TECHNICAL MEMORANDUM

STANTONSBURG ROAD / TENTH STREET CONNECTOR
FROM MEMORIAL DRIVE TO SR 1702 (EVANS STREET)
GREENVILLE, PITT COUNTY, NORTH CAROLINA

TIP NO. U-3315

TRAFFIC CAPACITY ANALYSIS REPORT

Prepared by
Kimley-Horn and Associates, Inc.
for the
Division of Highways
North Carolina Department of Transportation

KHA Project #012654002

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Summary

North Carolina Department of Transportation (NCDOT) *Transportation Improvement Program* (TIP) Project U-3315 proposes the extension of and improvements to SR 1598 (W. Tenth Street) from Memorial Drive to SR 1702 (Evans Street) in Greenville, Pitt County. The typical cross-section for the project is anticipated to be a four-lane curb and gutter facility with a 23-foot wide median and a posted speed limit of 40 mph.

The intersection analyses show that the corridor experiences unacceptable levels of service (LOS) at certain locations under existing conditions and throughout the study area under No Build conditions in the Design Year 2030. The evaluation also shows that the proposed design would allow the study area intersections to operate at acceptable levels in Design Year 2030 at most locations. At the intersections of SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive and SR 1598 (W. Tenth Street) at SR 1702 (Evans Street), long cycle lengths and heavy left-turn and through volumes prevent the intersections from operating at acceptable levels of service even with significant geometric and signal improvements. The analysis projects **LOS E** under Build conditions at these locations. However, a LOS E is common in urban areas, and no feasible additional improvements were identified at either of these intersections to mitigate to LOS D. No queuing issues were identified at either location with the recommended improvements and turn lane storages.

The following improvements are recommended based on the capacity analyses presented herein:

SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive

- An additional eastbound left-turn lane and an exclusive eastbound right-turn lane on Stantonsburg Road
- Restriping the existing eastbound shared left-through lane to an exclusive through lane
- Exclusive westbound left- and right-turn lanes on Farmville Boulevard
- Exclusive northbound and southbound right-turn lanes on Memorial Drive
- An additional 125’ of storage for the existing southbound left-turn lane on Memorial Drive
- Modifying the traffic signal to remove the split phasing for the Stantonsburg Road and Farmville Boulevard approaches

Farmville Boulevard at Line Avenue / Bancroft Avenue

- Exclusive left-turn lanes on all four approaches

Farmville Boulevard / W. Tenth Street Connector at W. Fourteenth Street

- Restriping and additional lanes to provide one exclusive left-turn lane, dual through lanes, and an exclusive right-turn lane on eastbound Farmville Boulevard
- One exclusive left-turn lane, one exclusive through lane, and a shared through-right lane on the westbound W. Tenth Street Connector
- Restriping and additional lanes to provide dual exclusive left-turn lanes, an exclusive through lane, and an exclusive right-turn lane on northbound W. Fourteenth Street
- Restriping and additional lanes to provide an exclusive left-turn lane and a shared through-right lane on southbound W. Fourteenth Street

SR 1598 (W. Tenth Street) at SR 1702 (Evans Street)

- An additional 350' of storage for the existing eastbound left-turn lane on W. Tenth Street
- An exclusive eastbound right-turn lane on W. Tenth Street
- An additional westbound left-turn lane and an exclusive westbound right-turn lane on W. Tenth Street (not part of the U-3315 project)
- An additional northbound left-turn lane, an additional southbound left-turn lane, and an exclusive southbound right-turn lane on Evans Street
- An exclusive northbound right-turn lane on Evans Street (not part of the U-3315 project)

SR 1598 (Dickinson Avenue) at E. Fourteenth Street (Not part of U-3315 Project)

- An exclusive eastbound right-turn lane on Dickinson Avenue
- An additional 175' of storage for the existing northbound left-turn lane on E. Fourteenth Street

Figure 9 outlines the recommended laneage, traffic control, and storage lengths based on the capacity analyses.

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1.0 Introduction

1.1 PROJECT DESCRIPTION

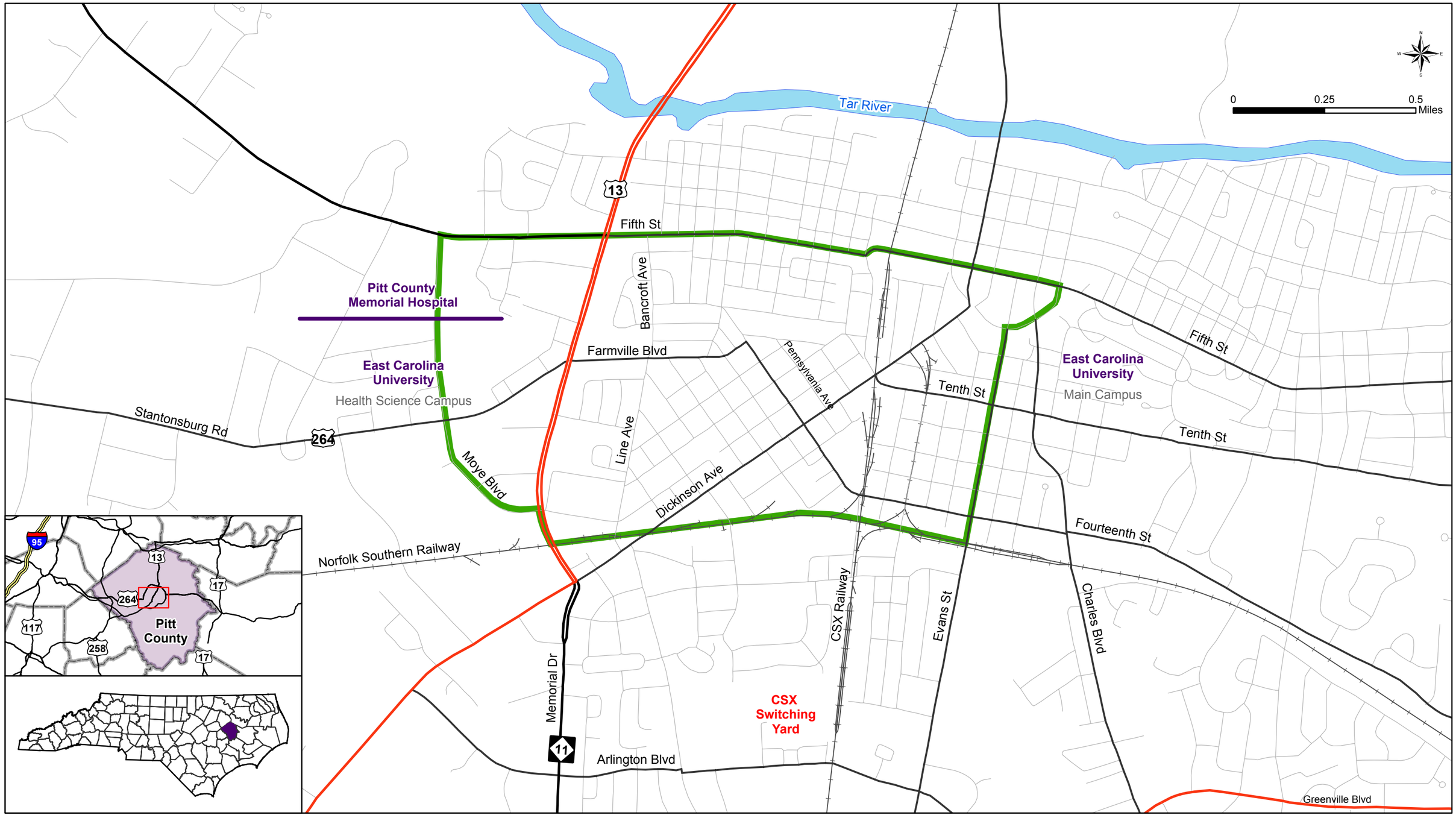
The Stantonsburg Road / Tenth Street Connector project is listed as U-3315 in the North Carolina Department of Transportation (NCDOT) *Draft 2009-2015 State Transportation Improvement Program* (TIP). TIP Project U-3315 proposes the extension of and improvements to SR 1598 (W. Tenth Street) from Memorial Drive to SR 1702 (Evans Street), including a grade separation with the CSX railroad, in Greenville, Pitt County. The project location is shown in **Figure 1**. The typical cross-section for the project is anticipated to be a four-lane curb and gutter facility with a 23-foot median with a posted speed limit of 40 miles per hour (mph). Planning and design efforts are underway for this project, and right of way acquisition is programmed in the TIP for federal fiscal year (FFY) 2009. Construction is scheduled for FFY 2011.

1.2 STUDY AREA

The project study area is located in the City of Greenville and encompasses residential, commercial, and institutional land uses. The study area is generally bounded by Martin Luther King, Jr. Drive/Fifth Street to the north, Reade Circle/Evans Street to the east, the Norfolk-Southern Railway to the south, and Moye Boulevard to the west. The westernmost section of the study area (between Moye Boulevard and Memorial Drive) contains mostly medical facilities and county governmental offices. The section of the study area between Farmville Boulevard and Fleming Street is a predominantly residential area and also contains Sadie Saulter Elementary School, several churches, and community parks. The Tobacco Warehouse area, located in the easternmost section of the study area, contains a mix of commercial, governmental, office, and industrial uses.

The Stantonsburg Road / Tenth Street Connector project was first proposed in the *1994 Greenville Urban Area Thoroughfare Plan.* It is currently included in the *2005 Greenville Urban Area Thoroughfare Plan,* the *2004 Horizons Plan,* and the *2005/2006 Center City – West Greenville Revitalization Plan.* Additionally, this project was identified as funded in the NCDOT *2004-2010 TIP* and remains on the *Draft 2009-2015 TIP.*

The existing network of primary roadways consists of both undivided and median-divided facilities. Secondary roadways in the study area consist mostly of urban undivided roads with varying cross-sections. **Figure 2** shows the existing roadway laneage along major streets in the study area.



Stantonsburg Road/Tenth Street Connector
(Project U-3315)
Greenville, Pitt County, NC

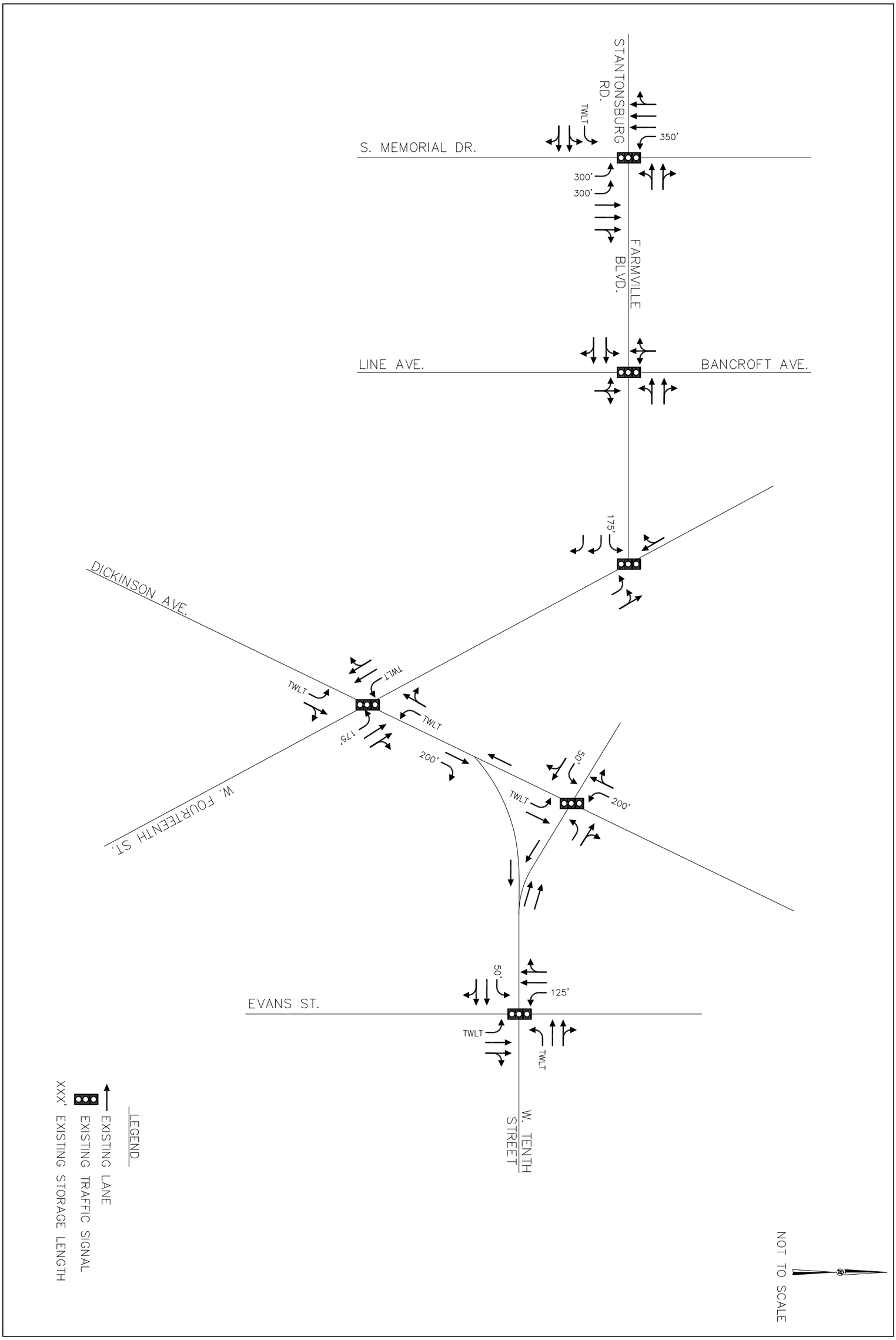
Kimley-Horn and Associates, Inc.

Legend

- US Highways
- State Highways
- Major Roads
- Secondary Roads
- Study Area
- Railroad

Figure 1
Project Vicinity Map

Greenville
Tenth Street Connector



Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	EXISTING ROADWAY LANEAGE	FIGURE 2

2.0 Description of Analysis

Capacity analyses were performed for at-grade intersections in the study area. KHA performed an intersection analysis using the 2005, 2010, and 2030 design year traffic projections to determine existing and projected intersection operations on this corridor. Signal plans are included in Appendix A, and the forecasts for this project are provided in Appendix B.

Analyses were performed for the following scenarios: 2005, 2010, and 2030 No Build Conditions with the existing roadway network and 2005, 2010, and 2030 Build conditions with the proposed multi-lane section. A total of six (6) key intersections were evaluated for proposed improvements. The study intersections are listed below, and these roadways are illustrated in **Figure 1**. Existing lane geometry and traffic control conditions are shown for the study intersections in **Figure 2**.

- SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive
- Farmville Boulevard at Line Avenue / Bancroft Avenue
- Farmville Boulevard / W. Tenth Street Connector at W. Fourteenth Street
- W. Tenth Street Connector at Pennsylvania Avenue *(Build only)*
- SR 1598 (W. Tenth Street) at SR 1598 / SR 1610 (Dickinson Avenue) *(No Build only)*
- SR 1598 (W. Tenth Street) at SR 1702 (Evans Street)
- SR 1598 (Dickinson Avenue) at E. Fourteenth Street

Level of service (LOS) is a measure used to describe operational conditions on a roadway segment, ramp junction, or at an intersection. The grades for LOS range from A through F and are based on average vehicle delay with respect to intersections, or vehicular density with respect to roadway segments. LOS D is the typical target threshold for urban settings during the peak hours of operation. LOS E and F represent near failing and failing conditions respectively, and may occur frequently in urban conditions during peak hours. LOS values are most important at signalized intersections, since adjustments to timing and lane geometry have the potential to alleviate problems and distribute delay more evenly over all approaches. Poor LOS values at unsignalized intersections that do not warrant a signal may be more difficult to improve. The AM peak hour typically falls between 7 AM and 9 AM, and the PM peak hour typically falls between 4 PM and 6 PM. An analysis of both the AM and PM periods was performed to capture the expected worst case condition.

3.0 Analysis Methodology

Recommendations for improvements to Stantonsburg Road / Tenth Street were developed based on the capacity analyses described in this section.

3.1 TRAFFIC FORECAST PROJECTIONS

The traffic projections for the project area in the 2005 Base Year, 2010 Build Year, and 2030 Design Year were presented in the *Traffic Forecast Technical Memorandum* (Kimley-Horn, December 2006). Traffic volumes were revised to reflect the proposed grade separation (with no access) between Tenth Street and Dickinson Avenue and reported in the *TIP Project No. U-3315 Volume/Break-Out Clarification Memorandum*, dated September 25, 2007. Figures A-8 through A-10 were revised based on this memorandum and are included in this report in Appendix B. Using the traffic projections developed in the technical memorandum, base, build, and design year turning movement volumes were determined for the key intersections along the project corridor. The average annual daily traffic (AADT) was converted to peak hour volumes, based on the design hour factors, directional distributions, and turning movement AADT volumes. Turning movement volumes were reviewed and balanced between adjacent intersections to within 10% of the one-way volume and 5% of the projected directional split.

Figures 3 through **8** show the balanced No Build 2005, No Build 2010, No Build 2030, Build 2005, Build 2010, and Build 2030 AM and PM peak hour traffic volumes at each of the study intersections. The traffic forecasts, analysis spreadsheets, and volume balancing adjustments are located in **Appendix B**.

3.2 PEAK HOUR INTERSECTION LEVEL-OF-SERVICE ANALYSIS

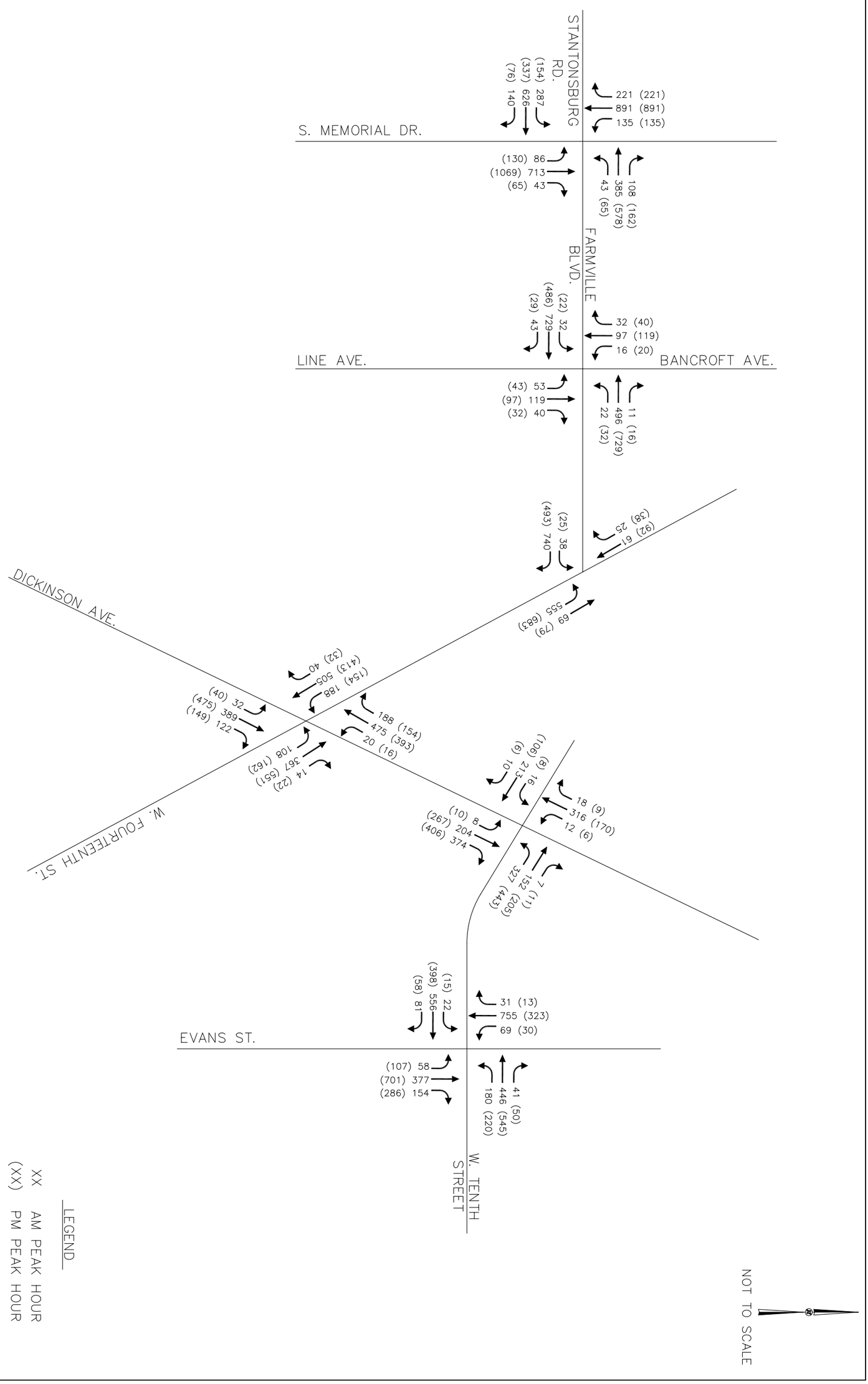
At-grade intersection analyses were performed in Synchro© (version 7) using methodologies prescribed in the *Highway Capacity Manual* (HCM) (2000) to compute level of service (LOS) and delay for each intersection under current and future scenarios. The general assumptions included an uncoordinated network with signal phasing for the No Build 2005 scenario. For the No Build 2010 and 2030 scenarios, the NCDOT Congestion Management Capacity Analysis Guidelines were applied to the existing uncoordinated network through the study corridor. For all Build scenarios, the NCDOT Congestion Management Capacity Analysis Guidelines were followed (unless otherwise noted) to create a coordinated network through the study corridor (excluding the intersection of SR 1598 (Dickinson Avenue) at E. Fourteenth Street). **Table 1** details the results of the intersection analyses.

Existing cycle lengths were used for the No Build 2005 scenario, and NCDOT Congestion Management recommended minimum cycle lengths or longer were used for all intersections in the 2010 and 2030 No Build scenarios. Except for the intersection of Farmville Boulevard at Line Avenue / Bancroft Avenue, which was run at a half cycle, a 140-second cycle length was used for all intersections in the 2005 and 2010 Build scenarios, and a 180-second cycle length was used for all intersections in the 2030 Build scenario.

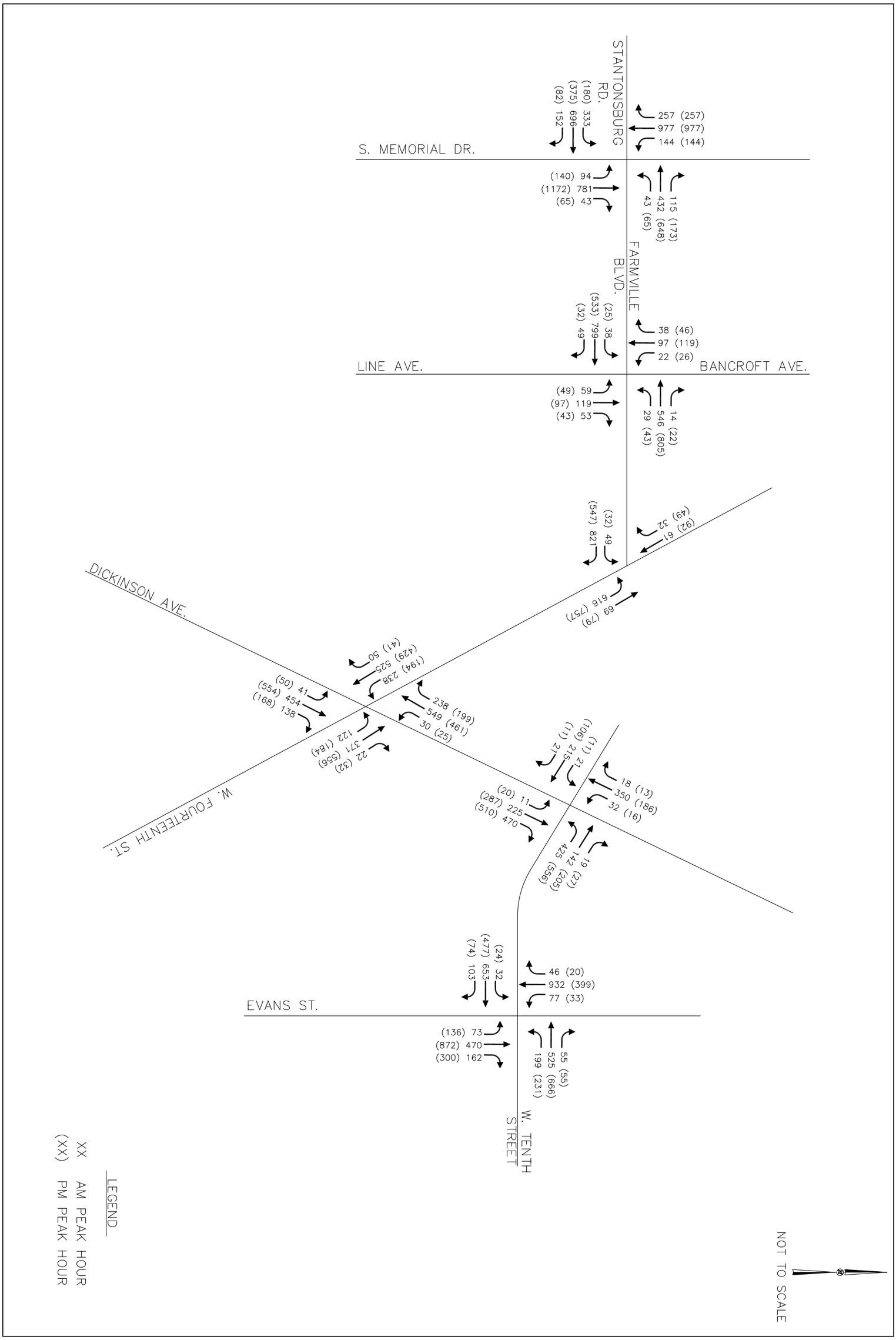
Lagging, protected-only left-turn phasing was utilized for some left-turn movements at the intersections of SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive and SR 1598 (W. Tenth Street) at SR 1702 (Evans Street) to optimize network operations. Lagging left-turn phases are currently utilized at both of these intersections.

Synchro© queue analysis was used to evaluate the average and 95th percentile queue lengths at the study intersections. In addition, the data was transferred to SimTraffic© to create a representative simulation of traffic conditions. The simulation helped to identify areas where queuing and congestion would present potential problems at the network level, as opposed to intersection performance alone, including the appropriateness of recommended storage lengths. Turn bay length recommendations were developed based on the 95th percentile queue lengths reported in Synchro and were confirmed using SimTraffic©.[1] The Synchro LOS reports are located in **Appendix C**.

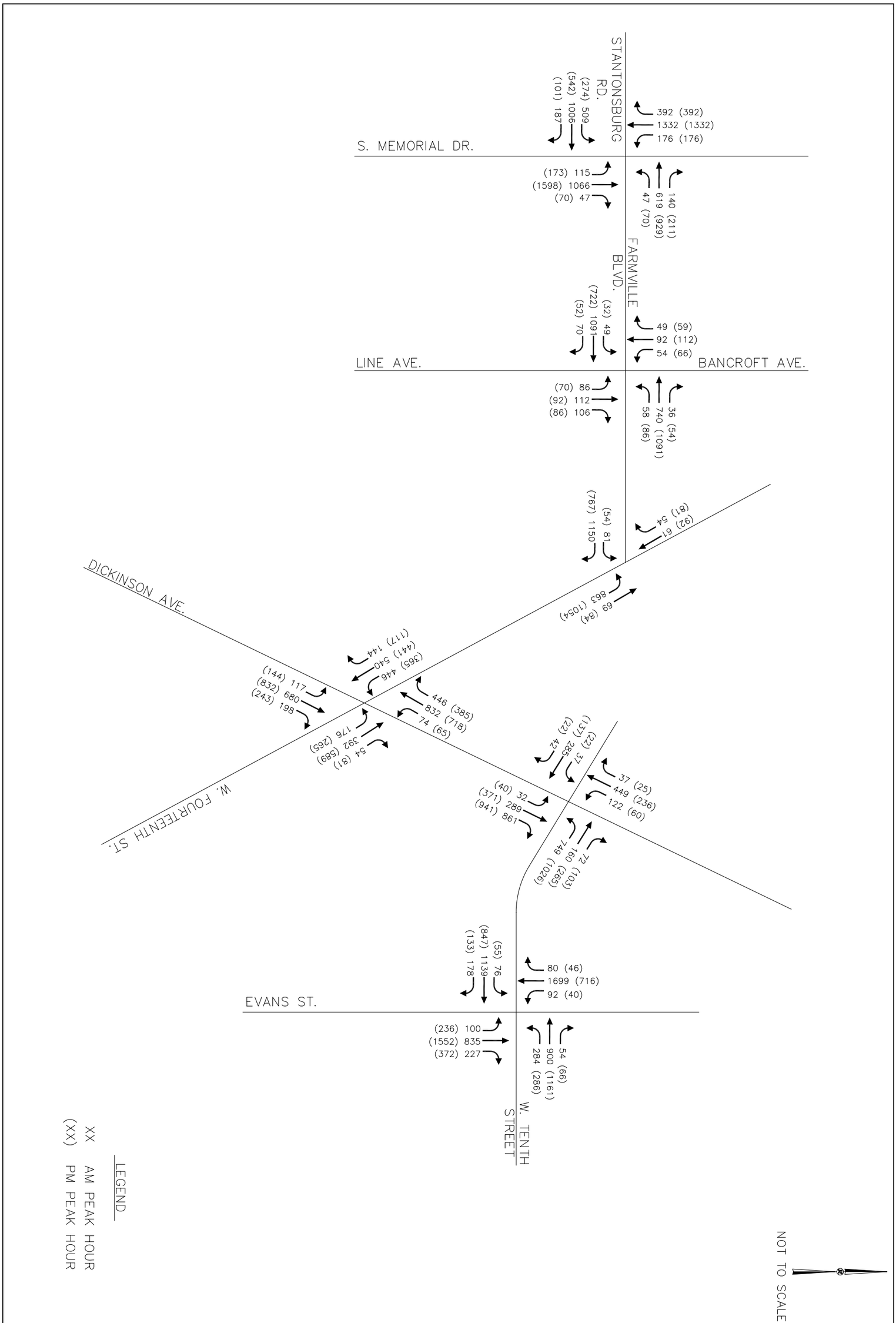
[1] 95th percentile queue length (average queue length experienced with 95th percentile traffic arriving) was used to determine storage lengths. When 95th percentile traffic volumes at an intersection exceed capacity, the queue shown will rarely be exceeded and is acceptable for the design of storage bays (*Synchro 6 User Guide*, 2003).



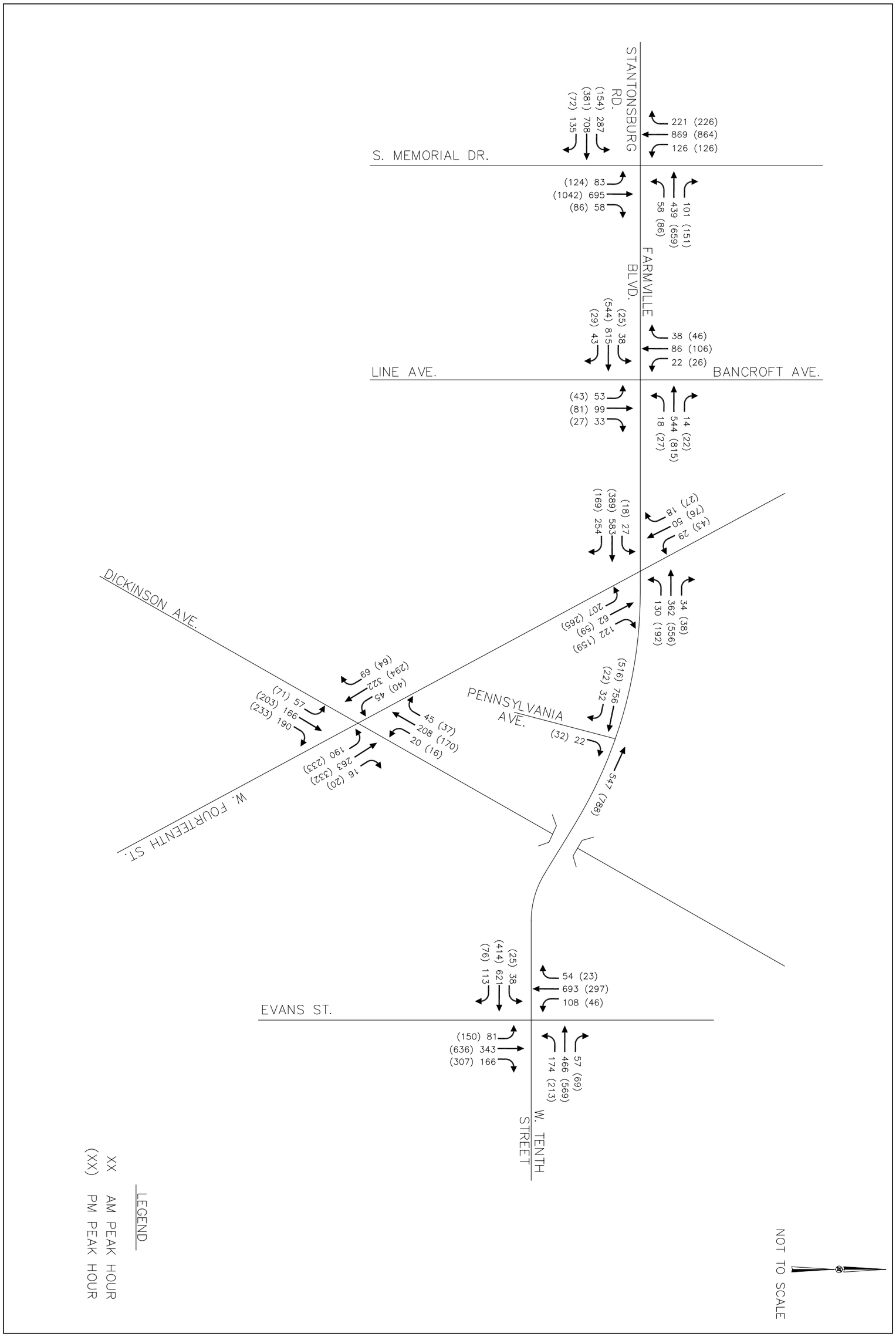
Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	NO BUILD 2005 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 3



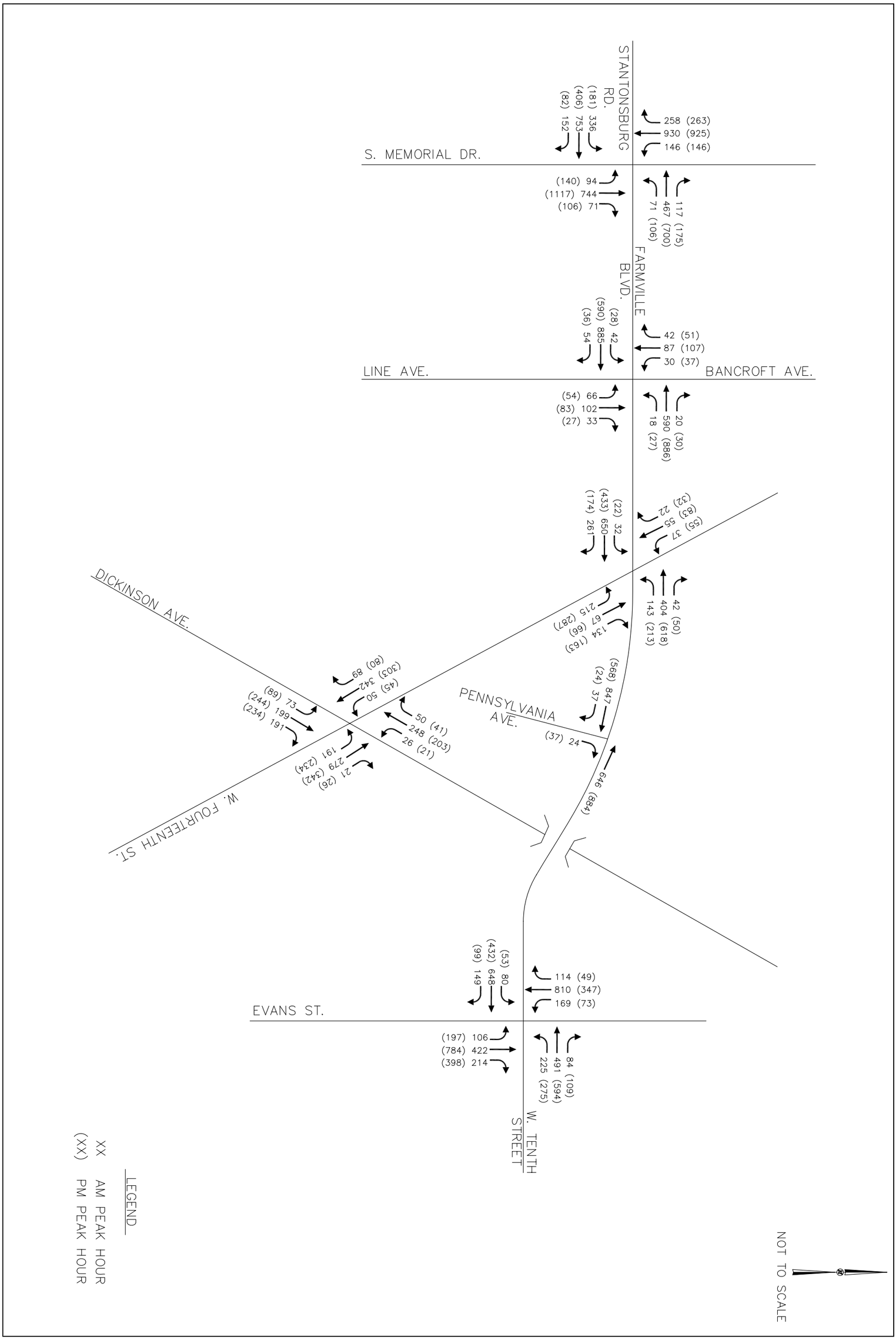
Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	NO BUILD 2010 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 4



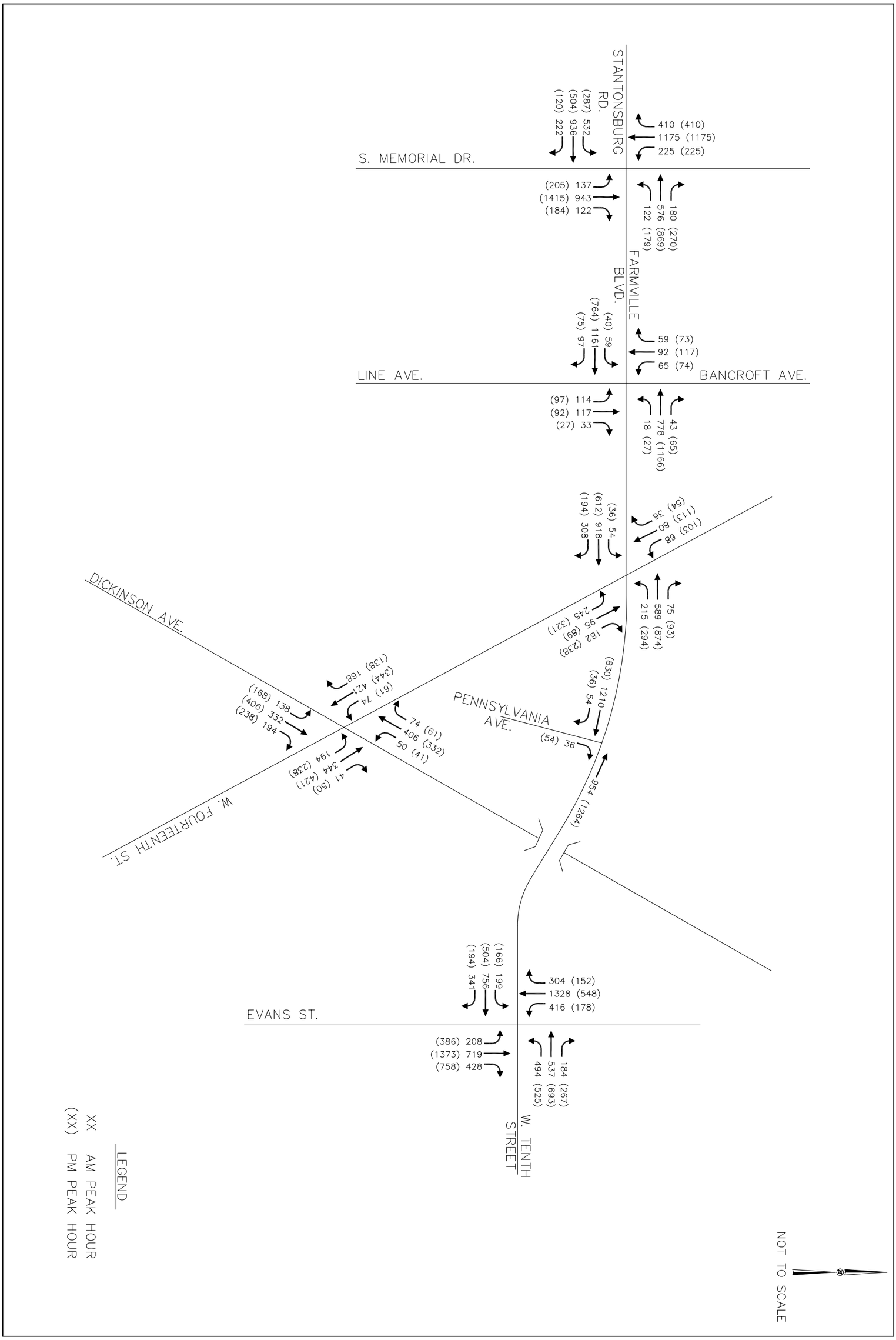
Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	NO BUILD 2030 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 5



Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	BUILD 2005 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 6



Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	BUILD 2010 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 7



Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	BUILD 2030 AM AND PM PEAK HOUR TRAFFIC VOUMES	FIGURE 8

Table 1
Intersection Level-of-Service Summary

Condition	No Build LOS (Delay in seconds)		Build LOS (Delay in seconds)	
	AM Peak-Hr	PM Peak-Hr	AM Peak-Hr	PM Peak-Hr
SR 1467 (Stantonsburg Road)/ Farmville Boulevard at Memorial Drive (Signalized)				
Existing Traffic (2005)	E (65.7)	E (64.1)	D (41.2)	D (39.0)
Interim Year (2010)	E (69.5)	E (67.6)	D (42.7)	D (40.3)
Design Year (2030)	F (166.8)	F (155.6)	E (59.7)	E (59.8)
Farmville Boulevard at Line Avenue / Bancroft Avenue (Signalized)				
Existing Traffic (2005)	B (11.8)	B (11.3)	A (7.8)	A (7.6)
Interim Year (2010)	B (12.4)	B (11.8)	A (7.7)	B (10.2)
Design Year (2030)	B (18.7)	B (20.0)	B (11.1)	B (14.0)
Farmville Boulevard/W. Tenth Street Connector at W. Fourteenth Street (Signalized)				
Existing Traffic (2005)	B (12.7)	B (16.1)	C (22.6)	C (27.4)
Interim Year (2010)	B (13.6)	B (14.9)	C (25.6)	C (30.1)
Design Year (2030)	B (16.7)	B (18.0)	D (38.1)	D (46.8)
SR 1598 (W. Tenth Street) at SR 1598 / SR 1610 (Dickinson Avenue) (Signalized)				
Existing Traffic (2005)	C (22.1)	C (23.6)		
Interim Year (2010)	D (38.4)	C (33.6)		
Design Year (2030)	F (91.4)	F (93.4)		
W. Tenth Street Connector at Pennsylvania Avenue - *Northbound Approach* (Unsignalized)				
Existing Traffic (2005)			A (9.6)	A (9.2)
Interim Year (2010)			A (9.7)	A (9.2)
Design Year (2030)			A (10.0)	A (9.5)
SR 1598 (W. Tenth Street) at SR 1702 (Evans Street) (Signalized)				
Existing Traffic (2005)	C (29.0)	C (26.6)	D (35.2)	C (34.4)
Interim Year (2010)	D (47.2)	D (43.1)	D (40.2)	D (40.8)
Design Year (2030)	F (171.3)	F (158.5)	E (67.7)	E (59.3)
SR 1598 (Dickinson Avenue) at E. Fourteenth Street (Signalized)				
Existing Traffic (2005)	D (51.2)	D (46.2)	D (38.3)	D (36.7)
Interim Year (2010)	E (65.0)	E (62.9)	D (39.9)	D (40.4)
Design Year (2030)	F (199.4)	F (203.1)	D (52.3)	D (48.9)

SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive – Signalized
Under the existing geometry and signal timings, this intersection operates at **LOS E** during both peak periods in the No Build 2005 scenario. With the projected traffic growth, the 2005 average vehicular delay (65.7 seconds in the AM peak hour, 64.1 seconds (s) in the PM peak hour) is expected to increase by approximately 5% by 2010 (69.5 s AM, 67.6 s PM) and by approximately 150% by 2030 to operate at **LOS F** (166.8 s AM, 155.6 s PM). Heavy through movements on all approaches are likely to result in extensive queuing and congestion.

