

September 2025



# EAST WEAVER STREET TRAFFIC ANALYSIS

LOCATED IN CARRBORO, NC

Prepared for:

Town of Carrboro  
301 W Main Street  
Carrboro, North Carolina 27510

Prepared by:

Exult Engineering, PC  
P.O. Box 99277  
Raleigh, NC 27624



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East Weaver Street Traffic Analysis

DocuSigned by:  
Prepared by: Lisa Lundeen (sign)  
1F764ED5B62440B...  
Date: 09/19/2025

**Lisa Lundeen, PE**

DocuSigned by:  
Reviewed by: Tyler Blang (sign)  
54551A9ACD31460...  
Date: 09/19/2025

**Tyler Blang, PE**



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## EXECUTIVE SUMMARY

The Town of Carrboro (Town) has contracted with Exult Engineering to evaluate the traffic operations of the closure of East Weaver Street to vehicular traffic. The Town's plan proposes to eliminate vehicular traffic on East Weaver Street from North Greensboro Street to East Main Street/Roberson Street and convert it to a bicycle- and pedestrian-only facility. This study evaluates the operations of the following intersections:

- North Greensboro Street at East/West Weaver Street
- North/South Greensboro Street at East/West Main Street
- East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street
- South Greensboro Street at Roberson Street
- South Greensboro Street at East/West Braxton Foushee Street
- Roberson Street at Maple Avenue
- Roberson Street at Sweet Bay Place
- Maple Avenue at East Braxton Foushee Street
- West Main Street/Jones Ferry Road at West Main Street
- West Main Street at West Weaver Street

The purpose of this study is to evaluate the existing and future traffic operations of the study intersections and to make recommendations for the street closure.

The scope of the study was based on coordination with the North Carolina Department of Transportation (NCDOT) and the Town during a Scoping Meeting on March 5, 2025. A Scoping Memorandum of Understanding (MOU) was prepared summarizing the results of that meeting. The Scoping MOU and subsequent correspondence regarding the scope of the study is included in the Appendix of this report. The *NCDOT Congestion Management Capacity Analysis Guidelines* were used for reference.

Capacity analyses were performed at the study intersections under the following scenarios:

- Existing traffic (2025)
- No-Build traffic (2026) with existing travel patterns along East Weaver Street
- Build-out traffic (2026) with the closure of East Weaver Street to vehicular traffic
- Build-out traffic (2026) with Recommended Improvements

Based on coordination with NCDOT and the Town and a historic negative growth rate, a 0% annual growth rate was applied to existing traffic volumes to determine 2026 background traffic volumes. Approved developments are developments in the area of the proposed site that have been approved but not yet constructed. The traffic from these approved developments is expected to contribute to the no-build traffic volumes projected for the study intersections. The following approved developments were included in the 2026 traffic volumes:

- 201 N. Greensboro Street – a three-story building with 5,395 square feet of mixed-use restaurant and retail space and 10,790 square feet of office space located in the northwest corner of North Greensboro Street and West Weaver Street.
- 400 North Greensboro Street – 7 apartment units and 1,290 square feet of office space located in the northeast corner of North Greensboro Street and Parker Street.

Traffic Impact Analysis (TIA) reports were not performed for the 201 N. Greensboro Street development or the 400 North Greensboro Street development. Therefore, trips were generated and assigned in accordance with the 203 Development trip distribution. Information provided by the Town related to the approved developments as well as trip generation and distribution information for the approved developments are included in the Appendix. According to NCDOT, there are no roadway improvements committed to by others to include in the future analysis for the study intersections.

Based on the capacity analysis presented herein, the following roadway improvements are recommended to be completed **by the Town of Carrboro** to accommodate future traffic due to the closure of East Weaver Street:

North Greensboro Street at East/West Weaver Street

- Close the east leg of East Weaver Street to vehicular traffic.
- Restripe the exclusive southbound left-turn lane on North Greensboro Street to a southbound through lane.
- Restripe the existing exclusive northbound left-turn lane on North Greensboro Street to a second southbound receiving lane.
- Restripe the existing northbound through lane on North Greensboro Street to a shared through/left lane.
- Modify signal for a 3-legged intersection.

