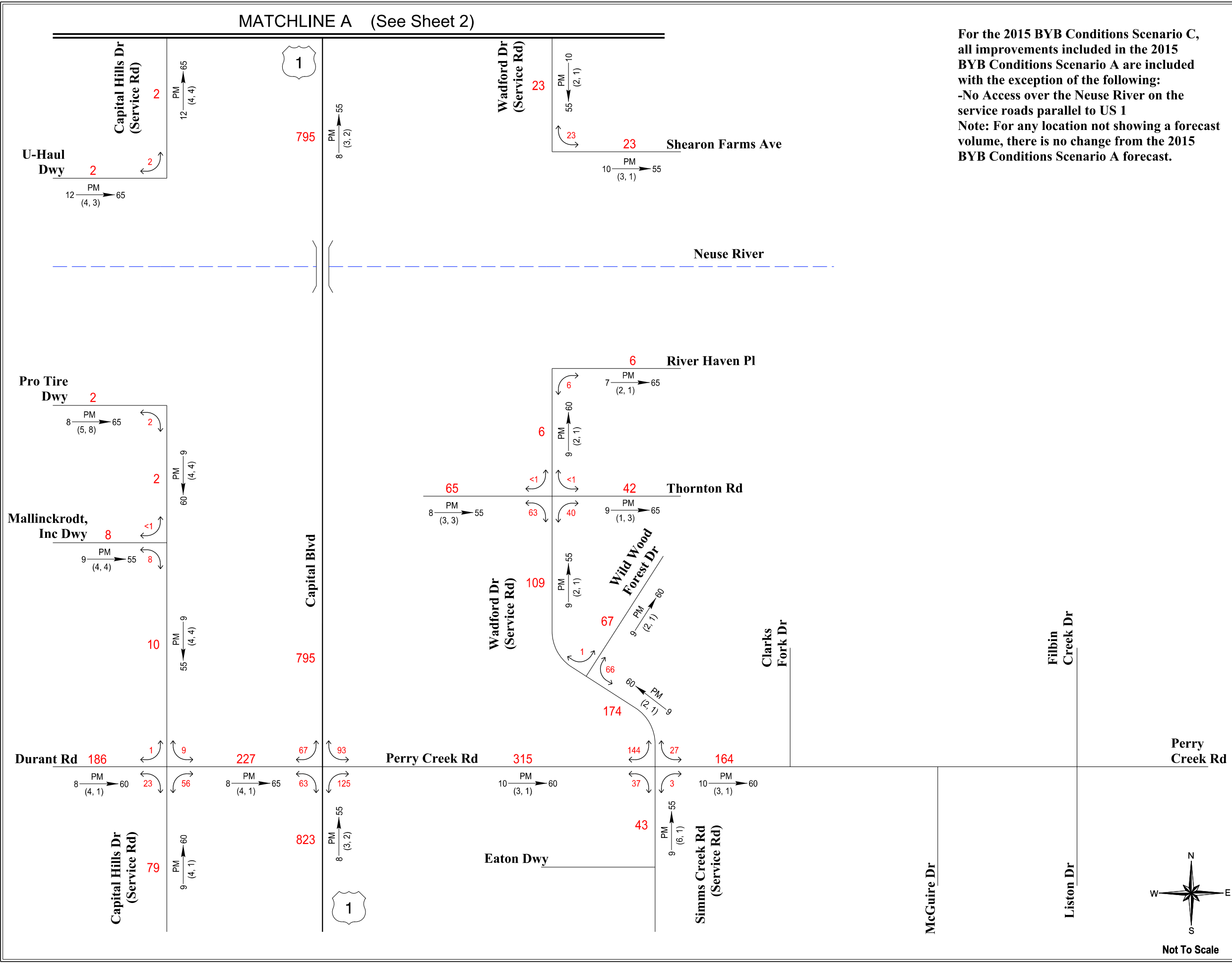
DATE: December 2017

PREPARED BY: RS&H

LOCATION:
US 1 (Capital Blvd) from I-540 to
SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade





Wake County, Div. 5

US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
Base Year Build
Conditions Scenario C
FIGURE 12 SHEET 1 of 2