The following roadway improvements are recommended in conjunction with this project:

- An additional eastbound left-turn lane and an exclusive eastbound right-turn lane on Stantonsburg Road
- Restriping the existing eastbound shared left-through lane to an exclusive through lane
- Exclusive westbound left- and right-turn lanes on Farmville Boulevard
- Exclusive northbound and southbound right-turn lanes on Memorial Drive
- An additional 125' of storage for the existing southbound left-turn lane on Memorial Drive
- Modifying the traffic signal to remove the split phasing for the Stantonsburg Road and Farmville Boulevard approaches

With these improvements in place, the intersection is projected to operate at LOS D in the AM and PM peak hours for both the 2005 (41.2 s AM, 39.0 s PM) and 2010 (42.7 s AM, 40.3 s PM) Build scenarios. For the 2030 Build scenario, the intersection is projected to operate at **LOS E** (59.7 s AM, 59.8 s PM) with the eastbound and northbound through movements also operating at **LOS E** in the AM and PM peak hours. The westbound through movement is expected to operate at **LOS F** in the AM peak hour and at **LOS E** in the PM peak hour. However, no queuing issues were observed at this intersection based on SimTraffic© simulations with the recommended turn lane storage lengths. The future operations also offer an improvement in average delay over current conditions.

Farmville Boulevard at Line Avenue / Bancroft Avenue – Signalized
Under the existing geometry and signal timings, this intersection operates at LOS B (11.8 s AM, 11.3 s PM) during both peak periods in the No Build 2005 scenario and is expected to continue to operate at LOS B in the AM and PM peak hours for both the No Build 2010 (12.4 s AM, 11.8 s PM) and 2030 (18.7 s AM, 20.0 s PM) conditions.

The following roadway improvements are recommended in conjunction with this project:

- Exclusive left-turn lanes on all four approaches

With these improvements in place, the intersection is projected to operate at LOS A in the AM and PM peak hours for the 2005 (7.8 s AM, 7.6 s PM) Build scenario. In the 2010 Build scenario, the intersection is expected to operate at LOS A (7.7 s) in the AM peak hour and LOS B (10.2 s) in the PM peak hour. For the 2030 Build scenario, the intersection is projected to operate at LOS B (11.1 s AM, 14.0 s PM) in both peak hours.

Farmville Boulevard / W. Tenth Street Connector at W. Fourteenth Street – Signalized

Under the existing geometry and signal timings, this intersection operates at LOS B (12.7 s AM, 16.1 s PM) during both peak periods in the No Build 2005 scenario and is expected to continue to operate at LOS B during both peak periods for the No Build 2010 (13.6 s AM, 14.9 s PM) and 2030 (16.7 s AM, 18.0 s PM) conditions.

As part of this project, W. Tenth Street will be extended to align with Farmville Boulevard at W. Fourteenth Street. The following roadway laneage is recommended at this intersection:

- Restriping and additional lanes to provide one exclusive left-turn lane, dual through lanes, and an exclusive right-turn lane on eastbound Farmville Boulevard
- One exclusive left-turn lane, one exclusive through lane, and a shared through-right lane on the westbound W. Tenth Street Connector
- Restriping and additional lanes to provide dual exclusive left-turn lanes, an exclusive through lane, and an exclusive right-turn lane on northbound W. Fourteenth Street
- Restriping and additional lanes to provide an exclusive left-turn lane and a shared through-right lane on southbound W. Fourteenth Street

With these improvements in place, the intersection is projected to operate at LOS C in the AM and PM peak hours for both the 2005 (22.6 s AM, 27.4 s PM) and 2010 (25.6 s AM, 30.1 s PM) Build scenarios. For the 2030 Build scenario, the intersection is projected to operate at an overall LOS D in the AM and PM peak hours (38.1 s AM, 46.8 s PM).

However, due to the long cycle length (140 seconds) and the low volumes, the southbound through movement is expected to operate at **LOS E** in the AM and PM peak hours for both the 2005 and 2010 scenarios. In 2030 the northbound through movement is expected to operate at **LOS E** in both peak hours, and the southbound through

movement is expected to operate at **LOS F** in both peak hours. No reasonable improvements were identified to mitigate these delays, and no queuing issues were observed based on SimTraffic© simulations with the recommended turn lane storage lengths.

SR 1598 (W. Tenth Street) at SR 1598 / SR 1610 (Dickinson Avenue) – Signalized
Under the existing geometry and signal timings, this intersection operates at LOS C during both peak periods (22.1 s AM, 23.6 s PM) in the No Build 2005 scenario. With the projected traffic growth, the intersection is expected to fall to LOS D (38.4 s) in the AM peak hour but remain at LOS C (33.6 s) in the PM peak hour in 2010. In 2030 the intersection is projected to operate at **LOS F** (91.4 s AM, 93.4 s PM) in both peak hours.

As part of this project, this intersection is currently planned to be grade-separated with no direct access from W. Tenth Street to/from Dickinson Avenue, therefore no Build analyses were performed for this intersection.

W. Tenth Street Connector at Pennsylvania Avenue – Unsignalized
Analysis indicates that the future right-in/right-out intersection of the W. Tenth Street Connector at Pennsylvania Avenue is expected to operate at LOS A for the northbound approach of Pennsylvania Avenue in the AM and PM peak hours for all Build scenarios. No turn lanes are recommended at this intersection due to the low traffic volumes.

SR 1598 (W. Tenth Street) at SR 1702 (Evans Street) – Signalized
Under the existing geometry and signal timings, this intersection operates at LOS C during both peak periods in the No Build 2005 scenario. With the projected traffic growth, the 2005 average vehicular delay (29.0 seconds in the AM peak, 26.6 seconds PM) is expected to increase by over 60% by 2010, resulting in an overall LOS D (47.2 s AM, 43.1 s PM), and by almost 500% by 2030 to operate at **LOS F** (171.3 s AM, 158.5 s PM).

Based on the capacity analysis presented herein, the following roadway improvements are recommended to be in place by the year 2030:

- An additional 350’ of storage for the existing eastbound left-turn lane on W. Tenth Street
- An exclusive eastbound right-turn lane on W. Tenth Street
- An additional westbound left-turn lane and an exclusive westbound right-turn lane on W. Tenth Street
- An additional left-turn lane and an exclusive right-turn lane on both the northbound and southbound approaches of Evans Street

With these improvements in place, the intersection is projected to operate at LOS D (35.2 s) in the AM peak hour and LOS C (34.4 s) in the PM peak hour for the 2005 Build scenario and at LOS D (40.2 s AM, 40.8 s PM) for the 2010 Build scenario. For the 2030 Build scenario, the intersection is projected to operate at **LOS E** (67.7 s AM, 59.3 s PM) with multiple through movements also operating at **LOS E**. However, LOS E is often considered to be acceptable in urbanized areas. The only improvements capable of improving this intersection to LOS D are additional through lanes on both W. Tenth Street and Evans Street, which are not constructible due to the historic districts in the area. In addition, no queuing issues were observed at this intersection based on SimTraffic© simulations with the recommended turn lane storage lengths.

SR 1598 (Dickinson Avenue) at E. Fourteenth Street – Signalized
Under the existing geometry and signal timings, this intersection operates at LOS D (51.2 s AM, 46.2 s PM) in the No Build 2005 scenario. With the projected traffic growth, the intersection is expected to fall to **LOS E** (65.0 s AM, 62.9 s PM) in 2010 and to **LOS F** (199.4 s AM, 203.1 s PM) in 2030.

The following roadway improvements are needed by 2030. This intersection is not part of this project, however.

- An exclusive eastbound right-turn lane on Dickinson Avenue
- An additional 175’ of storage for the existing northbound left-turn lane on E. Fourteenth Street

With these improvement in place, the intersection is projected to operate at LOS D in the AM and PM peak hours for all Build scenarios with only the westbound through movement on Dickinson Avenue operating at **LOS E** in some scenarios.

4.0 Conclusions and Recommendations

The intersection analyses indicate that this corridor experiences unacceptable delays at certain locations under existing conditions and throughout the study area under No Build conditions. The evaluation also shows that the proposed design would allow the study area intersections to operate at acceptable levels in Design Year 2030 at most locations. At the intersections of SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive, SR 1598 (W. Tenth Street) at SR 1702 (Evans Street) long cycle lengths and heavy left-turn and through volumes prevent the intersections from operating at an acceptable level of service even with significant geometric and signal improvements. The analysis projects **LOS E** under Build conditions at these locations. However, a LOS E is common in urban areas, and no feasible additional improvements were identified at either of these intersections to mitigate to LOS D. No queuing issues were identified at either location with the recommended improvements and turn lane storages.

The following improvements are recommended based on the capacity analyses presented herein:

SR 1467 (Stantonsburg Road) / Farmville Boulevard at Memorial Drive

- An additional eastbound left-turn lane and an exclusive eastbound right-turn lane on Stantonsburg Road
- Restriping the existing eastbound shared left-through lane to an exclusive through lane
- Exclusive westbound left- and right-turn lanes on Farmville Boulevard
- Exclusive northbound and southbound right-turn lanes on Memorial Drive
- An additional 125’ of storage for the existing southbound left-turn lane on Memorial Drive
- Modifying the traffic signal to remove the split phasing for the Stantonsburg Road and Farmville Boulevard approaches

Farmville Boulevard at Line Avenue / Bancroft Avenue

- Exclusive left-turn lanes on all four approaches

Farmville Boulevard / W. Tenth Street Connector at W. Fourteenth Street

- Restriping and additional lanes to provide one exclusive left-turn lane, dual through lanes, and an exclusive right-turn lane on eastbound Farmville Boulevard

- One exclusive left-turn lane, one exclusive through lane, and a shared through-right lane on the westbound W. Tenth Street Connector
- Restriping and additional lanes to provide dual exclusive left-turn lanes, an exclusive through lane, and an exclusive right-turn lane on northbound W. Fourteenth Street
- Restriping and additional lanes to provide an exclusive left-turn lane and a shared through-right lane on southbound W. Fourteenth Street

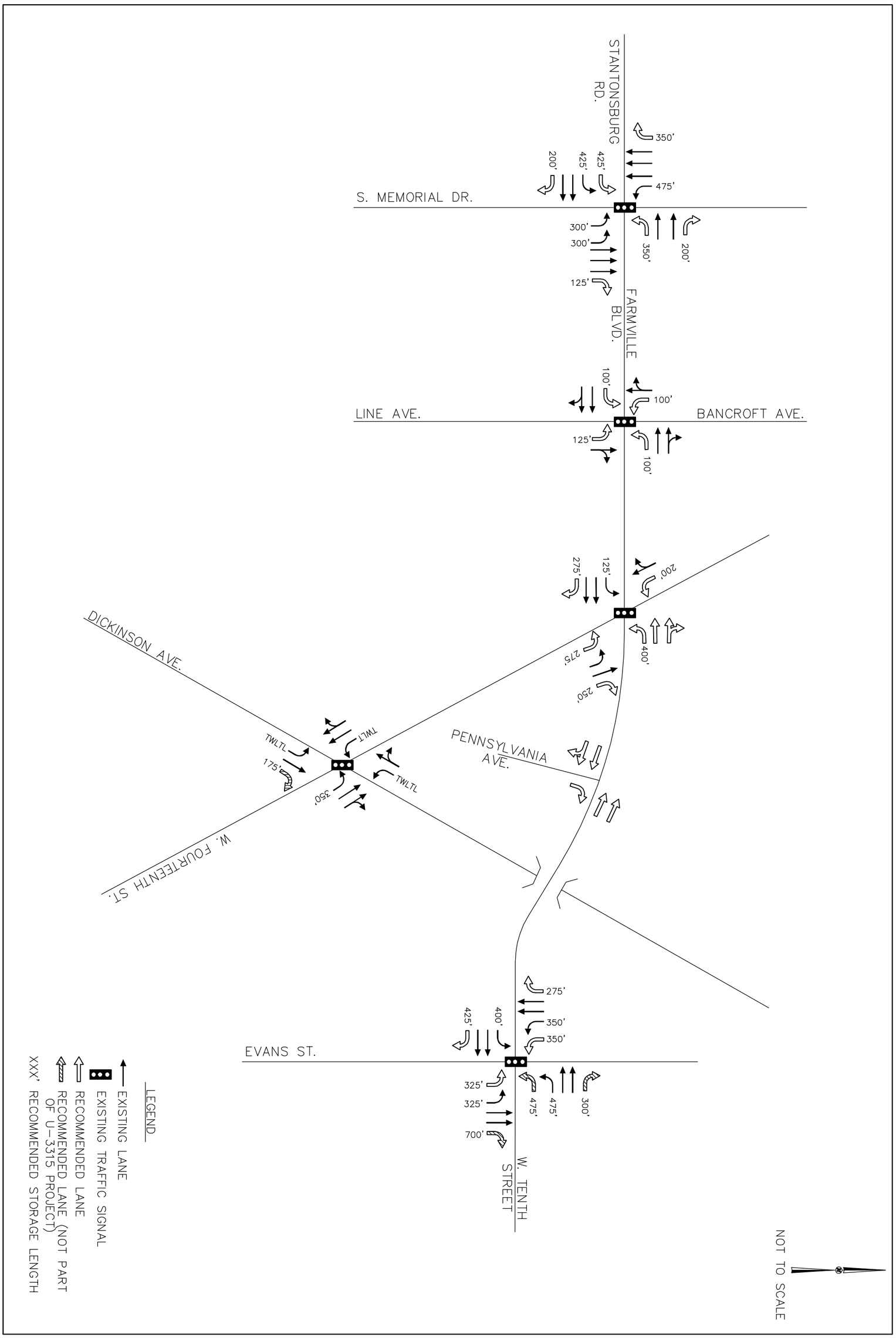
SR 1598 (W. Tenth Street) at SR 1702 (Evans Street)

- An additional 350' of storage for the existing eastbound left-turn lane on W. Tenth Street
- An exclusive eastbound right-turn lane on W. Tenth Street
- An additional westbound left-turn lane and an exclusive westbound right-turn lane on W. Tenth Street (not part of the U-3315 project)
- An additional northbound left-turn lane, an additional southbound left-turn lane, and an exclusive southbound right-turn lane on Evans Street
- An exclusive northbound right-turn lane on Evans Street (not part of the U-3315 project)

SR 1598 (Dickinson Avenue) at E. Fourteenth Street (Not part of U-3315 Project)

- An exclusive eastbound right-turn lane on Dickinson Avenue
- An additional 175' of storage for the existing northbound left-turn lane on E. Fourteenth Street

Figure 9 outlines the recommended laneage, traffic control, and storage lengths based on the capacity analyses.



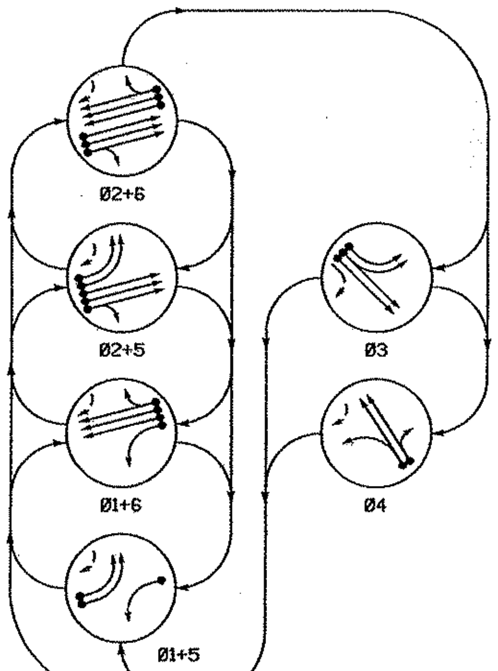
Kimley-Horn and Associates, Inc.	TENTH STREET CONNECTOR CAPACITY ANALYSIS REPORT	RECOMMENDED ROADWAY LANEAGE	FIGURE 9

Appendix A

Existing Traffic Signal Plans

PROJECT REFERENCE NO.	SHEET NO.
U-3852B	136

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

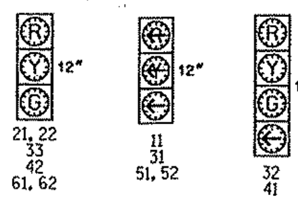
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11	←	←	←R	←R	←R	←R	←R
21,22	R	R	G	G	R	R	Y
31	←R	←R	←R	←R	←	←R	←R
32	R	R	R	R	G ←	R	R
33	R	R	R	R	G	R	R
41	R	R	R	R	R	G ←	R
42	R	R	R	R	R	G	R
51,52	←	←R	←	←R	←R	←R	←R
61,62	R	G	R	G	R	R	Y

SIGNAL FACE I.D.

Denotes L.E.D.



LOOP & DETECTOR UNIT INSTALLATION CHART

NEMA CONTROLLER WITH TS-2 CABINET

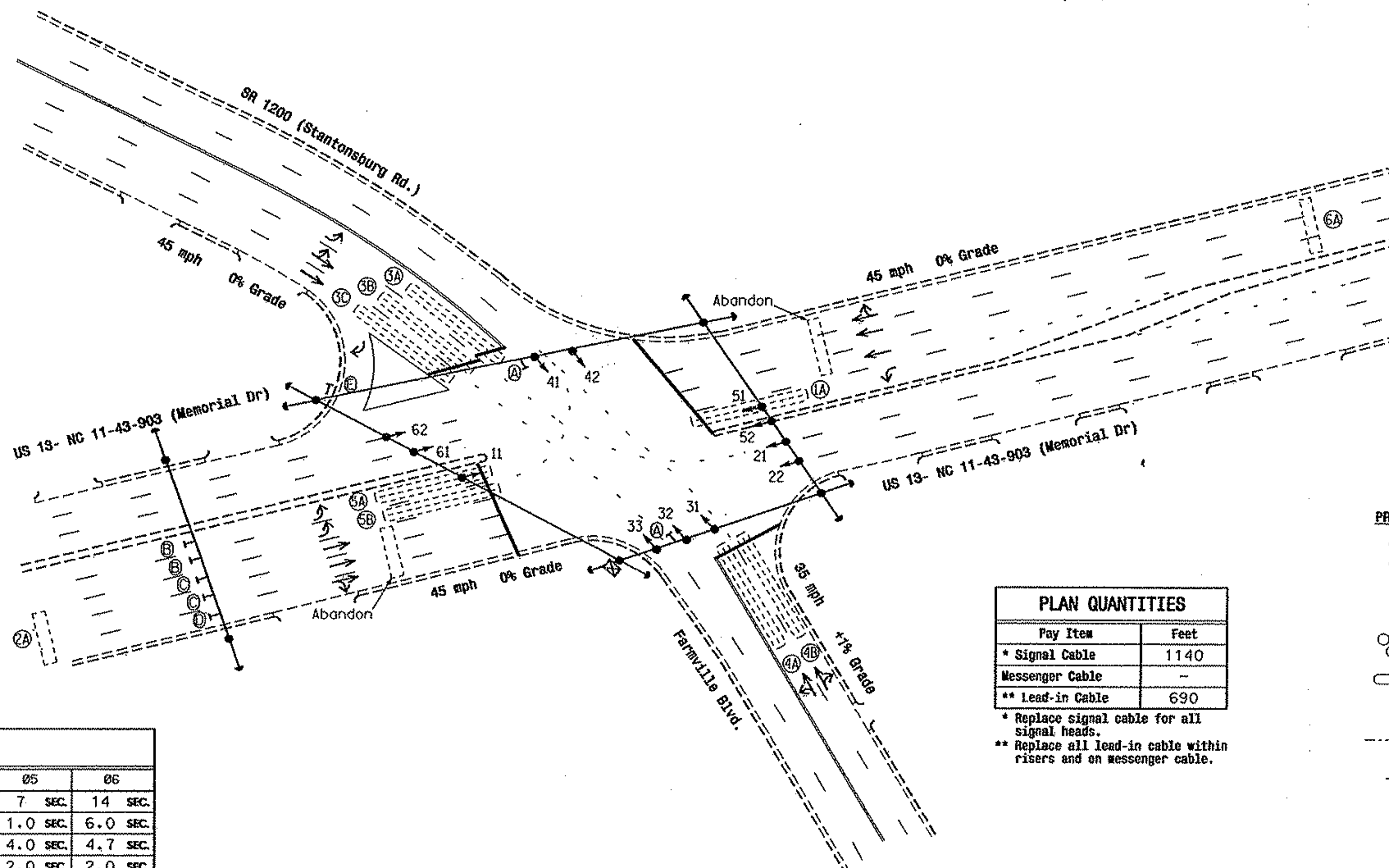
INDUCTIVE LOOPS: LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	DETECTOR UNITS: NEMA PHASE	NEW	EXISTING	TIMING: FEATURE	TIMING: TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN
1A	6X60	2-4-2	+5		X	1	X		-	- SEC.	ALL	NO
*2A	6X27	EXISTING	330		X	2	X		-	- SEC.	ALL	NO
3A	6X60	2-4-2	+5		X	3	X		-	- SEC.	ALL	NO
3B	6X60	2-4-2	+5		X	3	X		-	- SEC.	ALL	NO
3C	6X60	2-4-2	+5		X	3	X		DELAY	3 SEC.	ALL	YES
4A	6X60	2-4-2	+5		X	4	X		-	- SEC.	ALL	NO
4B	6X60	2-4-2	+5		X	4	X		DELAY	10 SEC.	ALL	YES
5A	6X60	2-4-2	+5		X	5	X		-	- SEC.	ALL	NO
5B	6X60	2-4-2	+5		X	5	X		-	- SEC.	ALL	NO
*6A	6X29	EXISTING	330		X	6	X		-	- SEC.	ALL	NO

*Unable to field verify loops.

6 Phase
Fully Actuated
(Greenville City System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Pavement markings are existing.
3. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
4. During coordination, phase 1 or phase 5 may be lagged.
5. During coordination, the order of phase 3 and phase 4 may be reversed.
6. Set all detector units to presence mode.
7. In the event of loop replacement refer to current Signals & Geometrics Design Manual.
8. Intersection Zone Number: 11
System Address Number: 53



PLAN QUANTITIES

Pay Item	Feet
* Signal Cable	1140
Messenger Cable	-
** Lead-in Cable	690

* Replace signal cable for all signal heads.
** Replace all lead-in cable within risers and on messenger cable.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
Ⓐ	Combined Through and Left Arrow Sign (R3-6L)	Ⓐ
Ⓑ	Left Arrow "ONLY" Sign (R3-5L)	Ⓑ
Ⓒ	Through Arrow "ONLY" Sign (R3-5A)	Ⓒ
Ⓓ	Combined Through and Right Arrow Sign (R3-6R)	Ⓓ
Ⓔ	"YIELD" Sign (R1-2)	Ⓔ

TIMING CHART

NEMA CONTROLLER

PHASE	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6
MINIMUM GREEN*	7 SEC.	14 SEC.	7 SEC.	7 SEC.	7 SEC.	14 SEC.
PASSAGE/GAP*	1.0 SEC.	6.0 SEC.	1.0 SEC.	1.0 SEC.	1.0 SEC.	6.0 SEC.
YELLOW CHANGE INT.	4.0 SEC.	4.7 SEC.	4.7 SEC.	4.0 SEC.	4.0 SEC.	4.7 SEC.
RED CLEARANCE	2.0 SEC.	2.0 SEC.	2.5 SEC.	3.0 SEC.	2.0 SEC.	2.0 SEC.
MAX. 1*	30 SEC.	90 SEC.	45 SEC.	45 SEC.	30 SEC.	90 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	NONE	NONE	MIN. RECALL
VEH. CALL MEMORY	NONLOCK	LOCK	NONLOCK	NONLOCK	NONLOCK	LOCK
WALK*	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.
FLASHING DON'T WALK	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.
VOLUME DENSITY	OFF	ON	OFF	OFF	OFF	ON
ACTUATION B4 ADD	- VEH.	0 VEH.	- VEH.	- VEH.	- VEH.	0 VEH.
SEC. PER ACTUATION*	- SEC.	1.0 SEC.	- SEC.	- SEC.	- SEC.	1.0 SEC.
MAX. INITIAL*	- SEC.	37 SEC.	- SEC.	- SEC.	- SEC.	37 SEC.
TIME B4 REDUCTION*	- SEC.	15 SEC.	- SEC.	- SEC.	- SEC.	15 SEC.
TIME TO REDUCE*	- SEC.	30 SEC.	- SEC.	- SEC.	- SEC.	30 SEC.
MINIMUM GAP	- SEC.	3.5 SEC.	- SEC.	- SEC.	- SEC.	3.5 SEC.

* These values may be field adjusted. Do not adjust Min Green and Passage /Gap times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

Prepared in the Offices of: Signals and Geometrics Section, 122 N. McDowell St., Raleigh, NC 27603

US 13-NC 11-43-903(Memorial Dr)
at
SR 1200 (Stantonsburg Rd.)/
Farmville Blvd.

Division 02 Pitt County Greenville

PLAN DATE: March 2003	REVIEWED BY: S T Franklin
PREPARED BY: L A Elliott	REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23489

SIGNATURE DATE 6/25/03

SIG. INVENTORY NO. 02-0053

Lanes, Volumes, Timings
53: Stantonsburg Rd & Memorial Dr.

2/27/2007

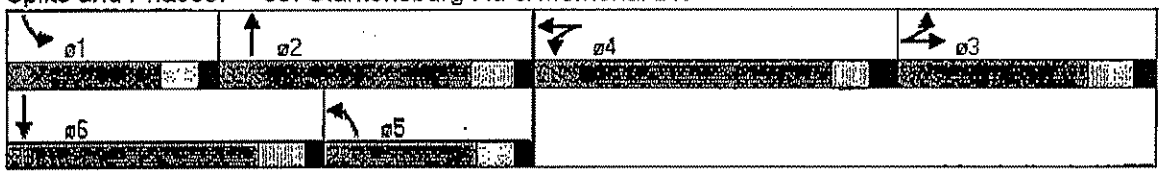
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	10	12	11	11	12
Storage Length (ft)	0		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	2		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.91	0.91	0.95	0.95	0.95	0.95	0.97	0.91	0.91	1.00	0.91	0.91
Frt		0.992			0.980			0.997			0.960	
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	1610	3363	0	0	3444	0	3433	4732	0	1711	4719	0
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	1610	3363	0	0	3444	0	3433	4732	0	1711	4719	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			14			2			72	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.04	1.04	1.00
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1983			1174			2186			1881	
Travel Time (s)		30.0			17.8			33.1			28.5	
Volume (vph)	183	450	24	109	541	97	169	676	14	162	651	240
Peak Hour Factor	0.92	0.92	0.92	0.90	0.92	0.90	0.92	0.90	0.90	0.90	0.90	0.92
Adj. Flow (vph)	199	489	26	121	588	108	184	751	16	180	723	261
Lane Group Flow (vph)	199	515	0	0	817	0	184	767	0	180	984	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases												
Detector Phases	3	3		4	4		5	2		1	6	
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		13.0	21.0		22.0	21.0	
Total Split (s)	27.0	27.0	0.0	38.0	38.0	0.0	22.0	33.0	0.0	22.0	33.0	0.0
Total Split (%)	22.5%	22.5%	0.0%	31.7%	31.7%	0.0%	18.3%	27.5%	0.0%	18.3%	27.5%	0.0%
Maximum Green (s)	19.8	19.8		31.0	31.0		16.0	26.3		16.0	26.3	
Yellow Time (s)	4.7	4.7		4.0	4.0		4.0	4.7		4.0	4.7	
All-Red Time (s)	2.5	2.5		3.0	3.0		2.0	2.0		2.0	2.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0		1.0	1.0		1.0	6.0		1.0	6.0	
Minimum Gap (s)	1.0	1.0		1.0	1.0		1.0	3.5		1.0	3.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	15.0		0.0	15.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	22.2	22.2			32.1		18.0	34.5		17.2	32.7	
Actuated g/C Ratio	0.18	0.18			0.27		0.15	0.29		0.14	0.27	
v/c Ratio	0.67	0.82			0.88		0.36	0.56		0.73	0.73	
Control Delay	58.2	59.4			49.4		55.9	44.5		71.2	61.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	58.2	59.4			49.4		55.9	44.5		71.2	61.6	

Lanes, Volumes, Timings
53: Stantonsburg Rd & Memorial Dr. 2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	E			D		E	D		E	E	
Approach Delay		59.1			49.4			46.7			63.1	
Approach LOS		E			D			D			E	

Intersection Summary
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 82 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 54.9 Intersection LOS: D
Intersection Capacity Utilization 70.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 53: Stantonsburg Rd & Memorial Dr.



Lanes, Volumes, Timings
53: Stantonsburg Rd & Memorial Dr.

2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	2		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.91	0.91	0.95	0.95	0.95	0.95	0.97	0.91	0.91	1.00	0.91	0.91
Frt		0.989			0.982			0.986			0.981	
Flt Protected	0.950				0.992		0.950			0.950		
Satd. Flow (prot)	1610	3353	0	0	3448	0	3433	5065	0	1770	4989	0
Flt Permitted	0.950				0.992		0.950			0.950		
Satd. Flow (perm)	1610	3353	0	0	3448	0	3433	5065	0	1770	4989	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			10			3			21	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		1987			1174			2185			1875	
Travel Time (s)		30.1			22.9			33.1			28.4	
Volume (vph)	181	578	47	73	321	54	138	699	20	186	934	135
Peak Hour Factor	0.92	0.92	0.92	0.90	0.92	0.92	0.92	0.92	0.90	0.92	0.92	0.92
Adj. Flow (vph)	197	628	51	81	349	59	150	760	22	202	1015	147
Lane Group Flow (vph)	197	679	0	0	489	0	150	782	0	202	1162	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases												
Detector Phases	3	3		4	4		5	2		1	6	
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	20.0	20.0		23.0	23.0		13.0	21.0		14.0	21.2	
Total Split (s)	38.0	38.0	0.0	28.0	28.0	0.0	22.0	36.0	0.0	28.0	42.0	0.0
Total Split (%)	29.2%	29.2%	0.0%	21.5%	21.5%	0.0%	16.9%	27.7%	0.0%	21.5%	32.3%	0.0%
Maximum Green (s)	30.8	30.8		21.0	21.0		16.0	29.3		22.0	35.3	
Yellow Time (s)	4.7	4.7		4.0	4.0		4.0	4.7		4.0	4.7	
All-Red Time (s)	2.5	2.5		3.0	3.0		2.0	2.0		2.0	2.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0		1.0	1.0		1.0	6.0		1.0	6.0	
Minimum Gap (s)	1.0	1.0		1.0	1.0		1.0	3.5		1.0	3.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	15.0		0.0	15.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	31.1	31.1			22.5		18.0	41.1		19.3	42.4	
Actuated g/C Ratio	0.24	0.24			0.17		0.14	0.32		0.15	0.33	
v/c Ratio	0.51	0.84			0.81		0.32	0.49		0.77	0.71	
Control Delay	29.8	36.3			58.7		52.1	38.3		40.8	31.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	29.8	36.3			58.7		52.1	38.3		40.8	31.0	
LOS	C	D			E		D	D		D	C	

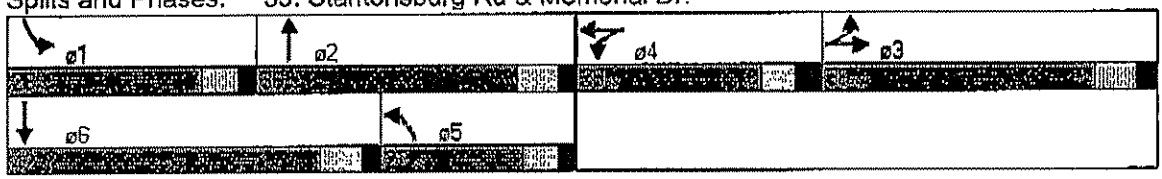
Lanes, Volumes, Timings
53: Stantonsburg Rd & Memorial Dr. 2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		34.8			58.7			40.6			32.5	
Approach LOS		C			E			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 111 (85%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 38.6 Intersection LOS: D
Intersection Capacity Utilization 69.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 53: Stantonsburg Rd & Memorial Dr.



2/27/2007 Signal#: 91 – Farmville / Line 3

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	0	7	0	7	0	7	0	7	5	5	5	5
BIKE GRN	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	0	0	0	0	0	0	0	0	10	0	10
PED CLR	0	16	0	16	0	16	0	16	0	16	0	16
VEH EXT	5.0	1.0	5.0	1.0	5.0	1.0	5.0	1.0	5.0	5.0	5.0	5.0
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX EXT	0	0	0	0	0	0	0	0	0	0	0	0
MAX1	35	35	35	25	35	35	35	25	35	35	35	35
MAX2	40	40	40	40	40	40	40	40	40	40	40	40
MAX3	0	0	0	0	0	0	0	0	0	0	0	0
DET MAX	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
RED CLR	0.0	1.5	0.0	1.5	0.0	1.5	0.0	1.5	1.0	1.0	1.0	1.0
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INI	0	0	0	0	0	0	0	0	30	30	30	30
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVR PHS	PHASE	CARRYOVR PHS
1	0	7	0
2	0	8	0
3	0	9	0
4	0	10	0
5	0	11	0
6	0	12	0

-2 phase
-2&6 Farmville

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY												
VEHICLE RECALL		X				X						
PED RECALL												
RECALL TO MAX												
SOFT RECALL												
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

2/27/2007 Signal#: 90 - 14th / Farmville 3

2. CONTROLLER SUBMENU

EB NB SB EB

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	7	10	0	7	0	10	0	0	7	0	0	0
BIKE GRN	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	0	0	0	0	0	0	0	5	0	0	0
PED CLR	0	0	0	0	0	0	0	0	15	0	0	0
VEH EXT	1.0	3.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX EXT	0	0	0	0	0	0	0	0	0	0	0	0
MAX1	15	30	0	20	0	30	0	0	0	0	0	0
MAX2	0	0	0	0	0	0	0	0	0	0	0	0
MAX3	0	0	0	0	0	0	0	0	0	0	0	0
DET MAX	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW	4.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	4.0	4.0	4.0
RED CLR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INI	0	0	0	0	0	0	0	0	0	0	0	0
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10												
11												
12												

3. PED TIMING CARRYOVER

PHASE	CARRYOVR PHS	PHASE	CARRYOVR PHS
1	0	7	0
2	0	8	0
3	0	9	0
4	0	10	0
5	0	11	0
6	0	12	0

1 NB phase

1 & 6 run together

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY		X				X						
VEHICLE RECALL		X				X						
PED RECALL												
RECALL TO MAX												
SOFT RECALL												
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

2/27/2007 Signal#: 89 - 10TH / DICKINSON 3

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	0	7	7	7	0	7	0	7	5	5	5	5
BIKE GRN	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	0	0	0	0	0	0	0	0	0	0	0
PED CLR	0	0	0	0	0	0	0	0	0	16	0	16
VEH EXT	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX EXT	0	0	0	0	0	0	0	0	0	0	0	0
MAX1	0	30	30	15	0	30	0	15	0	0	0	0
MAX2	0	0	0	0	0	0	0	0	0	0	0	0
MAX3	0	0	0	0	0	0	0	0	0	0	0	0
DET MAX	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW	3.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
RED CLR	0.0	3.0	2.0	3.0	0.0	3.0	0.0	2.0	1.0	1.0	1.0	1.0
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INI	0	0	0	0	0	0	0	0	30	30	30	30
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVR PHS	PHASE	CARRYOVR PHS
1	0	7	0
2	0	8	0
3	0	9	0
4	0	10	0
5	0	11	0
6	0	12	0

WB Left PM+PT

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY		X				X						
VEHICLE RECALL		X				X						
PED RECALL												
RECALL TO MAX												
SOFT RECALL												
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

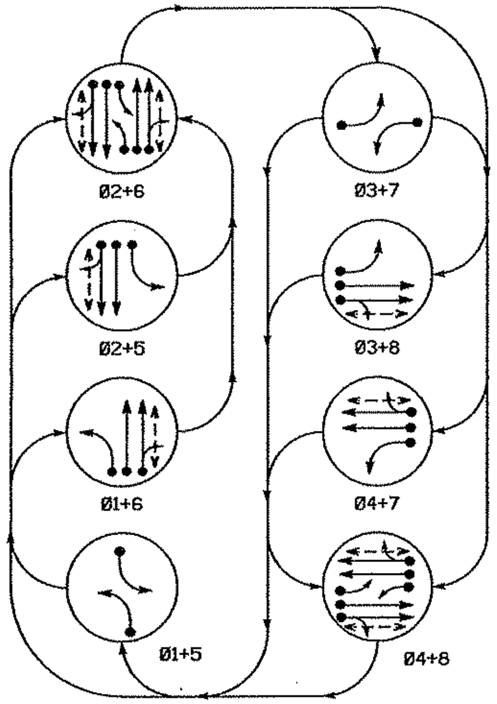
OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER											0.0	
LAG/LEAD GREEN TIMER											0.0	
LAG/LEAD YELLOW TIMER											0.0	
LAG/LEAD RED TIMER											0.0	

PROJECT REFERENCE NO.	SHEET NO.
U-3852B	120

PHASING DIAGRAM



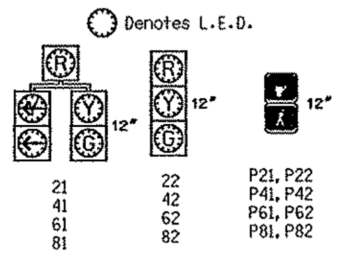
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	FLASH
21	R	R	G	G	R	R	R	R	Y
22	R	R	G	G	R	R	R	R	Y
41	R	R	R	R	R	R	G	G	R
42	R	R	R	R	R	R	G	G	R
61	R	G	R	G	R	R	R	R	Y
62	R	G	R	G	R	R	R	R	Y
81	R	R	R	R	R	G	R	G	R
82	R	R	R	R	R	G	R	G	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	DW	W	W	DRK
P81, P82	DW	DW	DW	DW	DW	W	DW	W	DRK

SIGNAL FACE I.D.

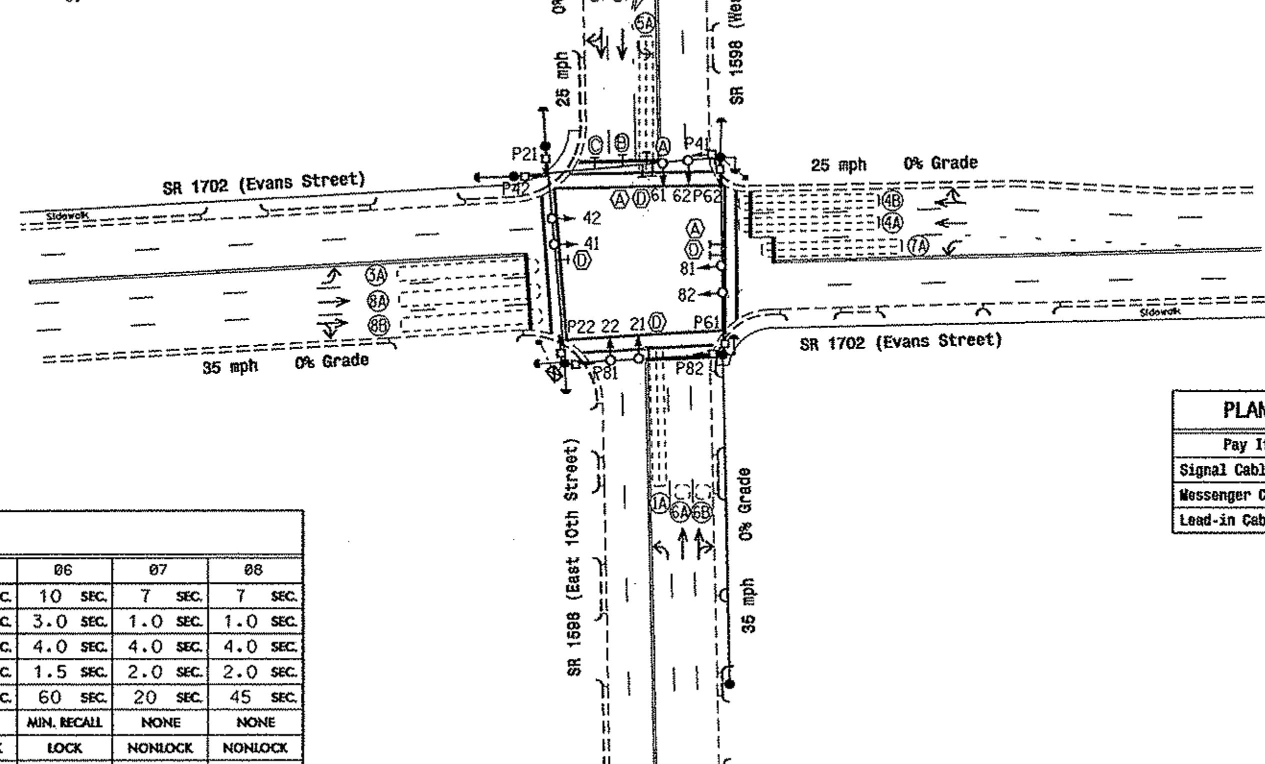


LOOP & DETECTOR UNIT INSTALLATION CHART

NEMA CONTROLLER WITH TS-2 CABINET

INDUCTIVE LOOPS						DETECTOR UNITS						
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	NEW	EXISTING	TIMING FEATURE	TIMING TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
1A	6X60	2-4-2	+5		X	6	X		-	- SEC.	ALL	NO
						1	X		DELAY	15 SEC.	ALL	YES
2A,2B	6X6	EXISTING	70		X	2	X		-	- SEC.	ALL	NO
3A	6X60	EXISTING	+5		X	8	X		DELAY	2 SEC.	ALL	YES
						3	X		DELAY	15 SEC.	ALL	YES
✱4A	6X60	2-4-2	+5		X	4	X		-	- SEC.	ALL	NO
✱4B	6X60	2-4-2	+5		X	4	X		DELAY	10 SEC.	ALL	YES
5A	6X60	2-4-2	+5		X	2	X		-	- SEC.	ALL	NO
						5	X		DELAY	15 SEC.	ALL	YES
6A,6B	6X6	EXISTING	55		X	6	X		-	- SEC.	ALL	NO
7A	6X60	2-4-2	+5		X	4	X		DELAY	2 SEC.	ALL	YES
						7	X		DELAY	15 SEC.	ALL	YES
✱8A	6X60	EXISTING	+5		X	8	X		-	- SEC.	ALL	NO
✱8B	6X60	EXISTING	+5		X	8	X		DELAY	10 SEC.	ALL	YES

✱See Note 13.



TIMING CHART

NEMA CONTROLLER

PHASE	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
MINIMUM GREEN*	7 SEC.	10 SEC.	7 SEC.	7 SEC.	7 SEC.	10 SEC.	7 SEC.	7 SEC.
PASSAGE/GAP*	1.0 SEC.	3.0 SEC.	1.0 SEC.	1.0 SEC.	1.0 SEC.	3.0 SEC.	1.0 SEC.	1.0 SEC.
YELLOW CHANGE INT.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.
RED CLEARANCE	1.5 SEC.	1.5 SEC.	2.0 SEC.	2.0 SEC.	1.5 SEC.	1.5 SEC.	2.0 SEC.	2.0 SEC.
MAX. 1*	25 SEC.	60 SEC.	20 SEC.	45 SEC.	25 SEC.	60 SEC.	20 SEC.	45 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	NONE	NONE	MIN. RECALL	NONE	NONE
VEHI. CALL MEMORY	NONLOCK	LOCK	NONLOCK	NONLOCK	NONLOCK	LOCK	NONLOCK	NONLOCK
WALK*	– SEC.	5 SEC.	– SEC.	5 SEC.	– SEC.	5 SEC.	– SEC.	5 SEC.
FLASHING DON'T WALK	– SEC.	10 SEC.	– SEC.	10 SEC.	– SEC.	10 SEC.	– SEC.	10 SEC.
VOLUME DENSITY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
ACTUATION B4 ADD	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.
SEC. PER ACTUATION*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
MAX. INITIAL*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
TIME B4 REDUCTION*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
TIME TO REDUCE*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
MINIMUM GAP	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.