North/South Greensboro Street at East/West Main Street

- Restripe the exclusive southbound left-turn lane on North Greensboro Street to provide full storage.
- Restripe the existing southbound left-turn lane stop bar on North Greensboro Street approximately 25 feet north of the current position to allow heavy vehicles to turn right from East Main Street.

East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street

- Close the southeast leg of East Weaver Street to vehicular traffic
- Restripe the shared westbound left/through lane on East Main Street to an exclusive westbound left-turn lane.
- Restripe the exclusive westbound right-turn lane on East Main Street to a shared through/right lane.
- Modify signal for a 4-legged intersection.

Transit Routes and Stops:

- Re-route the F Route and CW Route from East Weaver Street to the intersection of East Main Street and North Greensboro Street.
- Re-direct transit users to the transit stops located at East Main Street at Jade Palace and East Main Street at Weaver Street Realty.

Parking:

- Re-direct vehicles to park in Century Center Lot, East Main Lot, or other Public Parking Lots with availability.
- If parking availability becomes challenging, it is recommended that the Town complete a parking occupancy study to identify where there may be available capacity for parking and provide signage to direct vehicles to the available parking lots.

Truck Access:

- Install removable bollards at each end of East Weaver Street to allow garbage trucks to access the properties once per week for trash pickup.

Additionally, the **Town of Carrboro** should consider the following improvements to accommodate bicycle and pedestrian users within the study area:

South Greensboro Street at Roberson Street:

- Stripe a crosswalk along South Greensboro Street to accommodate heavy pedestrian traffic.

Roberson Street at Maple Avenue:

- Stripe crosswalks on all approaches to accommodate heavy pedestrian traffic.

West Main Street/Jones Ferry Road at West Main Street:

- Stripe a crosswalk on the west leg of Jones Ferry Road to accommodate heavy pedestrian traffic.

Roberson Street, East Braxton Foushee Street, and Maple Avenue:

- Install sidewalk along Roberson Street, East Braxton Foushee Street, and Maple Avenue to accommodate heavy pedestrian traffic.

All Roadway Segments:

- Existing bicycle lanes or sharrows are present along parts of Main Street and Weaver Street. With limited existing pavement, stripe sharrows to accommodate bicycles where dedicated bicycle lanes are not feasible.

## INTRODUCTION

The Town of Carrboro has contracted with Exult Engineering to evaluate the traffic operations of the closure of East Weaver Street to vehicular traffic. The Town's plan proposes to eliminate vehicular traffic on East Weaver Street from North Greensboro Street to East Main Street/Roberson Street and convert it to a bicycle and pedestrian only facility. This study evaluates the operations of the following intersections in Carrboro, North Carolina, as shown in Figure 1:

- North Greensboro Street at East/West Weaver Street
- North/South Greensboro Street at East/West Main Street
- East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street
- South Greensboro Street at Roberson Street
- South Greensboro Street at East/West Braxton Foushee Street
- Roberson Street at Maple Avenue
- Roberson Street at Sweet Bay Place
- Maple Avenue at East Braxton Foushee Street
- West Main Street/Jones Ferry Road at West Main Street
- West Main Street at West Weaver Street

The purpose of this study is to evaluate the existing and future traffic operations of the study intersections and to make recommendations for the street closure.

The scope of the study was based on coordination with NCDOT and the Town during a Scoping Meeting on March 5, 2025. A Scoping Memorandum of Understanding (MOU) was prepared summarizing the results of that meeting. The Scoping MOU and subsequent correspondence regarding the scope of the study is included in the Appendix of this report. The *NCDOT Congestion Management Capacity Analysis Guidelines* were used for reference.