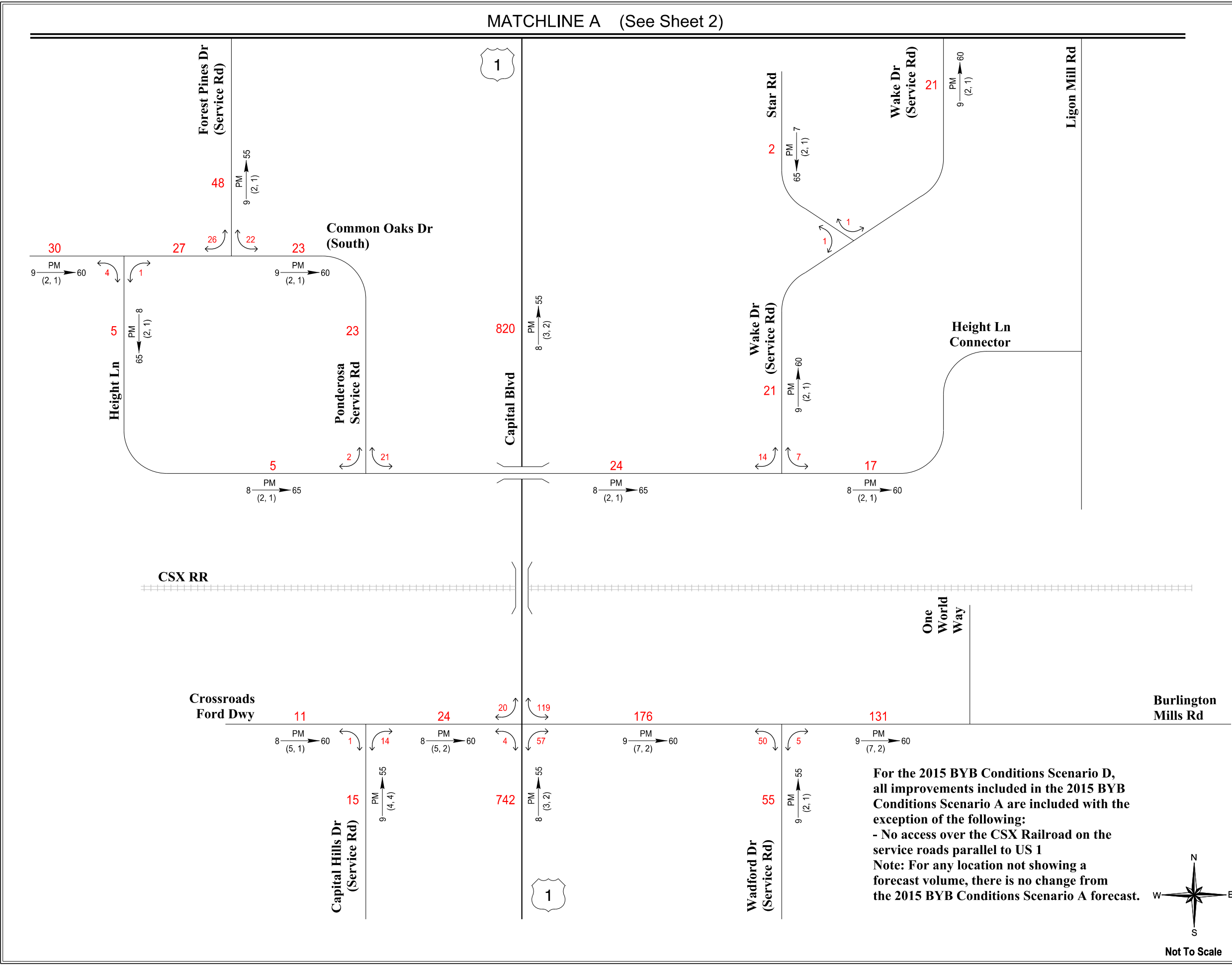
LEGEND

DHV $\xrightarrow{\text{PM (d,t)}} D$

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Not To Scale



Wake County, Div. 5

2015

ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS

**Base Year Build
Conditions Scenario D**

FIGURE 13 SHEET 1 of 2

LEGEND

DHV $\xrightarrow[\text{(d,t)}]{\text{PM}}$ D

000 No. of Vehicles Per Day in 100's

DHV Design Hourly Volume (%)

D Peak Hour Directional Split (%)

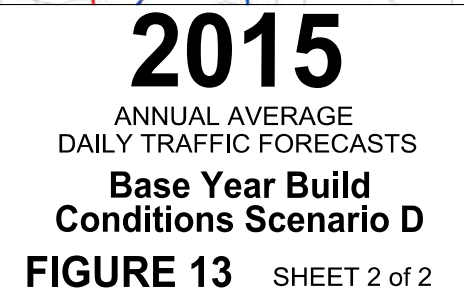
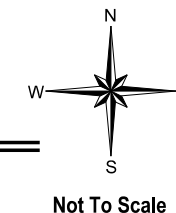
PM PM Peak Period