* These values may be field adjusted. Do not adjust Min Green and Passge /Gap times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

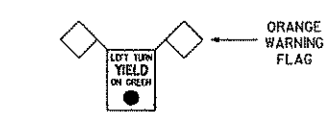
8 Phase
Fully Actuated
(Greenville City System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Pavement markings are existing.
3. Omit phase 1 during phase 2 on.
4. Omit phase 5 during phase 6 on.
5. Omit phase 3 during phase 4 on.
6. Omit phase 7 during phase 8 on.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Thirty days after implementation of the revised signal operation, signs D and/or orange flags may be removed at the discretion of the Regional Traffic Engineer.
10. Remove existing "Left Turn Signal" signs - (R10-10L).
11. Set all detector units to presence mode.
12. Program phase 4 and phase 8 for dual entry.
13. Run new lead-in cable to each of the following existing loops: 4A, 4B, 8A, and 8B. Wire these loops on separate detectors.
14. In the event of loop replacement, refer to current Signals & Geometrics Design Manual.
15. Intersection Zone Number: 3
System Address Number: 23

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
Ⓐ	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
Ⓑ	Through Arrow "ONLY" Sign (R3-5A)	Ⓑ
Ⓒ	Combined Through and Right Arrow Sign (R3-6R)	Ⓒ
Ⓓ	"LEFT TURN YIELD ON GREEN" Sign With Flags (R10-12)	Ⓓ



PLAN QUANTITIES

Pay Item	Feet
Signal Cable	1560
Messenger Cable	–
Lead-in Cable	1230

Signal Upgrade

Prepared in the Offices of: Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

SCALE 0 40 1"=40'

SR 1598 (10th Street) at SR 1702 (Evans Street)

Division 02 Pitt County Greenville

PLAN DATE: March 2003	REVIEWED BY: S T Franklin
PREPARED BY: L A Elliott	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23489 ... ALEXANDER
SIGNATURE 6/6/03 DATE
SIG. INVENTORY NO. 02-0016

Lanes, Volumes, Timings
23: 10th Street & Evans Street

2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	9	10	11	10	11	11	10	11	11
Storage Length (ft)	0		80	0		0	0		0	0		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.991			0.979			0.966			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3274	0	1593	3234	0	1652	3305	0	1652	3397	0
Flt Permitted	0.162			0.403			0.576			0.197		
Satd. Flow (perm)	305	3274	0	676	3234	0	1001	3305	0	342	3397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			19			39			6	
Headway Factor	1.14	1.09	1.04	1.14	1.09	1.04	1.09	1.04	1.04	1.09	1.04	1.04
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		318			630			362			416	
Travel Time (s)		6.2			12.3			7.1			8.1	
Volume (vph)	14	435	29	111	503	80	28	441	128	36	187	10
Peak Hour Factor	0.71	0.71	0.71	0.88	0.88	0.88	0.78	0.78	0.78	0.81	0.81	0.81
Adj. Flow (vph)	20	613	41	126	572	91	36	565	164	44	231	12
Lane Group Flow (vph)	20	654	0	126	663	0	36	729	0	44	243	0
Turn Type	prm+pt			prm+pt			prm+pt			prm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phases	5	2		1	6		3	8		7	4	
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	21.5		13.0	21.5		13.0	22.0		13.0	22.0	
Total Split (s)	14.0	36.0	0.0	15.0	37.0	0.0	14.0	35.0	0.0	14.0	35.0	0.0
Total Split (%)	14.0%	36.0%	0.0%	15.0%	37.0%	0.0%	14.0%	35.0%	0.0%	14.0%	35.0%	0.0%
Maximum Green (s)	8.5	30.5		9.5	31.5		8.0	29.0		8.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	3.0		1.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		10.0			10.0			10.0			10.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.5	43.5		53.5	53.5		31.0	25.6		31.3	25.7	
Actuated g/C Ratio	0.44	0.44		0.54	0.54		0.31	0.26		0.31	0.26	
v/c Ratio	0.08	0.46		0.27	0.38		0.10	0.83		0.19	0.28	
Control Delay	22.1	23.4		8.5	6.1		18.9	36.6		20.3	28.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.1	23.4		8.5	6.1		18.9	36.6		20.3	28.7	

Lanes, Volumes, Timings
23: 10th Street & Evans Street

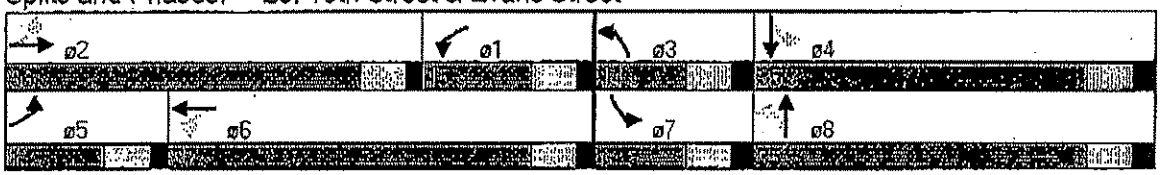
2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	C		A	A		B	D		C	C	
Approach Delay		23.4			6.5			35.8			27.4	
Approach LOS		C			A			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 84 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 22.3 Intersection LOS: C
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 23: 10th Street & Evans Street



Lanes, Volumes, Timings
23: 10th Street & Evans Street

2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	9	10	11	10	11	11	10	11	11
Storage Length (ft)	0		80	0		0	0		0	0		0
Storage Lanes	1		1	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.993			0.982			0.947			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1593	3280	0	1593	3244	0	1652	3240	0	1652	3404	0
Flt Permitted	0.271			0.349			0.238			0.321		
Satd. Flow (perm)	454	3280	0	585	3244	0	414	3240	0	558	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			18			99			3	
Headway Factor	1.14	1.09	1.04	1.14	1.09	1.04	1.09	1.04	1.04	1.09	1.04	1.04
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		318			632			381			352	
Travel Time (s)		6.2			12.3			7.1			6.9	
Volume (vph)	8	608	32	144	367	52	25	311	170	80	472	15
Peak Hour Factor	0.84	0.84	0.84	0.86	0.86	0.86	0.98	0.98	0.98	0.82	0.82	0.82
Adj. Flow (vph)	10	724	38	167	427	60	26	317	173	98	576	18
Lane Group Flow (vph)	10	762	0	167	487	0	26	490	0	98	594	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phases	5	2		1	6		3	8		7	4	
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	21.5		13.0	21.5		13.0	22.0		13.0	22.0	
Total Split (s)	14.0	38.0	0.0	18.0	42.0	0.0	14.0	30.0	0.0	14.0	30.0	0.0
Total Split (%)	14.0%	38.0%	0.0%	18.0%	42.0%	0.0%	14.0%	30.0%	0.0%	14.0%	30.0%	0.0%
Maximum Green (s)	8.5	32.5		12.5	36.5		8.0	24.0		8.0	24.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	3.0		1.0	3.0		1.0	1.0		1.0	1.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		10.0			10.0			10.0			10.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.0	29.0		42.4	42.4		43.5	36.3		46.0	41.9	
Actuated g/C Ratio	0.29	0.29		0.42	0.42		0.44	0.36		0.46	0.42	
v/c Ratio	0.04	0.80		0.46	0.35		0.09	0.40		0.27	0.42	
Control Delay	23.2	35.5		15.2	10.9		17.7	22.1		18.9	24.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.2	35.5		15.2	10.9		17.7	22.1		18.9	24.3	

Lanes, Volumes, Timings
23: 10th Street & Evans Street

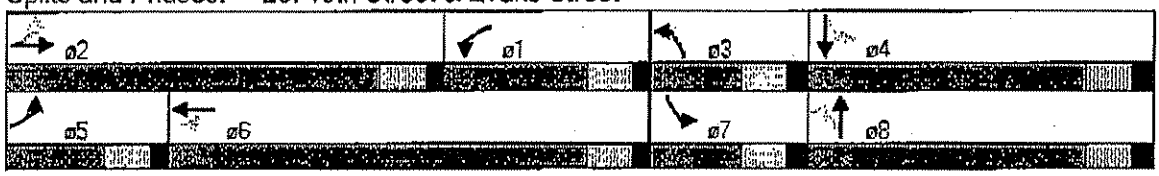
2/27/2007

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D		B	B		B	C		B	C	
Approach Delay		35.3			12.0			21.9			23.6	
Approach LOS		D			B			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 59.0% ICU Level of Service B
Analysis Period (min) 15

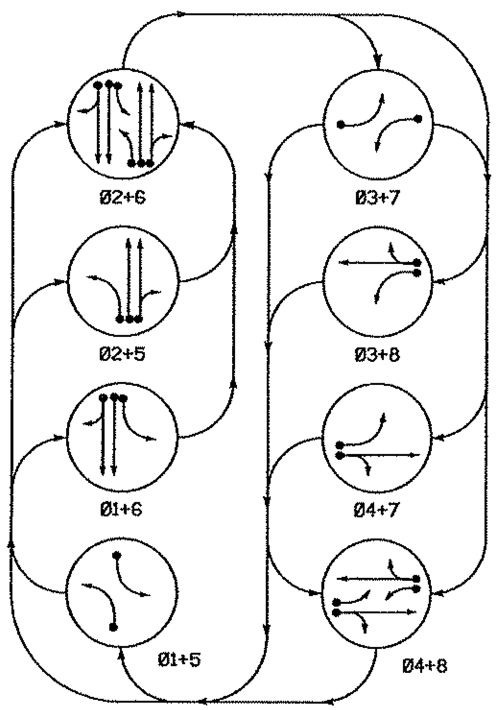
Splits and Phases: 23: 10th Street & Evans Street



PROJECT REFERENCE NO.	SHEET NO.
U-3852B	178

8 Phase
Fully Actuated
(Greenville City System)

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

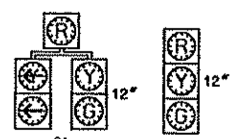
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	FLASH
21	←/R	R	←/G	G	R	R	R	R	Y
22	R	R	G	G	R	R	R	R	Y
41	R	R	R	R	←/R	R	←/G	G	R
42	R	R	R	R	R	R	G	G	R
61	←/R	←/G	R	G	R	R	R	R	Y
62	R	G	R	G	R	R	R	R	Y
81	R	R	R	R	←/R	←/G	R	G	R
82	R	R	R	R	R	G	R	G	R

SIGNAL FACE I.D.

Denotes L.E.D.



21
41
61
81

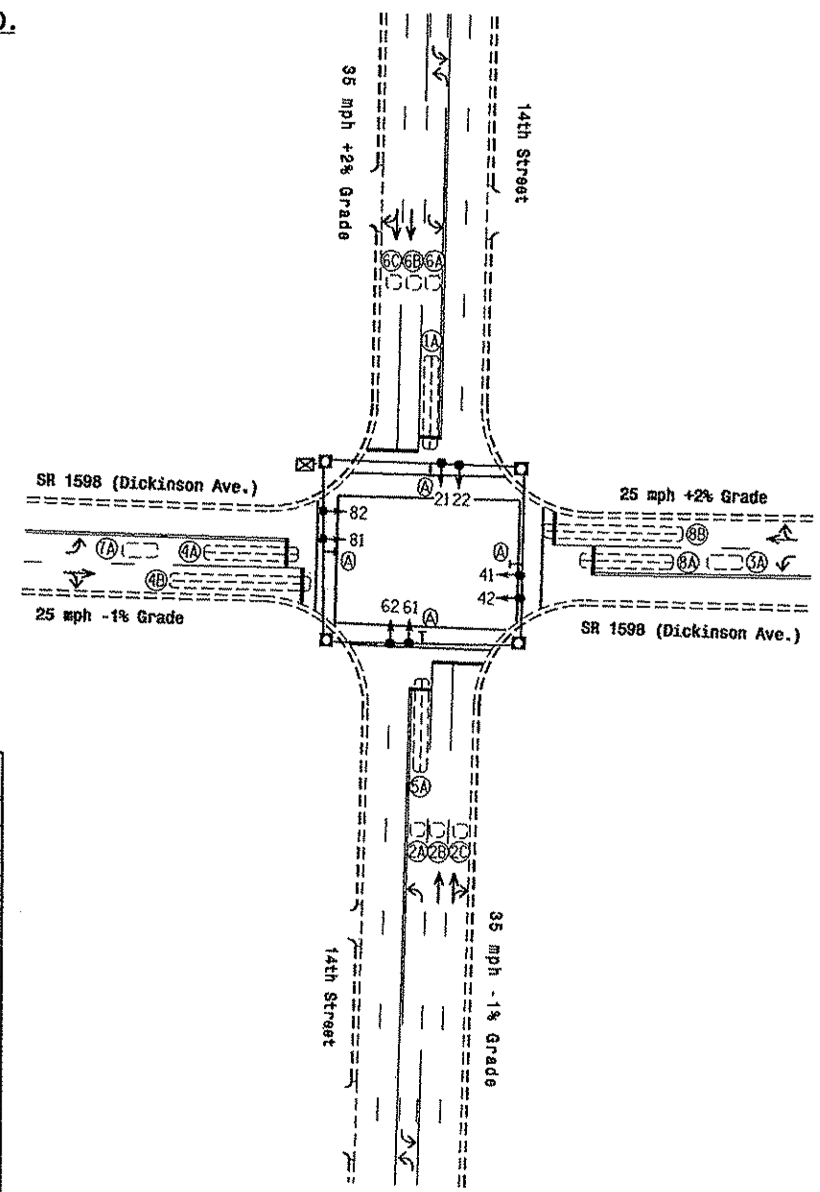
22
42
62
82

LOOP & DETECTOR UNIT INSTALLATION CHART
NEMA CONTROLLER WITH TS-2 CABINET

INDUCTIVE LOOPS						DETECTOR UNITS						
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	NEW	EXISTING	TIMING FEATURE	TIMING TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
1A	6X40	2-4-2	+5		X	1	X		DELAY	15 SEC.	ALL	YES
2A,2B,2C	6X6	EXISTING	70		X	2	X		-	- SEC.	ALL	NO
3A	6X15	EXISTING	50		X	3	X		DELAY	15 SEC.	ALL	YES
4A	6X40	2-4-2	+5		X	4	X		-	- SEC.	ALL	NO
4B	6X60	2-4-2	+5		X	4	X		-	- SEC.	ALL	NO
5A	6X40	2-4-2	+5		X	5	X		DELAY	15 SEC.	ALL	YES
6A,6B,6C	6X6	EXISTING	70		X	6	X		-	- SEC.	ALL	NO
7A	6X15	EXISTING	50		X	7	X		DELAY	15 SEC.	ALL	YES
8A	6X40	2-4-2	+5		X	8	X		-	- SEC.	ALL	NO
8B	6X60	2-4-2	+5		X	8	X		-	- SEC.	ALL	NO

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Pavement markings are existing.
3. Omit phase 1 during phase 2 on.
4. Omit phase 5 during phase 6 on.
5. Omit phase 3 during phase 4 on.
6. Omit phase 7 during phase 8 on.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
8. Existing "Left Turn Yield on Green" ball signs-(R10-12) may be removed at the discretion of the Regional Traffic Engineer.
9. Set all detector units to presence mode.
10. Program phase 4 and phase 8 for dual entry.
11. Intersection Zone Number: 4
System Address Number: 88



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
Ⓐ	"LEFT TURN YIELD ON GREEN" Sign (R10-12)	Ⓐ

TIMING CHART
NEMA CONTROLLER

PHASE	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
MINIMUM GREEN*	7 SEC.	10 SEC.	10 SEC.	7 SEC.	7 SEC.	10 SEC.	10 SEC.	7 SEC.
PASSAGE/GAP*	1.0 SEC.	3.0 SEC.	3.0 SEC.	1.0 SEC.	1.0 SEC.	3.0 SEC.	3.0 SEC.	1.0 SEC.
YELLOW CHANGE INT.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.	4.0 SEC.
RED CLEARANCE	2.0 SEC.	2.0 SEC.	2.5 SEC.	2.0 SEC.	2.0 SEC.	2.0 SEC.	2.0 SEC.	2.0 SEC.
MAX. 1*	15 SEC.	45 SEC.	15 SEC.	35 SEC.	15 SEC.	45 SEC.	15 SEC.	35 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	NONE	NONE	MIN. RECALL	NONE	NONE
VEH. CALL MEMORY	NONLOCK	LOCK	NONLOCK	NONLOCK	NONLOCK	LOCK	NONLOCK	NONLOCK
WALK*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
FLASHING DON'T WALK	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
VOLUME DENSITY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
ACTUATION B4 ADD	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.	– VEH.
SEC. PER ACTUATION*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
MAX. INITIAL*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
TIME B4 REDUCTION*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
TIME TO REDUCE*	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.
MINIMUM GAP	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.	– SEC.

* These values may be field adjusted. Do not adjust Min Green and Passage /Gap times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

PLAN QUANTITIES

Pay Item	Feet
* Signal Cable	540
Messenger Cable	-
** Lead-in Cable	540

* Replace signal cable for all signal heads.
** Replace all lead-in cable within metal poles and on messenger cable.

Signal Upgrade

Prepared in the Offices of: Traffic Engineering and Safety Systems Branch, Signals and Geometrics Section, State of North Carolina Department of Transportation
122 N. McDowell St., Raleigh, NC 27603

**14th Street
at
SR 1598 (Dickinson Avenue)**

Division 02 Pitt County Greenville

PLAN DATE: January 2003	REVIEWED BY:
PREPARED BY: Amy Hambright	REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 23489 ENGINEER ... ALEXANDER

SIGNATURE DATE 4/16/03

SIG. INVENTORY NO. 02-0006

04-AUG-2003 13:31
lelliott

2/27/2007 Signal#: 88 - 14th / Dickinson

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	7	10	10	7	7	10	10	7	5	5	5	5
BIKE GRN	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	0	0	0	0	0	0	0	0	10	0	10
PED CLR	0	16	0	16	0	16	0	16	0	16	0	16
VEH EXT	1.0	3.0	3.0	1.0	1.0	3.0	3.0	1.0	5.0	5.0	5.0	5.0
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX EXT	0	0	0	0	0	0	0	0	0	0	0	0
MAX1	15	45	15	35	15	45	15	35	35	35	35	35
MAX2	40	40	40	45	40	40	40	45	40	40	40	40
MAX3	0	0	0	0	0	0	0	0	0	0	0	0
DET MAX	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
RED CLR	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INI	30	0	0	0	0	0	0	0	30	30	30	30
TIME B4	0	0	0	0	0	0	0	0	0	0	0	0
CARS WT	0	0	0	0	0	0	0	0	0	0	0	0
TTREDUC	0	0	0	0	0	0	0	0	0	0	0	0
MIN GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVR PHS	PHASE	CARRYOVR PHS
1	0	7	0
2	0	8	0
3	0	9	0
4	0	10	0
5	0	11	0
6	0	12	0

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY		X				X						
VEHICLE RECALL												
PED RECALL												
RECALL TO MAX												
SOFT RECALL												
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

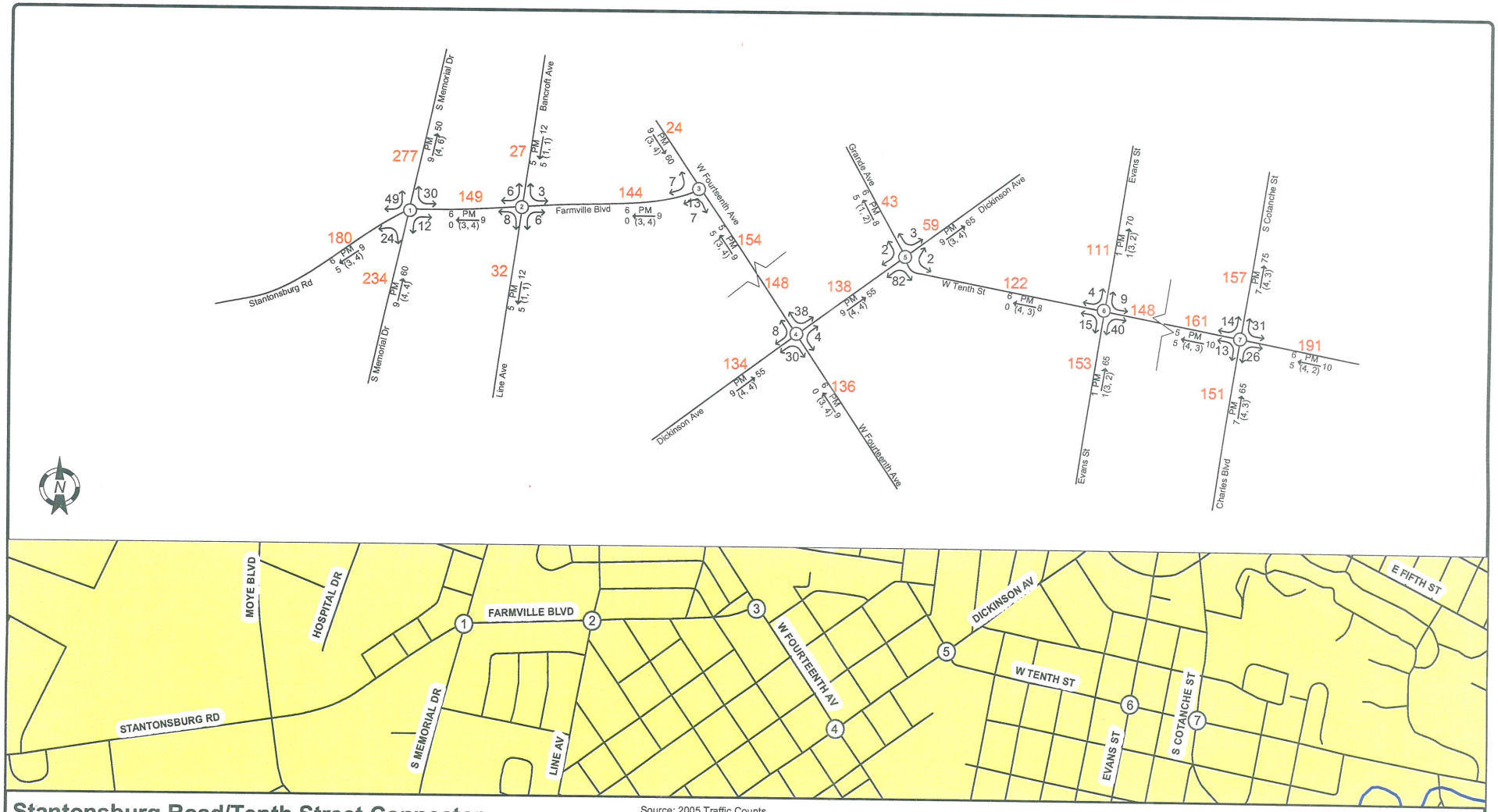
OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

PM+PT
Dickinson 488 (4-EB)
14th 286 (2-SB)

Appendix B

a) Traffic Forecasts and Analysis Spreadsheets



Stantonsburg Road/Tenth Street Connector
(Project U-3315)
Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

Source: 2005 Traffic Counts

No. of Vehicles Per Day (VPD) in 100's
Turning Volume (VPD) in 100's

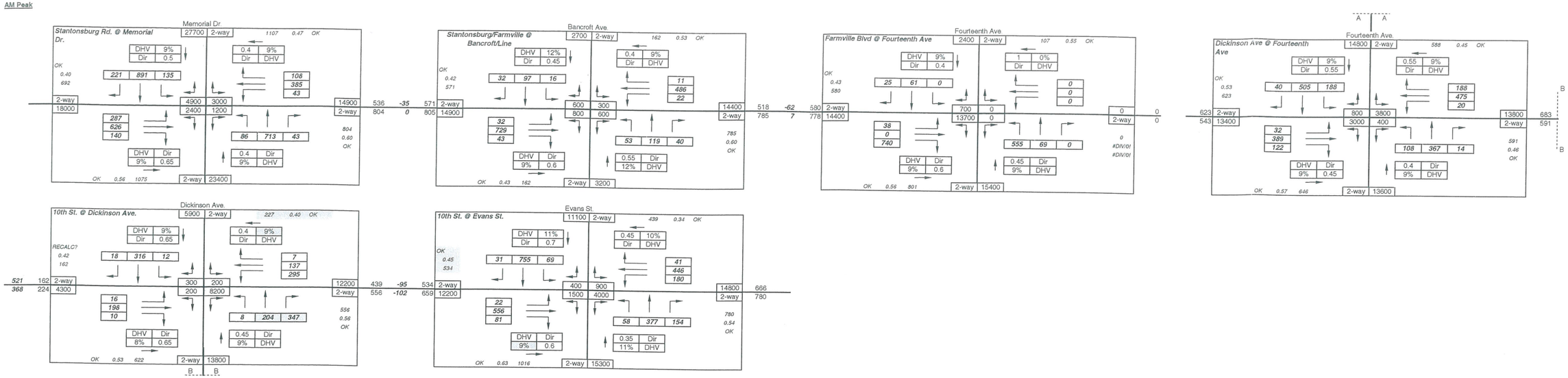
DHV Design Hourly Volume (%)
PM PM Peak Period
D Peak Hour Directional Split (%)
(d, t) Duals, TT-STs (%)
→ Indicates Direction of D

Figure A5
2005 No Build Scenario

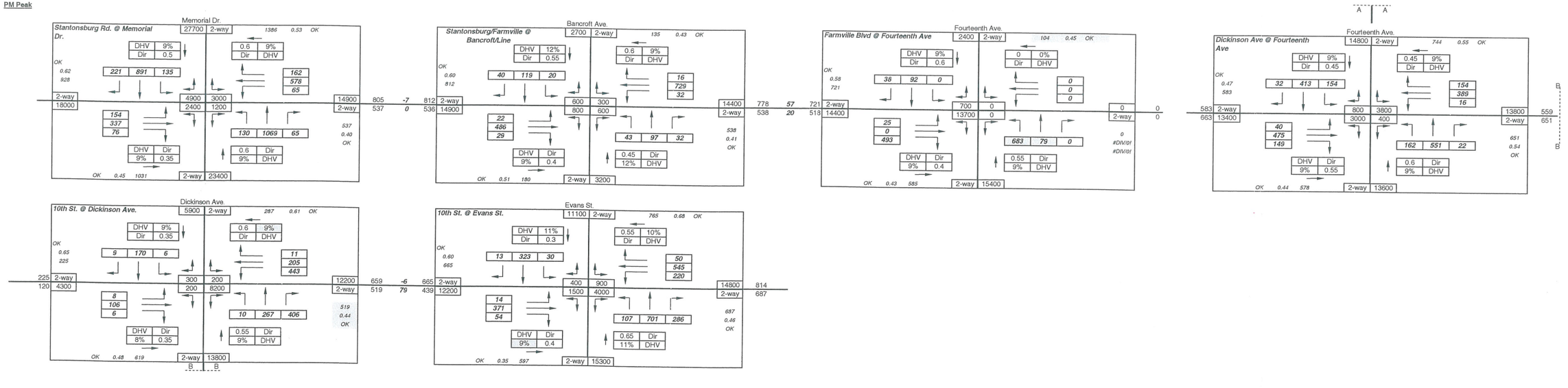
Tenth Street Connector

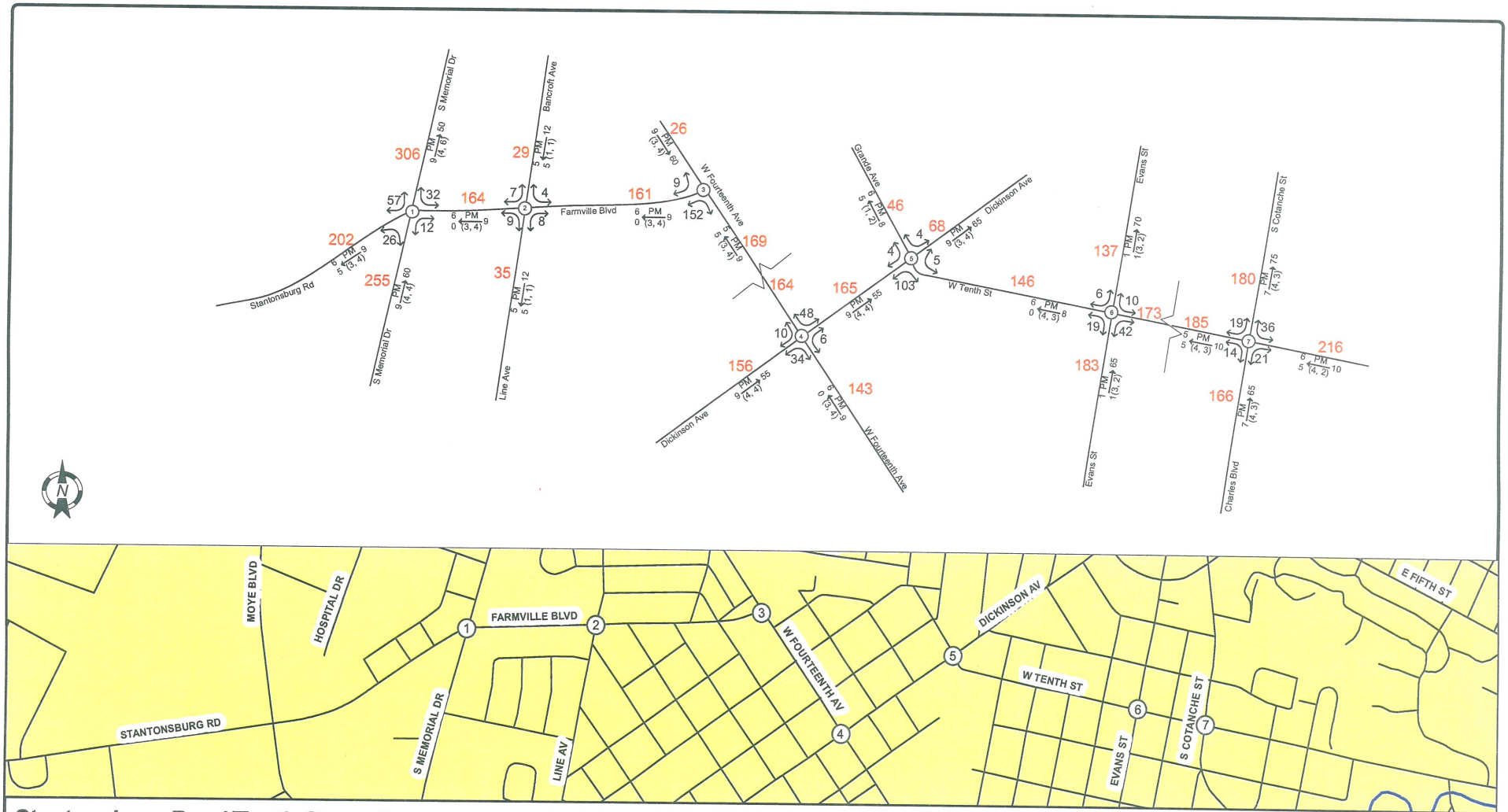
No Build 2005

AM Peak



PM Peak





Stantonsburg Road/Tenth Street Connector
(Project U-3315)
Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

No. of Vehicles Per Day (VPD) in 100's
Turning Volume (VPD) in 100's

DHV Design Hourly Volume (%)
PM PM Peak Period
D Peak Hour Directional Split (%)
(d, t) Duals, TT-STs (%)

→ Indicates Direction of D

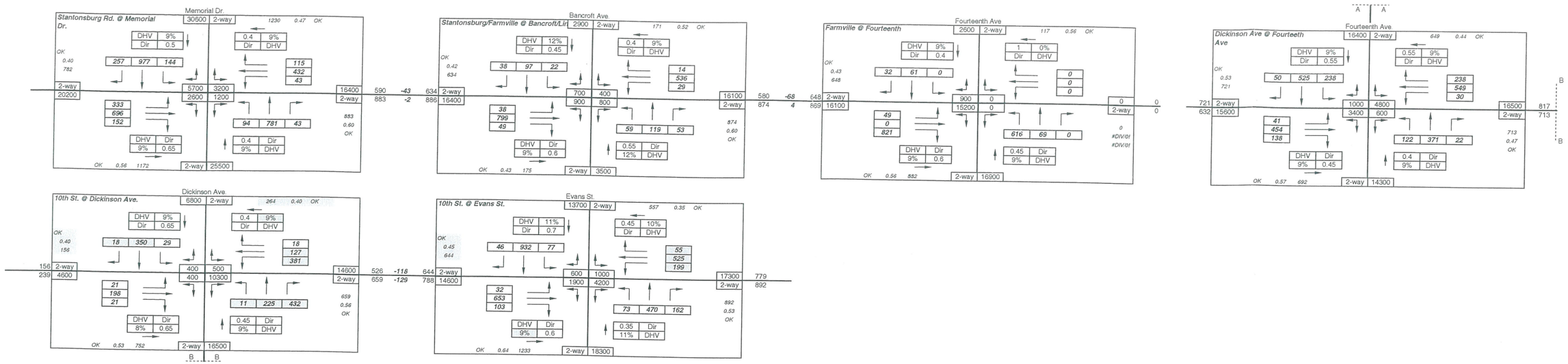
DHV PM (d, t) → D

Figure A6
2010 No Build Scenario

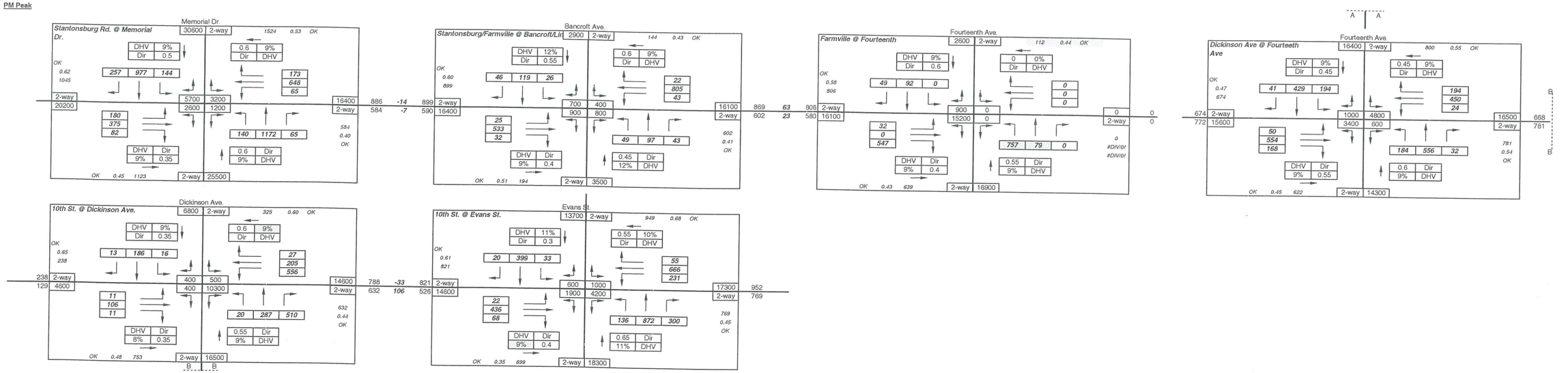
Tenth Street Connector

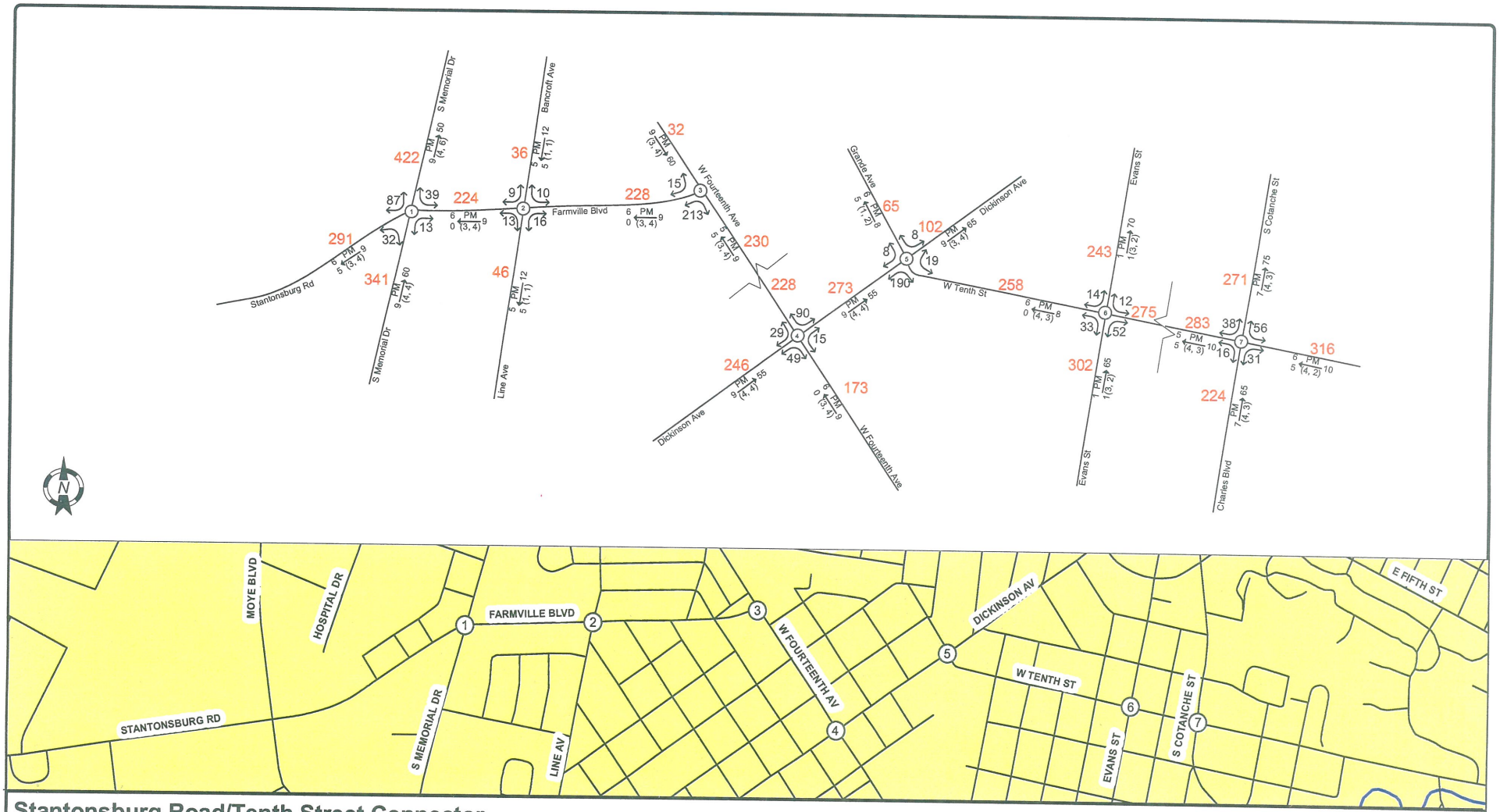
No Build 2010

AM Peak



PM Peak





Stantonsburg Road/Tenth Street Connector (Project U-3315)

Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

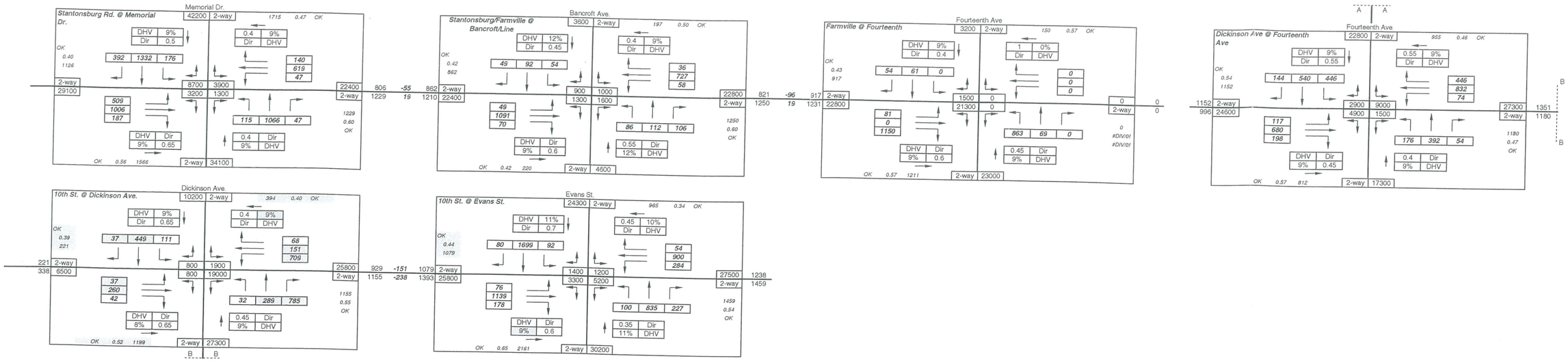
###	No. of Vehicles Per Day (VPD) in 100's
###	Turning Volume (VPD) in 100's
DHV	Design Hourly Volume (%)
PM	PM Peak Period
D	Peak Hour Directional Split (%)
(d, t)	Duals, TT-STs (%)
→	Indicates Direction of D

DHV PM (d, t) D

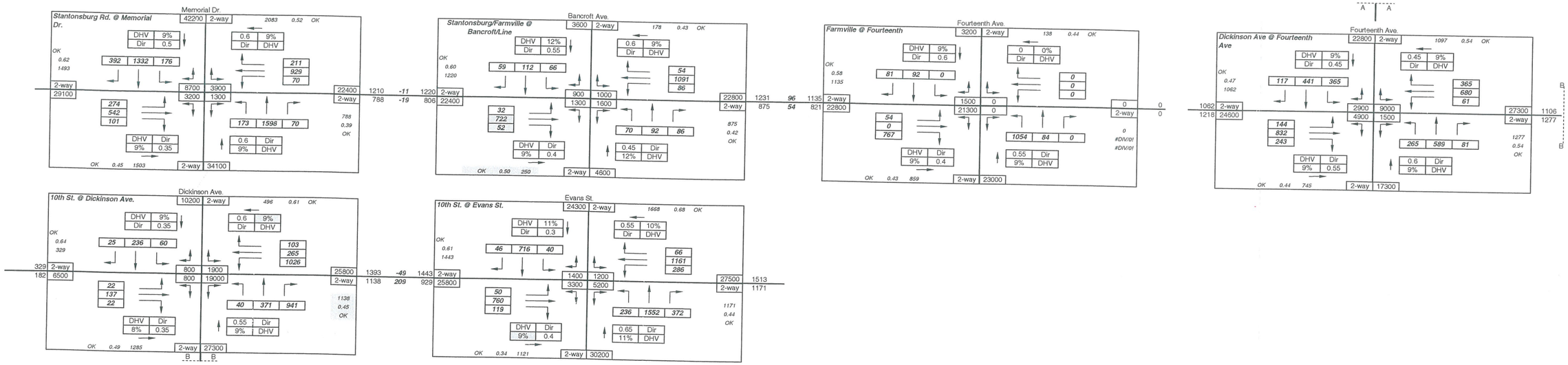
Figure A7
2030 No Build Scenario

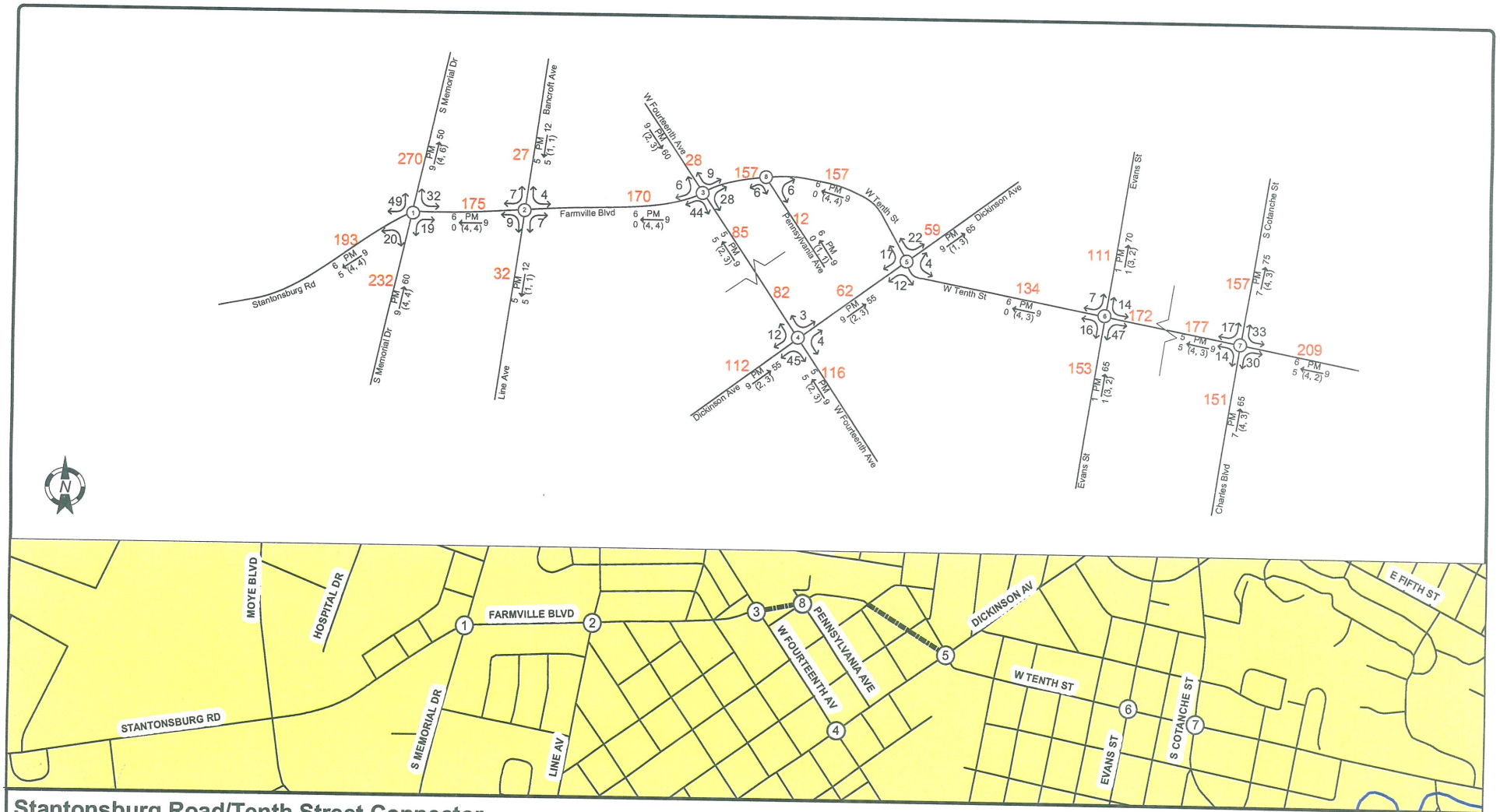
No Build 2030

AM Peak



PM Peak





Stantonsburg Road/Tenth Street Connector
(Project U-3315)
Greenville, Pitt County, NC

Not to Scale

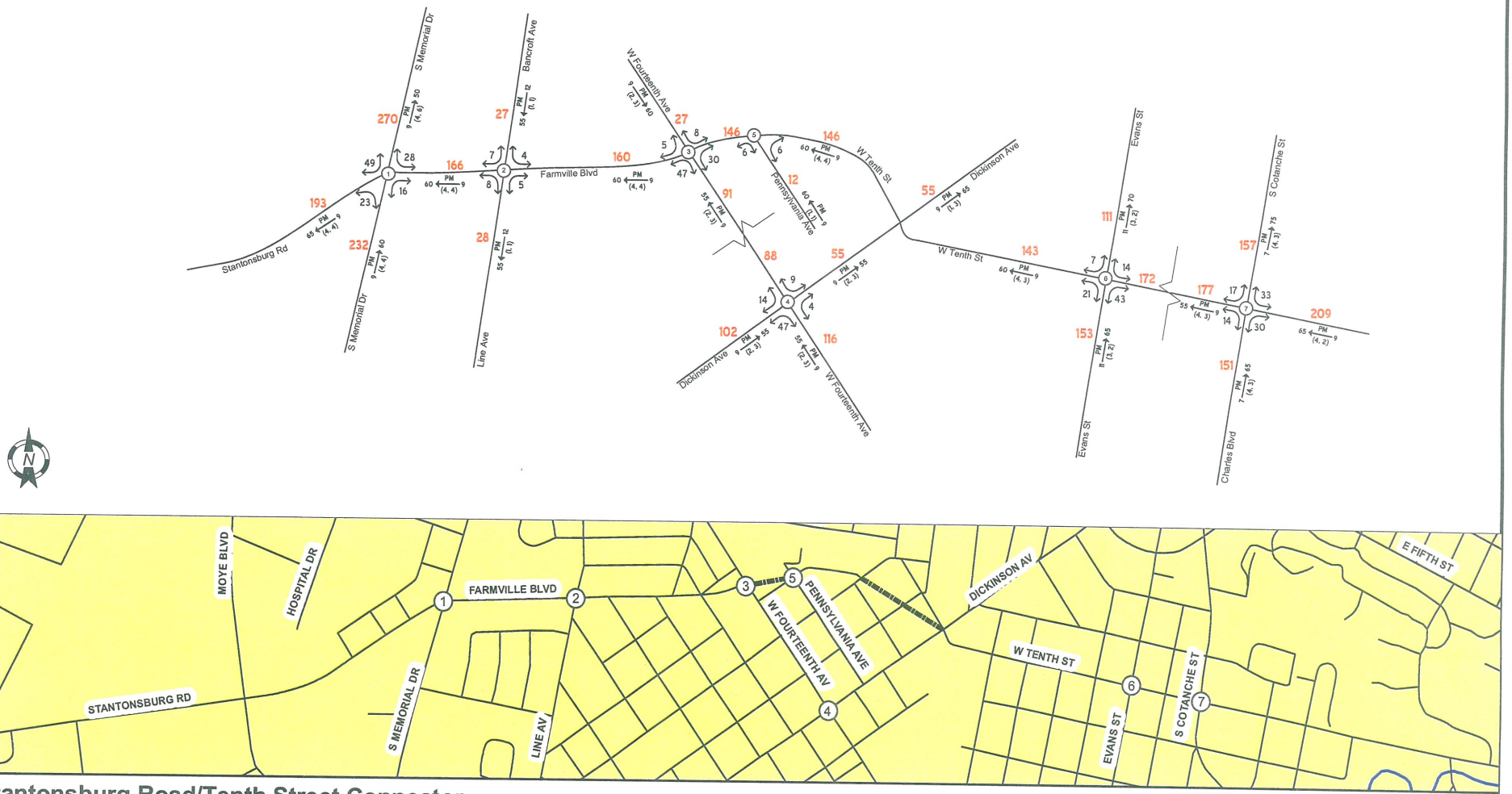
Kimley-Horn and Associates, Inc.