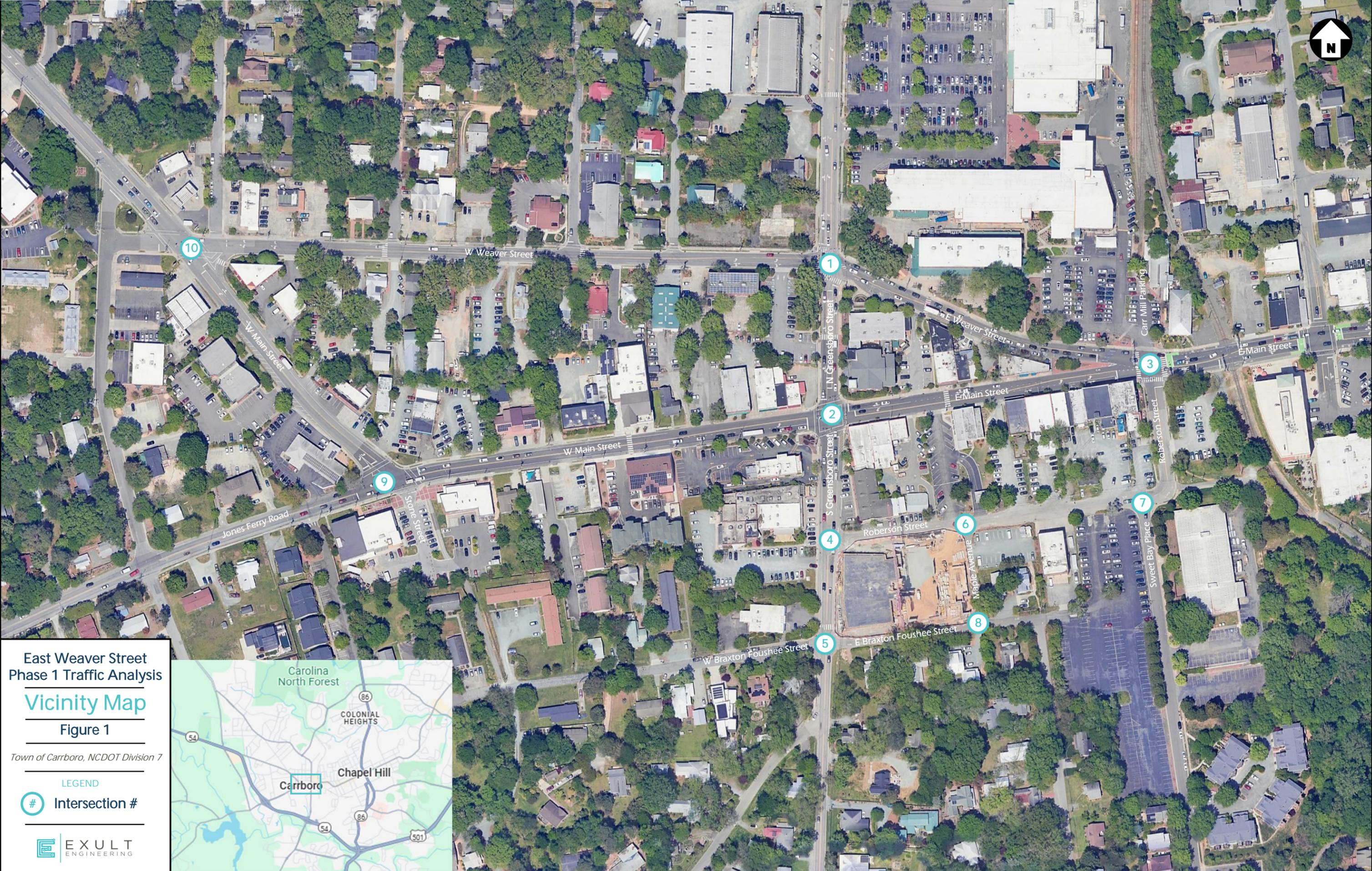
Capacity analyses were performed at the study intersections under the following scenarios:

- Existing traffic (2025)
- No-Build traffic (2026) with existing travel patterns along East Weaver Street
- Build-out traffic (2026) with the closure of East Weaver Street to vehicular traffic
- Build-out traffic (2026) with Recommended Improvements

Based on coordination with NCDOT and the Town and a historic negative growth rate, a 0% annual growth rate was applied to existing traffic volumes to determine 2026 background traffic volumes. Approved developments are developments in the area of the proposed site that have been approved but not yet constructed. The traffic from these approved developments is expected to contribute to the no-build traffic volumes projected for the study intersections. The following approved developments were included in the 2026 traffic volumes:

- 201 N. Greensboro Street – a three-story building with 5,395 square feet of mixed use restaurant and retail space and 10,790 square feet of office space located in the northwest corner of North Greensboro Street and West Weaver Street.
- 400 North Greensboro Street – 7 apartment units and 1,290 square feet of office space located in the northeast corner of North Greensboro Street and Parker Street.