\rightarrow Direction of D

(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Note: For any location not showing a forecast volume, there is no change from the 2015 BYB Conditions Scenario A forecast.


$$\text{DHV} \xrightarrow[\text{(d,t)}]{\text{PM}} \text{D}$$

000	No. of Vehicles Per Day in 100's
DHV	Design Hourly Volume (%)
D	Peak Hour Directional Split (%)
PM	PM Peak Period
→	Direction of D
(d,t)	Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
--------------------	-----------------------

COUNTY: Wake	DIVISION: 5
---------------------	--------------------

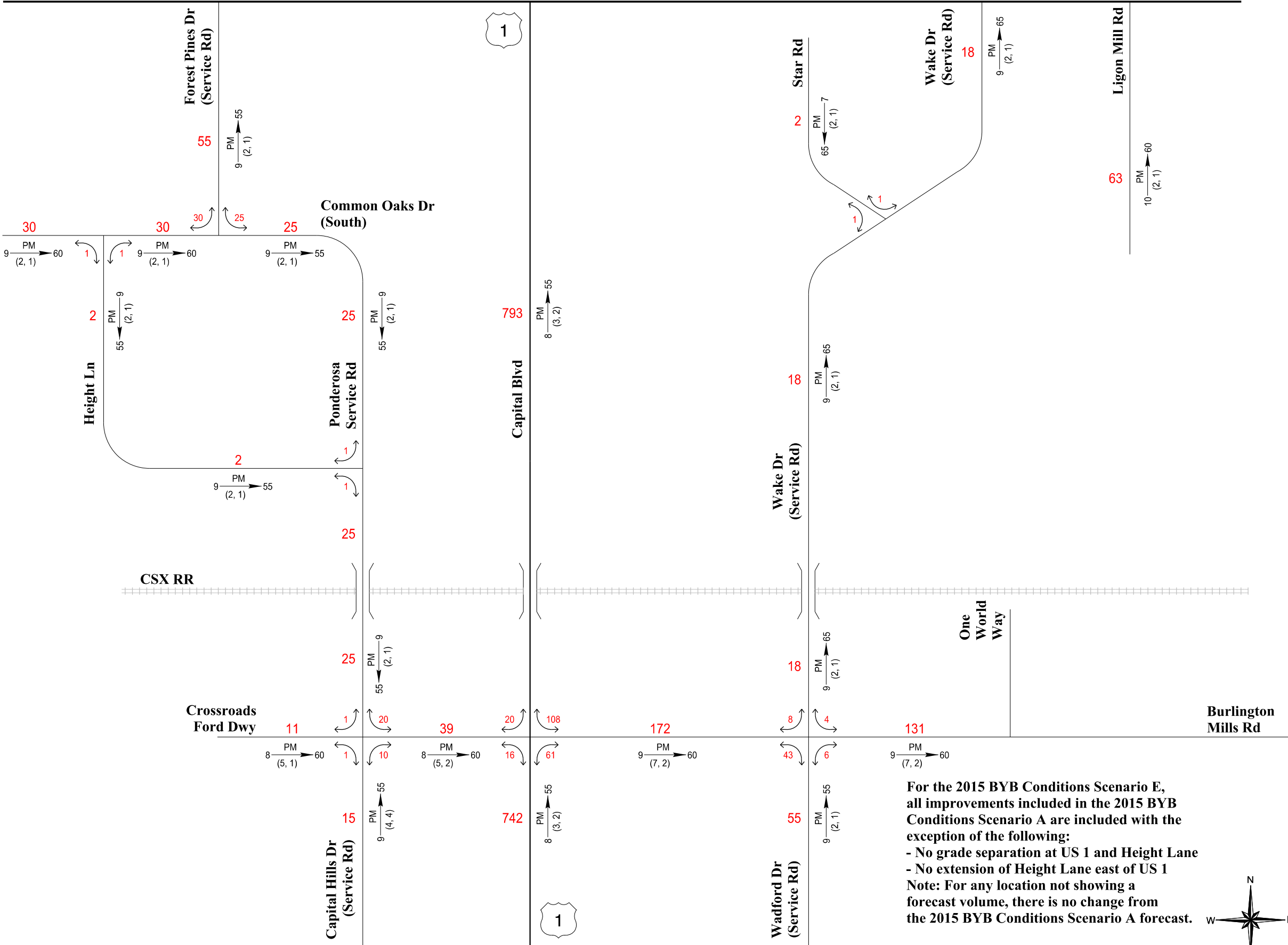
DATE: December 2017

PREPARED BY: RS&H

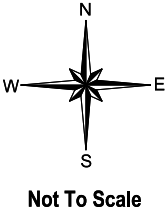
E	LOCATION:	US 1 (Capital Blvd) from I-540 to SR 909 (Purnell Rd)/SR 1931 (Harris Rd)
---	------------------	--

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade

MATCHLINE A (See Sheet 2)



For the 2015 BYB Conditions Scenario E, all improvements included in the 2015 BYB Conditions Scenario A are included with the exception of the following:
- No grade separation at US 1 and Height Lane
- No extension of Height Lane east of US 1
Note: For any location not showing a forecast volume, there is no change from the 2015 BYB Conditions Scenario A forecast.