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

DHV PM (d, t) D

Figure A8
2005 Build Scenario

Greenville
Tenth Street Connector



Stantonsburg Road/Tenth Street Connector (Project U-3315)

Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

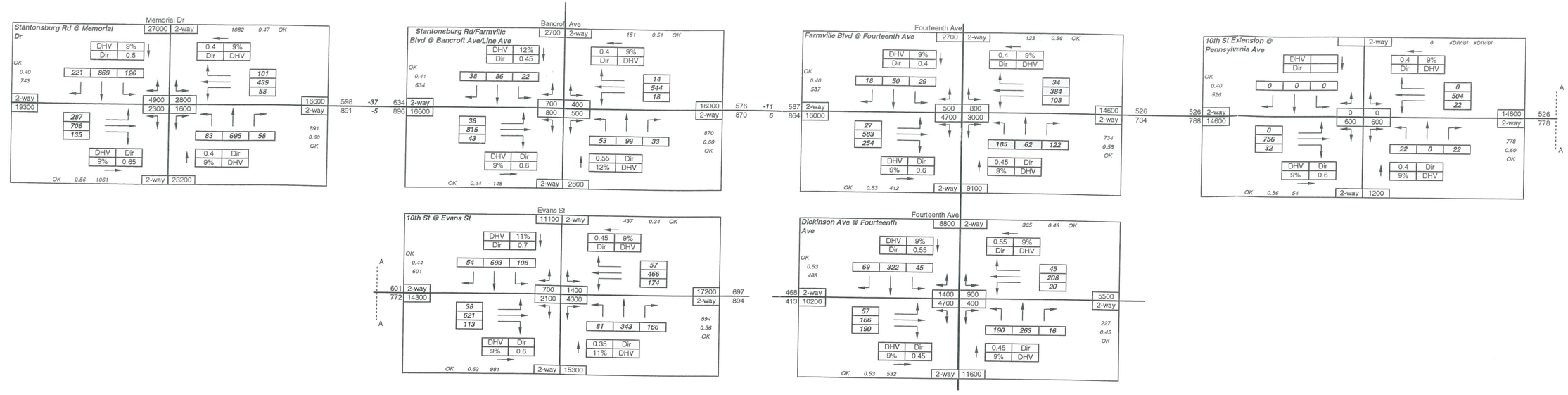
###	No. of Vehicles Per Day (VPD) in 100's
###	Turning Volume (VPD) in 100's
DHV	Design Hourly Volume (%)
PM	PM Peak Period
D	Peak Hour Directional Split (%)
(d, t)	Duals, TT-STs (%)
→	Indicates Direction of D

DHV PM (d, t) D

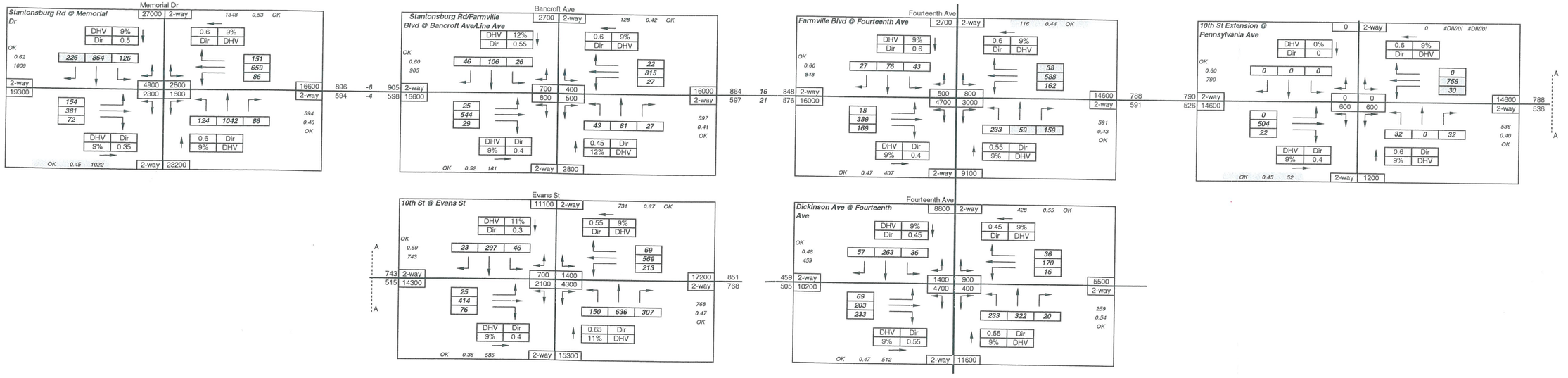
Figure A8 (Revised)
2005 Build Scenario

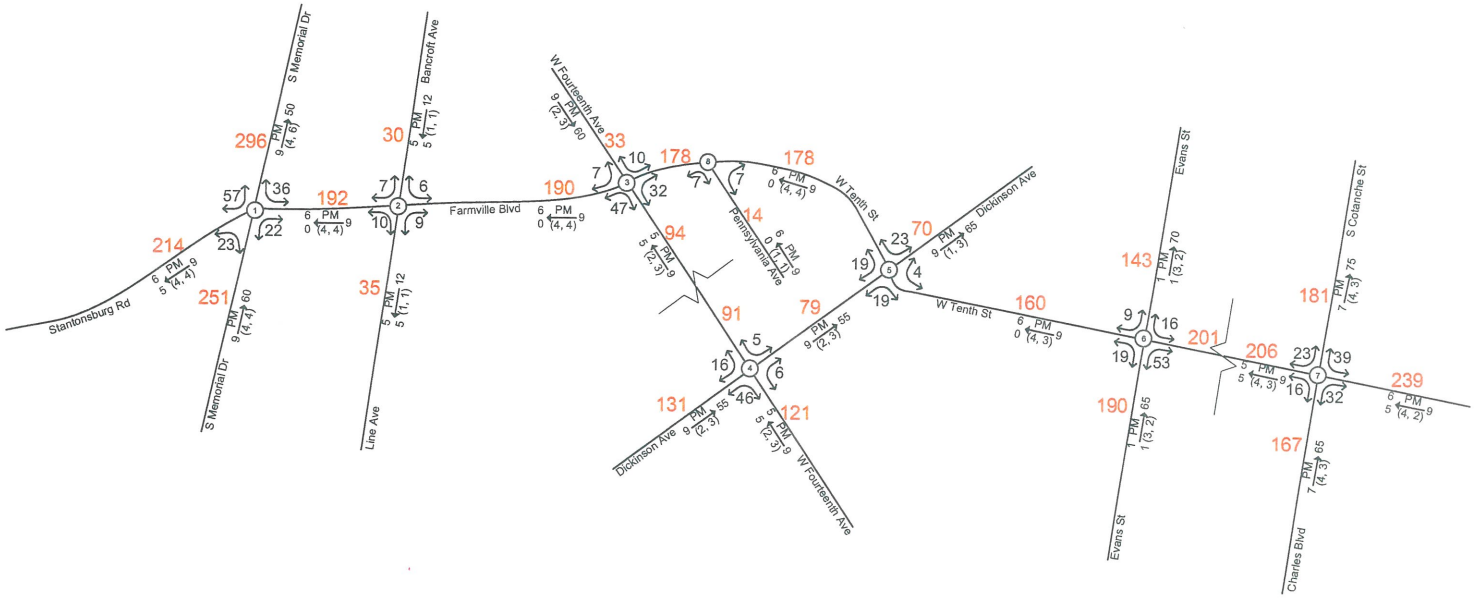
Build 2005

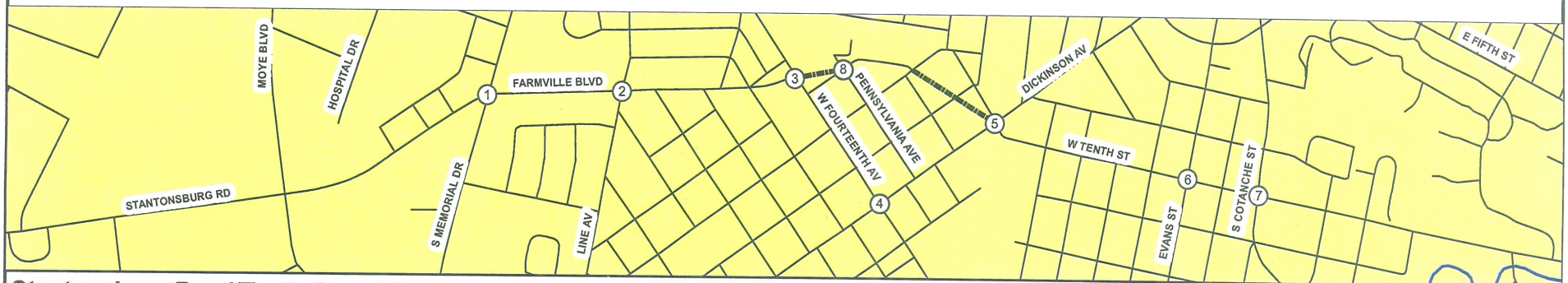
AM Peak



PM Peak







Stantonsburg Road/Tenth Street Connector (Project U-3315)

Greenville, Pitt County, NC

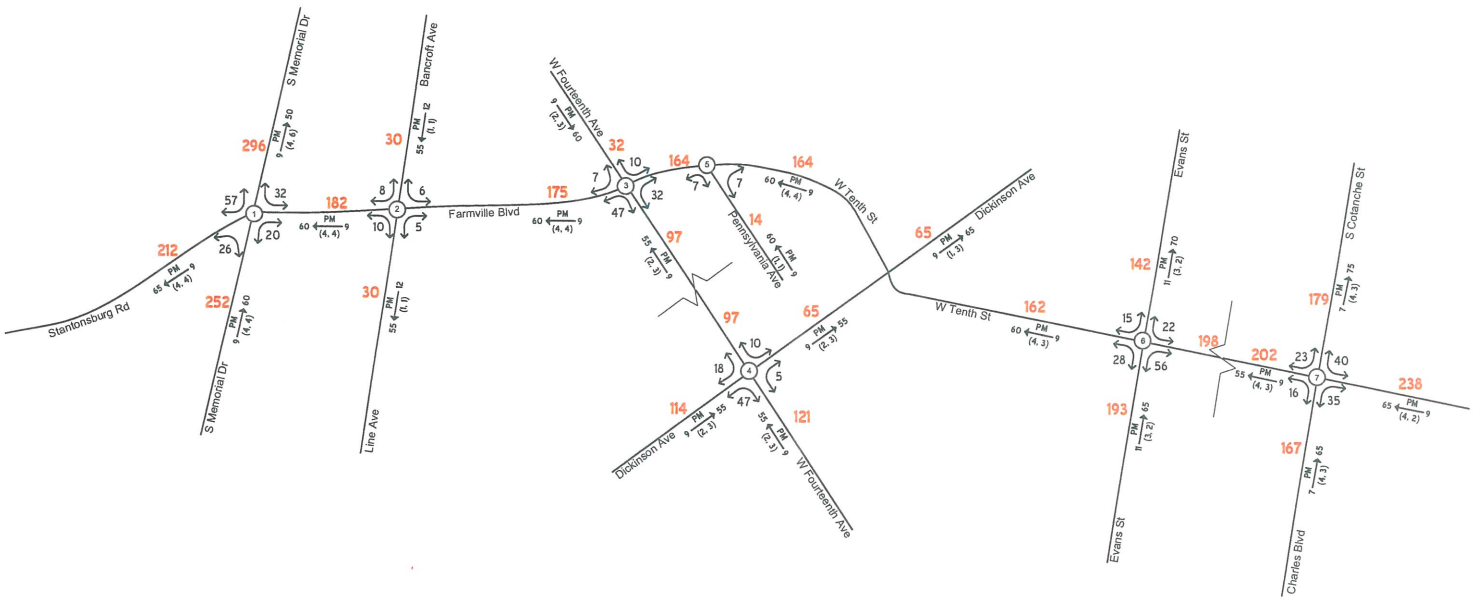
Not to Scale

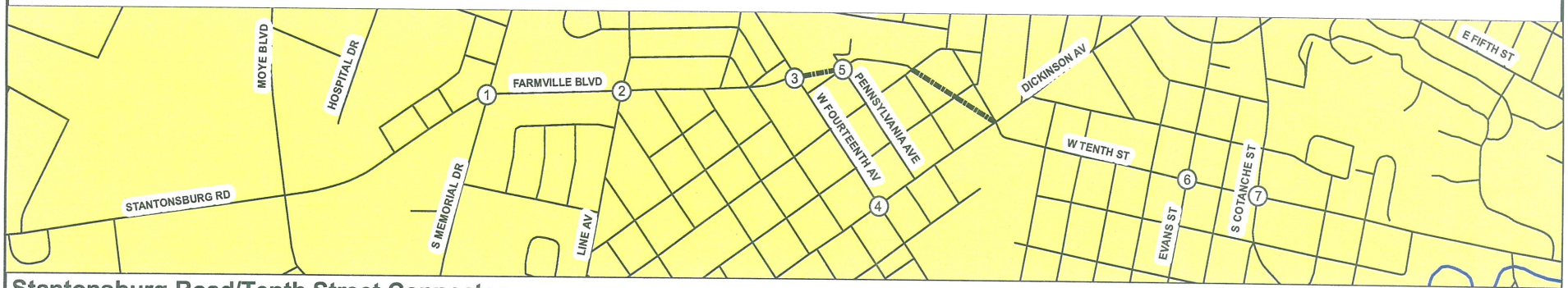
Kimley-Horn and Associates, Inc.

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

DHV PM (d, t) → D

Figure A9
2010 Build Scenario





Stantonsburg Road/Tenth Street Connector (Project U-3315)

Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

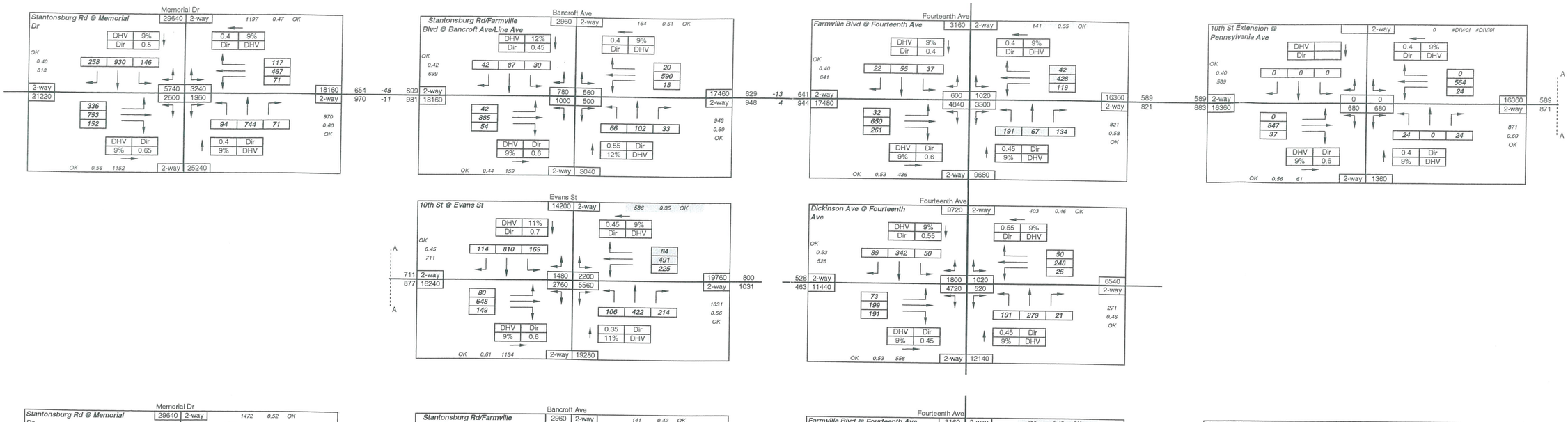
###	No. of Vehicles Per Day (VPD) in 100's
###	Turning Volume (VPD) in 100's
DHV	Design Hourly Volume (%)
PM	PM Peak Period
D	Peak Hour Directional Split (%)
(d, t)	Duals, TT-STs (%)
→	Indicates Direction of D

DHV PM (d, t) D

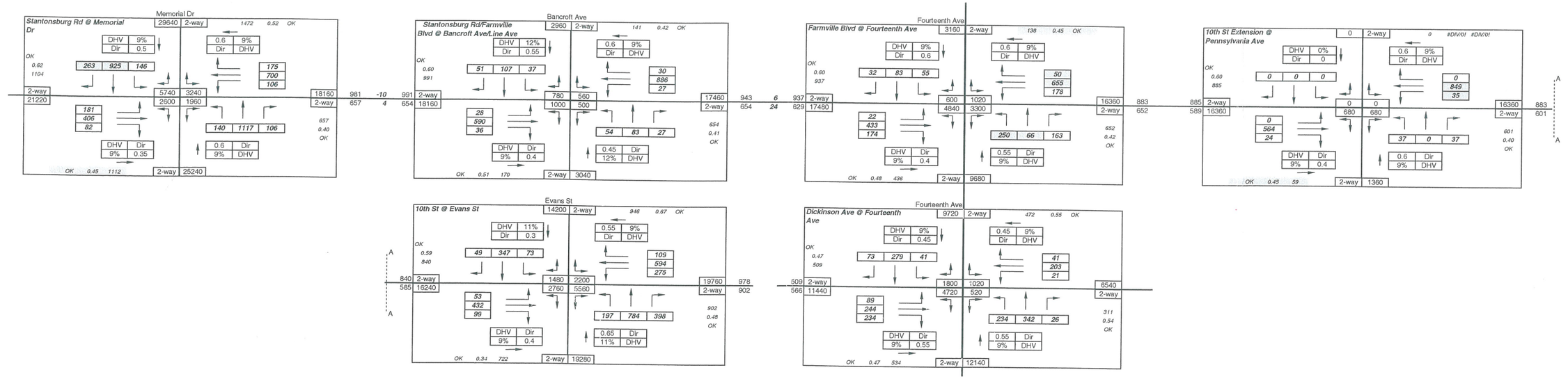
Figure A9 (Revised)
2010 Build Scenario

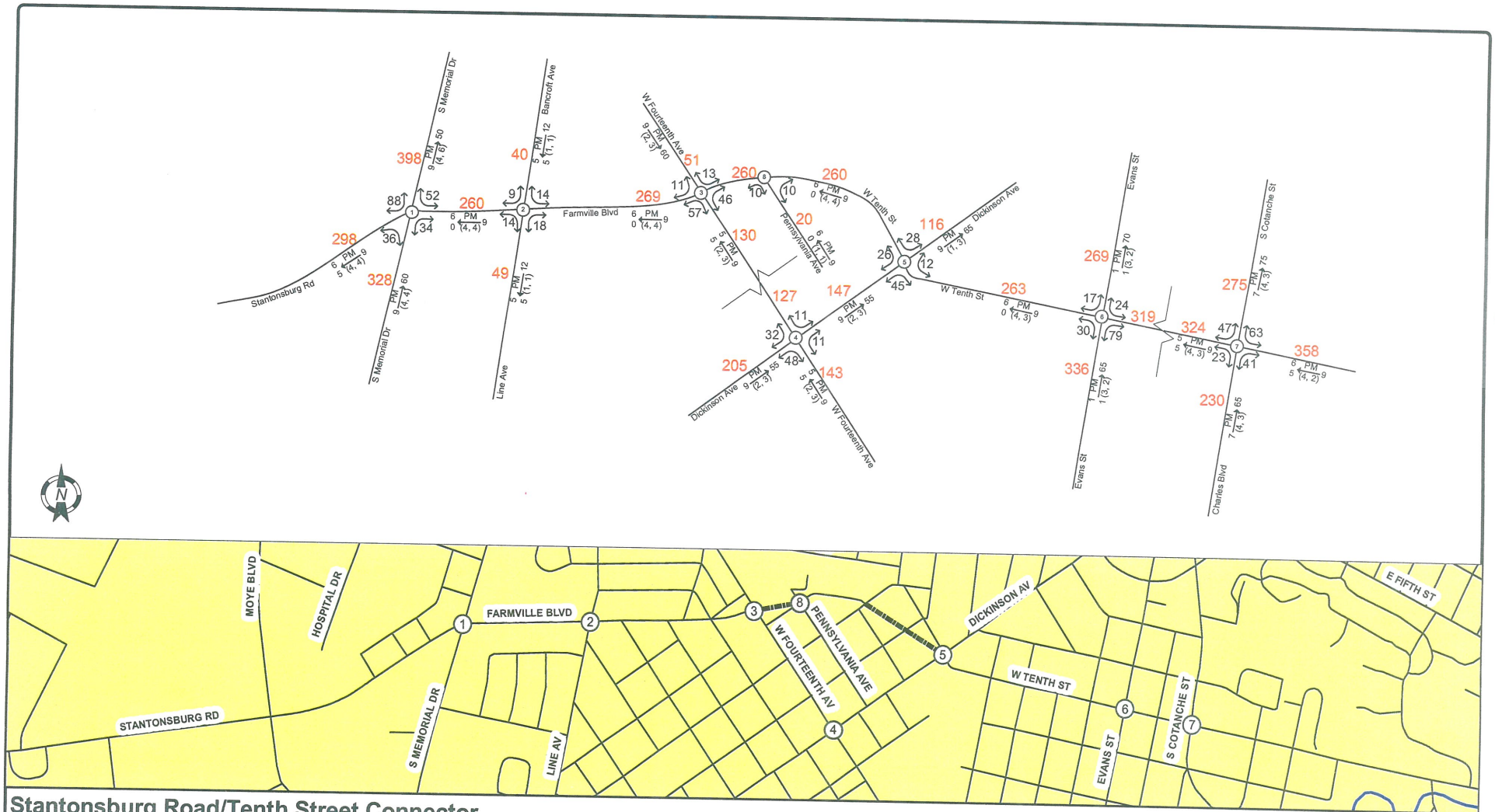
Build 2010

AM Peak



PM Peak





Stantonsburg Road/Tenth Street Connector
(Project U-3315)
Greenville, Pitt County, NC

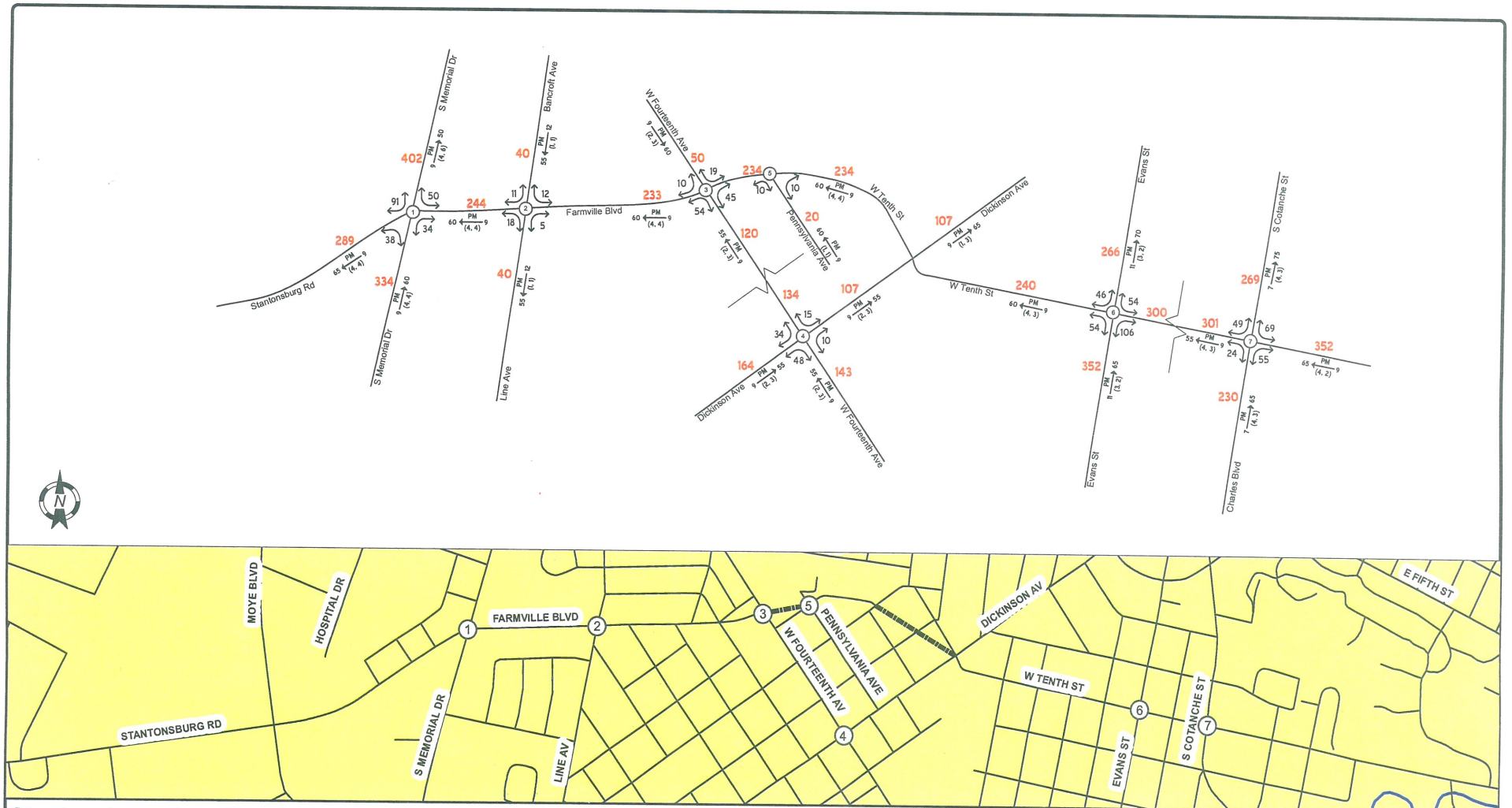
Not to Scale

Kimley-Horn and Associates, Inc.

Figure A10
2030 Build Scenario

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

DHV PM (d, t) D



Stantonsburg Road/Tenth Street Connector (Project U-3315)

Greenville, Pitt County, NC

Not to Scale

Kimley-Horn and Associates, Inc.

Figure A10 (Revised)
2030 Build Scenario

No. of Vehicles Per Day (VPD) in 100's
Turning Volume (VPD) in 100's

DHV Design Hourly Volume (%)
PM PM Peak Period
D Peak Hour Directional Split (%)
(d, t) Duals, TT-STs (%)