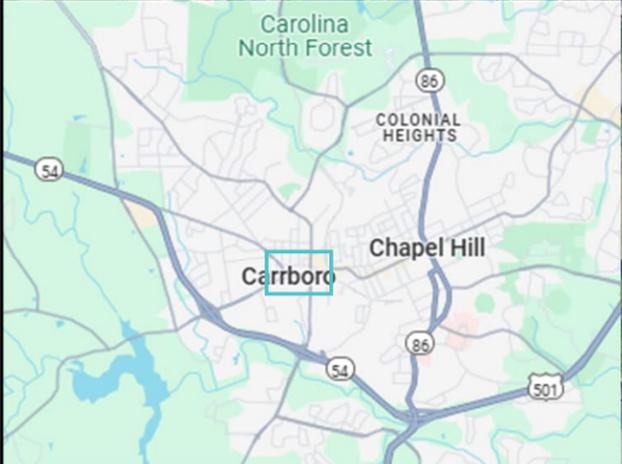
TIA's were not performed for the 201 N. Greensboro Street development or the 400 North Greensboro Street development. Therefore, trips were generated and assigned in accordance with the 203 Development trip distribution. Information provided by the Town related to the approved developments as well as trip generation and distribution information for the approved developments are included in the Appendix. According to NCDOT, there are no roadway improvements committed to by others to include in the future analysis for the study intersections.



East Weaver Street  
Phase 1 Traffic Analysis  
**Vicinity Map**  
Figure 1

Town of Carrboro, NCDOT Division 7

LEGEND  
# Intersection #



## EXISTING CONDITIONS

The study area for the East Weaver Street Traffic Analysis includes the following existing intersections:

- North Greensboro Street at East/West Weaver Street
- North/South Greensboro Street at East/West Main Street
- East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street
- South Greensboro Street at Roberson Street
- South Greensboro Street at East/West Braxton Foushee Street
- Roberson Street at Maple Avenue
- Roberson Street at Sweet Bay Place
- Maple Avenue at East Braxton Foushee Street
- West Main Street/Jones Ferry Road at West Main Street
- West Main Street at West Weaver Street

A site visit was performed on Wednesday, March 26, 2025, to observe existing field conditions, such as lane geometry, posted speed limits, and traffic operations. Figure 2 shows the Existing Lane Geometry at the above existing study intersections.

Peak-hour turning movement traffic counts were performed at the existing study intersections during the AM (7:00 – 9:00), PM (4:00 – 6:00), and Saturday (11:00 am – 1:00 pm) peak periods on Saturday, March 22, 2025, and Tuesday, March 25, 2025. Traffic count data is included in the Appendix of this report. The traffic imbalances between study intersections were justified due to the number of access points and land uses located between study intersections. Several vehicles did travel down Maple Avenue in the wrong direction. These trips were re-routed to the correct direction. A sketch depicting the adjustments is included in the Appendix. Figure 3 depicts the 2025 AM, PM, and Saturday Peak-Hour Existing Traffic Volumes.

North/South Greensboro Street is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. North/South Greensboro Street is classified as a minor arterial on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, North/South Greensboro Street has an ADT volume of 11,000 vehicles per day in 2023.

East Weaver Street is currently a 2-lane undivided roadway with a posted speed limit of 25 miles per hour (mph) in the project vicinity. East Weaver Street is classified as a local road on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, East Weaver Street/West Weaver Street has an ADT volume of 6,800 vehicles per day in 2023.

West Weaver Street is currently a 2-lane undivided roadway with a posted speed limit of 25 miles per hour (mph) in the project vicinity. West Weaver Street is classified as a local road on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, East Weaver Street/West Weaver Street has an ADT volume of 5,400 vehicles per day in 2023.