Wake County, Div. 5

2015
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
Base Year Build
Conditions Scenario E
FIGURE 14 SHEET 1 of 2

LEGEND

DHV $\xrightarrow[\text{(d,t)}]{\text{PM}}$ D

000 No. of Vehicles Per Day in 100's
DHV Design Hourly Volume (%)
D Peak Hour Directional Split (%)
PM PM Peak Period
→ Direction of D
(d,t) Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
COUNTY: Wake	DIVISION: 5
DATE: December 2017	
PREPARED BY: RS&H	
LOCATION: US 1 (Capital Blvd) from I-540 to SR 1909 (Purnell Rd)/SR 1931 (Harris Rd)	
PROJECT: US 1 (Capital Blvd) Freeway Upgrade	

Note: For any location not showing a forecast volume, there is no change from the 2015 BYB Conditions Scenario A forecast.

**Forest Pines Dr
(Service Rd)***

Corona Blvd

**Popes
Creek Dr**

Capital Blvd

**Galaxy Dr
(Service Rd)**

**Caveness
Farms Ave**

Shoppes at Caveness Farms Connector

**Common Oaks Dr
(North)**

Falls of Neuse Rd

**Forest Pines Dr
(Service Rd)**

**Wakefield
Commons
Ent**

1

ALT
1
Main St

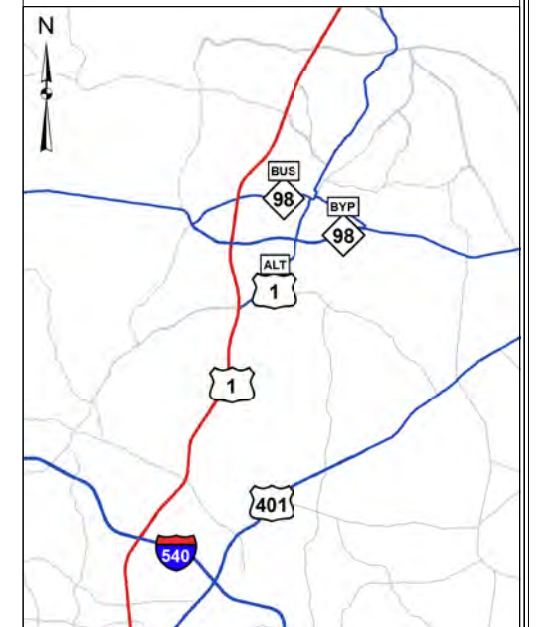
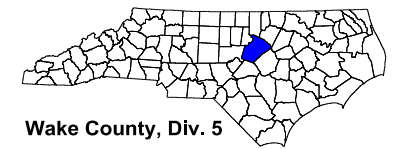
**Wake Dr
(Service Rd)**

**Golden
Corral Dwy**

02 Fitness

Walmart Dwy

Ligon Mill Rd



2015
ANNUAL AVERAGE
DAILY TRAFFIC FORECASTS
**Base Year Build
Conditions Scenario E**

FIGURE 14 SHEET 2 of 2

LEGEND

$$\text{DHV} \xrightarrow[\text{(d,t)}]{\text{PM}} \text{D}$$

000	No. of Vehicles Per Day in 100's
DHV	Design Hourly Volume (%)
D	Peak Hour Directional Split (%)
PM	PM Peak Period
→	Direction of D
(d,t)	Duals, TT-ST's (%)

TIP: U-5307	WBS: 47027.1.1
--------------------	-----------------------

COUNTY: Wake	DIVISION: 5
---------------------	--------------------

DATE: December 2017

PREPARED BY: RS&H

E	LOCATION: US 1 (Capital Blvd) from I-540 to SR 909 (Purnell Rd)/SR 1931 (Harris Rd)	
---	--	--

PROJECT:
US 1 (Capital Blvd) Freeway Upgrade

MATCHLINE A (See Sheet 1)



1520 South Blvd, Suite 200
Charlotte, NC 28203
704-752-0610

rsandh.com