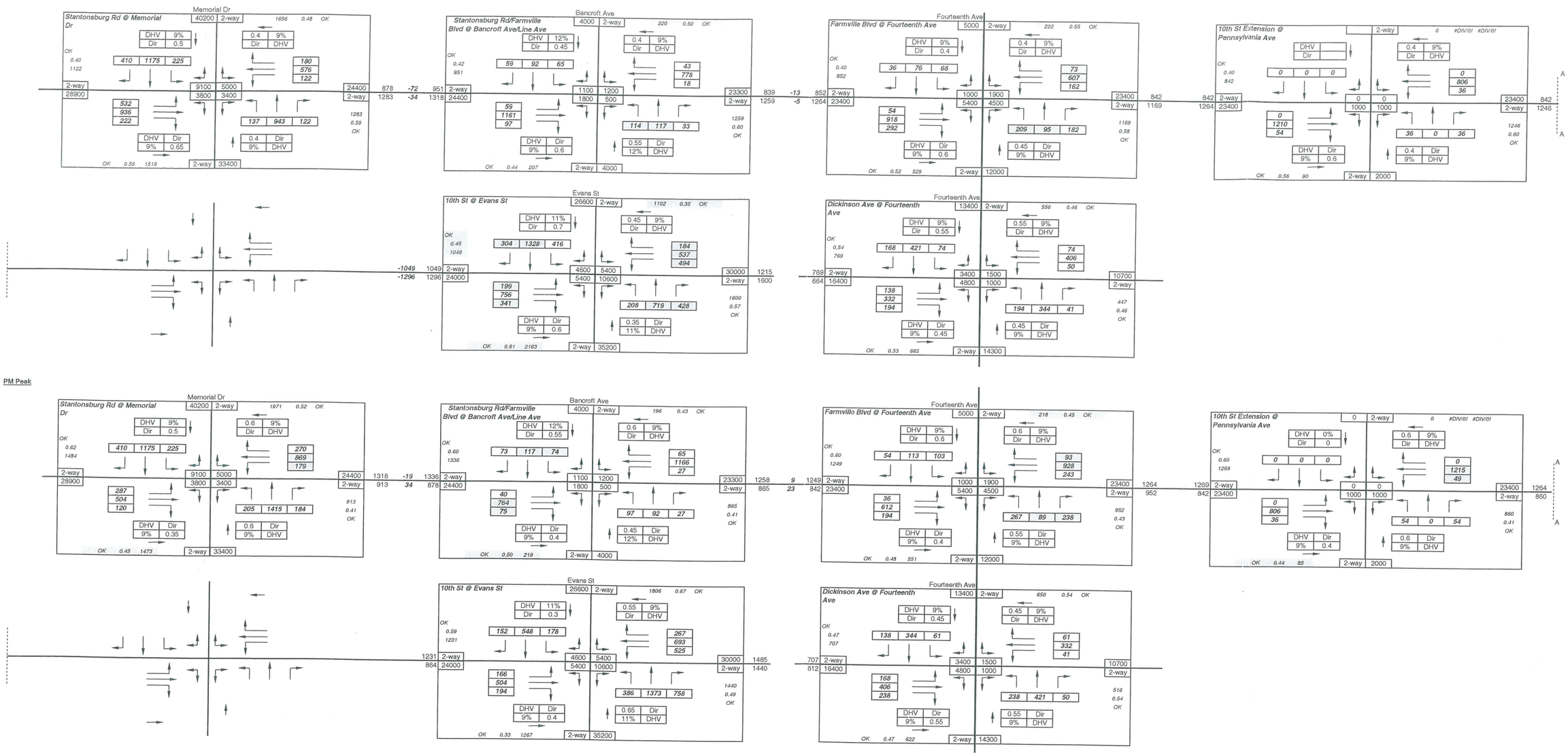
→ Indicates Direction of D

DHV (d, t) PM → D

Tenth Street Connector

Build 2030

AM Peak



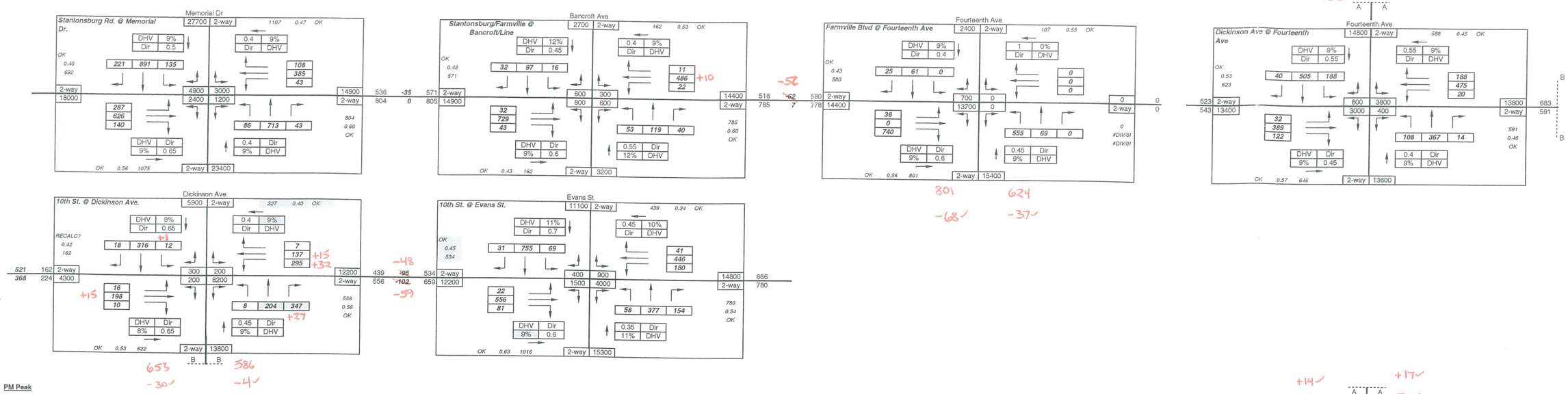
PM Peak

Appendix B

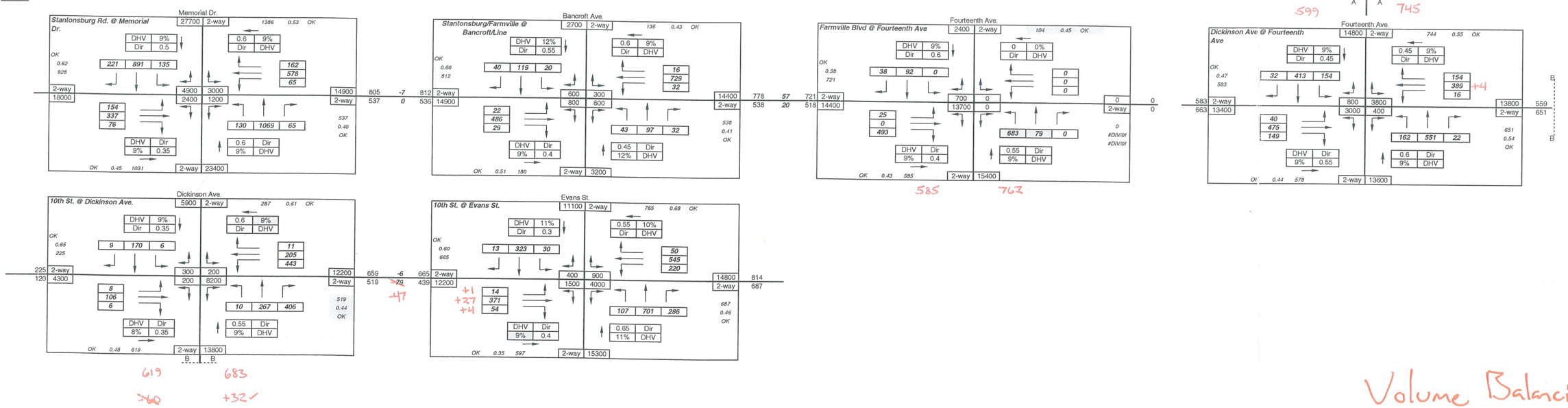
b) Volume Balancing Adjustments

No Build 2005

AM Peak



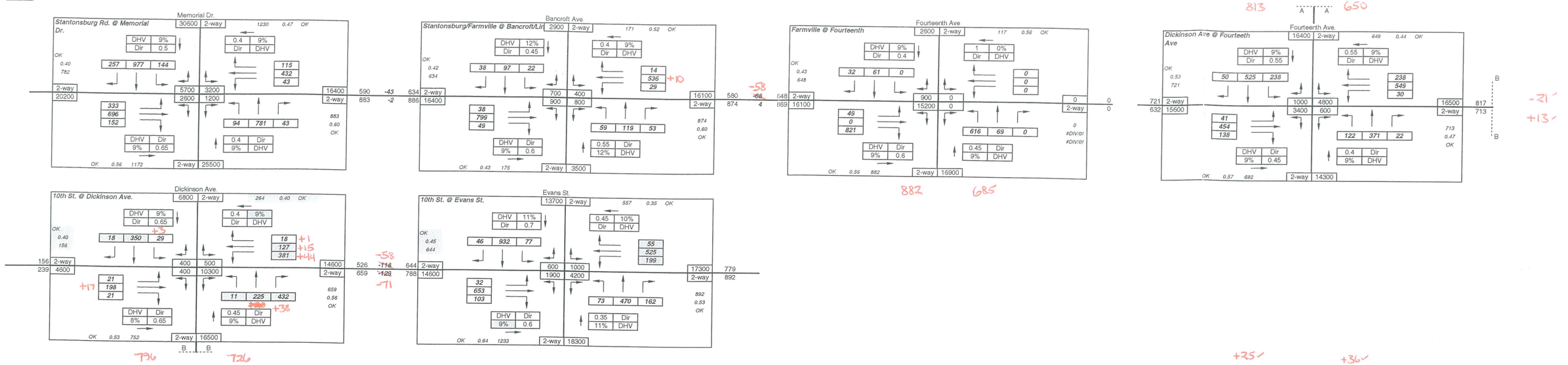
PM Peak



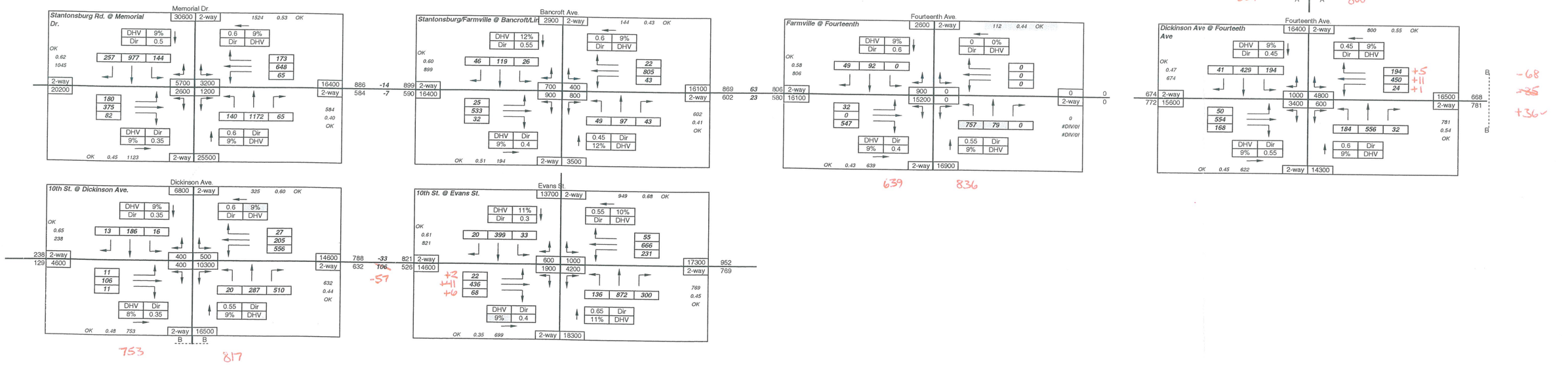
Volume Balancing
4/26/07

No Build 2010

AM Peak

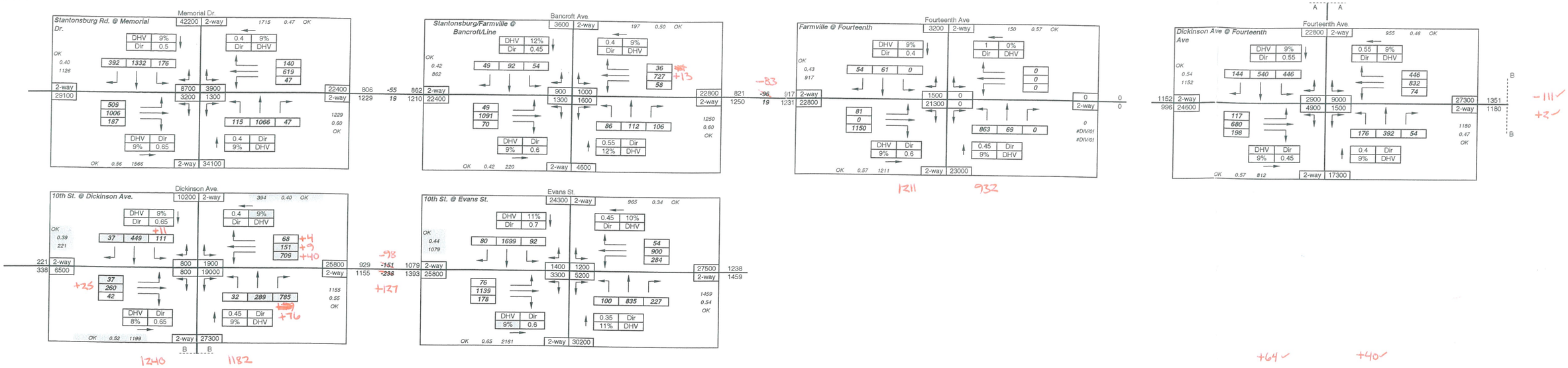


PM Peak

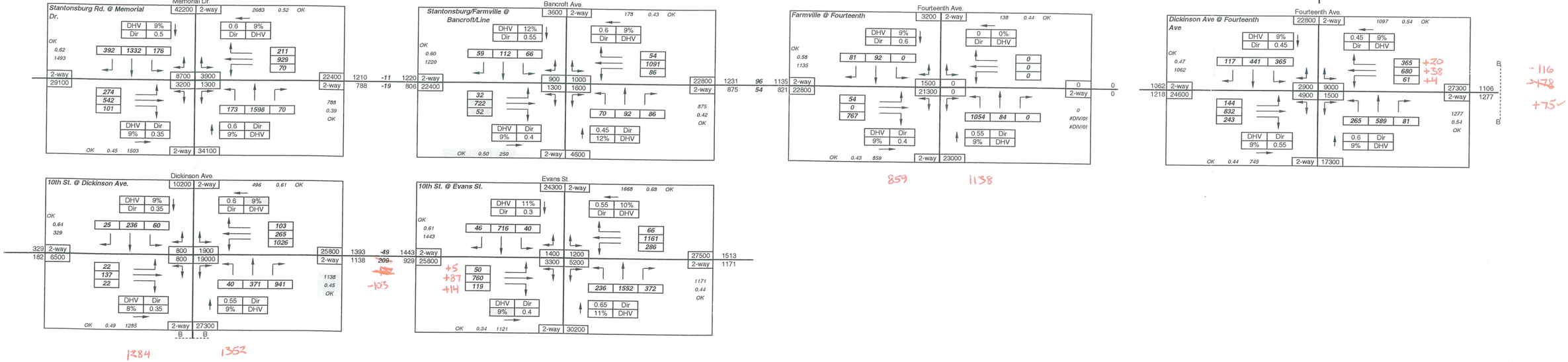


No Build 2030

AM Peak

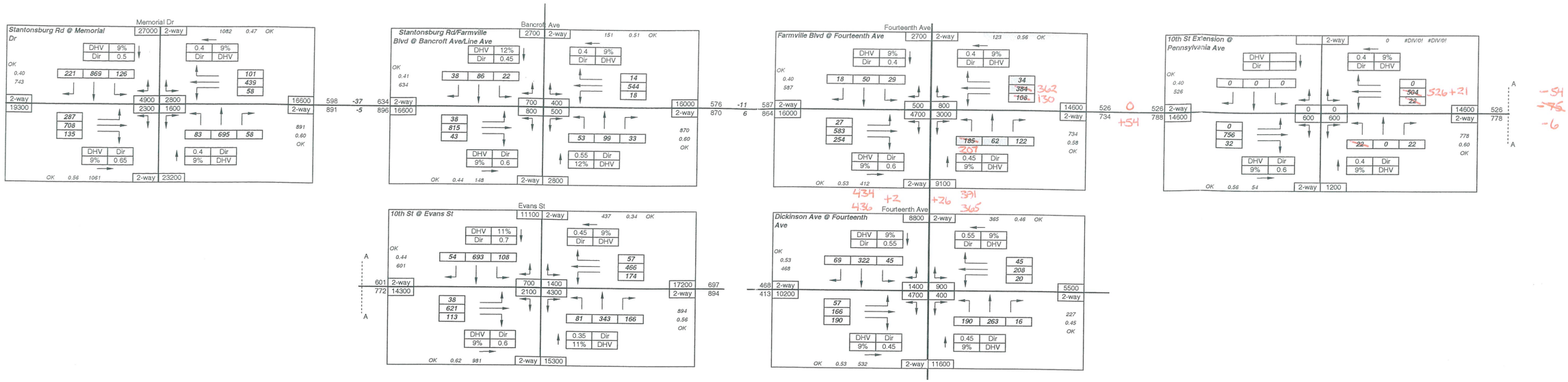


PM Peak

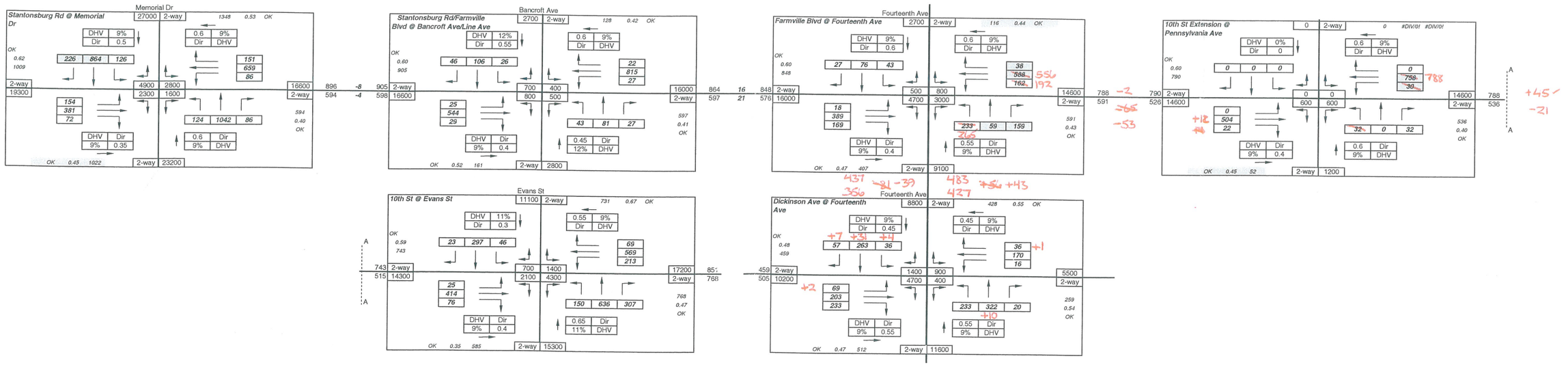


Build 2005

AM Peak

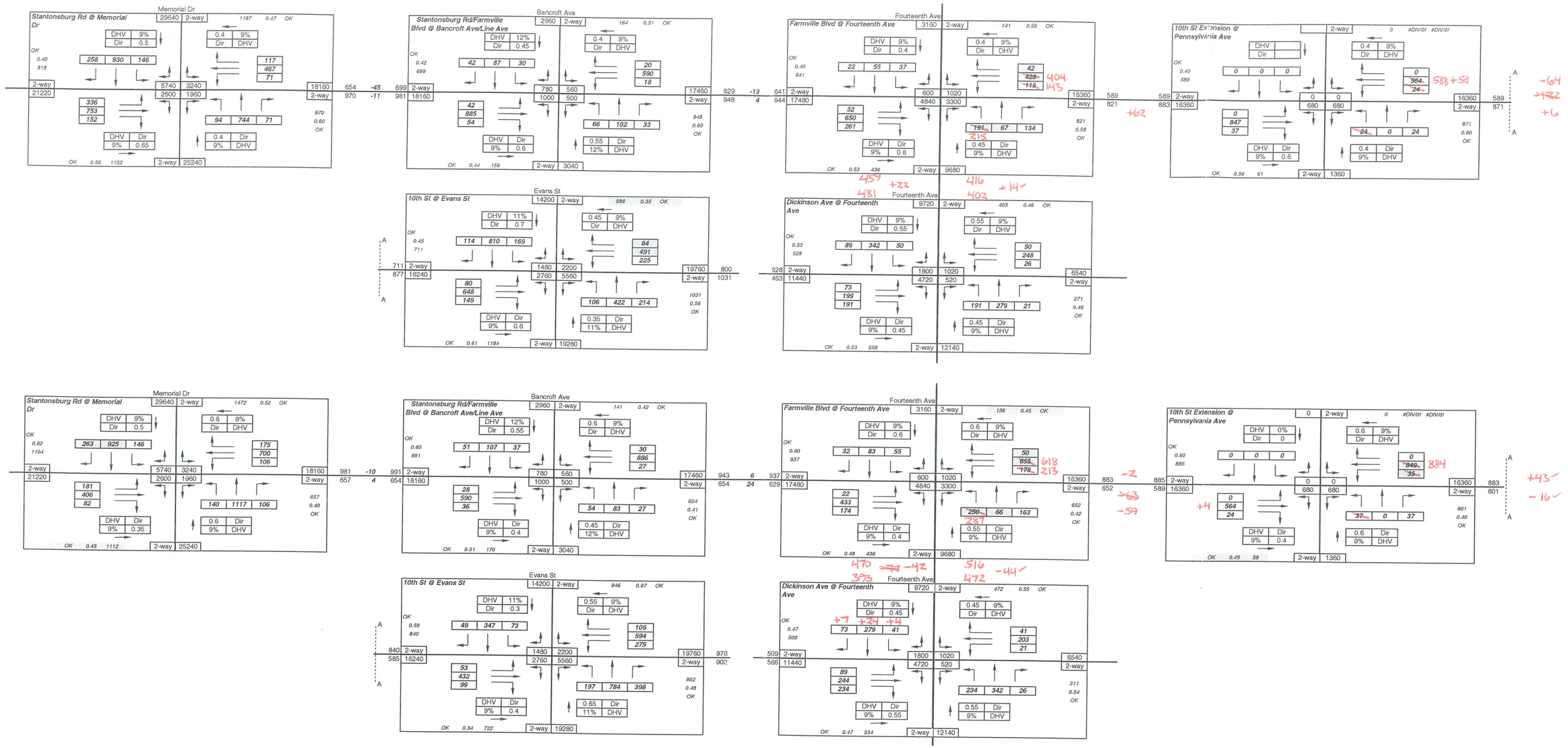


PM Peak



Build 2010

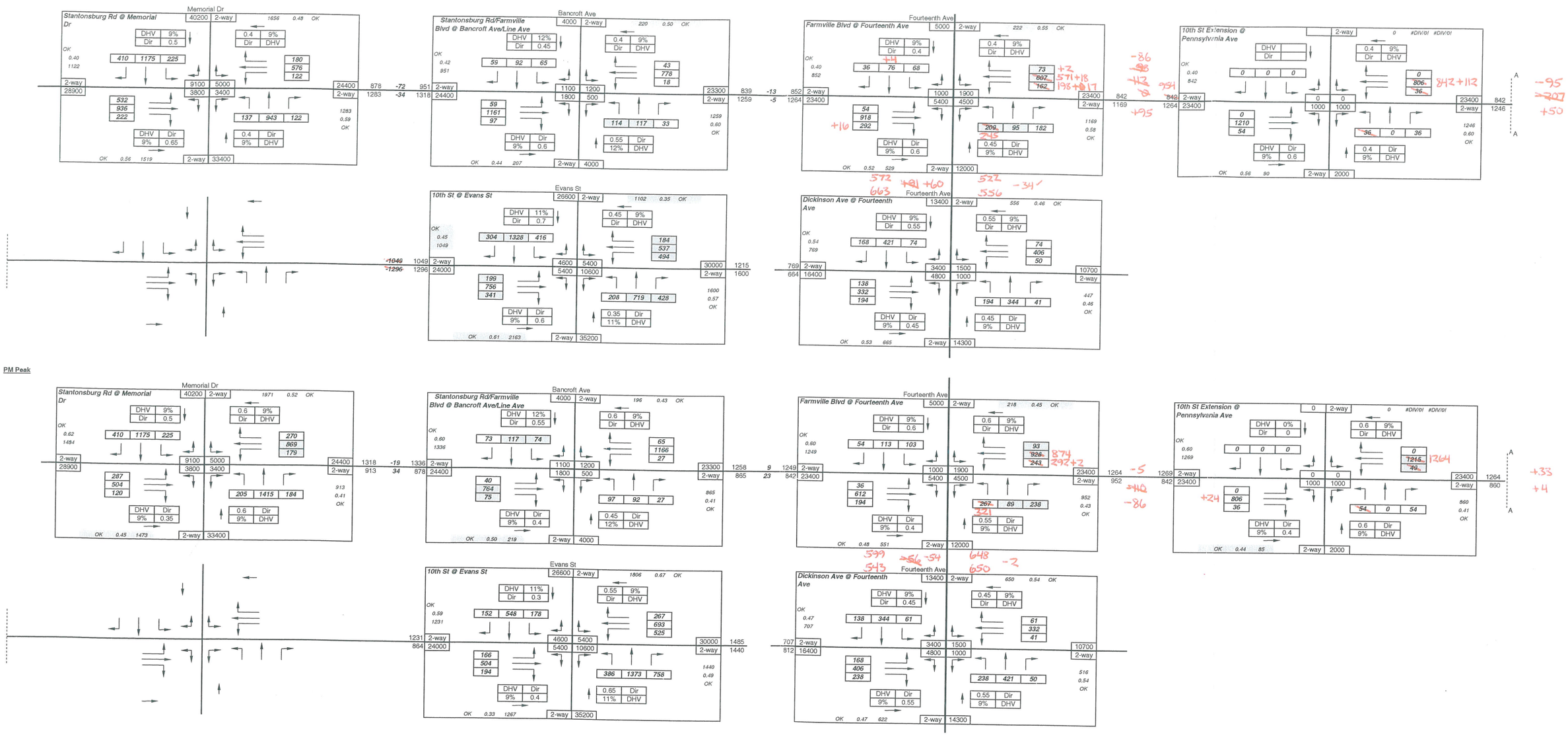
AM Peak



PM Peak

Build 2030

AM Peak



PM Peak

Appendix C

Intersection Analysis Output Reports

a) No Build 2005

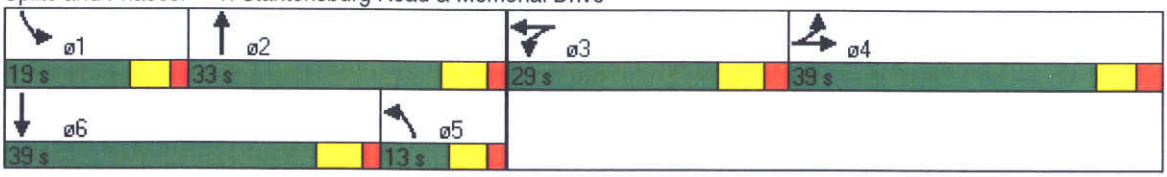
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	626	140	43	385	108	86	713	43	135	891	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3232	0	0	3354	0	3367	4943	0	1719	4792	0
Flt Permitted	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (perm)	1579	3232	0	0	3354	0	3367	4943	0	1719	4792	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	287	884	0	0	596	0	96	840	0	150	1236	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	23.0	23.0		23.2	23.2		13.0	22.7		13.0	22.7	
Total Split (s)	39.0	39.0	0.0	29.0	29.0	0.0	13.0	33.0	0.0	19.0	39.0	0.0
Total Split (%)	32.5%	32.5%	0.0%	24.2%	24.2%	0.0%	10.8%	27.5%	0.0%	15.8%	32.5%	0.0%
Yellow Time (s)	4.0	4.0		4.7	4.7		4.0	4.7		4.0	4.7	
All-Red Time (s)	3.0	3.0		2.5	2.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	4.0	7.2	7.2	4.0	6.0	6.7	4.0	6.0	6.7	4.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	32.0	32.0			21.8		7.0	26.7		12.6	32.3	
Actuated g/C Ratio	0.27	0.27			0.18		0.06	0.22		0.10	0.27	
v/c Ratio	0.68	1.03			0.98		0.49	0.76		0.83	0.96	
Control Delay	48.9	80.8			80.7		63.7	49.1		87.4	60.3	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	48.9	80.8			80.7		63.7	49.1		87.4	60.3	
LOS	D	F			F		E	D		F	E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		73.0			80.7			50.6			63.2	
Approach LOS		E			F			D			E	
Queue Length 50th (ft)	219	~401			244		37	225		115	346	
Queue Length 95th (ft)	330	#536			#364		67	276		#227	#444	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	421	862			609		196	1100		186	1290	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.68	1.03			0.98		0.49	0.76		0.81	0.96	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 82 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 65.7 Intersection LOS: E
Intersection Capacity Utilization 85.8% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

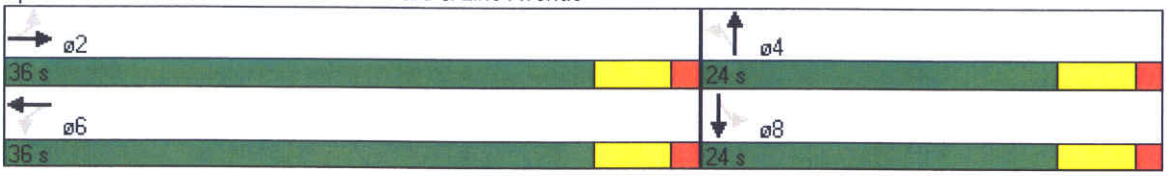


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	729	43	22	496	11	53	119	40	16	97	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3436	0	0	3454	0	0	1812	0	0	1814	0
Flt Permitted		0.915			0.904			0.889			0.953	
Satd. Flow (perm)	0	3151	0	0	3129	0	0	1631	0	0	1739	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	894	0	0	587	0	0	235	0	0	162	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		21.5	21.5		21.5	21.5	
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	24.0	24.0	0.0	24.0	24.0	0.0
Total Split (%)	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		31.8			31.8			13.1			13.1	
Actuated g/C Ratio		0.57			0.57			0.23			0.23	
v/c Ratio		0.50			0.33			0.62			0.40	
Control Delay		9.2			7.7			25.9			20.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.2			7.7			25.9			20.2	
LOS		A			A			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.2			7.7			25.9			20.2	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		82			47			68			44	
Queue Length 95th (ft)		155			93			125			87	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1794			1782			493			526	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.50			0.33			0.48			0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 72.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Farmville Boulevard & Line Avenue

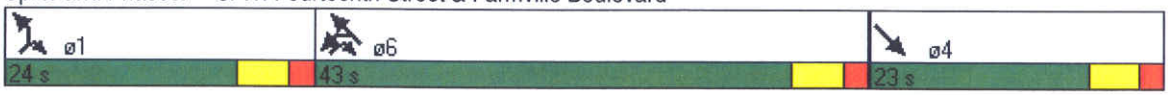


Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	61	25	555	69	38	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1756	0	1649	1671	1736	2733
Flt Permitted			0.950	0.963	0.950	
Satd. Flow (perm)	1756	0	1649	1671	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			44%			
Lane Group Flow (vph)	96	0	346	348	42	822
Turn Type			custom			pt+ov
Protected Phases	4		6	6	1	1 6
Permitted Phases			6			
Detector Phase	4		6	6	1	1 6
Switch Phase						
Minimum Initial (s)	7.0		10.0	10.0	7.0	
Minimum Split (s)	22.0		22.0	22.0	22.0	
Total Split (s)	23.0	0.0	43.0	43.0	24.0	67.0
Total Split (%)	25.6%	0.0%	47.8%	47.8%	26.7%	74.4%
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max	Max	None	
Act Effct Green (s)	9.9		37.9	37.9	14.2	59.9
Actuated g/C Ratio	0.12		0.49	0.49	0.18	0.78
v/c Ratio	0.44		0.43	0.42	0.13	0.39
Control Delay	39.7		17.4	17.3	28.6	4.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	39.7		17.4	17.3	28.6	4.8
LOS	D		B	B	C	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	39.7			17.4	5.9	
Approach LOS	D			B	A	
Queue Length 50th (ft)	46		120	121	18	73
Queue Length 95th (ft)	93		222	223	46	125
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	346		813	823	392	2139
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.28		0.43	0.42	0.11	0.38

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 41.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard



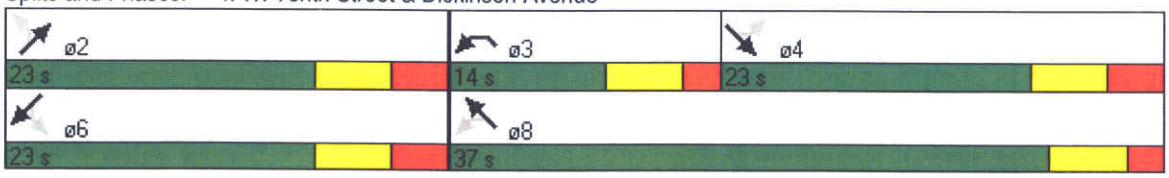
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	213	10	327	152	7	8	204	0	12	316	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1850	0	1736	1814	0	1736	1827	0	1736	1812	0
Flt Permitted	0.646			0.416			0.424			0.617		
Satd. Flow (perm)	1203	1850	0	760	1814	0	775	1827	0	1127	1812	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	248	0	363	177	0	9	227	0	13	371	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4		8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.0	23.0		10.0	22.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0	0.0	14.0	37.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	23.3%	61.7%	0.0%	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	12.3	12.3		27.3	27.3		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.22	0.22		0.48	0.48		0.28	0.28		0.28	0.28	
v/c Ratio	0.07	0.62		0.72	0.20		0.04	0.44		0.04	0.72	
Control Delay	17.5	26.9		19.3	8.8		16.8	20.5		16.5	29.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.5	26.9		19.3	8.8		16.8	20.5		16.5	29.3	
LOS	B	C		B	A		B	C		B	C	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		26.2			15.9			20.4			28.9	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	5	76		73	31		2	62		3	112	
Queue Length 95th (ft)	18	136		#138	60		12	126		15	#243	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	321	493		507	937		221	519		321	515	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.06	0.50		0.72	0.19		0.04	0.44		0.04	0.72	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 56.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 64.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



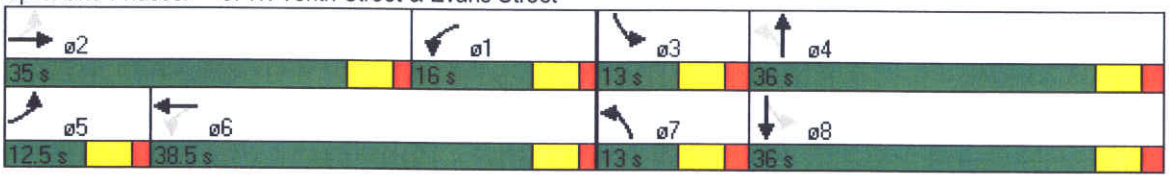
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	556	81	180	446	41	58	377	154	69	755	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3405	0	1736	3426	0	1752	3354	0	1752	3484	0
Flt Permitted	0.258			0.319			0.135			0.303		
Satd. Flow (perm)	471	3405	0	583	3426	0	249	3354	0	559	3484	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	708	0	200	542	0	64	590	0	77	873	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	12.5	21.5		12.5	21.5		13.0	22.0		13.0	22.0	
Total Split (s)	12.5	35.0	0.0	16.0	38.5	0.0	13.0	36.0	0.0	13.0	36.0	0.0
Total Split (%)	12.5%	35.0%	0.0%	16.0%	38.5%	0.0%	13.0%	36.0%	0.0%	13.0%	36.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	34.4	34.4		43.2	43.2		35.5	29.6		35.6	29.6	
Actuated g/C Ratio	0.34	0.34		0.43	0.43		0.36	0.30		0.36	0.30	
v/c Ratio	0.10	0.61		0.58	0.37		0.32	0.59		0.27	0.85	
Control Delay	26.1	31.5		17.7	7.5		21.3	32.8		19.6	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.1	31.5		17.7	7.5		21.3	32.8		19.6	41.9	
LOS	C	C		B	A		C	C		B	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		31.3			10.3			31.6			40.0	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	11	210		30	43		22	160		27	261	
Queue Length 95th (ft)	30	277		m69	m52		49	224		57	#353	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	250	1170		385	1483		198	1023		286	1063	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.61		0.52	0.37		0.32	0.58		0.27	0.82	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: W. Tenth Street & Evans Street



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	188	505	40	108	367	14	32	389	122	20	475	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3433	0	1736	3450	0	1736	1761	0	1736	1748	0
Flt Permitted	0.373			0.221			0.097			0.240		
Satd. Flow (perm)	681	3433	0	404	3450	0	177	1761	0	438	1748	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	209	605	0	120	424	0	36	568	0	22	737	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	7.0		10.0	7.0	
Minimum Split (s)	16.0	22.0		16.5	22.0		16.0	22.0		16.5	22.0	
Total Split (s)	16.0	23.0	0.0	17.0	24.0	0.0	16.0	43.0	0.0	17.0	44.0	0.0
Total Split (%)	16.0%	23.0%	0.0%	17.0%	24.0%	0.0%	16.0%	43.0%	0.0%	17.0%	44.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.5	2.0		2.0	2.0		2.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.5	6.0	4.0	6.0	6.0	4.0	6.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	27.4	17.4		28.0	18.1		45.0	41.1		43.6	38.3	
Actuated g/C Ratio	0.29	0.19		0.30	0.19		0.45	0.44		0.42	0.41	
v/c Ratio	0.67	0.95		0.45	0.63		0.15	0.73		0.07	1.03	
Control Delay	36.4	65.4		28.5	40.8		13.4	30.6		13.4	72.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.4	65.4		28.5	40.8		13.4	30.6		13.4	72.2	
LOS	D	E		C	D		B	C		B	E	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		57.9			38.1			29.6			70.5	
Approach LOS		E			D			C			E	
Queue Length 50th (ft)	99	~218		54	134		10	233		6	~540	
Queue Length 95th (ft)	#183	#331		98	187		25	#524		18	#764	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	313	637		271	668		235	773		316	715	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.67	0.95		0.44	0.63		0.15	0.73		0.07	1.03	

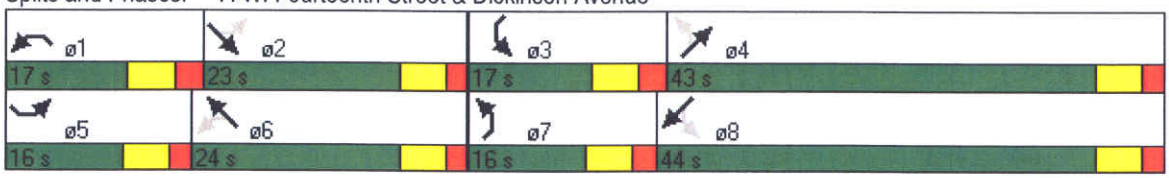
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 93.6
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 51.2 Intersection LOS: D
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	337	76	65	578	162	130	1069	65	135	891	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3229	0	0	3354	0	3367	4943	0	1719	4792	0
Flt Permitted	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (perm)	1579	3229	0	0	3354	0	3367	4943	0	1719	4792	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	154	475	0	0	894	0	144	1260	0	150	1236	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	23.0	23.0		23.2	23.2		13.0	22.7		13.0	22.7	
Total Split (s)	24.0	24.0	0.0	40.0	40.0	0.0	13.0	40.0	0.0	16.0	43.0	0.0
Total Split (%)	20.0%	20.0%	0.0%	33.3%	33.3%	0.0%	10.8%	33.3%	0.0%	13.3%	35.8%	0.0%
Yellow Time (s)	4.0	4.0		4.7	4.7		4.0	4.7		4.0	4.7	
All-Red Time (s)	3.0	3.0		2.5	2.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	4.0	7.2	7.2	4.0	6.0	6.7	4.0	6.0	6.7	4.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	17.0	17.0			32.8		7.0	33.3		10.0	36.3	
Actuated g/C Ratio	0.14	0.14			0.27		0.06	0.28		0.08	0.30	
v/c Ratio	0.69	1.04			0.97		0.73	0.92		1.05	0.85	
Control Delay	65.7	102.7			67.7		77.5	53.6		141.8	46.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	65.7	102.7			67.7		77.5	53.6		141.8	46.2	
LOS	E	F			E		E	D		F	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		93.6			67.7			56.1			56.5	
Approach LOS		F			E			E			E	
Queue Length 50th (ft)	126	~218			362		57	347		~126	328	
Queue Length 95th (ft)	#225	#332			#499		#107	#434		#262	390	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	224	457			917		196	1372		143	1450	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.69	1.04			0.97		0.73	0.92		1.05	0.85	

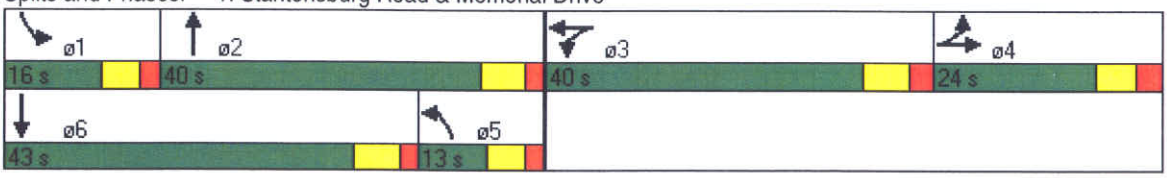
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 64.1 Intersection LOS: E
Intersection Capacity Utilization 85.8% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

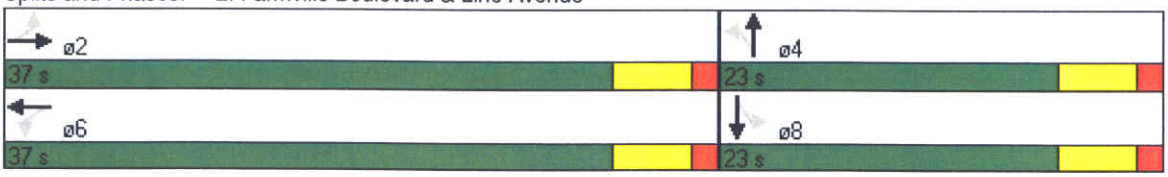


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	486	29	32	729	16	43	97	32	20	119	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3436	0	0	3454	0	0	1812	0	0	1814	0
Flt Permitted		0.907			0.914			0.862			0.954	
Satd. Flow (perm)	0	3123	0	0	3163	0	0	1581	0	0	1741	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	596	0	0	864	0	0	192	0	0	198	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		21.5	21.5		21.5	21.5	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	61.7%	61.7%	0.0%	61.7%	61.7%	0.0%	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		33.0			33.0			11.7			11.7	
Actuated g/C Ratio		0.59			0.59			0.21			0.21	
v/c Ratio		0.32			0.46			0.58			0.54	
Control Delay		7.0			8.1			26.2			24.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.0			8.1			26.2			24.4	
LOS		A			A			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		7.0			8.1			26.2			24.4	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		44			72			55			57	
Queue Length 95th (ft)		88			138			106			107	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1849			1873			451			496	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.46			0.43			0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Farmville Boulevard & Line Avenue

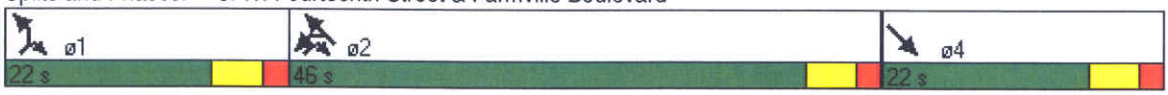


Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	92	38	683	79	25	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1756	0	1649	1670	1736	2733
Flt Permitted			0.950	0.962	0.950	
Satd. Flow (perm)	1756	0	1649	1670	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			44%			
Lane Group Flow (vph)	144	0	425	422	28	548
Turn Type			custom			pt+ov
Protected Phases	4		2	2	1	1 2
Permitted Phases			2			
Detector Phase	4		2	2	1	1 2
Switch Phase						
Minimum Initial (s)	7.0		7.0	7.0	7.0	
Minimum Split (s)	22.0		13.0	13.0	22.0	
Total Split (s)	22.0	0.0	46.0	46.0	22.0	68.0
Total Split (%)	24.4%	0.0%	51.1%	51.1%	24.4%	75.6%
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.0	6.0	6.0	6.0	6.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		Max	Max	None	
Act Effct Green (s)	11.8		40.2	40.2	11.7	58.0
Actuated g/C Ratio	0.14		0.49	0.49	0.14	0.71
v/c Ratio	0.57		0.52	0.51	0.11	0.28
Control Delay	42.4		18.5	18.2	32.2	5.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	42.4		18.5	18.2	32.2	5.1
LOS	D		B	B	C	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	42.4			18.3	6.4	
Approach LOS	D			B	A	
Queue Length 50th (ft)	69		148	146	13	48
Queue Length 95th (ft)	133		284	280	37	83
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	328		811	821	324	1975
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.44		0.52	0.51	0.09	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81.8			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard

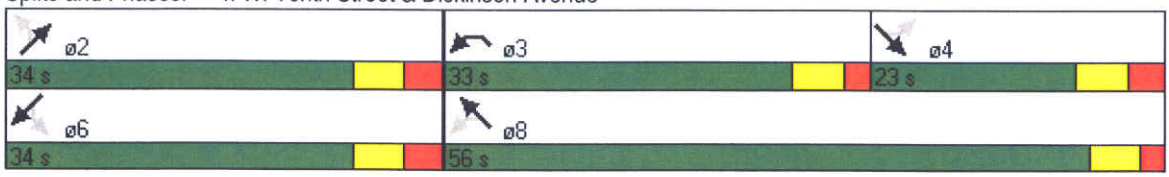


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	8	106	6	443	205	11	10	267	0	6	170	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1848	0	1736	1812	0	1736	1827	0	1736	1812	0
Flt Permitted	0.610			0.420			0.633			0.520		
Satd. Flow (perm)	1136	1848	0	767	1812	0	1156	1827	0	950	1812	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	125	0	492	240	0	11	297	0	7	199	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4		8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.0	23.0		10.0	22.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0	0.0	33.0	56.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	25.6%	25.6%	0.0%	36.7%	62.2%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	10.6	10.6		35.0	35.0		27.8	27.8		27.8	27.8	
Actuated g/C Ratio	0.13	0.13		0.46	0.46		0.36	0.36		0.36	0.36	
v/c Ratio	0.06	0.50		0.80	0.29		0.03	0.44		0.02	0.30	
Control Delay	31.8	39.9		24.8	12.6		21.0	24.4		21.0	22.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.8	39.9		24.8	12.6		21.0	24.4		21.0	22.5	
LOS	C	D		C	B		C	C		C	C	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		39.3			20.8			24.3			22.4	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	4	58		162	65		4	113		2	71	
Queue Length 95th (ft)	18	117		246	107		17	221		13	148	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	217	353		681	1007		422	668		347	662	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.35		0.72	0.24		0.03	0.44		0.02	0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



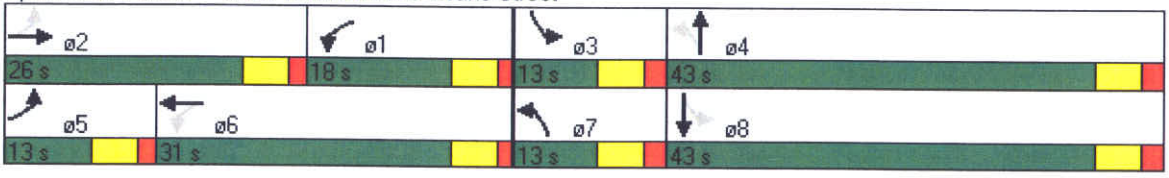
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	398	58	220	545	50	107	701	286	30	323	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3405	0	1736	3426	0	1752	3354	0	1752	3484	0
Flt Permitted	0.201			0.466			0.450			0.119		
Satd. Flow (perm)	367	3405	0	851	3426	0	830	3354	0	220	3484	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	506	0	244	662	0	119	1097	0	33	373	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	12.5	21.5		12.5	21.5		13.0	22.0		13.0	22.0	
Total Split (s)	13.0	26.0	0.0	18.0	31.0	0.0	13.0	43.0	0.0	13.0	43.0	0.0
Total Split (%)	13.0%	26.0%	0.0%	18.0%	31.0%	0.0%	13.0%	43.0%	0.0%	13.0%	43.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	28.5	28.5		38.4	38.4		41.7	37.2		38.3	31.3	
Actuated g/C Ratio	0.28	0.28		0.38	0.38		0.42	0.37		0.38	0.31	
v/c Ratio	0.08	0.52		0.59	0.50		0.29	0.88		0.17	0.34	
Control Delay	32.6	34.8		12.3	7.7		16.7	39.0		15.4	26.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.6	34.8		12.3	7.7		16.7	39.0		15.4	26.3	
LOS	C	C		B	A		B	D		B	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		34.8			8.9			36.8			25.4	
Approach LOS		C			A			D			C	
Queue Length 50th (ft)	9	159		34	48		36	317		9	84	
Queue Length 95th (ft)	27	217		m22	m23		71	#464		26	123	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	207	970		463	1317		417	1270		191	1302	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.52		0.53	0.50		0.29	0.86		0.17	0.29	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 78.6% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: W. Tenth Street & Evans Street



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	154	413	32	162	551	22	40	475	149	16	393	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3433	0	1736	3450	0	1736	1761	0	1736	1750	0
Flt Permitted	0.231			0.257			0.166			0.113		
Satd. Flow (perm)	422	3433	0	470	3450	0	303	1761	0	206	1750	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	495	0	180	636	0	44	694	0	18	608	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	7.0		10.0	7.0	
Minimum Split (s)	16.0	22.0		16.5	22.0		16.0	22.0		16.5	22.0	
Total Split (s)	16.0	23.0	0.0	17.0	24.0	0.0	17.0	43.0	0.0	17.0	43.0	0.0
Total Split (%)	16.0%	23.0%	0.0%	17.0%	24.0%	0.0%	17.0%	43.0%	0.0%	17.0%	43.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.5	2.0		2.0	2.0		2.5	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	6.5	6.0	4.0	6.0	6.0	4.0	6.5	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	27.4	17.3		28.0	18.1		44.2	40.3		42.7	37.5	
Actuated g/C Ratio	0.30	0.19		0.30	0.20		0.45	0.43		0.42	0.40	
v/c Ratio	0.64	0.77		0.64	0.94		0.16	0.91		0.08	0.86	
Control Delay	35.5	46.6		34.8	62.4		13.4	44.1		13.4	41.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.5	46.6		34.8	62.4		13.4	44.1		13.4	41.2	
LOS	D	D		C	E		B	D		B	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		43.7			56.3			42.3			40.4	
Approach LOS		D			E			D			D	
Queue Length 50th (ft)	78	160		83	~217		13	318		5	362	
Queue Length 95th (ft)	#145	#244		#153	#338		29	#707		16	#580	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	268	642		287	674		292	765		242	707	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.64	0.77		0.63	0.94		0.15	0.91		0.07	0.86	

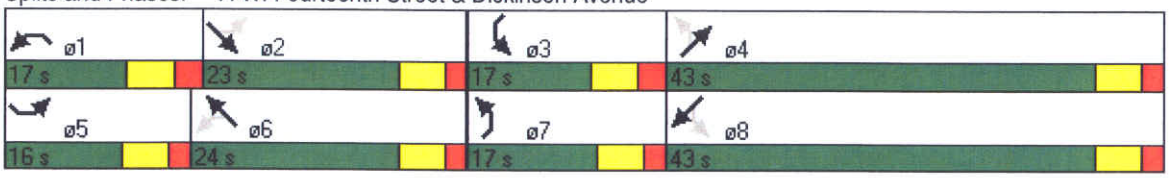
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 92.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 46.2 Intersection LOS: D
Intersection Capacity Utilization 73.5% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix C

Intersection Analysis Output Reports

b) No Build 2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	333	696	152	43	432	115	94	781	43	144	977	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3232	0	0	3357	0	3367	4948	0	1719	4787	0
Flt Permitted	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (perm)	1579	3232	0	0	3357	0	3367	4948	0	1719	4787	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	333	979	0	0	656	0	104	916	0	160	1372	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	21.0		14.0	21.0	
Total Split (s)	47.0	47.0	0.0	32.0	32.0	0.0	14.0	39.0	0.0	22.0	47.0	0.0
Total Split (%)	33.6%	33.6%	0.0%	22.9%	22.9%	0.0%	10.0%	27.9%	0.0%	15.7%	33.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	42.0	42.0			27.0		9.0	34.5		16.5	42.0	
Actuated g/C Ratio	0.30	0.30			0.19		0.06	0.25		0.12	0.30	
v/c Ratio	0.70	1.01			1.01		0.48	0.75		0.79	0.96	
Control Delay	52.8	79.5			94.2		71.1	53.4		86.4	63.3	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	52.8	79.5			94.2		71.1	53.4		86.4	63.3	
LOS	D	E			F		E	D		F	E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		72.8			94.2			55.2			65.7	
Approach LOS		E			F			E			E	
Queue Length 50th (ft)	296	~500			~324		47	286		143	450	
Queue Length 95th (ft)	424	#655			#456		79	339		#254	#550	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	474	970			647		216	1221		209	1436	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.70	1.01			1.01		0.48	0.75		0.77	0.96	

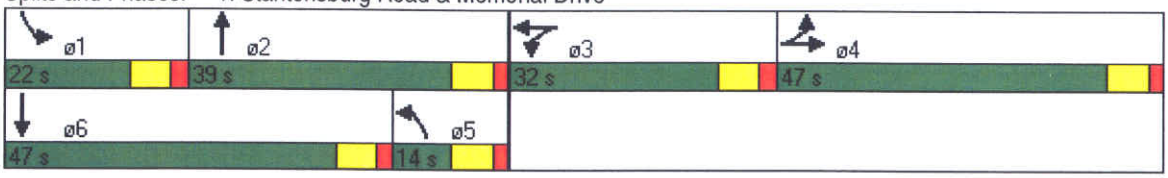
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 69.5 Intersection LOS: E
Intersection Capacity Utilization 86.5% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

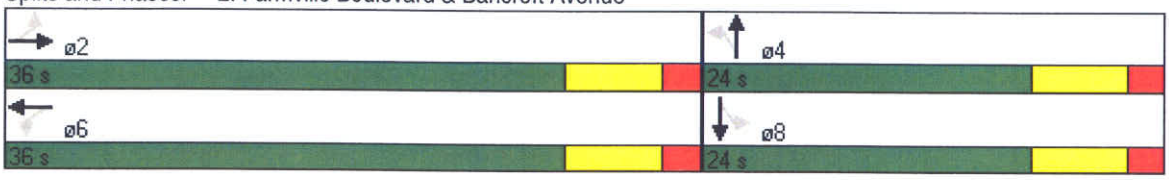


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	799	49	29	546	14	59	119	53	22	97	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3436	0	0	3450	0	0	1799	0	0	1806	0
Flt Permitted		0.903			0.876			0.881			0.936	
Satd. Flow (perm)	0	3109	0	0	3029	0	0	1606	0	0	1703	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	984	0	0	655	0	0	257	0	0	174	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	24.0	24.0	0.0	24.0	24.0	0.0
Total Split (%)	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		31.1			31.1			15.5			15.5	
Actuated g/C Ratio		0.55			0.55			0.27			0.27	
v/c Ratio		0.58			0.39			0.59			0.37	
Control Delay		10.7			8.8			23.6			18.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.7			8.8			23.6			18.9	
LOS		B			A			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.7			8.8			23.6			18.9	
Approach LOS		B			A			C			B	
Queue Length 50th (ft)		105			61			75			47	
Queue Length 95th (ft)		175			105			136			91	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1709			1665			509			539	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.58			0.39			0.50			0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 56.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Farmville Boulevard & Bancroft Avenue