East Main Street is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. East Main Street is classified as a minor arterial on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, East Main Street has an ADT volume of 11,500 vehicles per day in 2023.

West Main Street is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. West Main Street is classified as a minor arterial on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, East Main Street has an ADT volume of 7,700 vehicles per day in 2023.

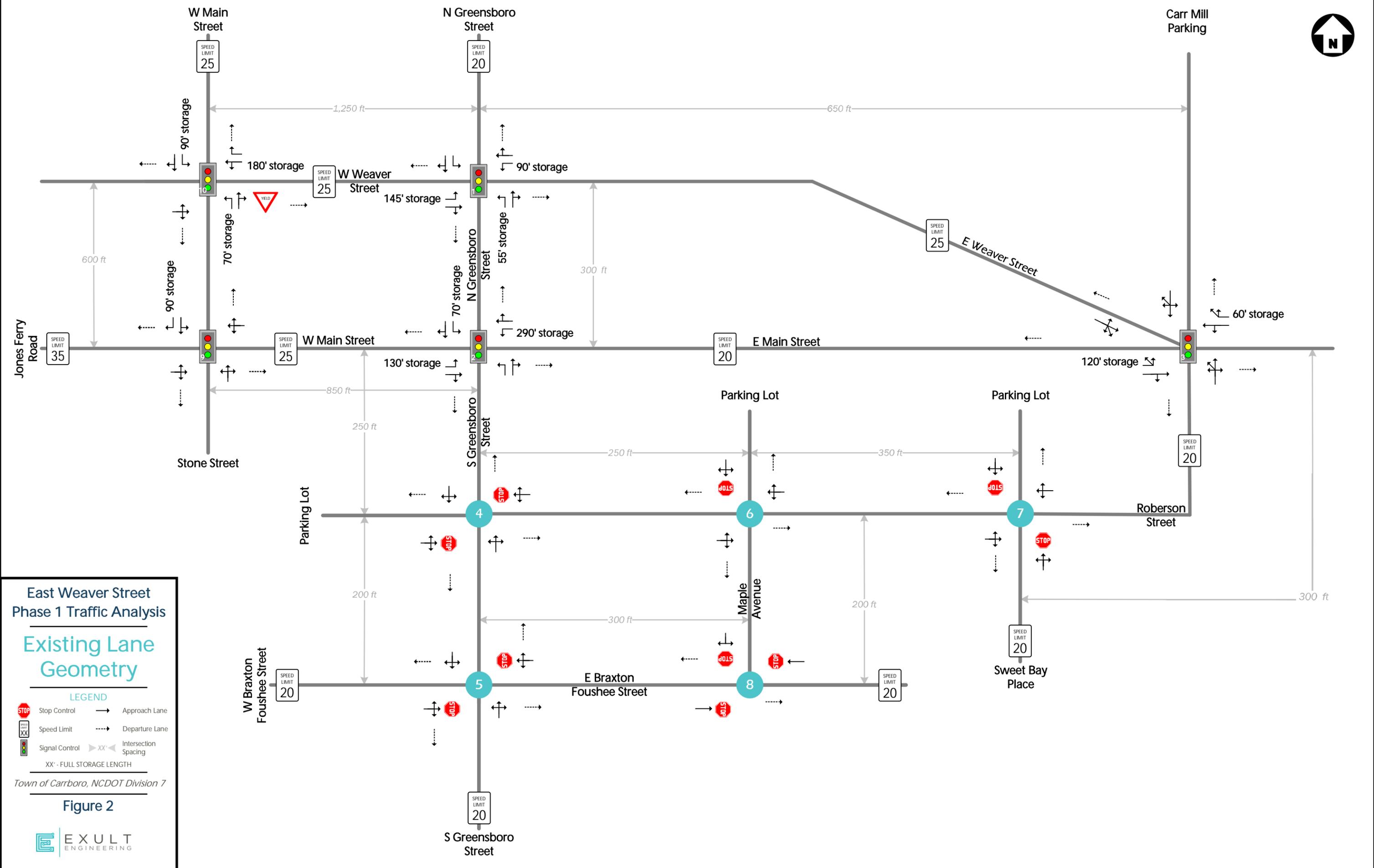
Jones Ferry Road is currently a 2-lane undivided roadway with a posted speed limit of 35 miles per hour (mph) in the project vicinity. Jones Ferry Road is classified as a minor arterial on the *NCDOT Functional Class Map*. According to NCDOT's *Annual Average Daily Traffic (AADT) Mapping Application*, Jones Ferry Road has an ADT volume of 7,600 vehicles per day in 2023.