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	61	32	616	69	49	821
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1741	0	1649	1670	1736	2733
Flt Permitted			0.950	0.962	0.950	
Satd. Flow (perm)	1741	0	1649	1670	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			45%			
Lane Group Flow (vph)	104	0	376	385	54	912
Turn Type			custom			pt+ov
Protected Phases	4		2	2	1	1 2
Permitted Phases			2			
Detector Phase	4		2	2	1	1 2
Switch Phase						
Minimum Initial (s)	7.0		10.0	10.0	7.0	
Minimum Split (s)	14.0		17.0	17.0	14.0	
Total Split (s)	19.0	0.0	46.0	46.0	25.0	71.0
Total Split (%)	21.1%	0.0%	51.1%	51.1%	27.8%	78.9%
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	2.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	
Act Effct Green (s)	12.0		32.8	32.8	17.4	57.9
Actuated g/C Ratio	0.16		0.44	0.44	0.24	0.78
v/c Ratio	0.38		0.52	0.52	0.13	0.43
Control Delay	37.6		19.6	19.7	27.9	4.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	37.6		19.6	19.7	27.9	4.9
LOS	D		B	B	C	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	37.6			19.6	6.2	
Approach LOS	D			B	A	
Queue Length 50th (ft)	50		146	150	22	88
Queue Length 95th (ft)	103		238	244	56	131
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	320		841	852	480	2175
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.33		0.45	0.45	0.11	0.42

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard

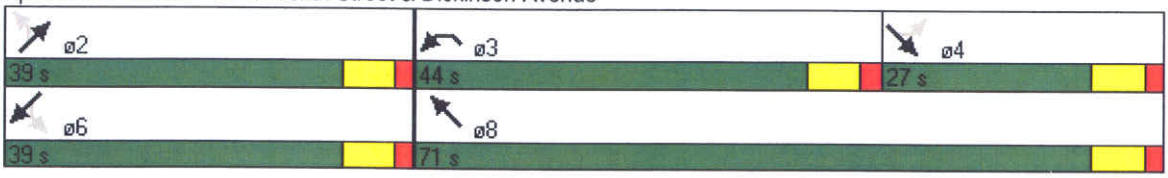
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	21	215	21	425	142	19	11	225	0	32	350	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1839	0	1736	1794	0	1736	1827	0	1736	1814	0
Flt Permitted	0.644			0.950			0.295			0.499		
Satd. Flow (perm)	1200	1839	0	1736	1794	0	539	1827	0	912	1814	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	262	0	472	179	0	12	250	0	36	409	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4					2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		17.0	17.0		17.0	17.0	
Total Split (s)	27.0	27.0	0.0	44.0	71.0	0.0	39.0	39.0	0.0	39.0	39.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	40.0%	64.5%	0.0%	35.5%	35.5%	0.0%	35.5%	35.5%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	19.7	19.7		33.1	57.8		34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.19	0.19		0.32	0.57		0.34	0.34		0.34	0.34	
v/c Ratio	0.10	0.74		0.84	0.18		0.07	0.41		0.12	0.67	
Control Delay	36.9	53.5		46.7	10.8		28.1	30.6		28.1	37.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.9	53.5		46.7	10.8		28.1	30.6		28.1	37.5	
LOS	D	D		D	B		C	C		C	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		52.1			36.8			30.5			36.8	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	13	168		293	53		6	135		17	246	
Queue Length 95th (ft)	37	#271		422	86		22	217		44	373	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	254	389		628	1076		181	613		306	609	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.67		0.75	0.17		0.07	0.41		0.12	0.67	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 102.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 38.4 Intersection LOS: D
Intersection Capacity Utilization 75.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



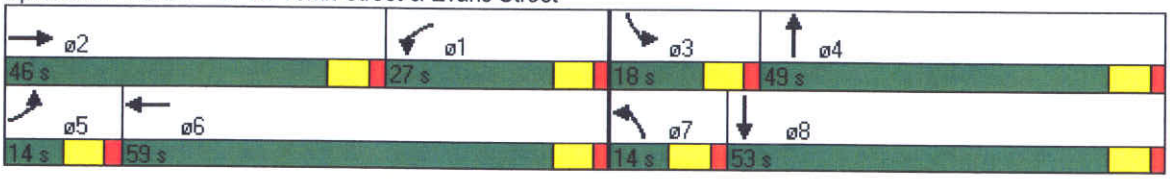
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	653	103	199	525	55	73	470	162	77	932	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3402	0	1736	3423	0	1752	3372	0	1752	3480	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3402	0	1736	3423	0	1752	3372	0	1752	3480	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	840	0	221	644	0	81	702	0	86	1087	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		14.0	22.0		14.0	22.0	
Total Split (s)	14.0	46.0	0.0	27.0	59.0	0.0	14.0	49.0	0.0	18.0	53.0	0.0
Total Split (%)	10.0%	32.9%	0.0%	19.3%	42.1%	0.0%	10.0%	35.0%	0.0%	12.9%	37.9%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	9.0	42.0		21.2	57.0		9.1	44.6		12.1	47.6	
Actuated g/C Ratio	0.06	0.30		0.15	0.41		0.06	0.32		0.09	0.34	
v/c Ratio	0.32	0.82		0.84	0.46		0.70	0.65		0.57	0.92	
Control Delay	70.7	53.7		53.8	10.5		95.0	44.6		75.9	57.1	
Queue Delay	0.0	0.8		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	70.7	54.6		53.8	10.5		95.0	44.6		75.9	57.1	
LOS	E	D		D	B		F	D		E	E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		55.2			21.5			49.8			58.5	
Approach LOS		E			C			D			E	
Queue Length 50th (ft)	32	379		204	72		74	291		76	496	
Queue Length 95th (ft)	70	464		m#295	m87		#158	362		135	#625	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	112	1020		273	1394		115	1075		163	1193	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	43		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.32	0.86		0.81	0.46		0.70	0.65		0.53	0.91	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 47.2 Intersection LOS: D
Intersection Capacity Utilization 82.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: W. Tenth Street & Evans Street



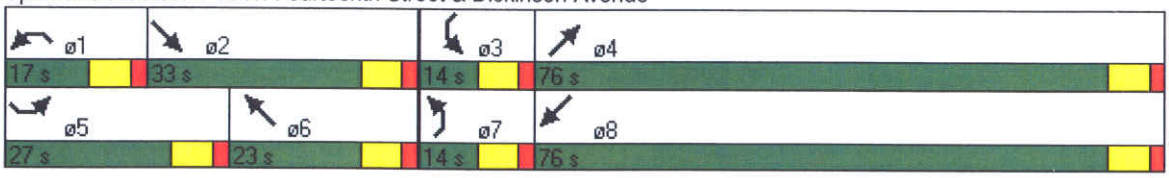
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	238	525	50	122	371	22	41	454	138	30	549	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3426	0	1736	3443	0	1736	1763	0	1736	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3426	0	1736	3443	0	1736	1763	0	1736	1745	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	264	639	0	136	436	0	46	657	0	33	874	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0		14.0	23.0	
Total Split (s)	27.0	33.0	0.0	17.0	23.0	0.0	14.0	76.0	0.0	14.0	76.0	0.0
Total Split (%)	19.3%	23.6%	0.0%	12.1%	16.4%	0.0%	10.0%	54.3%	0.0%	10.0%	54.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	22.1	28.1		12.0	18.1		9.0	73.1		9.0	70.3	
Actuated g/C Ratio	0.16	0.21		0.09	0.13		0.06	0.54		0.06	0.52	
v/c Ratio	0.94	0.91		0.89	0.96		0.41	0.70		0.30	0.97	
Control Delay	97.2	71.0		109.6	91.5		74.3	29.5		70.7	56.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	97.2	71.0		109.6	91.5		74.3	29.5		70.7	56.9	
LOS	F	E		F	F		E	C		E	E	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		78.6			95.8			32.4			57.4	
Approach LOS		E			F			C			E	
Queue Length 50th (ft)	242	304		125	211		41	458		29	766	
Queue Length 95th (ft)	#423	#420		#256	#325		85	618		66	#1071	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	281	705		153	456		113	949		110	905	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.94	0.91		0.89	0.96		0.41	0.69		0.30	0.97	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 136.4
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 65.0 Intersection LOS: E
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



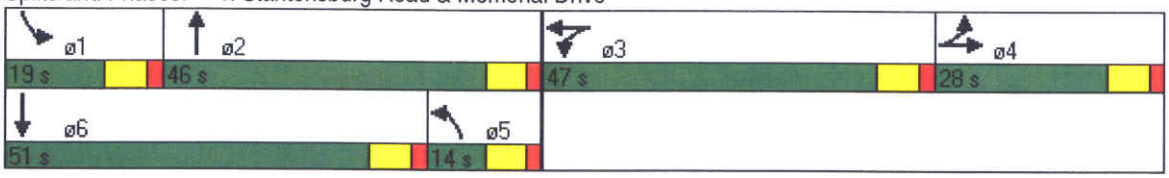
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	375	82	65	648	173	140	1172	65	144	977	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3232	0	0	3357	0	3367	4948	0	1719	4787	0
Flt Permitted	0.950	0.998			0.996		0.950			0.950		
Satd. Flow (perm)	1579	3232	0	0	3357	0	3367	4948	0	1719	4787	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	180	528	0	0	984	0	156	1374	0	160	1372	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	21.0		14.0	21.0	
Total Split (s)	28.0	28.0	0.0	47.0	47.0	0.0	14.0	46.0	0.0	19.0	51.0	0.0
Total Split (%)	20.0%	20.0%	0.0%	33.6%	33.6%	0.0%	10.0%	32.9%	0.0%	13.6%	36.4%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	23.0	23.0			42.0		9.0	41.0		14.0	46.0	
Actuated g/C Ratio	0.16	0.16			0.30		0.06	0.29		0.10	0.33	
v/c Ratio	0.69	0.99			0.98		0.72	0.95		0.93	0.87	
Control Delay	70.3	95.6			71.7		83.2	62.6		114.2	51.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	70.3	95.6			71.7		83.2	62.6		114.2	51.5	
LOS	E	F			E		F	E		F	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		89.2			71.7			64.7			58.0	
Approach LOS		F			E			E			E	
Queue Length 50th (ft)	172	267			467		73	450		147	430	
Queue Length 95th (ft)	#271	#397			#614		#122	#547		#289	495	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	259	531			1007		216	1449		172	1573	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.69	0.99			0.98		0.72	0.95		0.93	0.87	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 67.6 Intersection LOS: E
Intersection Capacity Utilization 86.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

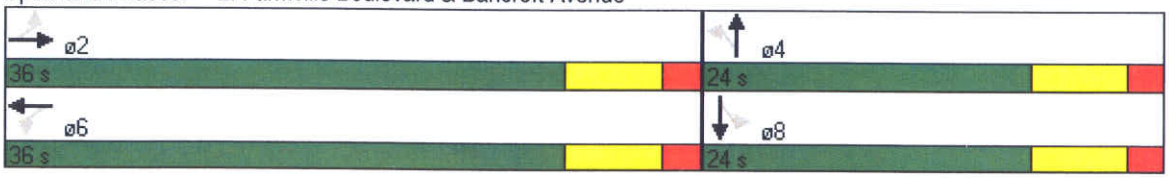


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	533	32	43	805	22	49	97	43	26	119	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3436	0	0	3450	0	0	1799	0	0	1808	0
Flt Permitted		0.890			0.893			0.858			0.938	
Satd. Flow (perm)	0	3065	0	0	3087	0	0	1564	0	0	1708	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	656	0	0	966	0	0	210	0	0	212	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	36.0	36.0	0.0	36.0	36.0	0.0	24.0	24.0	0.0	24.0	24.0	0.0
Total Split (%)	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		31.1			31.1			14.1			14.1	
Actuated g/C Ratio		0.56			0.56			0.25			0.25	
v/c Ratio		0.38			0.56			0.52			0.49	
Control Delay		8.2			9.9			22.6			21.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.2			9.9			22.6			21.3	
LOS		A			A			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2			9.9			22.6			21.3	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		55			94			59			59	
Queue Length 95th (ft)		104			171			112			110	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1725			1737			495			541	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.38			0.56			0.42			0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 55.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Farmville Boulevard & Bancroft Avenue

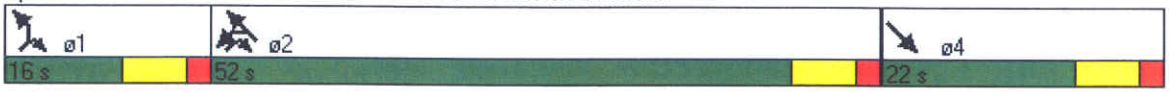


Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	92	49	757	79	32	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1741	0	1649	1668	1736	2733
Flt Permitted			0.950	0.961	0.950	
Satd. Flow (perm)	1741	0	1649	1668	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			45%			
Lane Group Flow (vph)	156	0	463	466	36	608
Turn Type			Split			pt+ov
Protected Phases	4		2	2	1	1 2
Permitted Phases						
Detector Phase	4		2	2	1	1 2
Switch Phase						
Minimum Initial (s)	7.0		10.0	10.0	7.0	
Minimum Split (s)	14.0		17.0	17.0	14.0	
Total Split (s)	22.0	0.0	52.0	52.0	16.0	68.0
Total Split (%)	24.4%	0.0%	57.8%	57.8%	17.8%	75.6%
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	2.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		Max	Max	None	
Act Effct Green (s)	14.3		47.0	47.0	11.0	63.1
Actuated g/C Ratio	0.16		0.54	0.54	0.13	0.72
v/c Ratio	0.55		0.52	0.52	0.16	0.31
Control Delay	41.1		16.1	16.0	37.2	5.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	41.1		16.1	16.0	37.2	5.1
LOS	D		B	B	D	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	41.1			16.1	6.9	
Approach LOS	D			B	A	
Queue Length 50th (ft)	80		165	166	18	59
Queue Length 95th (ft)	140		267	268	47	90
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	329		888	898	219	1972
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.47		0.52	0.52	0.16	0.31

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard



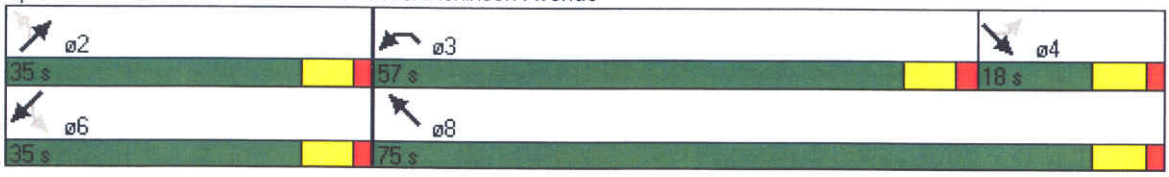
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	11	106	11	556	205	27	20	287	0	16	186	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1837	0	1736	1796	0	1736	1827	0	1736	1809	0
Flt Permitted	0.600			0.950			0.528			0.387		
Satd. Flow (perm)	1118	1837	0	1736	1796	0	965	1827	0	707	1809	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	130	0	618	258	0	22	319	0	18	221	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4					2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		17.0	17.0		17.0	17.0	
Total Split (s)	18.0	18.0	0.0	57.0	75.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	16.4%	16.4%	0.0%	51.8%	68.2%	0.0%	31.8%	31.8%	0.0%	31.8%	31.8%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	12.1	12.1		40.8	57.9		30.3	30.3		30.3	30.3	
Actuated g/C Ratio	0.12	0.12		0.41	0.59		0.31	0.31		0.31	0.31	
v/c Ratio	0.09	0.57		0.86	0.24		0.07	0.57		0.08	0.40	
Control Delay	43.7	53.7		39.0	9.9		29.2	35.5		29.8	31.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	43.7	53.7		39.0	9.9		29.2	35.5		29.8	31.8	
LOS	D	D		D	A		C	D		C	C	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		52.8			30.4			35.1			31.7	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	7	79		347	71		10	172		8	112	
Queue Length 95th (ft)	27	152		497	110		32	296		29	204	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	148	243		828	1143		298	563		218	558	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.53		0.75	0.23		0.07	0.57		0.08	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 98.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 33.6 — Intersection LOS: C
Intersection Capacity Utilization 62.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



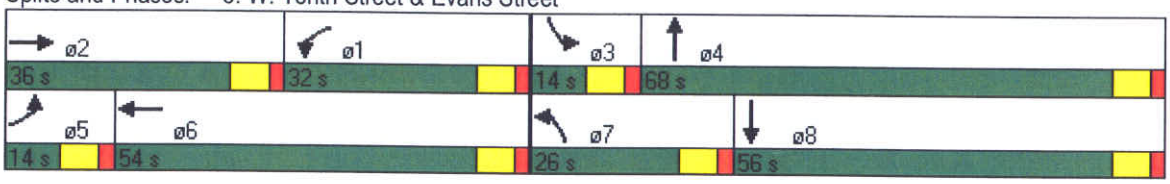
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	477	74	231	666	55	136	872	300	33	399	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3402	0	1736	3433	0	1752	3372	0	1752	3480	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3402	0	1736	3433	0	1752	3372	0	1752	3480	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	612	0	257	801	0	151	1302	0	37	465	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		14.0	22.0		14.0	22.0	
Total Split (s)	14.0	36.0	0.0	32.0	54.0	0.0	26.0	68.0	0.0	14.0	56.0	0.0
Total Split (%)	9.3%	24.0%	0.0%	21.3%	36.0%	0.0%	17.3%	45.3%	0.0%	9.3%	37.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	9.0	35.6		25.9	58.1		18.7	62.3		9.0	49.9	
Actuated g/C Ratio	0.06	0.24		0.17	0.39		0.12	0.42		0.06	0.33	
v/c Ratio	0.26	0.76		0.86	0.60		0.69	0.93		0.35	0.40	
Control Delay	73.9	61.4		27.6	8.4		79.5	54.1		77.3	39.5	
Queue Delay	0.0	0.0		0.0	0.2		0.0	0.0		0.0	0.0	
Total Delay	73.9	61.4		27.6	8.6		79.5	54.1		77.3	39.5	
LOS	E	E		C	A		E	D		E	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		62.0			13.2			56.8			42.3	
Approach LOS		E			B			E			D	
Queue Length 50th (ft)	26	308		212	139		142	628		35	180	
Queue Length 95th (ft)	60	#404		m192	m115		221	#755		75	234	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	104	807		312	1329		245	1416		105	1205	
Starvation Cap Reductn	0	0		0	87		0	0		0	0	
Spillback Cap Reductn	0	1		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	0.76		0.82	0.64		0.62	0.92		0.35	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 43.1 Intersection LOS: D
Intersection Capacity Utilization 84.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: W. Tenth Street & Evans Street



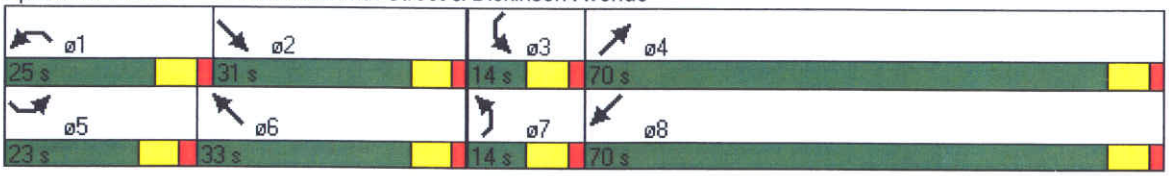
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	194	429	41	184	556	32	50	554	168	25	461	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3426	0	1736	3443	0	1736	1763	0	1736	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3426	0	1736	3443	0	1736	1763	0	1736	1745	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	523	0	204	654	0	56	803	0	28	733	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0		14.0	23.0	
Total Split (s)	23.0	31.0	0.0	25.0	33.0	0.0	14.0	70.0	0.0	14.0	70.0	0.0
Total Split (%)	16.4%	22.1%	0.0%	17.9%	23.6%	0.0%	10.0%	50.0%	0.0%	10.0%	50.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	18.1	26.9		19.3	28.1		9.0	66.2		9.0	63.4	
Actuated g/C Ratio	0.13	0.20		0.14	0.21		0.07	0.49		0.06	0.47	
v/c Ratio	0.94	0.77		0.83	0.92		0.50	0.93		0.25	0.90	
Control Delay	103.0	61.0		83.7	71.7		78.5	52.0		68.8	49.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	103.0	61.0		83.7	71.7		78.5	52.0		68.8	49.1	
LOS	F	E		F	E		E	D		E	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		73.3			74.6			53.7			49.8	
Approach LOS		E			E			D			D	
Queue Length 50th (ft)	199	243		183	312		50	707		25	606	
Queue Length 95th (ft)	#366	#316		#316	#433		98	#993		59	#865	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	231	680		255	714		113	869		111	828	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.94	0.77		0.80	0.92		0.50	0.92		0.25	0.89	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 135.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 62.9 Intersection LOS: E
Intersection Capacity Utilization 81.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix C

Intersection Analysis Output Reports

c) No Build 2030

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	509	1006	187	47	619	140	115	1066	47	176	1332	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3242	0	0	3371	0	3367	4958	0	1719	4772	0
Flt Permitted	0.950	0.998			0.997		0.950			0.950		
Satd. Flow (perm)	1579	3242	0	0	3371	0	3367	4958	0	1719	4772	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	509	1383	0	0	896	0	128	1236	0	196	1916	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	21.0		14.0	21.0	
Total Split (s)	51.0	51.0	0.0	34.0	34.0	0.0	14.0	43.0	0.0	22.0	51.0	0.0
Total Split (%)	34.0%	34.0%	0.0%	22.7%	22.7%	0.0%	9.3%	28.7%	0.0%	14.7%	34.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	46.0	46.0			29.0		9.0	38.0		17.0	46.0	
Actuated g/C Ratio	0.31	0.31			0.19		0.06	0.25		0.11	0.31	
v/c Ratio	1.05	1.39			1.37		0.63	0.98		1.01	1.31	
Control Delay	104.4	221.3			221.9		83.5	77.1		130.5	185.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	104.4	221.3			221.9		83.5	77.1		130.5	185.5	
LOS	F	F			F		F	E		F	F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		189.9			221.9			77.7			180.4	
Approach LOS		F			F			E			F	
Queue Length 50th (ft)	~594	~987			~608		64	443		~197	~879	
Queue Length 95th (ft)	#847	#1134			#744		101	#549		#366	#973	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	484	994			652		202	1256		195	1463	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	1.05	1.39			1.37		0.63	0.98		1.01	1.31	

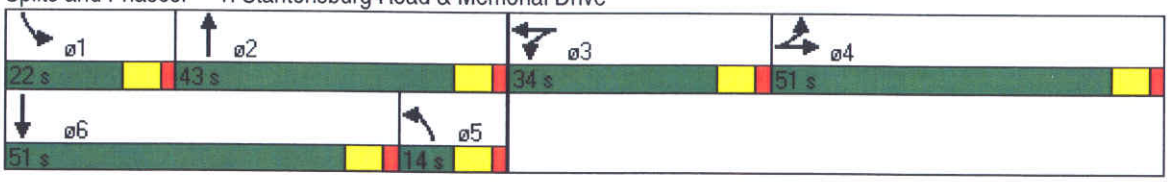
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 166.8 Intersection LOS: F
Intersection Capacity Utilization 112.3% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

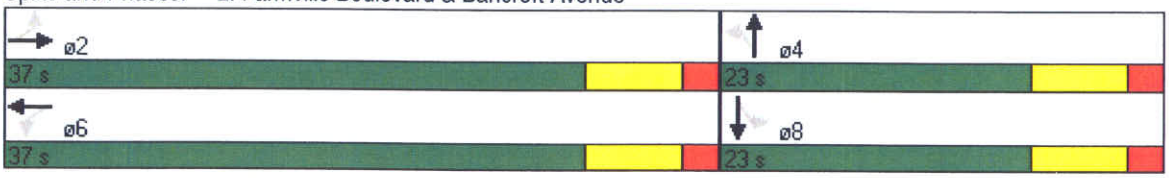


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1091	70	58	740	36	86	112	106	54	92	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3433	0	0	3440	0	0	1768	0	0	1792	0
Flt Permitted		0.873			0.718			0.829			0.789	
Satd. Flow (perm)	0	3003	0	0	2477	0	0	1486	0	0	1434	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1344	0	0	926	0	0	338	0	0	216	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	61.7%	61.7%	0.0%	61.7%	61.7%	0.0%	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		32.0			32.0			17.1			17.1	
Actuated g/C Ratio		0.54			0.54			0.29			0.29	
v/c Ratio		0.83			0.69			0.79			0.52	
Control Delay		17.5			13.6			34.9			22.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.5			13.6			34.9			22.8	
LOS		B			B			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.5			13.6			34.9			22.8	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)		195			118			110			64	
Queue Length 95th (ft)		#298			182			#227			122	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1627			1341			446			430	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.83			0.69			0.76			0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 59.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 92.5%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: Farmville Boulevard & Bancroft Avenue

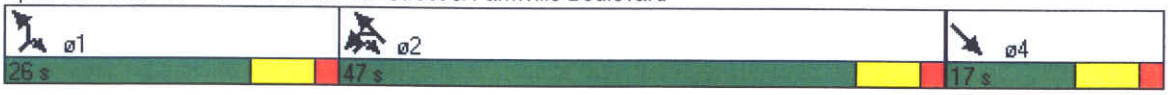


Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	61	54	863	69	81	1150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1712	0	1649	1664	1736	2733
Flt Permitted			0.950	0.959	0.950	
Satd. Flow (perm)	1712	0	1649	1664	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			46%			
Lane Group Flow (vph)	128	0	518	518	90	1278
Turn Type			custom			pt+ov
Protected Phases	4		2	2	1	1 2
Permitted Phases			2			
Detector Phase	4		2	2	1	1 2
Switch Phase						
Minimum Initial (s)	7.0		10.0	10.0	7.0	
Minimum Split (s)	14.0		17.0	17.0	14.0	
Total Split (s)	17.0	0.0	47.0	47.0	26.0	73.0
Total Split (%)	18.9%	0.0%	52.2%	52.2%	28.9%	81.1%
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	2.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	
Act Effct Green (s)	11.4		39.9	39.9	20.7	65.7
Actuated g/C Ratio	0.13		0.46	0.46	0.24	0.75
v/c Ratio	0.57		0.69	0.68	0.22	0.62
Control Delay	47.4		24.3	24.1	29.6	6.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	47.4		24.3	24.1	29.6	6.6
LOS	D		C	C	C	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	47.4			24.2	8.1	
Approach LOS	D			C	A	
Queue Length 50th (ft)	69		231	230	42	152
Queue Length 95th (ft)	127		355	353	82	205
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	235		778	785	419	2079
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.54		0.67	0.66	0.21	0.61

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	37	285	42	749	160	72	32	289	0	122	449	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1827	0	1736	1741	0	1736	1827	0	1736	1807	0
Flt Permitted	0.600			0.950			0.105			0.311		
Satd. Flow (perm)	1118	1827	0	1736	1741	0	192	1827	0	568	1807	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	364	0	832	258	0	36	321	0	136	540	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4					2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		17.0	17.0		17.0	17.0	
Total Split (s)	31.0	31.0	0.0	66.0	97.0	0.0	43.0	43.0	0.0	43.0	43.0	0.0
Total Split (%)	22.1%	22.1%	0.0%	47.1%	69.3%	0.0%	30.7%	30.7%	0.0%	30.7%	30.7%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	26.0	26.0		61.0	92.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.19	0.19		0.44	0.66		0.27	0.27		0.27	0.27	
v/c Ratio	0.20	1.07		1.10	0.23		0.69	0.65		0.88	1.10	
Control Delay	51.2	122.7		101.2	10.3		105.6	52.2		96.6	118.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	51.2	122.7		101.2	10.3		105.6	52.2		96.6	118.2	
LOS	D	F		F	B		F	D		F	F	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		115.5			79.7			57.6			113.9	
Approach LOS		F			E			E			F	
Queue Length 50th (ft)	32	~367		~858	88		30	260		119	~557	
Queue Length 95th (ft)	69	#569		#1111	129		#96	367		#251	#786	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	208	339		756	1144		52	496		154	490	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.20	1.07		1.10	0.23		0.69	0.65		0.88	1.10	

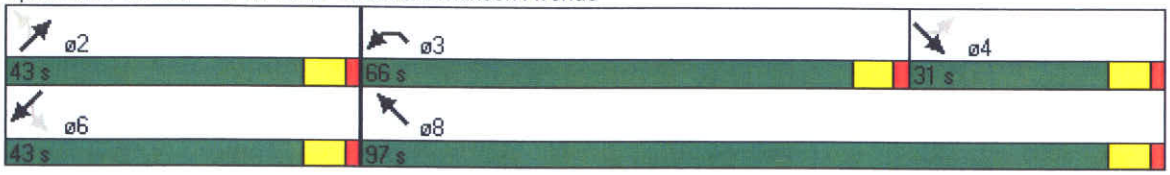
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 91.4 Intersection LOS: F
Intersection Capacity Utilization 109.9% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	1139	178	284	900	54	100	835	227	92	1699	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3402	0	1736	3443	0	1752	3393	0	1752	3480	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3402	0	1736	3443	0	1752	3393	0	1752	3480	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	1464	0	316	1060	0	111	1180	0	102	1977	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		14.0	22.0		14.0	22.0	
Total Split (s)	15.0	51.0	0.0	24.0	60.0	0.0	14.0	61.0	0.0	14.0	61.0	0.0
Total Split (%)	10.0%	34.0%	0.0%	16.0%	40.0%	0.0%	9.3%	40.7%	0.0%	9.3%	40.7%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	10.0	46.0		19.0	55.0		9.0	56.0		9.0	56.0	
Actuated g/C Ratio	0.07	0.31		0.13	0.37		0.06	0.37		0.06	0.37	
v/c Ratio	0.72	1.40		1.44	0.84		1.06	0.93		0.97	1.52	
Control Delay	100.8	226.1		229.6	16.9		168.4	58.7		148.7	272.6	
Queue Delay	0.0	0.0		0.0	5.8		0.0	0.0		0.0	0.0	
Total Delay	100.8	226.1		229.6	22.7		168.4	58.7		148.7	272.6	
LOS	F	F		F	C		F	E		F	F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		219.3			70.2			68.2			266.6	
Approach LOS		F			E			E			F	
Queue Length 50th (ft)	82	~1006		~430	163		~119	582		102	~1417	
Queue Length 95th (ft)	#171	#1145		m#353	m133		#250	#723		#228	#1550	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	116	1043		220	1262		105	1267		105	1299	
Starvation Cap Reductn	0	0		0	157		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.72	1.40		1.44	0.96		1.06	0.93		0.97	1.52	

Intersection Summary

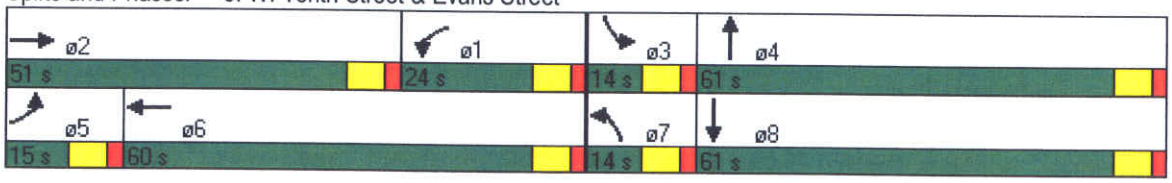
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 146 (97%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.52
Intersection Signal Delay: 171.3 Intersection LOS: F
Intersection Capacity Utilization 124.9% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 5: W. Tenth Street & Evans Street



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	446	540	144	176	392	54	117	680	198	74	832	446
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3360	0	1736	3409	0	1736	1765	0	1736	1732	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3360	0	1736	3409	0	1736	1765	0	1736	1732	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	496	760	0	196	496	0	130	976	0	82	1420	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0		14.0	23.0	
Total Split (s)	38.0	47.0	0.0	20.0	29.0	0.0	16.0	99.0	0.0	14.0	97.0	0.0
Total Split (%)	21.1%	26.1%	0.0%	11.1%	16.1%	0.0%	8.9%	55.0%	0.0%	7.8%	53.9%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	33.0	42.0		15.0	24.0		11.0	94.0		9.0	92.0	
Actuated g/C Ratio	0.18	0.23		0.08	0.13		0.06	0.52		0.05	0.51	
v/c Ratio	1.56	0.97		1.35	1.09		1.23	1.06		0.94	1.60	
Control Delay	310.8	92.8		252.8	138.0		224.0	87.4		162.8	308.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	310.8	92.8		252.8	138.0		224.0	87.4		162.8	308.5	
LOS	F	F		F	F		F	F		F	F	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		178.9			170.5			103.4			300.5	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~824	474		~302	~345		~188	~1260		99	~2390	
Queue Length 95th (ft)	#1063	#611		#481	#472		#342	#1526		#222	#2652	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	318	784		145	455		106	922		87	885	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.56	0.97		1.35	1.09		1.23	1.06		0.94	1.60	

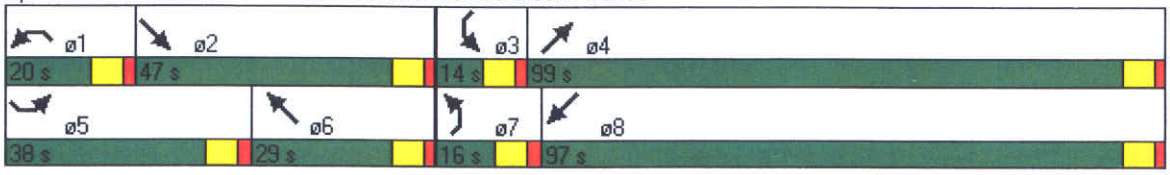
Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.60
Intersection Signal Delay: 199.4 Intersection LOS: F
Intersection Capacity Utilization 131.4% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	274	542	101	70	929	211	173	1598	70	176	1332	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	300		0	350		0
Storage Lanes	1		0	0		0	2		0	1		0
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	1579	3242	0	0	3371	0	3367	4958	0	1719	4772	0
Flt Permitted	0.950	0.998			0.997		0.950			0.950		
Satd. Flow (perm)	1579	3242	0	0	3371	0	3367	4958	0	1719	4772	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			35			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			22.3			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	274	744	0	0	1344	0	192	1854	0	196	1916	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Detector Phase	4	4		3	3		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	14.0		7.0	14.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	21.0		14.0	21.0	
Total Split (s)	37.0	37.0	0.0	60.0	60.0	0.0	14.0	61.0	0.0	22.0	69.0	0.0
Total Split (%)	20.6%	20.6%	0.0%	33.3%	33.3%	0.0%	7.8%	33.9%	0.0%	12.2%	38.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	32.0	32.0			55.0		9.0	56.0		17.0	64.0	
Actuated g/C Ratio	0.18	0.18			0.31		0.05	0.31		0.09	0.36	
v/c Ratio	0.98	1.29			1.30		1.14	1.20		1.21	1.13	
Control Delay	119.3	198.7			191.7		183.4	148.8		201.4	117.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	119.3	198.7			191.7		183.4	148.8		201.4	117.7	
LOS	F	F			F		F	F		F	F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		177.3			191.7			152.0			125.5	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	359	~612			~1066		~136	~969		~281	~956	
Queue Length 95th (ft)	#579	#756			#1207		#227	#1059		#459	#1043	
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	100						300			350		
Base Capacity (vph)	281	576			1030		168	1542		162	1697	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.98	1.29			1.30		1.14	1.20		1.21	1.13	

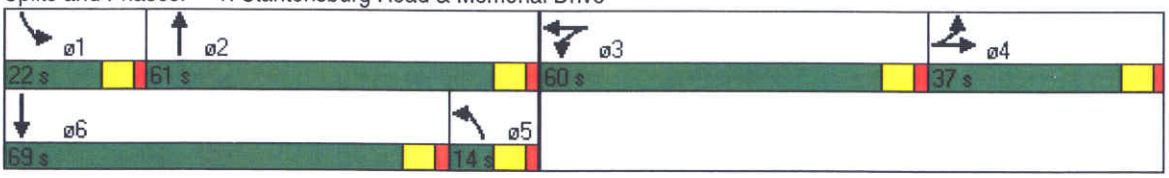
Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 155.6 Intersection LOS: F
Intersection Capacity Utilization 110.7% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive



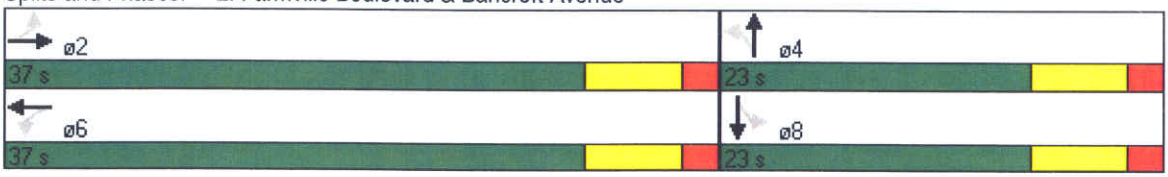
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	722	52	86	1091	54	70	92	86	66	112	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	0	3430	0	0	3437	0	0	1768	0	0	1792	0
Flt Permitted		0.840			0.801			0.798			0.798	
Satd. Flow (perm)	0	2887	0	0	2761	0	0	1431	0	0	1450	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1145			1538			989			307	
Travel Time (s)		22.3			30.0			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	896	0	0	1368	0	0	276	0	0	263	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	61.7%	61.7%	0.0%	61.7%	61.7%	0.0%	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		None	None		None	None		None	None	
Act Effct Green (s)		32.1			32.1			16.0			16.0	
Actuated g/C Ratio		0.55			0.55			0.28			0.28	
v/c Ratio		0.56			0.90			0.70			0.66	
Control Delay		10.6			22.8			29.6			27.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.6			22.8			29.6			27.3	
LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.6			22.8			29.6			27.3	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)		104			217			86			80	
Queue Length 95th (ft)		153			#376			#164			149	
Internal Link Dist (ft)		1065			1458			909			227	
Turn Bay Length (ft)												
Base Capacity (vph)		1594			1524			429			435	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.56			0.90			0.64			0.60	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 58.1
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 20.0 Intersection LOS: B
Intersection Capacity Utilization 88.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Farmville Boulevard & Bancroft Avenue



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	92	81	1054	84	54	767
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		175	0
Storage Lanes		0	1		1	2
Taper Length (ft)		100	100		100	100
Satd. Flow (prot)	1712	0	1649	1664	1736	2733
Flt Permitted			0.950	0.959	0.950	
Satd. Flow (perm)	1712	0	1649	1664	1736	2733
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	782			1306	1538	
Travel Time (s)	15.2			25.4	30.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)			46%			
Lane Group Flow (vph)	192	0	632	632	60	852
Turn Type			custom			pt+ov
Protected Phases	4		2	2	1	1 2
Permitted Phases			2			
Detector Phase	4		2	2	1	1 2
Switch Phase						
Minimum Initial (s)	7.0		10.0	10.0	7.0	
Minimum Split (s)	14.0		17.0	17.0	14.0	
Total Split (s)	22.0	0.0	54.0	54.0	14.0	68.0
Total Split (%)	24.4%	0.0%	60.0%	60.0%	15.6%	75.6%
Yellow Time (s)	5.0		5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	2.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	
Act Effct Green (s)	15.1		44.4	44.4	9.2	58.7
Actuated g/C Ratio	0.18		0.53	0.53	0.11	0.70
v/c Ratio	0.62		0.72	0.72	0.32	0.45
Control Delay	42.8		20.9	20.6	42.5	6.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	42.8		20.9	20.6	42.5	6.5
LOS	D		C	C	D	A

Lane Group	SET	SER	NWL	NWT	NEL	NER
Approach Delay	42.8			20.7	8.9	
Approach LOS	D			C	A	
Queue Length 50th (ft)	101		262	261	32	102
Queue Length 95th (ft)	171		403	398	71	139
Internal Link Dist (ft)	702			1226	1458	
Turn Bay Length (ft)					175	
Base Capacity (vph)	342		917	926	190	1954
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.56		0.69	0.68	0.32	0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 59.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: W. Fourteenth Street & Farmville Boulevard

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	22	137	22	1026	265	103	40	371	0	60	236	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	100		100	100		100	100		100
Satd. Flow (prot)	1770	1825	0	1736	1750	0	1736	1827	0	1736	1801	0
Flt Permitted	0.523			0.950			0.348			0.161		
Satd. Flow (perm)	974	1825	0	1736	1750	0	636	1827	0	294	1801	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		543			147			189			707	
Travel Time (s)		14.8			4.0			5.2			19.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	176	0	1140	408	0	44	412	0	67	290	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4	4					2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		17.0	17.0		17.0	17.0	
Total Split (s)	17.0	17.0	0.0	88.0	105.0	0.0	45.0	45.0	0.0	45.0	45.0	0.0
Total Split (%)	11.3%	11.3%	0.0%	58.7%	70.0%	0.0%	30.0%	30.0%	0.0%	30.0%	30.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	12.0	12.0		83.0	100.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.08	0.08		0.55	0.67		0.27	0.27		0.27	0.27	
v/c Ratio	0.31	1.21		1.19	0.35		0.26	0.85		0.86	0.60	
Control Delay	76.1	195.4		126.1	11.9		48.4	68.9		121.5	54.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	76.1	195.4		126.1	11.9		48.4	68.9		121.5	54.3	
LOS	E	F		F	B		D	E		F	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		181.1			96.0			66.9			66.9	
Approach LOS		F			F			E			E	
Queue Length 50th (ft)	23	~209		~1338	163		34	384		63	250	
Queue Length 95th (ft)	55	#369		#1604	223		73	#557		#164	353	
Internal Link Dist (ft)		463			67			109			627	
Turn Bay Length (ft)	50									200		
Base Capacity (vph)	78	146		961	1167		170	487		78	480	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.31	1.21		1.19	0.35		0.26	0.85		0.86	0.60	

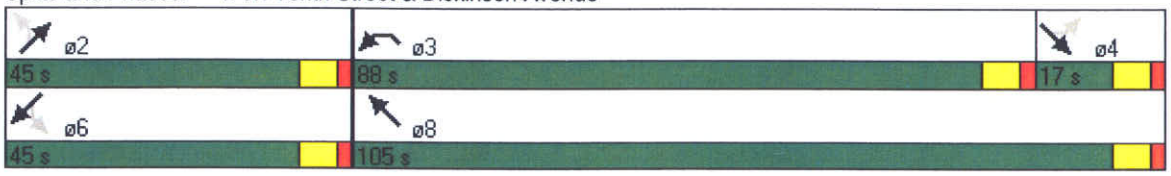
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 93.4 — Intersection LOS: F
Intersection Capacity Utilization 109.9% — ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: W. Tenth Street & Dickinson Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	847	133	286	1161	66	236	1552	372	40	716	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3402	0	1736	3443	0	1752	3403	0	1752	3473	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3402	0	1736	3443	0	1752	3403	0	1752	3473	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			25	
Link Distance (ft)		1633			628			931			570	
Travel Time (s)		44.5			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	1089	0	318	1363	0	262	2137	0	44	847	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		14.0	22.0		14.0	22.0	
Total Split (s)	14.0	43.0	0.0	24.0	53.0	0.0	32.0	69.0	0.0	14.0	51.0	0.0
Total Split (%)	9.3%	28.7%	0.0%	16.0%	35.3%	0.0%	21.3%	46.0%	0.0%	9.3%	34.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	9.0	38.0		19.0	50.8		26.0	66.8		9.0	47.0	
Actuated g/C Ratio	0.06	0.25		0.13	0.34		0.17	0.45		0.06	0.31	
v/c Ratio	0.59	1.26		1.45	1.17		0.86	1.41		0.42	0.78	
Control Delay	91.1	172.8		228.3	93.6		86.3	221.7		80.6	53.0	
Queue Delay	0.0	2.0		0.0	21.6		0.0	0.0		0.0	0.0	
Total Delay	91.1	174.7		228.3	115.2		86.3	221.7		80.6	53.0	
LOS	F	F		F	F		F	F		F	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		170.3			136.6			206.9			54.3	
Approach LOS		F			F			F			D	
Queue Length 50th (ft)	59	~702		~416	~851		250	~1506		42	401	
Queue Length 95th (ft)	#122	#842		m189	m158		#396	#1636		86	485	
Internal Link Dist (ft)		1553			548			851			490	
Turn Bay Length (ft)	50			125			125			125		
Base Capacity (vph)	104	862		220	1166		315	1516		105	1088	
Starvation Cap Reductn	0	0		0	47		0	0		0	0	
Spillback Cap Reductn	0	3		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.59	1.27		1.45	1.22		0.83	1.41		0.42	0.78	

Intersection Summary

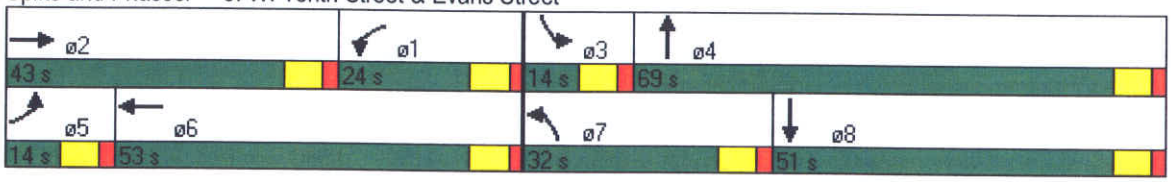
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 4 (3%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.45
Intersection Signal Delay: 158.5 Intersection LOS: F
Intersection Capacity Utilization 120.8% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 5: W. Tenth Street & Evans Street



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	365	441	117	265	589	81	144	832	243	65	718	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	175		0	50		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1736	3364	0	1736	3409	0	1736	1765	0	1736	1732	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3364	0	1736	3409	0	1736	1765	0	1736	1732	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1042	
Travel Time (s)		25.4			15.3			24.6			28.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	406	620	0	294	744	0	160	1194	0	72	1226	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases												
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0		14.0	23.0	
Total Split (s)	34.0	39.0	0.0	33.0	38.0	0.0	18.0	94.0	0.0	14.0	90.0	0.0
Total Split (%)	18.9%	21.7%	0.0%	18.3%	21.1%	0.0%	10.0%	52.2%	0.0%	7.8%	50.0%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		None	Max		None	None		None	None	
Act Effct Green (s)	29.0	34.0		28.0	33.0		13.0	89.0		9.0	85.0	
Actuated g/C Ratio	0.16	0.19		0.16	0.18		0.07	0.49		0.05	0.47	
v/c Ratio	1.45	0.98		1.09	1.19		1.28	1.37		0.83	1.50	
Control Delay	270.2	101.6		147.6	160.6		233.9	208.9		139.3	265.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	270.2	101.6		147.6	160.6		233.9	208.9		139.3	265.3	
LOS	F	F		F	F		F	F		F	F	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		168.3			157.0			211.9			258.4	
Approach LOS		F			F			F			F	
Queue Length 50th (ft)	~651	388		~389	~555		~238	~1853		86	~1998	
Queue Length 95th (ft)	#878	#521		#594	#693		#404	#2119		#190	#2267	
Internal Link Dist (ft)		1226			707			822			962	
Turn Bay Length (ft)	100			175			50			50		
Base Capacity (vph)	280	635		270	625		125	873		87	818	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.45	0.98		1.09	1.19		1.28	1.37		0.83	1.50	

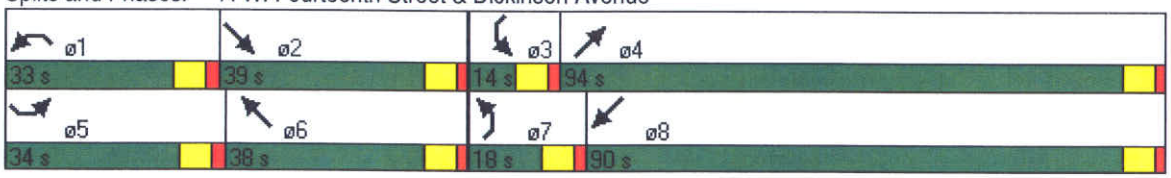
Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 203.1 Intersection LOS: F
Intersection Capacity Utilization 125.0% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix C

Intersection Analysis Output Reports

d) Build 2005

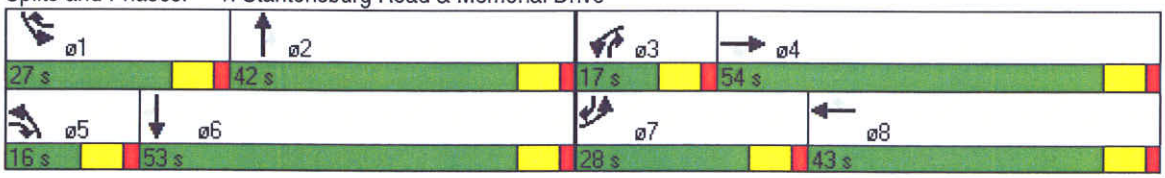
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	708	135	58	439	101	83	695	58	126	869	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	319	787	150	64	488	112	92	772	64	140	966	246
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	28.0	54.0	16.0	17.0	43.0	27.0	16.0	42.0	17.0	27.0	53.0	28.0
Total Split (%)	20.0%	38.6%	11.4%	12.1%	30.7%	19.3%	11.4%	30.0%	12.1%	19.3%	37.9%	20.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	20.0	40.5	56.4	11.2	31.7	54.9	10.9	50.1	66.2	18.3	57.4	82.4
Actuated g/C Ratio	0.14	0.29	0.40	0.08	0.23	0.39	0.08	0.36	0.47	0.13	0.41	0.59
v/c Ratio	0.66	0.78	0.24	0.46	0.62	0.18	0.35	0.43	0.09	0.62	0.48	0.27
Control Delay	63.5	51.4	27.4	71.3	40.6	27.4	64.7	36.9	23.9	69.5	32.4	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	51.4	27.4	71.3	40.6	27.4	64.7	36.9	23.9	69.5	32.4	16.0
LOS	E	D	C	E	D	C	E	D	C	E	C	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		51.6			41.3			38.8			33.3	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	143	346	89	60	165	61	41	198	32	122	238	107
Queue Length 95th (ft)	191	392	127	112	195	103	71	272	71	190	310	175
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	553	1215	632	149	942	653	276	1784	744	272	2026	939
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.65	0.24	0.43	0.52	0.17	0.33	0.43	0.09	0.51	0.48	0.26

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 28 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 41.2 Intersection LOS: D
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Stantonsburg Road & Memorial Drive



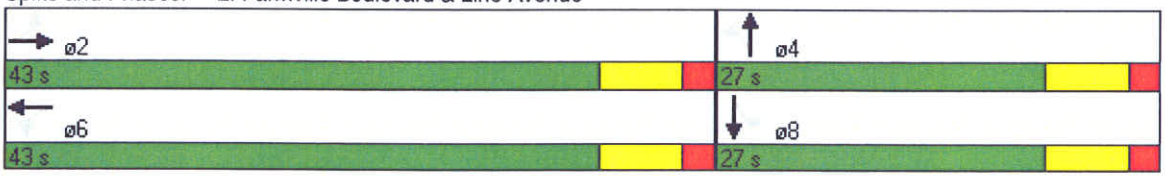
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	815	43	18	544	14	53	99	33	22	86	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3443	0	1736	3457	0	1787	1810	0	1787	1795	0
Flt Permitted	0.417			0.279			0.669			0.652		
Satd. Flow (perm)	762	3443	0	510	3457	0	1259	1810	0	1227	1795	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			989			307	
Travel Time (s)		19.5			26.2			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	954	0	20	620	0	59	147	0	24	138	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	27.0	27.0	0.0	27.0	27.0	0.0
Total Split (%)	61.4%	61.4%	0.0%	61.4%	61.4%	0.0%	38.6%	38.6%	0.0%	38.6%	38.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	50.8	50.8		50.8	50.8		13.0	13.0		13.0	13.0	
Actuated g/C Ratio	0.73	0.73		0.73	0.73		0.19	0.19		0.19	0.19	
v/c Ratio	0.08	0.38		0.05	0.25		0.25	0.44		0.11	0.41	
Control Delay	2.4	2.6		3.3	4.7		25.9	28.7		23.1	28.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.4	2.6		3.3	4.7		25.9	28.7		23.1	28.2	
LOS	A	A		A	A		C	C		C	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.5			4.6			27.9			27.4	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	5	83		6	127		22	57		9	53	
Queue Length 95th (ft)	m8	96		m3	28		49	99		26	94	
Internal Link Dist (ft)		1065			1455			909			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	553	2499		370	2509		396	569		386	564	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.38		0.05	0.25		0.15	0.26		0.06	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 33 (47%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Farmville Boulevard & Line Avenue



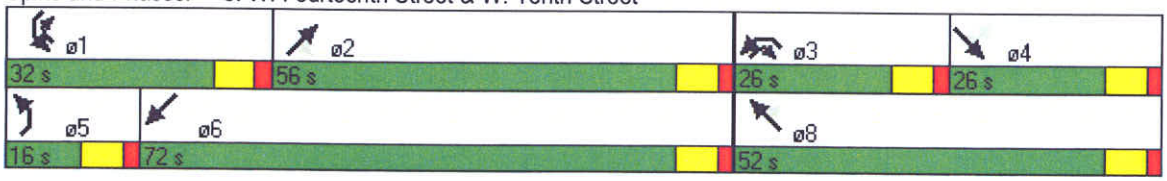
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	29	50	18	207	62	122	27	583	254	130	362	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1773	0	3400	1845	1568	1736	3471	1553	1736	3426	0
Flt Permitted	0.712			0.950			0.950			0.950		
Satd. Flow (perm)	1313	1773	0	3400	1845	1568	1736	3471	1553	1736	3426	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	76	0	230	69	136	30	648	282	144	440	0
Turn Type	Perm			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases		4		3	8	1	5	2	3	1	6	
Permitted Phases	4					8			2			
Detector Phase	4	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	23.0	23.0		14.0	23.0	14.0	14.0	23.0	14.0	14.0	23.0	
Total Split (s)	26.0	26.0	0.0	26.0	52.0	32.0	16.0	56.0	26.0	32.0	72.0	0.0
Total Split (%)	18.6%	18.6%	0.0%	18.6%	37.1%	22.9%	11.4%	40.0%	18.6%	22.9%	51.4%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead		Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	13.3	13.3		16.7	35.1	58.9	10.3	71.1	92.8	18.9	85.2	
Actuated g/C Ratio	0.10	0.10		0.12	0.25	0.42	0.07	0.51	0.66	0.14	0.61	
v/c Ratio	0.26	0.45		0.57	0.15	0.21	0.23	0.37	0.27	0.62	0.21	
Control Delay	62.4	67.5		63.4	39.7	24.6	94.1	7.2	4.6	61.3	4.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.4	67.5		63.4	39.7	24.6	94.1	7.2	4.6	61.3	4.1	
LOS	E	E		E	D	C	F	A	A	E	A	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		66.0			47.5			9.2			18.2	
Approach LOS		E			D			A			B	
Queue Length 50th (ft)	28	67		103	49	78	29	20	14	88	17	
Queue Length 95th (ft)	61	117		143	84	102	66	290	233	99	157	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	197	266		510	619	751	140	1762	1077	335	2086	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.29		0.45	0.11	0.18	0.21	0.37	0.26	0.43	0.21	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 14 (10%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 22.6 Intersection LOS: C
Intersection Capacity Utilization 48.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	756	32	0	547	0	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	840	36	0	608	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			876		1162	438
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			611		933	119
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			845		236	810

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	560	316	304	304	24
Volume Left	0	0	0	0	0
Volume Right	0	36	0	0	24
cSH	1700	1700	1700	1700	810
Volume to Capacity	0.33	0.19	0.18	0.18	0.03
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	9.6
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.6
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

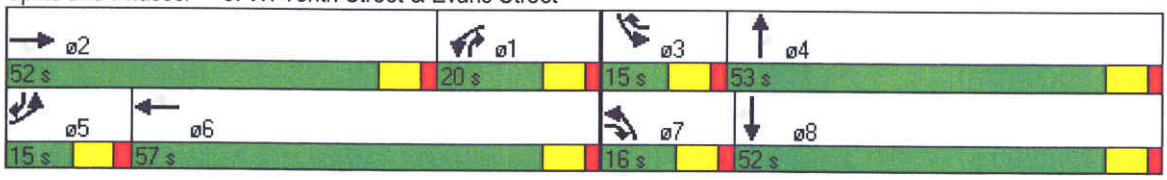
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	621	113	174	466	57	81	343	166	108	693	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		650	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		3235			628			931			570	
Travel Time (s)		55.1			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	690	126	193	518	63	90	381	184	120	770	60
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	15.0	52.0	16.0	20.0	57.0	15.0	16.0	53.0	20.0	15.0	52.0	15.0
Total Split (%)	10.7%	37.1%	11.4%	14.3%	40.7%	10.7%	11.4%	37.9%	14.3%	10.7%	37.1%	10.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.3	54.8	65.3	14.5	61.9	76.8	10.4	40.7	55.3	9.9	40.2	55.5
Actuated g/C Ratio	0.07	0.39	0.47	0.10	0.44	0.55	0.07	0.29	0.40	0.07	0.29	0.40
v/c Ratio	0.33	0.51	0.17	0.55	0.34	0.07	0.36	0.37	0.30	0.50	0.76	0.10
Control Delay	93.5	21.2	8.9	56.1	18.1	8.9	65.5	39.8	19.1	70.2	50.7	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.5	21.2	8.9	56.1	18.1	8.9	65.5	39.8	19.1	70.2	50.7	25.2
LOS	F	C	A	E	B	A	E	D	B	E	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		23.0			26.8			37.5			51.6	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	40	140	25	89	149	11	40	144	83	55	337	34
Queue Length 95th (ft)	82	173	39	131	164	21	70	178	114	89	385	61
Internal Link Dist (ft)		3155			548			851			490	
Turn Bay Length (ft)	400		425	475		300	325		650	350		275
Base Capacity (vph)	131	1360	730	361	1535	853	267	1202	624	243	1177	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.51	0.17	0.53	0.34	0.07	0.34	0.32	0.29	0.49	0.65	0.10

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 48 (34%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 35.2 Intersection LOS: D
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: W. Tenth Street & Evans Street



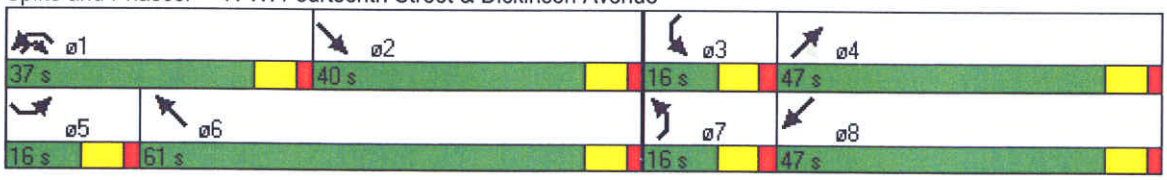
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	322	69	190	263	16	57	166	190	20	208	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1752	3410	0	1752	3473	0	1752	1845	1568	1752	1795	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3473	0	1752	1845	1568	1752	1795	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	435	0	211	310	0	63	184	211	22	281	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	16.0	40.0	0.0	37.0	61.0	0.0	16.0	47.0	37.0	16.0	47.0	0.0
Total Split (%)	11.4%	28.6%	0.0%	26.4%	43.6%	0.0%	11.4%	33.6%	26.4%	11.4%	33.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	10.5	42.9		21.4	57.9		10.6	29.2	55.8	9.8	25.6	
Actuated g/C Ratio	0.09	0.37		0.18	0.49		0.09	0.25	0.48	0.08	0.22	
v/c Ratio	0.32	0.35		0.66	0.18		0.40	0.40	0.28	0.15	0.72	
Control Delay	61.5	31.7		56.8	20.6		63.8	41.2	19.9	58.4	54.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.5	31.7		56.8	20.6		63.8	41.2	19.9	58.4	54.5	
LOS	E	C		E	C		E	D	B	E	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		34.7			35.2			34.5			54.8	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	38	134		161	77		49	128	107	17	213	
Queue Length 95th (ft)	85	218		248	123		103	202	148	47	310	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	170	1249		495	1715		170	684	903	170	665	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.29	0.35		0.43	0.18		0.37	0.27	0.23	0.13	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 117.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 38.3 — Intersection LOS: D
Intersection Capacity Utilization 57.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



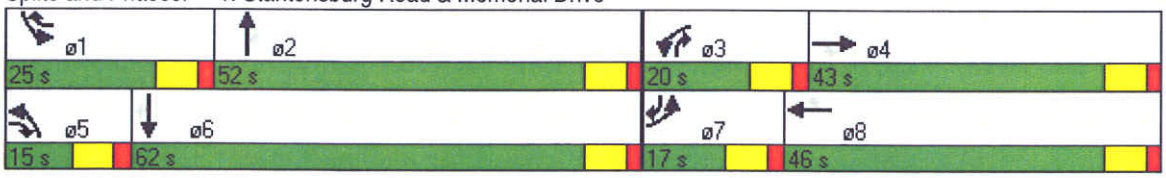
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	381	72	86	659	151	124	1042	86	126	864	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	423	80	96	732	168	138	1158	96	140	960	251
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	17.0	43.0	15.0	20.0	46.0	25.0	15.0	52.0	20.0	25.0	62.0	17.0
Total Split (%)	12.1%	30.7%	10.7%	14.3%	32.9%	17.9%	10.7%	37.1%	14.3%	17.9%	44.3%	12.1%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	11.8	35.2	51.2	13.6	37.0	59.6	11.0	53.6	72.2	17.5	60.2	77.0
Actuated g/C Ratio	0.08	0.25	0.37	0.10	0.26	0.43	0.08	0.38	0.52	0.12	0.43	0.55
v/c Ratio	0.60	0.48	0.14	0.57	0.80	0.25	0.52	0.61	0.12	0.65	0.45	0.30
Control Delay	71.2	46.4	29.9	76.6	38.5	24.9	69.6	37.5	19.4	72.4	29.6	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.2	46.4	29.9	76.6	38.5	24.9	69.6	37.5	19.4	72.4	29.6	18.8
LOS	E	D	C	E	D	C	E	D	B	E	C	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		50.7			39.8			39.4			32.1	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	78	174	47	89	217	88	62	317	45	122	233	125
Queue Length 95th (ft)	119	222	87	153	261	131	100	388	83	195	275	185
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	289	942	568	186	1017	689	264	1911	817	247	2123	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.45	0.14	0.52	0.72	0.24	0.52	0.61	0.12	0.57	0.45	0.30

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 132 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 39.0 Intersection LOS: D
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Stantonsburg Road & Memorial Drive



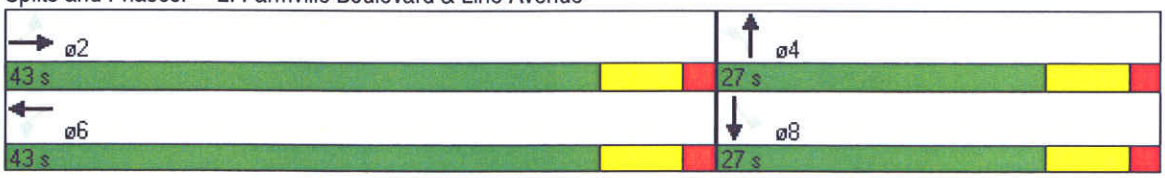
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	544	29	27	815	22	43	81	27	26	106	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3443	0	1736	3457	0	1787	1810	0	1787	1797	0
Flt Permitted	0.281			0.407			0.611			0.680		
Satd. Flow (perm)	513	3443	0	744	3457	0	1149	1810	0	1279	1797	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			989			307	
Travel Time (s)		19.5			26.2			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	636	0	30	930	0	48	120	0	29	169	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	27.0	27.0	0.0	27.0	27.0	0.0
Total Split (%)	61.4%	61.4%	0.0%	61.4%	61.4%	0.0%	38.6%	38.6%	0.0%	38.6%	38.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	46.2	46.2		46.2	46.2		13.8	13.8		13.8	13.8	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.20	0.20		0.20	0.20	
v/c Ratio	0.08	0.28		0.06	0.41		0.21	0.34		0.11	0.48	
Control Delay	2.7	2.7		2.2	3.7		24.3	25.7		22.3	28.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.7	2.7		2.2	3.7		24.3	25.7		22.3	28.6	
LOS	A	A		A	A		C	C		C	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.7			3.7			25.3			27.7	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	2	25		2	76		18	45		10	65	
Queue Length 95th (ft)	m6	54		m8	90		41	81		29	110	
Internal Link Dist (ft)		1065			1455			909			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	339	2270		491	2280		361	569		402	565	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.08	0.28		0.06	0.41		0.13	0.21		0.07	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 64 (91%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 49.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Farmville Boulevard & Line Avenue



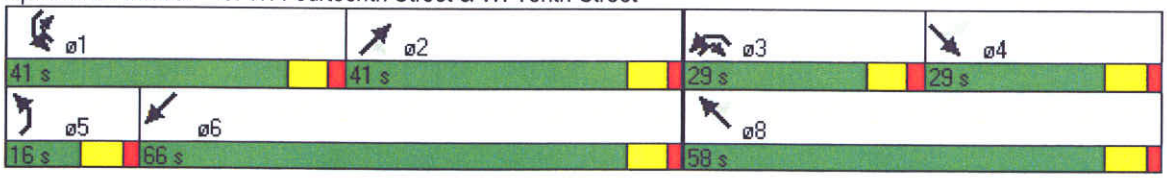
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	43	76	27	265	59	159	18	389	169	192	556	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1773	0	3400	1845	1568	1736	3471	1553	1736	3436	0
Flt Permitted	0.714			0.950			0.950			0.950		
Satd. Flow (perm)	1317	1773	0	3400	1845	1568	1736	3471	1553	1736	3436	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	114	0	294	66	177	20	432	188	213	660	0
Turn Type	Perm			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases		4		3	8	1	5	2	3	1	6	
Permitted Phases	4					8			2			
Detector Phase	4	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	23.0	23.0		14.0	23.0	14.0	14.0	23.0	14.0	14.0	23.0	
Total Split (s)	29.0	29.0	0.0	29.0	58.0	41.0	16.0	41.0	29.0	41.0	66.0	0.0
Total Split (%)	20.7%	20.7%	0.0%	20.7%	41.4%	29.3%	11.4%	29.3%	20.7%	29.3%	47.1%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead		Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	16.3	16.3		19.3	40.6	70.1	9.7	59.9	84.2	24.5	80.3	
Actuated g/C Ratio	0.12	0.12		0.14	0.29	0.50	0.07	0.43	0.60	0.18	0.57	
v/c Ratio	0.31	0.55		0.63	0.12	0.23	0.17	0.29	0.20	0.70	0.33	
Control Delay	60.7	67.9		62.7	34.8	18.7	88.6	13.8	8.2	65.3	4.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.7	67.9		62.7	34.8	18.7	88.6	13.8	8.2	65.3	4.0	
LOS	E	E		E	C	B	F	B	A	E	A	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		65.8			44.8			14.5			19.0	
Approach LOS		E			D			B			B	
Queue Length 50th (ft)	41	100		131	44	89	19	49	16	133	20	
Queue Length 95th (ft)	80	159		175	75	100	48	193	159	158	45	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	226	304		583	698	914	137	1485	986	446	1971	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.38		0.50	0.09	0.19	0.15	0.29	0.19	0.48	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 137 (98%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 27.4 Intersection LOS: C
Intersection Capacity Utilization 49.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	516	22	0	788	0	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	573	24	0	876	0	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			598		1023	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			411		870	89
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			1049		270	883

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	382	216	438	438	36
Volume Left	0	0	0	0	0
Volume Right	0	24	0	0	36
cSH	1700	1700	1700	1700	883
Volume to Capacity	0.22	0.13	0.26	0.26	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	9.2
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.2
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

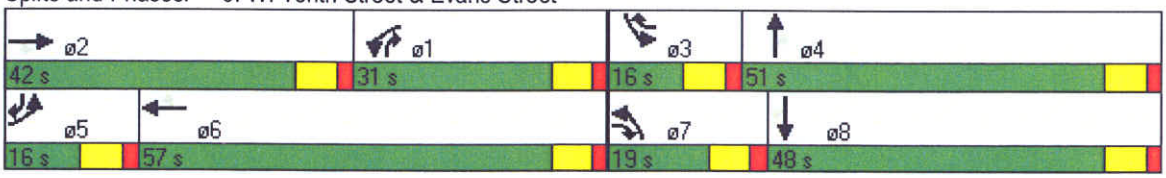
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	414	76	213	569	69	150	636	307	46	297	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		650	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		3235			628			931			570	
Travel Time (s)		55.1			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	460	84	237	632	77	167	707	341	51	330	26
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	16.0	42.0	19.0	31.0	57.0	16.0	19.0	51.0	31.0	16.0	48.0	16.0
Total Split (%)	11.4%	30.0%	13.6%	22.1%	40.7%	11.4%	13.6%	36.4%	22.1%	11.4%	34.3%	11.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.2	48.8	62.0	24.4	65.9	80.6	13.2	37.0	61.4	9.8	33.6	48.8
Actuated g/C Ratio	0.07	0.35	0.44	0.17	0.47	0.58	0.09	0.26	0.44	0.07	0.24	0.35
v/c Ratio	0.22	0.38	0.12	0.40	0.39	0.09	0.52	0.76	0.50	0.22	0.39	0.05
Control Delay	85.8	33.5	10.1	35.1	10.7	4.2	66.4	52.9	19.5	63.5	45.3	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	33.5	10.1	35.1	10.7	4.2	66.4	52.9	19.5	63.5	45.3	27.9
LOS	F	C	B	D	B	A	E	D	B	E	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.6			16.2			45.4			46.5	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	27	121	15	101	46	5	75	313	156	23	135	16
Queue Length 95th (ft)	60	181	40	143	130	10	114	360	185	45	167	34
Internal Link Dist (ft)		3155			548			851			490	
Turn Bay Length (ft)	400		425	475		300	325		650	350		275
Base Capacity (vph)	139	1210	697	625	1633	908	341	1152	706	267	1077	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.38	0.12	0.38	0.39	0.08	0.49	0.61	0.48	0.19	0.31	0.05

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 28 (20%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 61.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: W. Tenth Street & Evans Street



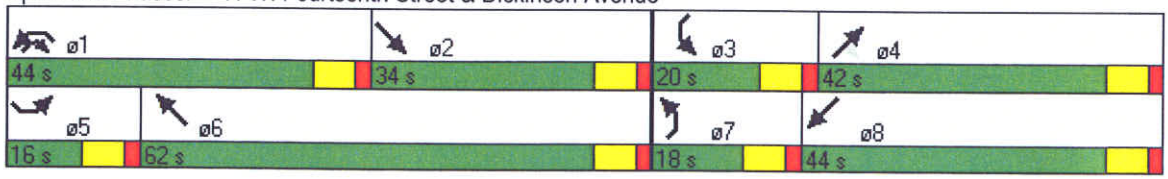
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	40	294	64	233	332	20	71	203	233	16	170	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1752	3410	0	1752	3477	0	1752	1845	1568	1752	1795	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3410	0	1752	3477	0	1752	1845	1568	1752	1795	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	398	0	259	391	0	79	226	259	18	230	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	16.0	34.0	0.0	44.0	62.0	0.0	18.0	42.0	44.0	20.0	44.0	0.0
Total Split (%)	11.4%	24.3%	0.0%	31.4%	44.3%	0.0%	12.9%	30.0%	31.4%	14.3%	31.4%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	10.3	40.3		24.8	58.8		11.8	30.1	60.1	9.7	22.5	
Actuated g/C Ratio	0.09	0.35		0.21	0.51		0.10	0.26	0.52	0.08	0.19	
v/c Ratio	0.28	0.34		0.69	0.22		0.44	0.47	0.32	0.12	0.66	
Control Delay	59.9	32.8		53.8	19.8		62.1	41.5	17.4	57.2	54.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	59.9	32.8		53.8	19.8		62.1	41.5	17.4	57.2	54.7	
LOS	E	C		D	B		E	D	B	E	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		35.5			33.3			33.3			54.9	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	33	123		195	97		60	137	100	14	173	
Queue Length 95th (ft)	77	204		285	149		120	250	170	40	261	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	171	1183		607	1761		202	618	1019	234	622	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.26	0.34		0.43	0.22		0.39	0.37	0.25	0.08	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 116.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 36.7 — Intersection LOS: D
Intersection Capacity Utilization 56.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix C

Intersection Analysis Output Reports

e) Build 2010

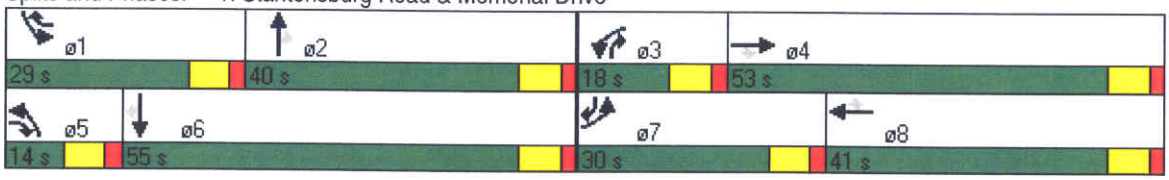
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	336	753	152	71	467	117	94	744	71	146	930	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	373	837	169	79	519	130	104	827	79	162	1033	287
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	30.0	53.0	14.0	18.0	41.0	29.0	14.0	40.0	18.0	29.0	55.0	30.0
Total Split (%)	21.4%	37.9%	10.0%	12.9%	29.3%	20.7%	10.0%	28.6%	12.9%	20.7%	39.3%	21.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	22.2	42.1	57.4	12.0	31.9	56.7	10.4	46.2	63.1	19.8	55.6	82.8
Actuated g/C Ratio	0.16	0.30	0.41	0.09	0.23	0.40	0.07	0.33	0.45	0.14	0.40	0.59
v/c Ratio	0.70	0.80	0.27	0.53	0.66	0.21	0.42	0.50	0.11	0.67	0.53	0.32
Control Delay	63.0	51.4	27.7	64.2	42.9	26.8	67.3	40.8	25.6	70.1	34.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	51.4	27.7	64.2	42.9	26.8	67.3	40.8	25.6	70.1	34.4	16.1
LOS	E	D	C	E	D	C	E	D	C	E	C	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		51.6			42.3			42.3			34.7	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	167	368	98	71	187	76	46	226	42	141	269	131
Queue Length 95th (ft)	219	423	148	124	233	122	79	299	85	214	328	193
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	601	1190	637	161	893	675	249	1645	712	295	1961	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.70	0.27	0.49	0.58	0.19	0.42	0.50	0.11	0.55	0.53	0.31

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 135 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 42.7 Intersection LOS: D
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

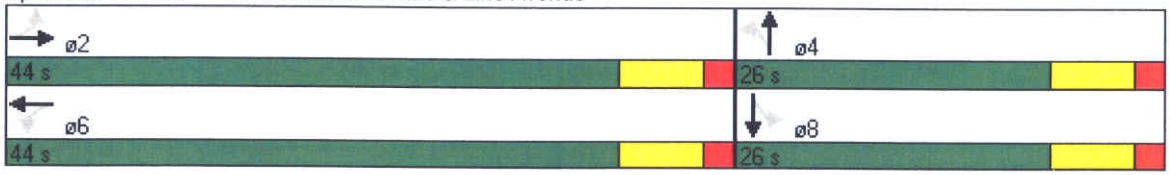


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	885	54	18	590	20	66	102	33	30	87	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3440	0	1736	3454	0	1787	1812	0	1787	1789	0
Flt Permitted	0.391			0.249			0.661			0.645		
Satd. Flow (perm)	714	3440	0	455	3454	0	1243	1812	0	1213	1789	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			989			307	
Travel Time (s)		19.5			26.2			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	1043	0	20	678	0	73	150	0	33	144	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	44.0	44.0	0.0	44.0	44.0	0.0	26.0	26.0	0.0	26.0	26.0	0.0
Total Split (%)	62.9%	62.9%	0.0%	62.9%	62.9%	0.0%	37.1%	37.1%	0.0%	37.1%	37.1%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	50.7	50.7		50.7	50.7		13.1	13.1		13.1	13.1	
Actuated g/C Ratio	0.72	0.72		0.72	0.72		0.19	0.19		0.19	0.19	
v/c Ratio	0.09	0.42		0.06	0.27		0.31	0.44		0.15	0.43	
Control Delay	2.4	2.6		3.0	4.3		27.1	28.6		23.7	28.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.4	2.6		3.0	4.3		27.1	28.6		23.7	28.4	
LOS	A	A		A	A		C	C		C	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.5			4.3			28.1			27.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	6	86		5	111		27	58		12	55	
Queue Length 95th (ft)	m8	101		m5	145		58	101		32	97	
Internal Link Dist (ft)		1065			1455			909			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	517	2491		330	2502		373	544		364	537	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.42		0.06	0.27		0.20	0.28		0.09	0.27	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 3 (4%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Farmville Boulevard & Line Avenue



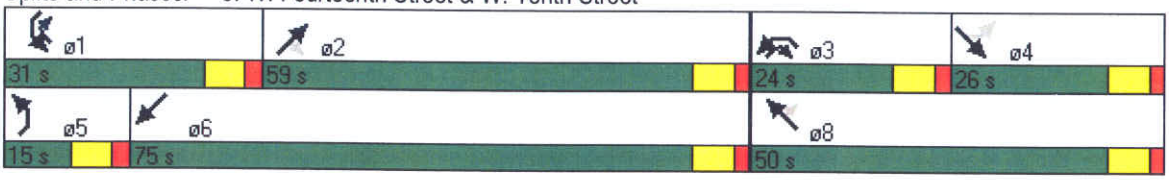
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	37	55	22	215	67	134	32	650	261	143	404	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1767	0	3400	1845	1568	1736	3471	1553	1736	3423	0
Flt Permitted	0.709			0.950			0.950			0.950		
Satd. Flow (perm)	1308	1767	0	3400	1845	1568	1736	3471	1553	1736	3423	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	85	0	239	74	149	36	722	290	159	496	0
Turn Type	Perm			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases		4		3	8	1	5	2	3	1	6	
Permitted Phases	4					8			2			
Detector Phase	4	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	23.0	23.0		14.0	23.0	14.0	14.0	23.0	14.0	14.0	23.0	
Total Split (s)	26.0	26.0	0.0	24.0	50.0	31.0	15.0	59.0	24.0	31.0	75.0	0.0
Total Split (%)	18.6%	18.6%	0.0%	17.1%	35.7%	22.1%	10.7%	42.1%	17.1%	22.1%	53.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead		Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.1	14.1		16.6	35.7	60.8	10.4	69.2	90.9	20.1	81.7	
Actuated g/C Ratio	0.10	0.10		0.12	0.26	0.43	0.07	0.49	0.65	0.14	0.58	
v/c Ratio	0.31	0.48		0.59	0.16	0.22	0.28	0.42	0.29	0.64	0.25	
Control Delay	63.4	67.7		64.5	39.5	23.8	95.7	10.4	6.3	73.8	7.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.4	67.7		64.5	39.5	23.8	95.7	10.4	6.3	73.8	7.7	
LOS	E	E		E	D	C	F	B	A	E	A	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		66.3			47.3			12.2			23.8	
Approach LOS		E			D			B			C	
Queue Length 50th (ft)	35	74		107	52	83	35	95	44	133	95	
Queue Length 95th (ft)	73	127		151	89	110	73	357	268	210	122	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	196	265		461	593	748	135	1717	1034	323	1997	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.21	0.32		0.52	0.12	0.20	0.27	0.42	0.28	0.49	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 120 (86%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 25.6 Intersection LOS: C
Intersection Capacity Utilization 51.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	847	37	0	646	0	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	941	41	0	718	0	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			982		1321	491
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		1068	113
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			779		188	798

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	627	355	359	359	27
Volume Left	0	0	0	0	0
Volume Right	0	41	0	0	27
cSH	1700	1700	1700	1700	798
Volume to Capacity	0.37	0.21	0.21	0.21	0.03
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	9.7
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.7
Approach LOS					A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

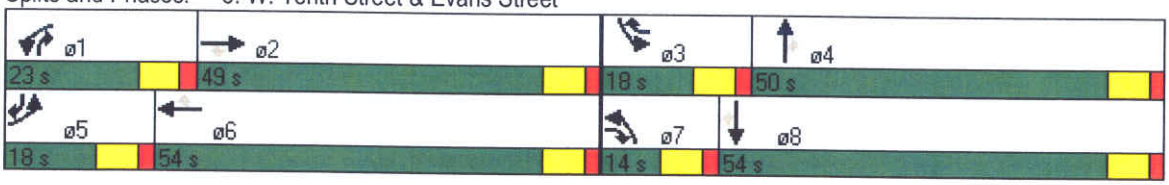
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	648	149	225	491	84	106	422	214	169	810	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		650	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		3235			628			931			570	
Travel Time (s)		55.1			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	720	166	250	546	93	118	469	238	188	900	127
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	18.0	49.0	14.0	23.0	54.0	18.0	14.0	50.0	23.0	18.0	54.0	18.0
Total Split (%)	12.9%	35.0%	10.0%	16.4%	38.6%	12.9%	10.0%	35.7%	16.4%	12.9%	38.6%	12.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	49.6	63.6	16.6	53.7	71.4	9.0	41.1	62.7	12.7	44.8	62.3
Actuated g/C Ratio	0.09	0.35	0.45	0.12	0.38	0.51	0.06	0.29	0.45	0.09	0.32	0.44
v/c Ratio	0.57	0.58	0.24	0.63	0.41	0.12	0.54	0.46	0.34	0.61	0.80	0.18
Control Delay	91.0	24.7	19.3	74.3	24.2	14.3	73.1	41.4	25.9	70.2	49.4	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.0	24.7	19.3	74.3	24.2	14.3	73.1	41.4	25.9	70.2	49.4	23.1
LOS	F	C	B	E	C	B	E	D	C	E	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		29.8			37.2			41.5			49.9	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	84	145	60	122	126	31	54	182	135	86	389	66
Queue Length 95th (ft)	145	182	83	169	157	52	89	228	191	128	456	106
Internal Link Dist (ft)		3155			548			851			490	
Turn Bay Length (ft)	400		425	475		300	325		650	350		275
Base Capacity (vph)	165	1231	706	433	1331	795	219	1127	718	316	1227	706
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.58	0.24	0.58	0.41	0.12	0.54	0.42	0.33	0.59	0.73	0.18

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 24 (17%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 69.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: W. Tenth Street & Evans Street



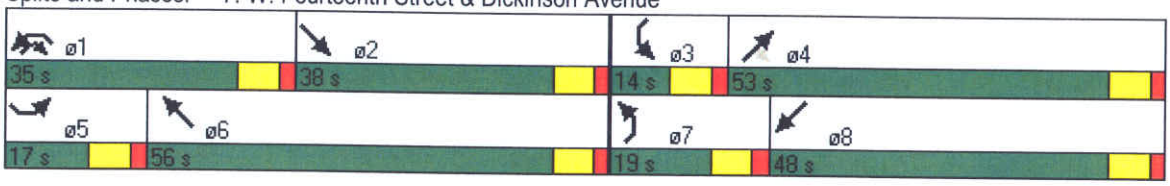
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	342	89	191	279	21	73	199	191	26	248	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1752	3396	0	1752	3470	0	1752	1845	1568	1752	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3396	0	1752	3470	0	1752	1845	1568	1752	1799	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	479	0	212	333	0	81	221	212	29	332	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	17.0	38.0	0.0	35.0	56.0	0.0	19.0	53.0	35.0	14.0	48.0	0.0
Total Split (%)	12.1%	27.1%	0.0%	25.0%	40.0%	0.0%	13.6%	37.9%	25.0%	10.0%	34.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	11.0	38.2		21.9	53.2		12.4	35.7	62.8	9.4	29.9	
Actuated g/C Ratio	0.09	0.32		0.18	0.45		0.10	0.30	0.53	0.08	0.25	
v/c Ratio	0.34	0.44		0.66	0.21		0.45	0.40	0.26	0.21	0.73	
Control Delay	63.1	37.5		57.8	25.0		63.8	36.6	16.3	62.7	52.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	63.1	37.5		57.8	25.0		63.8	36.6	16.3	62.7	52.7	
LOS	E	D		E	C		E	D	B	E	D	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		40.1			37.8			32.5			53.5	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	44	163		163	92		63	149	99	23	254	
Queue Length 95th (ft)	96	264		261	150		126	223	132	60	364	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	184	1090		459	1552		214	773	950	138	676	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.30	0.44		0.46	0.21		0.38	0.29	0.22	0.21	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 119
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 39.9 — Intersection LOS: D
Intersection Capacity Utilization 61.5% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



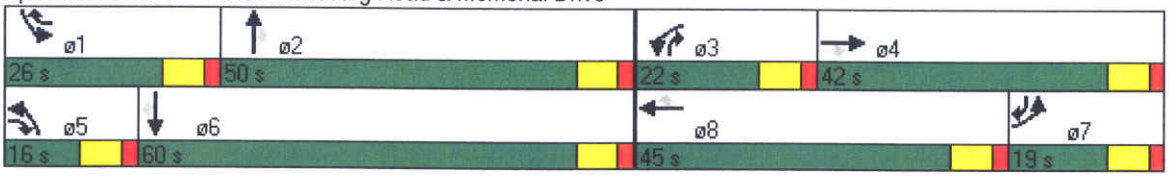
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	406	82	106	700	175	140	1117	106	146	925	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	50		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		631			1145			1101			1010	
Travel Time (s)		9.6			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	451	91	118	778	194	156	1241	118	162	1028	292
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	19.0	42.0	16.0	22.0	45.0	26.0	16.0	50.0	22.0	26.0	60.0	19.0
Total Split (%)	13.6%	30.0%	11.4%	15.7%	32.1%	18.6%	11.4%	35.7%	15.7%	18.6%	42.9%	13.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	14.3	36.7	52.9	15.3	37.7	56.4	11.2	49.2	69.5	18.8	56.8	71.2
Actuated g/C Ratio	0.10	0.26	0.38	0.11	0.27	0.40	0.08	0.35	0.50	0.13	0.41	0.51
v/c Ratio	0.58	0.50	0.16	0.62	0.83	0.31	0.58	0.71	0.15	0.70	0.51	0.37
Control Delay	67.4	45.9	29.6	73.2	37.4	17.1	71.3	42.7	20.7	74.3	32.7	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	45.9	29.6	73.2	37.4	17.1	71.3	42.7	20.7	74.3	32.7	14.6
LOS	E	D	C	E	D	B	E	D	C	E	C	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		49.7			37.7			44.0			33.7	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	91	183	54	87	291	10	72	371	59	141	260	110
Queue Length 95th (ft)	134	239	96	153	296	100	110	432	100	220	306	161
Internal Link Dist (ft)		551			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	349	924	588	211	992	651	272	1754	790	258	2006	784
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.49	0.15	0.56	0.78	0.30	0.57	0.71	0.15	0.63	0.51	0.37

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 111 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 40.3 Intersection LOS: D
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Stantonsburg Road & Memorial Drive



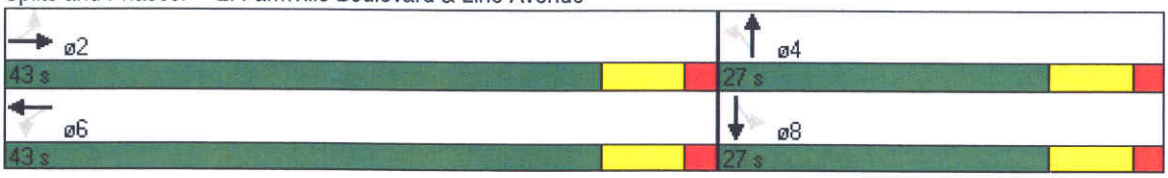
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	590	36	27	886	30	54	83	27	37	107	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3440	0	1736	3454	0	1787	1812	0	1787	1789	0
Flt Permitted	0.250			0.377			0.598			0.679		
Satd. Flow (perm)	457	3440	0	689	3454	0	1125	1812	0	1277	1789	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			989			307	
Travel Time (s)		19.5			26.2			19.3			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	696	0	30	1017	0	60	122	0	41	176	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	27.0	27.0	0.0	27.0	27.0	0.0
Total Split (%)	61.4%	61.4%	0.0%	61.4%	61.4%	0.0%	38.6%	38.6%	0.0%	38.6%	38.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	45.9	45.9		45.9	45.9		14.1	14.1		14.1	14.1	
Actuated g/C Ratio	0.66	0.66		0.66	0.66		0.20	0.20		0.20	0.20	
v/c Ratio	0.10	0.31		0.07	0.45		0.26	0.33		0.16	0.49	
Control Delay	7.9	9.6		3.7	4.5		25.2	25.3		22.9	28.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.9	9.6		3.7	4.5		25.2	25.3		22.9	28.6	
LOS	A	A		A	A		C	C		C	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.6			4.5			25.3			27.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	9	198		4	66		22	45		15	68	
Queue Length 95th (ft)	m32	251		m10	178		49	81		36	113	
Internal Link Dist (ft)		1065			1455			909			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	300	2254		451	2263		354	569		401	562	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.31		0.07	0.45		0.17	0.21		0.10	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 12 (17%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 10.2 Intersection LOS: B
Intersection Capacity Utilization 52.5% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Farmville Boulevard & Line Avenue