Roberson Street is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. Roberson Street is classified as local road on the *NCDOT Functional Class Map*. Assuming the PM peak hour accounts for 10% of the daily traffic, Roberson Street has an estimated ADT volume of 1,580 vehicles per day in 2025.

East/West Braxton Foushee Street is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. East/West Braxton Foushee Street is classified as local road on the *NCDOT Functional Class Map*. Assuming the PM peak hour accounts for 10% of the daily traffic, East/West Braxton Foushee Street has an estimated ADT volume of 490 vehicles per day in 2025.

Maple Avenue is currently a 1-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. Maple Avenue is classified as local road on the *NCDOT Functional Class Map*. Assuming the PM peak hour accounts for 10% of the daily traffic, Maple Avenue has an estimated ADT volume of 200 vehicles per day in 2025.

Sweet Bay Place is currently a 2-lane undivided roadway with a posted speed limit of 20 miles per hour (mph) in the project vicinity. Sweet Bay Place is classified as local road on the *NCDOT Functional Class Map*. Assuming the PM peak hour accounts for 10% of the daily traffic, Sweet Bay Place has an estimated ADT volume of 1,100 vehicles per day in 2025.



**East Weaver Street  
Phase 1 Traffic Analysis**

**Existing Lane  
Geometry**

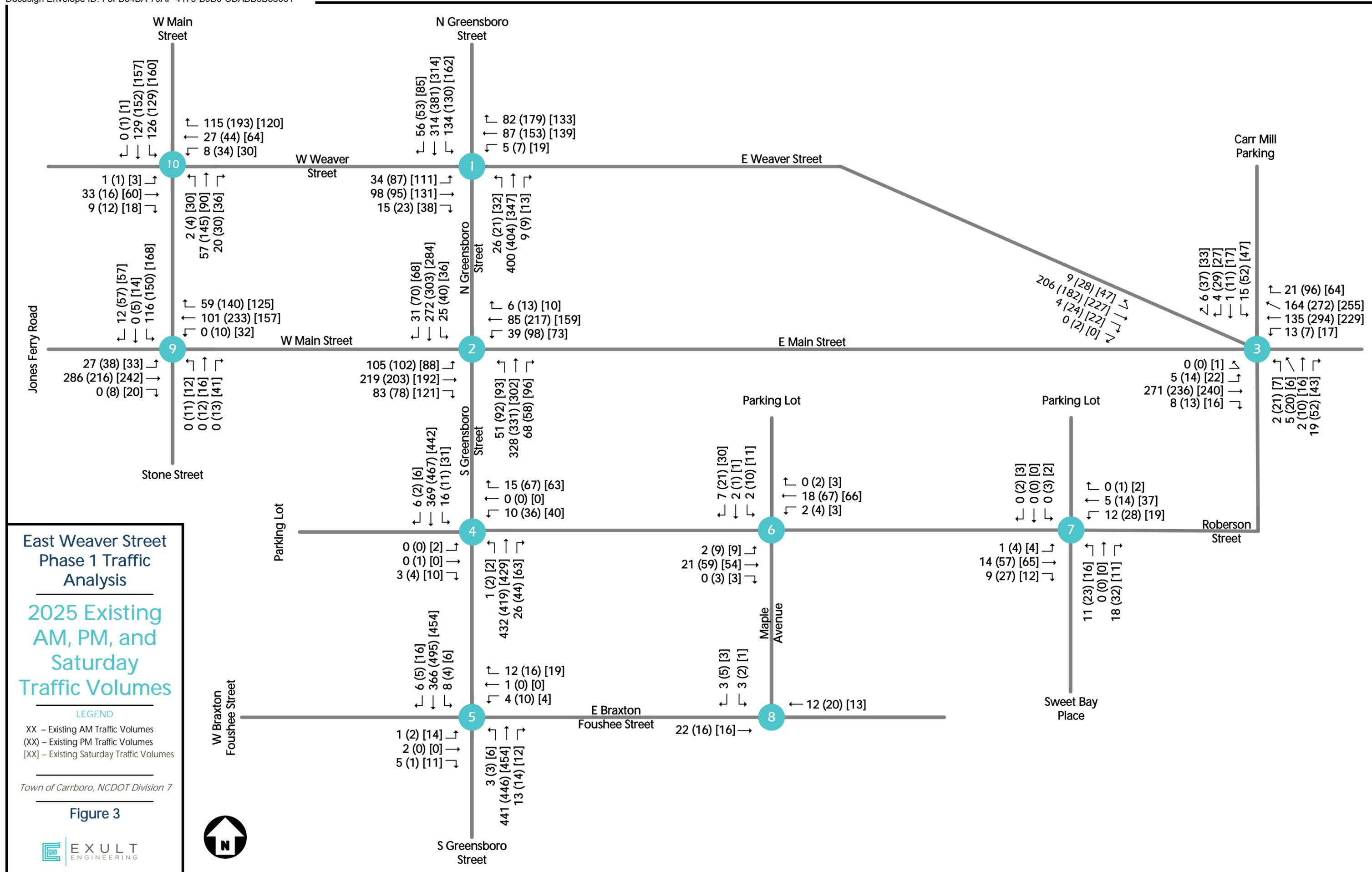
**LEGEND**

- Stop Control
- Speed Limit
- Signal Control
- Approach Lane
- Departure Lane
- Intersection Spacing

XX' - FULL STORAGE LENGTH

Town of Carrboro, NCDOT Division 7

**Figure 2**



## BICYCLE AND PEDESTRIAN CONSIDERATIONS

A high number of bicycles and pedestrians were observed at study intersections when existing traffic counts were collected. Table 1 summarizes the number of pedestrians counted during each peak hour and Table 2 summarizes the number of bicyclists counted during each peak hour.