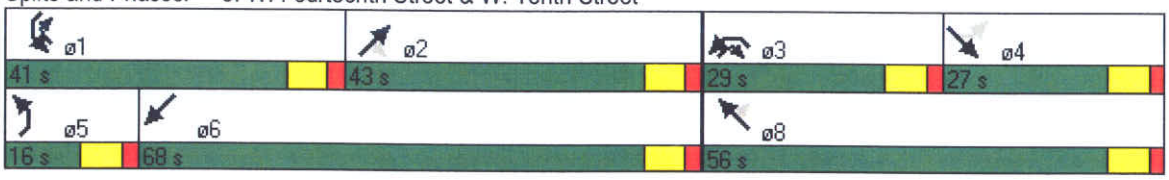
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	55	83	32	287	66	163	22	433	174	213	618	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1767	0	3400	1845	1568	1736	3471	1553	1736	3433	0
Flt Permitted	0.709			0.950			0.950			0.950		
Satd. Flow (perm)	1308	1767	0	3400	1845	1568	1736	3471	1553	1736	3433	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	128	0	319	73	181	24	481	193	237	743	0
Turn Type	Perm			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases		4		3	8	1	5	2	3	1	6	
Permitted Phases	4					8			2			
Detector Phase	4	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	23.0	23.0		14.0	23.0	14.0	14.0	23.0	14.0	14.0	23.0	
Total Split (s)	27.0	27.0	0.0	29.0	56.0	41.0	16.0	43.0	29.0	41.0	68.0	0.0
Total Split (%)	19.3%	19.3%	0.0%	20.7%	40.0%	29.3%	11.4%	30.7%	20.7%	29.3%	48.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lag	Lag		Lead		Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	17.2	17.2		20.2	42.3	73.7	9.7	56.3	81.5	26.3	78.5	
Actuated g/C Ratio	0.12	0.12		0.14	0.30	0.53	0.07	0.40	0.58	0.19	0.56	
v/c Ratio	0.38	0.59		0.65	0.13	0.22	0.20	0.34	0.21	0.73	0.39	
Control Delay	62.2	68.7		62.9	34.0	16.8	68.5	22.2	7.5	75.2	5.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.2	68.7		62.9	34.0	16.8	68.5	22.2	7.5	75.2	5.0	
LOS	E	E		E	C	B	E	C	A	E	A	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		66.6			44.6			19.7			22.0	
Approach LOS		E			D			B			C	
Queue Length 50th (ft)	52	112		143	48	85	23	86	27	183	30	
Queue Length 95th (ft)	96	175		189	81	97	55	125	62	203	135	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	206	278		583	672	933	136	1397	947	446	1926	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.30	0.46		0.55	0.11	0.19	0.18	0.34	0.20	0.53	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 95 (68%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 30.1 Intersection LOS: C
Intersection Capacity Utilization 51.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	568	24	0	884	0	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	631	27	0	982	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			658		1136	329
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			433		957	73
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1012		233	889

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	421	237	491	491	41
Volume Left	0	0	0	0	0
Volume Right	0	27	0	0	41
cSH	1700	1700	1700	1700	889
Volume to Capacity	0.25	0.14	0.29	0.29	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	9.2
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.2
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

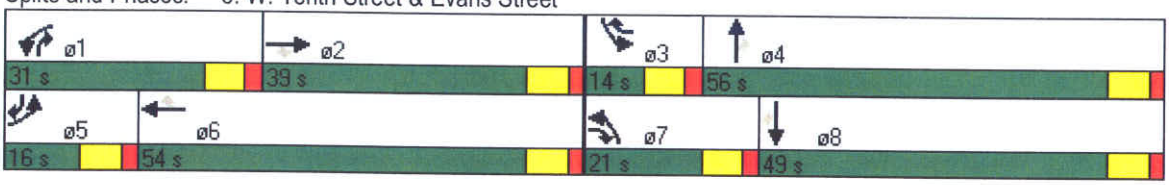
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	432	99	275	594	109	197	784	398	73	347	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		650	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		3235			628			931			570	
Travel Time (s)		55.1			12.2			18.1			15.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	480	110	306	660	121	219	871	442	81	386	54
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	16.0	39.0	21.0	31.0	54.0	14.0	21.0	56.0	31.0	14.0	49.0	16.0
Total Split (%)	11.4%	27.9%	15.0%	22.1%	38.6%	10.0%	15.0%	40.0%	22.1%	10.0%	35.0%	11.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.3	46.6	66.6	20.5	58.6	72.6	15.0	43.9	69.4	9.0	37.9	54.1
Actuated g/C Ratio	0.08	0.33	0.48	0.15	0.42	0.52	0.11	0.31	0.50	0.06	0.27	0.39
v/c Ratio	0.42	0.42	0.15	0.62	0.45	0.15	0.60	0.79	0.57	0.37	0.41	0.09
Control Delay	88.1	28.8	12.5	89.6	19.2	11.2	66.8	49.4	27.0	67.9	42.6	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.1	28.8	12.5	89.6	19.2	11.2	66.8	49.4	27.0	67.9	42.6	26.0
LOS	F	C	B	F	B	B	E	D	C	E	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		31.4			38.2			45.4			44.8	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	56	153	37	153	98	24	98	378	272	37	153	31
Queue Length 95th (ft)	106	195	43	203	123	38	143	427	314	65	189	57
Internal Link Dist (ft)		3155			548			851			490	
Turn Bay Length (ft)	400		425	475		300	325		650	350		275
Base Capacity (vph)	146	1156	750	625	1454	806	389	1277	839	219	1102	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.42	0.15	0.49	0.45	0.15	0.56	0.68	0.53	0.37	0.35	0.09

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 17 (12%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 40.8 Intersection LOS: D
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: W. Tenth Street & Evans Street



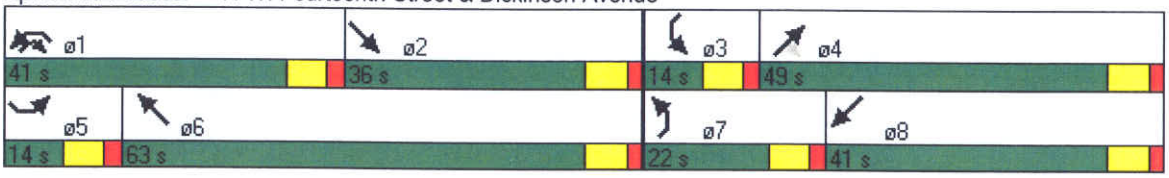
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	303	80	234	342	26	89	244	234	21	203	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1752	3396	0	1752	3466	0	1752	1845	1568	1752	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3396	0	1752	3466	0	1752	1845	1568	1752	1799	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	426	0	260	409	0	99	271	260	23	272	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	14.0	36.0	0.0	41.0	63.0	0.0	22.0	49.0	41.0	14.0	41.0	0.0
Total Split (%)	10.0%	25.7%	0.0%	29.3%	45.0%	0.0%	15.7%	35.0%	29.3%	10.0%	29.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	9.1	38.8		25.7	58.9		13.8	37.1	67.8	9.1	26.0	
Actuated g/C Ratio	0.07	0.31		0.21	0.47		0.11	0.30	0.54	0.07	0.21	
v/c Ratio	0.39	0.40		0.72	0.25		0.51	0.49	0.30	0.18	0.73	
Control Delay	69.3	38.4		58.6	22.5		64.3	41.3	16.7	63.0	58.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	69.3	38.4		58.6	22.5		64.3	41.3	16.7	63.0	58.5	
LOS	E	D		E	C		E	D	B	E	E	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		41.7			36.6			34.8			58.8	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)	40	144		203	108		78	199	128	18	212	
Queue Length 95th (ft)	90	241		304	170		147	286	157	51	316	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	128	1057		514	1638		243	661	990	128	528	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.39	0.40		0.51	0.25		0.41	0.41	0.26	0.18	0.52	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 124.6
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 40.4 — Intersection LOS: D
Intersection Capacity Utilization 59.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix C

Intersection Analysis Output Reports

f) Build 2030

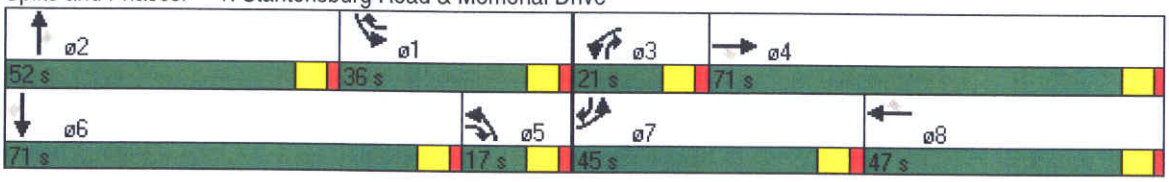
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	532	936	222	122	576	180	137	943	122	225	1175	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	200		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		1021			1145			1101			1010	
Travel Time (s)		15.5			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	591	1040	247	136	640	200	152	1048	136	250	1306	456
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	45.0	71.0	17.0	21.0	47.0	36.0	17.0	52.0	21.0	36.0	71.0	45.0
Total Split (%)	25.0%	39.4%	9.4%	11.7%	26.1%	20.0%	9.4%	28.9%	11.7%	20.0%	39.4%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	37.6	62.0	74.0	16.0	40.4	71.4	12.0	51.0	67.0	31.0	70.0	107.6
Actuated g/C Ratio	0.21	0.34	0.41	0.09	0.22	0.40	0.07	0.28	0.37	0.17	0.39	0.60
v/c Ratio	0.84	0.87	0.39	0.88	0.82	0.32	0.68	0.74	0.24	0.84	0.68	0.50
Control Delay	79.8	63.9	28.1	113.2	81.8	22.0	97.8	63.0	22.8	96.3	48.5	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	63.9	28.1	113.2	81.8	22.0	97.8	63.0	22.8	96.3	48.5	14.2
LOS	E	E	C	F	F	C	F	E	C	F	D	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		64.2			74.0			62.9			46.7	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)	345	595	146	147	379	85	92	423	71	291	480	203
Queue Length 95th (ft)	418	678	201	#293	486	122	135	486	112	#443	544	275
Internal Link Dist (ft)		941			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	748	1273	638	154	810	616	224	1413	578	296	1921	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.82	0.39	0.88	0.79	0.32	0.68	0.74	0.24	0.84	0.68	0.49

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 179 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 59.7 Intersection LOS: E
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive



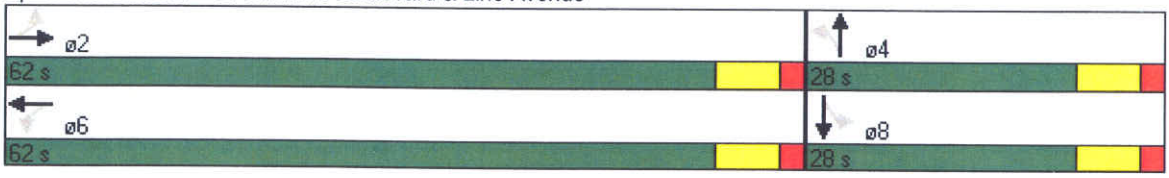
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	1161	97	18	778	43	114	117	33	65	92	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3429	0	1736	3443	0	1787	1819	0	1787	1770	0
Flt Permitted	0.289			0.150			0.556			0.558		
Satd. Flow (perm)	528	3429	0	274	3443	0	1046	1819	0	1050	1770	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			709			307	
Travel Time (s)		19.5			26.2			13.8			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	1398	0	20	912	0	127	167	0	72	168	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	62.0	62.0	0.0	62.0	62.0	0.0	28.0	28.0	0.0	28.0	28.0	0.0
Total Split (%)	68.9%	68.9%	0.0%	68.9%	68.9%	0.0%	31.1%	31.1%	0.0%	31.1%	31.1%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	62.9	62.9		62.9	62.9		17.1	17.1		17.1	17.1	
Actuated g/C Ratio	0.70	0.70		0.70	0.70		0.19	0.19		0.19	0.19	
v/c Ratio	0.18	0.58		0.10	0.38		0.64	0.48		0.36	0.50	
Control Delay	2.8	5.4		5.4	4.4		47.3	36.2		35.2	36.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.8	5.4		5.4	4.4		47.3	36.2		35.2	36.8	
LOS	A	A		A	A		D	D		D	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.3			4.4			41.0			36.3	
Approach LOS		A			A			D			D	
Queue Length 50th (ft)	5	54		3	73		67	85		36	86	
Queue Length 95th (ft)	m7	347		m9	200		118	135		71	137	
Internal Link Dist (ft)		1065			1455			629			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	369	2395		191	2405		267	465		268	452	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.58		0.10	0.38		0.48	0.36		0.27	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 43 (48%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 76.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Farmville Boulevard & Line Avenue



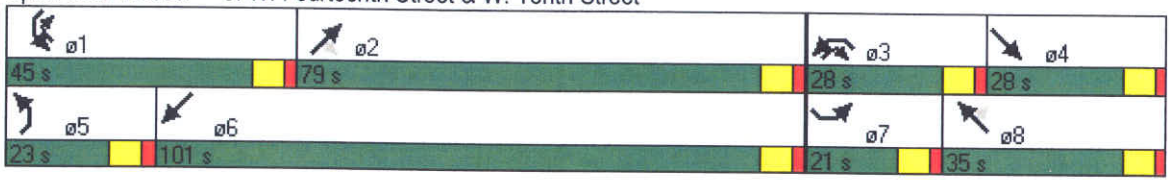
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	68	80	36	245	95	182	54	918	308	215	589	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1758	0	3400	1845	1568	1736	3471	1553	1736	3412	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1758	0	3400	1845	1568	1736	3471	1553	1736	3412	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	129	0	272	106	202	60	1020	342	239	737	0
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	14.0	23.0		14.0	23.0	14.0	23.0	23.0	14.0	14.0	23.0	
Total Split (s)	21.0	28.0	0.0	28.0	35.0	45.0	23.0	79.0	28.0	45.0	101.0	0.0
Total Split (%)	11.7%	15.6%	0.0%	15.6%	19.4%	25.0%	12.8%	43.9%	15.6%	25.0%	56.1%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.1	19.6		20.8	26.3	63.1	13.6	87.8	113.6	31.8	106.0	
Actuated g/C Ratio	0.08	0.11		0.12	0.15	0.35	0.08	0.49	0.63	0.18	0.59	
v/c Ratio	0.55	0.67		0.69	0.39	0.37	0.46	0.60	0.35	0.78	0.37	
Control Delay	95.0	94.0		86.1	73.2	44.1	95.1	18.3	10.7	115.2	8.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.0	94.0		86.1	73.2	44.1	95.1	18.3	10.7	115.2	8.4	
LOS	F	F		F	E	D	F	B	B	F	A	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		94.4			69.1			19.7			34.6	
Approach LOS		F			E			B			C	
Queue Length 50th (ft)	88	148		161	115	177	69	200	91	292	77	
Queue Length 95th (ft)	149	226		213	180	230	m119	465	209	m360	m106	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	156	225		434	308	621	174	1693	999	386	2010	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.49	0.57		0.63	0.34	0.33	0.34	0.60	0.34	0.62	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 150 (83%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 63.4% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	1210	54	0	954	0	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1344	60	0	1060	0	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.79		0.79	0.79
vC, conflicting volume			1404		1904	702
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			971		1607	77
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			545		75	761

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	896	508	530	530	40
Volume Left	0	0	0	0	0
Volume Right	0	60	0	0	40
cSH	1700	1700	1700	1700	761
Volume to Capacity	0.53	0.30	0.31	0.31	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.0
Lane LOS					A
Approach Delay (s)	0.0		0.0		10.0
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	199	756	341	494	537	184	208	719	428	416	1328	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		700	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	50		100	50		100	50		100	50		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		943			628			1142			874	
Travel Time (s)		16.1			12.2			22.2			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	221	840	379	549	597	204	231	799	476	462	1476	338
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	33.0	49.0	16.0	35.0	51.0	37.0	16.0	59.0	35.0	37.0	80.0	33.0
Total Split (%)	18.3%	27.2%	8.9%	19.4%	28.3%	20.6%	8.9%	32.8%	19.4%	20.6%	44.4%	18.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	26.7	44.0	55.0	30.0	47.3	82.2	11.0	56.1	86.1	29.9	75.0	106.7
Actuated g/C Ratio	0.15	0.24	0.31	0.17	0.26	0.46	0.06	0.31	0.48	0.17	0.42	0.59
v/c Ratio	0.86	0.99	0.80	0.98	0.66	0.29	1.11	0.73	0.63	0.82	1.01	0.36
Control Delay	85.5	74.0	33.7	92.7	51.3	35.3	167.4	60.4	23.2	84.7	77.4	20.2
Queue Delay	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	85.5	78.6	33.7	92.7	51.3	35.3	167.4	60.4	23.8	84.7	77.4	20.2
LOS	F	E	C	F	D	D	F	E	C	F	E	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		67.8			65.7			65.2			70.4	
Approach LOS		E			E			E			E	
Queue Length 50th (ft)	240	531	307	334	341	193	~160	452	228	272	~939	198
Queue Length 95th (ft)	#388	#670	426	#466	419	273	#258	535	301	339	#1097	268
Internal Link Dist (ft)		863			548			1062			794	
Turn Bay Length (ft)	400		425	475		300	325		700	350		275
Base Capacity (vph)	270	848	475	561	911	727	208	1092	750	604	1460	941
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	16	0	0	0	0	0	0	75	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	1.01	0.80	0.98	0.66	0.28	1.11	0.73	0.71	0.76	1.01	0.36

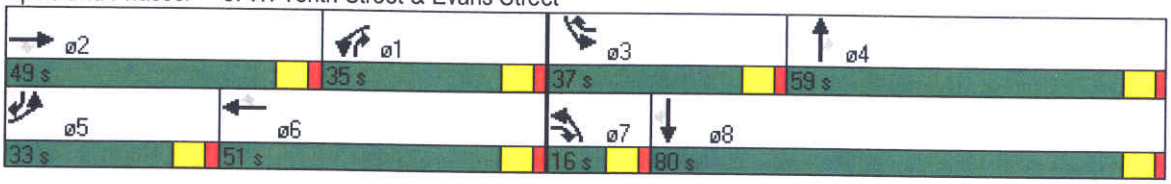
Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 49 (27%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 67.7 Intersection LOS: E
Intersection Capacity Utilization 94.3% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: W. Tenth Street & Evans Street



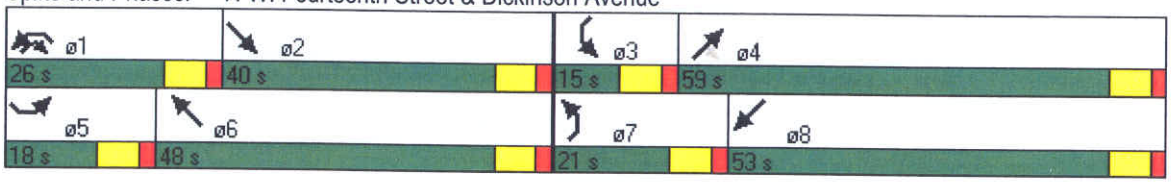
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	74	421	168	194	344	41	138	332	194	50	406	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	25		100	50		100	50		100
Satd. Flow (prot)	1752	3354	0	1752	3449	0	1752	1845	1568	1752	1802	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3354	0	1752	3449	0	1752	1845	1568	1752	1802	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	655	0	216	428	0	153	369	216	56	533	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	18.0	40.0	0.0	26.0	48.0	0.0	21.0	59.0	26.0	15.0	53.0	0.0
Total Split (%)	12.9%	28.6%	0.0%	18.6%	34.3%	0.0%	15.0%	42.1%	18.6%	10.7%	37.9%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	11.9	35.2		20.1	43.4		15.4	53.0	78.1	9.8	44.2	
Actuated g/C Ratio	0.09	0.26		0.15	0.32		0.11	0.39	0.58	0.07	0.33	
v/c Ratio	0.53	0.75		0.83	0.39		0.76	0.51	0.24	0.44	0.90	
Control Delay	73.1	53.0		82.0	37.8		83.5	35.2	15.4	73.4	63.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	73.1	53.0		82.0	37.8		83.5	35.2	15.4	73.4	63.3	
LOS	E	D		F	D		F	D	B	E	E	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		55.3			52.6			39.4			64.3	
Approach LOS		E			D			D			E	
Queue Length 50th (ft)	72	294		193	162		137	256	94	50	452	
Queue Length 95th (ft)	130	368		#328	213		#245	357	142	97	#650	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	170	876		274	1108		208	741	918	130	643	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.48	0.75		0.79	0.39		0.74	0.50	0.24	0.43	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 135
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 52.3 Intersection LOS: D
Intersection Capacity Utilization 77.9% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



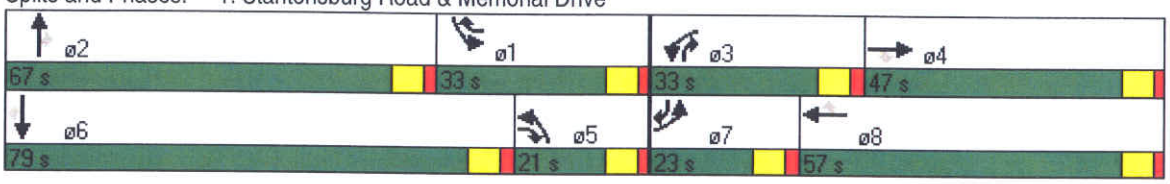
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	504	120	179	869	270	205	1415	184	225	1175	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	425		200	350		200	300		125	475		350
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (ft)	100		100	100		100	200		100	200		100
Satd. Flow (prot)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3367	3471	1553	1736	3471	1553	3367	4988	1553	1719	4940	1538
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		1148			1145			1101			1010	
Travel Time (s)		17.4			19.5			16.7			15.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	319	560	133	199	966	300	228	1572	204	250	1306	456
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	14.0	7.0	7.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	21.0	14.0	14.0	21.0	14.0
Total Split (s)	23.0	47.0	21.0	33.0	57.0	33.0	21.0	67.0	33.0	33.0	79.0	23.0
Total Split (%)	12.8%	26.1%	11.7%	18.3%	31.7%	18.3%	11.7%	37.2%	18.3%	18.3%	43.9%	12.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	18.0	44.3	60.3	25.7	52.0	80.0	16.0	62.0	87.7	28.0	74.0	92.0
Actuated g/C Ratio	0.10	0.25	0.34	0.14	0.29	0.44	0.09	0.34	0.49	0.16	0.41	0.51
v/c Ratio	0.95	0.65	0.26	0.80	0.96	0.43	0.76	0.92	0.27	0.94	0.64	0.58
Control Delay	115.7	65.8	27.0	101.9	64.9	12.1	96.9	65.6	14.8	114.5	44.2	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.7	65.8	27.0	101.9	64.9	12.1	96.9	65.6	14.8	114.5	44.2	21.3
LOS	F	E	C	F	E	B	F	E	B	F	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		76.4			59.1			64.0			47.8	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)	196	322	79	238	626	109	138	654	75	297	451	252
Queue Length 95th (ft)	#298	393	121	#341	#727	190	#195	720	108	#478	504	335
Internal Link Dist (ft)		1068			1065			1021			930	
Turn Bay Length (ft)	425		200	350		200	300		125	475		350
Base Capacity (vph)	337	855	520	270	1003	690	299	1718	777	267	2031	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.65	0.26	0.74	0.96	0.43	0.76	0.92	0.26	0.94	0.64	0.58

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 61 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 59.8 Intersection LOS: E
Intersection Capacity Utilization 88.7% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Stantonsburg Road & Memorial Drive

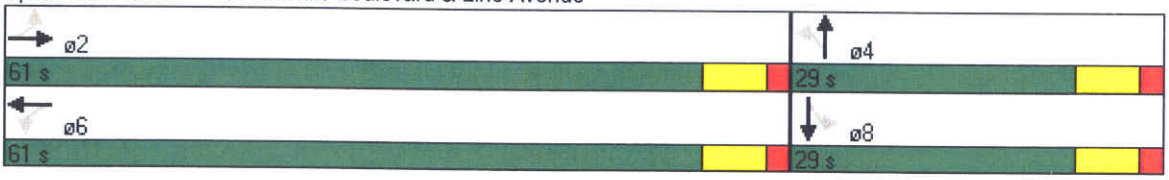


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	764	75	27	1166	65	97	92	27	74	117	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3426	0	1736	3443	0	1787	1817	0	1787	1772	0
Flt Permitted	0.155			0.279			0.467			0.646		
Satd. Flow (perm)	283	3426	0	510	3443	0	879	1817	0	1215	1772	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		1145			1535			691			307	
Travel Time (s)		19.5			26.2			13.5			6.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	932	0	30	1368	0	108	132	0	82	211	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	61.0	61.0	0.0	61.0	61.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	67.8%	67.8%	0.0%	67.8%	67.8%	0.0%	32.2%	32.2%	0.0%	32.2%	32.2%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None		None	None		None	None	
Act Effct Green (s)	62.0	62.0		62.0	62.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.20	0.20		0.20	0.20	
v/c Ratio	0.23	0.39		0.09	0.58		0.62	0.36		0.34	0.60	
Control Delay	12.3	9.9		3.6	7.6		47.4	32.8		33.4	39.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.3	9.9		3.6	7.6		47.4	32.8		33.4	39.2	
LOS	B	A		A	A		D	C		C	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.0			7.5			39.3			37.6	
Approach LOS		B			A			D			D	
Queue Length 50th (ft)	14	155		0	413		57	65		40	110	
Queue Length 95th (ft)	m24	m203		m11	412		104	108		76	167	
Internal Link Dist (ft)		1065			1455			611			227	
Turn Bay Length (ft)	100			100			125			100		
Base Capacity (vph)	195	2362		352	2373		234	485		324	473	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.23	0.39		0.09	0.58		0.46	0.27		0.25	0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 1 (1%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 63.2%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Farmville Boulevard & Line Avenue



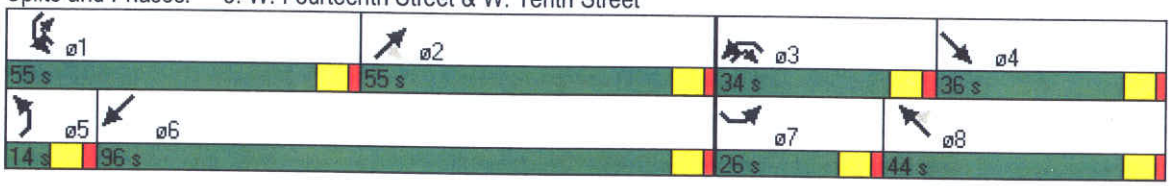
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	103	113	54	321	89	238	36	612	194	294	874	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	275		250	125		275	400		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	1756	0	3400	1845	1568	1736	3471	1553	1736	3423	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1756	0	3400	1845	1568	1736	3471	1553	1736	3423	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		782			1306			1535			385	
Travel Time (s)		15.2			25.4			26.2			6.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	186	0	357	99	264	40	680	216	327	1074	0
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0	7.0	7.0	12.0	
Minimum Split (s)	14.0	23.0		14.0	23.0	14.0	14.0	23.0	14.0	14.0	23.0	
Total Split (s)	26.0	36.0	0.0	34.0	44.0	55.0	14.0	55.0	34.0	55.0	96.0	0.0
Total Split (%)	14.4%	20.0%	0.0%	18.9%	24.4%	30.6%	7.8%	30.6%	18.9%	30.6%	53.3%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	None	None	C-Max	
Act Effct Green (s)	18.1	25.7		25.5	33.1	79.2	10.1	67.8	98.3	41.0	101.5	
Actuated g/C Ratio	0.10	0.14		0.14	0.18	0.44	0.06	0.38	0.55	0.23	0.56	
v/c Ratio	0.65	0.74		0.74	0.29	0.38	0.41	0.52	0.25	0.83	0.56	
Control Delay	94.7	91.5		83.6	64.5	34.3	103.0	39.9	31.8	106.7	10.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	94.7	91.5		83.6	64.5	34.3	103.0	39.9	31.8	106.7	10.4	
LOS	F	F		F	E	C	F	D	C	F	B	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		92.7			62.9			40.7			32.9	
Approach LOS		F			E			D			C	
Queue Length 50th (ft)	131	213		211	102	208	48	364	208	383	99	
Queue Length 95th (ft)	205	299		266	159	247	96	483	253	m390	165	
Internal Link Dist (ft)		702			1226			1455			305	
Turn Bay Length (ft)	200			275		250	125		275	400		
Base Capacity (vph)	204	302		548	400	768	98	1307	878	482	1930	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.56	0.62		0.65	0.25	0.34	0.41	0.52	0.25	0.68	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 99 (55%), Referenced to phase 2:NET and 6:SWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 46.8 Intersection LOS: D
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: W. Fourteenth Street & W. Tenth Street



Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	830	36	0	1264	0	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	922	40	0	1404	0	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	385					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			962		1644	481
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			615		1413	52
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			809		110	858

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NW 1
Volume Total	615	347	702	702	60
Volume Left	0	0	0	0	0
Volume Right	0	40	0	0	60
cSH	1700	1700	1700	1700	858
Volume to Capacity	0.36	0.20	0.41	0.41	0.07
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	9.5
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.5
Approach LOS					A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	504	194	525	693	267	386	1373	758	178	548	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	400		425	475		300	325		700	350		275
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3471	1553	3367	3471	1553	3400	3505	1568	3400	3505	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			25	
Link Distance (ft)		934			628			1175			781	
Travel Time (s)		15.9			12.2			22.9			21.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	560	216	583	770	297	429	1526	842	198	609	169
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Detector Phase	5	2	7	1	6	3	7	4	1	3	8	5
Switch Phase												
Minimum Initial (s)	7.0	10.0	7.0	7.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0	14.0	22.0	14.0
Total Split (s)	26.0	43.0	36.0	37.0	54.0	17.0	36.0	83.0	37.0	17.0	64.0	26.0
Total Split (%)	14.4%	23.9%	20.0%	20.6%	30.0%	9.4%	20.0%	46.1%	20.6%	9.4%	35.6%	14.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.0	38.0	66.6	32.0	49.0	66.0	28.6	78.0	110.0	12.0	61.4	87.4
Actuated g/C Ratio	0.12	0.21	0.37	0.18	0.27	0.37	0.16	0.43	0.61	0.07	0.34	0.49
v/c Ratio	0.91	0.76	0.38	0.97	0.81	0.52	0.79	1.00	0.88	0.87	0.51	0.22
Control Delay	101.0	58.3	16.2	67.9	38.6	27.8	84.3	74.1	34.4	115.9	49.5	28.2
Queue Delay	0.0	16.4	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.0	74.8	16.2	67.9	39.9	27.8	84.3	74.1	34.4	115.9	49.5	28.2
LOS	F	E	B	E	D	C	F	E	C	F	D	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		66.6			47.6			63.7			59.3	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	221	363	162	361	459	282	253	~956	531	121	306	116
Queue Length 95th (ft)	#369	321	63	m#454	m481	m299	316	#1123	704	#200	375	174
Internal Link Dist (ft)		854			548			1095			701	
Turn Bay Length (ft)	400		425	475		300	325		700	350		275
Base Capacity (vph)	203	733	595	599	945	569	586	1519	958	227	1196	762
Starvation Cap Reductn	0	0	0	0	58	0	0	0	0	0	0	0
Spillback Cap Reductn	0	168	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.99	0.36	0.97	0.87	0.52	0.73	1.00	0.88	0.87	0.51	0.22

Intersection Summary

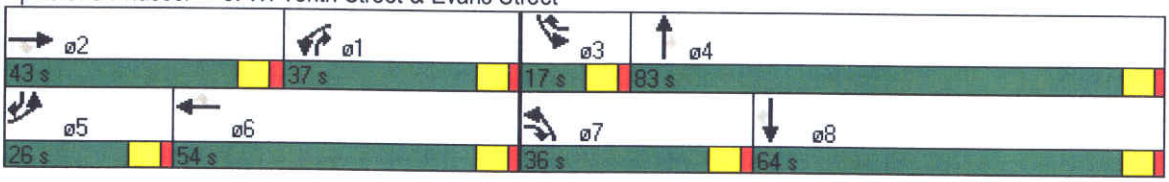
Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 166 (92%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 59.3 Intersection LOS: E
Intersection Capacity Utilization 89.4% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 5: W. Tenth Street & Evans Street



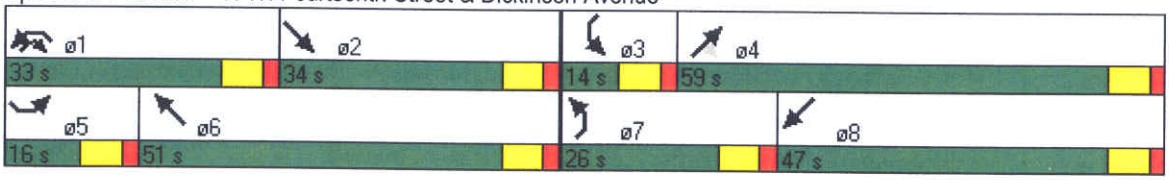
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	61	344	138	238	421	50	168	406	238	41	332	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	350		0	275		175	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	100		100	100		100	100		100	100		100
Satd. Flow (prot)	1752	3354	0	1752	3449	0	1752	1845	1568	1752	1802	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3354	0	1752	3449	0	1752	1845	1568	1752	1802	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1306			787			902			1147	
Travel Time (s)		25.4			15.3			24.6			31.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	535	0	264	524	0	187	451	264	46	437	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases									4			
Detector Phase	5	2		1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	14.0	23.0		14.0	23.0		14.0	23.0	14.0	14.0	23.0	
Total Split (s)	16.0	34.0	0.0	33.0	51.0	0.0	26.0	59.0	33.0	14.0	47.0	0.0
Total Split (%)	11.4%	24.3%	0.0%	23.6%	36.4%	0.0%	18.6%	42.1%	23.6%	10.0%	33.6%	0.0%
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	10.6	30.1		24.9	47.9		19.0	50.5	80.5	9.1	37.1	
Actuated g/C Ratio	0.08	0.23		0.19	0.36		0.14	0.38	0.61	0.07	0.28	
v/c Ratio	0.48	0.70		0.80	0.42		0.74	0.64	0.27	0.38	0.86	
Control Delay	73.0	54.0		69.8	35.0		73.1	38.9	13.1	71.9	62.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	73.0	54.0		69.8	35.0		73.1	38.9	13.1	71.9	62.3	
LOS	E	D		E	D		E	D	B	E	E	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Approach Delay		56.1			46.7			38.5			63.3	
Approach LOS		E			D			D			E	
Queue Length 50th (ft)	61	244		229	198		164	332	104	41	369	
Queue Length 95th (ft)	113	312		#349	254		#264	453	152	85	#529	
Internal Link Dist (ft)		1226			707			822			1067	
Turn Bay Length (ft)	100			350			275		175	100		
Base Capacity (vph)	149	768		377	1257		283	767	1001	122	583	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.46	0.70		0.70	0.42		0.66	0.59	0.26	0.38	0.75	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 131.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 48.9 Intersection LOS: D
Intersection Capacity Utilization 74.3% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: W. Fourteenth Street & Dickinson Avenue



Appendix D

SimTraffic© 2030 Build Queuing and Blocking Reports

Intersection: 1: Stantonsburg Road & Memorial Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T	T	T	R	L	T	T	T	R
Maximum Queue (ft)	305	486	663	686	300	278	427	437	298	132	138	363	545	568	225	376	403	426	414	280
Average Queue (ft)	206	240	387	419	82	131	262	281	143	57	56	209	234	253	49	216	259	275	283	113
95th Queue (ft)	289	372	585	633	298	250	374	405	303	114	116	324	391	413	189	358	392	408	400	227
Link Distance (ft)			909	909			1013	1013				994	994	994			923	923	923	
Upstream Blk Time (%)													0	0						
Queuing Penalty (veh)													0	0						
Storage Bay Dist (ft)	425	425			200	350			200	300	300				125	475				350
Storage Blk Time (%)			4	32	0	0	2	25	1			1		34		0	0		2	
Queuing Penalty (veh)			22	72	0	0	2	45	2			1		41		0	0		10	

Intersection: 2: Farmville Boulevard & Line Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	78	250	306	50	183	223	173	152	120	184
Average Queue (ft)	24	80	109	12	63	96	80	72	46	78
95th Queue (ft)	58	203	249	34	142	189	146	138	93	153
Link Distance (ft)		1013	1013		1430	1430		654		247
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100			100			125		100	
Storage Blk Time (%)	0	5			2		3	2	1	6
Queuing Penalty (veh)	0	3			0		4	2	2	4

Intersection: 3: W. Fourteenth Street & W. Tenth Street

Movement	SE	SE	NW	NW	NW	NW	NE	NE	NE	NE	SW	SW	SW
Directions Served	L	TR	L	L	T	R	L	T	T	R	L	T	TR
Maximum Queue (ft)	150	268	208	225	199	272	174	332	331	241	297	281	172
Average Queue (ft)	69	125	112	123	95	124	58	158	163	98	209	75	71
95th Queue (ft)	132	221	191	204	169	222	123	282	283	205	305	198	136
Link Distance (ft)		737		1212	1212			1430	1430			310	310
Upstream Blk Time (%)											1	1	
Queuing Penalty (veh)											0	5	
Storage Bay Dist (ft)	200		275			250	125			275	400		
Storage Blk Time (%)	0	3		0	0	1	3	15	1		1	1	
Queuing Penalty (veh)	0	2		0	0	1	12	8	3		3	2	

Intersection: 4: W. Tenth Street & Pennsylvania Avenue

Movement	EB	WB	NW
Directions Served	TR	T	R
Maximum Queue (ft)	11	47	53
Average Queue (ft)	0	3	19
95th Queue (ft)	7	31	42
Link Distance (ft)	310	2200	280
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: W. Tenth Street & Evans Street

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R	L	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	429	690	694	439	478	489	525	420	273	323	374	746	757	525	277	400	825	832	375
Average Queue (ft)	227	335	347	205	385	397	346	244	127	222	245	359	367	219	180	256	612	630	202
95th Queue (ft)	390	576	581	392	547	564	600	374	229	351	398	648	629	434	259	422	935	938	433
Link Distance (ft)		851	851				495	495				1078	1078				810	810	
Upstream Blk Time (%)		0	0		0	8	8	0				0	0				2	2	
Queuing Penalty (veh)		0	0		0	0	46	1				0	0				0	0	
Storage Bay Dist (ft)	400			425	475	475			300	325	325			700	350	350			275
Storage Blk Time (%)	0	4	4	0	3	11	0	4		2	11	6	0	1			21	30	0
Queuing Penalty (veh)	0	8	13	1	8	29	0	7		5	38	13	0	2			86	92	1

Intersection: 6: W. Tenth Street & Cotanche Street

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	T	T	R	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	198	249	501	508	200	370	538	451	231	150	288	298	166	251	399	749	748	375
Average Queue (ft)	122	157	373	391	67	152	313	240	60	72	163	179	50	144	211	540	550	212
95th Queue (ft)	187	257	533	543	190	295	512	409	144	136	262	271	117	229	389	866	860	428
Link Distance (ft)			495	495			559	559			871	871				731	731	
Upstream Blk Time (%)			1	4			3	0								10	11	
Queuing Penalty (veh)			9	34			0	0								0	0	
Storage Bay Dist (ft)	200	200			100	475			400	275			225	300	300			275
Storage Blk Time (%)	0	1	28	46	1		5	1			0	5		0	0	35	42	0
Queuing Penalty (veh)	2	6	69	70	7		6	2			0	5		0	0	127	108	1

Intersection: 7: W. Fourteenth Street & Dickinson Avenue

Movement	SE	SE	SE	NW	NW	NW	NE	NE	NE	SW	SW
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	199	327	370	314	260	238	270	563	272	138	846
Average Queue (ft)	82	200	238	166	111	120	132	219	112	60	501
95th Queue (ft)	169	319	353	286	217	202	239	398	244	126	802
Link Distance (ft)		1212	1212		741	741		856			1101
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			350			275		175	100	
Storage Blk Time (%)	8	34		1			0	13	1	5	57
Queuing Penalty (veh)	16	25		1			1	45	3	26	28

Network Summary

Network wide Queuing Penalty: 1187

Intersection: 1: Stantonsburg Road & Memorial Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	T	T	R	L	L	T	T	T	R	L	T	T	T	R
Maximum Queue (ft)	394	411	477	511	237	377	687	724	300	177	353	554	589	611	225	500	543	450	399	323
Average Queue (ft)	249	269	256	250	20	163	315	346	156	92	97	337	363	397	53	319	261	262	268	147
95th Queue (ft)	446	482	564	468	141	301	511	565	313	156	219	487	512	552	195	533	447	381	371	258
Link Distance (ft)			1036	1036			1012	1012				994	994	994			923	923	923	
Upstream Blk Time (%)			1	0													0			
Queuing Penalty (veh)			0	0													0			
Storage Bay Dist (ft)	425	425			200	350			200	300	300				125	475				350
Storage Blk Time (%)	6	9	0	15		0	6	30	2			10		41	0	5			1	0
Queuing Penalty (veh)	15	23	0	18		2	11	82	10			20		75	1	20			6	0

Intersection: 2: Farmville Boulevard & Line Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	73	226	262	46	212	255	136	124	136	206
Average Queue (ft)	22	109	147	9	88	117	61	58	45	90
95th Queue (ft)	56	188	223	30	172	212	115	109	98	164
Link Distance (ft)		1012	1012		1430	1430		636		247
Upstream Blk Time (%)										0
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	100			100			125		100	
Storage Blk Time (%)	0	7		0	3		1	0	1	8
Queuing Penalty (veh)	0	3		0	1		1	0	1	6

Intersection: 3: W. Fourteenth Street & W. Tenth Street

Movement	SE	SE	NW	NW	NW	NW	NE	NE	NE	NE	SW	SW	SW
Directions Served	L	TR	L	L	T	R	L	T	T	R	L	T	TR
Maximum Queue (ft)	284	354	267	276	240	313	200	354	354	240	302	366	286
Average Queue (ft)	110	177	152	159	85	147	38	195	201	106	231	163	137
95th Queue (ft)	203	297	235	242	175	271	109	330	331	205	331	340	248
Link Distance (ft)		737		1212	1212			1430	1430			310	310
Upstream Blk Time (%)											6	6	0
Queuing Penalty (veh)											0	36	0
Storage Bay Dist (ft)	200		275			250	125			275	400		
Storage Blk Time (%)	2	8	0	0	0	2	0	17	3	0	6	6	
Queuing Penalty (veh)	3	9	0	1	0	2	0	6	6	0	28	17	

Intersection: 4: W. Tenth Street & Pennsylvania Avenue

Movement	WB	WB	NW
Directions Served	T	T	R
Maximum Queue (ft)	135	87	63
Average Queue (ft)	15	4	23
95th Queue (ft)	82	45	44
Link Distance (ft)	2209	2209	285
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: W. Tenth Street & Evans Street

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R	L	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	329	291	312	186	390	406	435	377	356	191	421	637	640	381	264	281	366	380	341
Average Queue (ft)	168	145	146	56	235	251	187	179	127	120	147	332	350	195	164	175	214	224	95
95th Queue (ft)	307	255	260	128	397	406	361	338	275	179	288	535	541	332	312	323	340	347	215
Link Distance (ft)		842	842				494	494				1111	1111				717	717	
Upstream Blk Time (%)					0	0	0												
Queuing Penalty (veh)					0	0	1												
Storage Bay Dist (ft)	400			425	475	475			300	325	325			700	350	350			275
Storage Blk Time (%)	0				0	0	0	1	0			11	0		0	0	0	6	
Queuing Penalty (veh)	0				0	1	0	3	2			44	0		0	1	1	9	

Intersection: 6: W. Tenth Street & Cotanche Street

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	T	T	R	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	179	274	474	472	200	536	574	578	452	374	641	673	325	122	153	211	231	140
Average Queue (ft)	107	131	227	250	57	214	392	369	178	141	376	393	157	61	83	118	137	60
95th Queue (ft)	178	236	386	415	192	367	595	571	344	281	581	604	338	117	142	185	203	117
Link Distance (ft)			494	494			559	559			871	871				731	731	
Upstream Blk Time (%)			0	0		0	2	1										
Queuing Penalty (veh)			1	2		0	0	0										
Storage Bay Dist (ft)	200	200			100	475			400	275			225	300	300			275
Storage Blk Time (%)	1	1	12	37			4	6		0	23	36	0				0	
Queuing Penalty (veh)	5	7	26	51			10	22		0	32	65	1				0	

Intersection: 7: W. Fourteenth Street & Dickinson Avenue

Movement	SE	SE	SE	NW	NW	NW	NE	NE	NE	SW	SW
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	178	291	346	378	247	263	320	705	275	199	617
Average Queue (ft)	62	157	193	208	120	133	148	302	131	59	341
95th Queue (ft)	131	272	312	328	196	217	261	578	281	155	569
Link Distance (ft)		1212	1212		741	741		856			1101
Upstream Blk Time (%)								0			
Queuing Penalty (veh)								0			
Storage Bay Dist (ft)	100			350			275		175	100	
Storage Blk Time (%)	7	27		1			0	21	1	4	52
Queuing Penalty (veh)	11	17		2			0	84	4	14	21

Network Summary

Network wide Queuing Penalty: 839