**Table 1: Pedestrian Volumes**

Intersection	AM Peak Hour					PM Peak Hour					Saturday Peak Hour				
	East Leg	Northwest Leg	West Leg	North Leg	South Leg	East Leg	Northwest Leg	West Leg	North Leg	South Leg	East Leg	Northwest Leg	West Leg	North Leg	South Leg
North Greensboro Street at East/West Weaver Street	12		8	25	5	22		11	60	34	29		13	86	95
North/South Greensboro Street at East/West Main Street	7		9	4	15	29		13	22	56	32		28	19	75
East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street	19	2	3	33	45	47	30	28	98	127	80	41	54	217	234
South Greensboro Street at Roberson Street	5		10	14	3	9		16	5	9	18		29	32	17
South Greensboro Street at East/West Braxton Foushee Street	0		8	10	0	0		23	26	4	0		9	36	0
Roberson Street at Maple Avenue	1		6	4	5	7		8	25	24	9		21	28	30
Roberson Street at Sweet Bay Place	5		7	16	8	18		17	28	48	3		2	19	15
Maple Avenue at East Braxton Foushee Street	0		0	5	0	0		1	7	2	7		1	7	5
West Main Street/Jones Ferry Road at West Main Street	3		1	0	10	19		7	5	31	31		22	14	48
West Main Street at West Weaver Street	6		2	4	1	6		11	25	4	18		27	115	217

Crosswalks and sidewalks are provided at all signalized study intersections except for the west leg at Jones Ferry Road and West Main Street. With 27 pedestrians crossing the west leg during the Saturday peak hour, the Town should consider striping a crosswalk on the west leg of this intersection. Additionally, there are no crosswalks present at unsignalized study intersections except for the north leg of South Greensboro Street at East/West Braxton Foushee Street and Roberson Street at Sweet Bay Place. With a high number of pedestrians, the Town should consider the following improvements to accommodate pedestrians:

South Greensboro Street at Roberson Street:

- Stripe a crosswalk along South Greensboro Street to accommodate heavy pedestrian traffic.

Roberson Street at Maple Avenue:

- Stripe crosswalks on all approaches to accommodate heavy pedestrian traffic.

West Main Street/Jones Ferry Road at West Main Street:

- Stripe a crosswalk on the west leg of Jones Ferry Road to accommodate heavy pedestrian traffic.

Roberson Street, East Braxton Foushee Street, and Maple Avenue:

- Install sidewalk along Roberson Street, East Braxton Foushee Street, and Maple Avenue to accommodate heavy pedestrian traffic.

**Table 2: Bicycle Volumes**

Intersection	AM Peak Hour					PM Peak Hour					Saturday Peak Hour				
	East Leg	Northwest Leg	West Leg	North Leg	South Leg	East Leg	Northwest Leg	West Leg	North Leg	South Leg	East Leg	Northwest Leg	West Leg	North Leg	South Leg
North Greensboro Street at East/West Weaver Street	4		17	11	0	21		4	7	3	19		8	8	1
North/South Greensboro Street at East/West Main Street	1		23	4	1	15		10	1	14	4		15	4	5
East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street	6	29	17	16	1	34	21	11	8	64	39	24	11	14	7
South Greensboro Street at Roberson Street	1		0	7	2	14		0	6	4	2		0	7	1
South Greensboro Street at East/West Braxton Foushee Street	0		4	1	1	1		3	1	8	0		0	5	1
Roberson Street at Maple Avenue	2		5	3	1	26		4	0	0	4		3	7	0
Roberson Street at Sweet Bay Place	0		16	0	0	27		9	0	4	6		7	0	0
Maple Avenue at East Braxton Foushee Street	0		2	0	0	2		1	1	0	0		0	0	0
West Main Street/Jones Ferry Road at West Main Street	2		19	10	0	28		7	5	1	7		9	2	1
West Main Street at West Weaver Street	0		3	16	1	21		1	6	11	15		9	3	9

With a high number of bicyclists in the study area, the Town should consider the following improvements to accommodate bicycles:

- Existing bicycle lanes or sharrows are present along parts of Main Street and Weaver Street. With limited existing pavement, stripe sharrows to accommodate bicycles where dedicated bicycle lanes are not feasible.

## FUTURE TRAFFIC CONDITIONS

### 2026 No-Build Traffic Volumes

The projected 2026 no-build traffic volumes consist of existing 2025 traffic volumes plus background growth and approved development traffic.

Based on coordination with NCDOT and the Town and a historic negative growth rate, a 0% annual growth rate was applied to existing traffic volumes to determine 2026 background traffic volumes. Approved developments are developments in the area of the proposed site that have been approved but not yet constructed. The traffic from these approved developments is expected to contribute to the no-build traffic volumes projected for the study intersections. The following approved developments were included in the 2026 traffic volumes:

- 201 N. Greensboro Street – a three-story building with 5,395 square feet of mixed use restaurant and retail space and 10,790 square feet of office space located in the northwest corner of North Greensboro Street and West Weaver Street.
- 400 North Greensboro Street – 7 apartment units and 1,290 square feet of office space located in the northeast corner of North Greensboro Street and Parker Street.

TIA's were not performed for the 201 N. Greensboro Street development or the 400 North Greensboro Street development. Therefore, trips were generated and assigned in accordance with the 203 Development trip distribution. Information provided by the Town related to the approved developments as well as trip generation and distribution information for the approved developments are included in the Appendix. According to NCDOT, there are no roadway improvements committed to by others to include in the future analysis for the study intersections.

The projected no-build traffic volumes at the study intersections are shown in Figure 4 (2026 AM Peak Hour No-Build Traffic Volumes), Figure 5 (2026 PM Peak Hour No-Build Traffic Volumes), and Figure 6 (2026 Saturday Peak Hour No-Build Traffic Volumes). Traffic volume calculations are also included in the Appendix of this report.

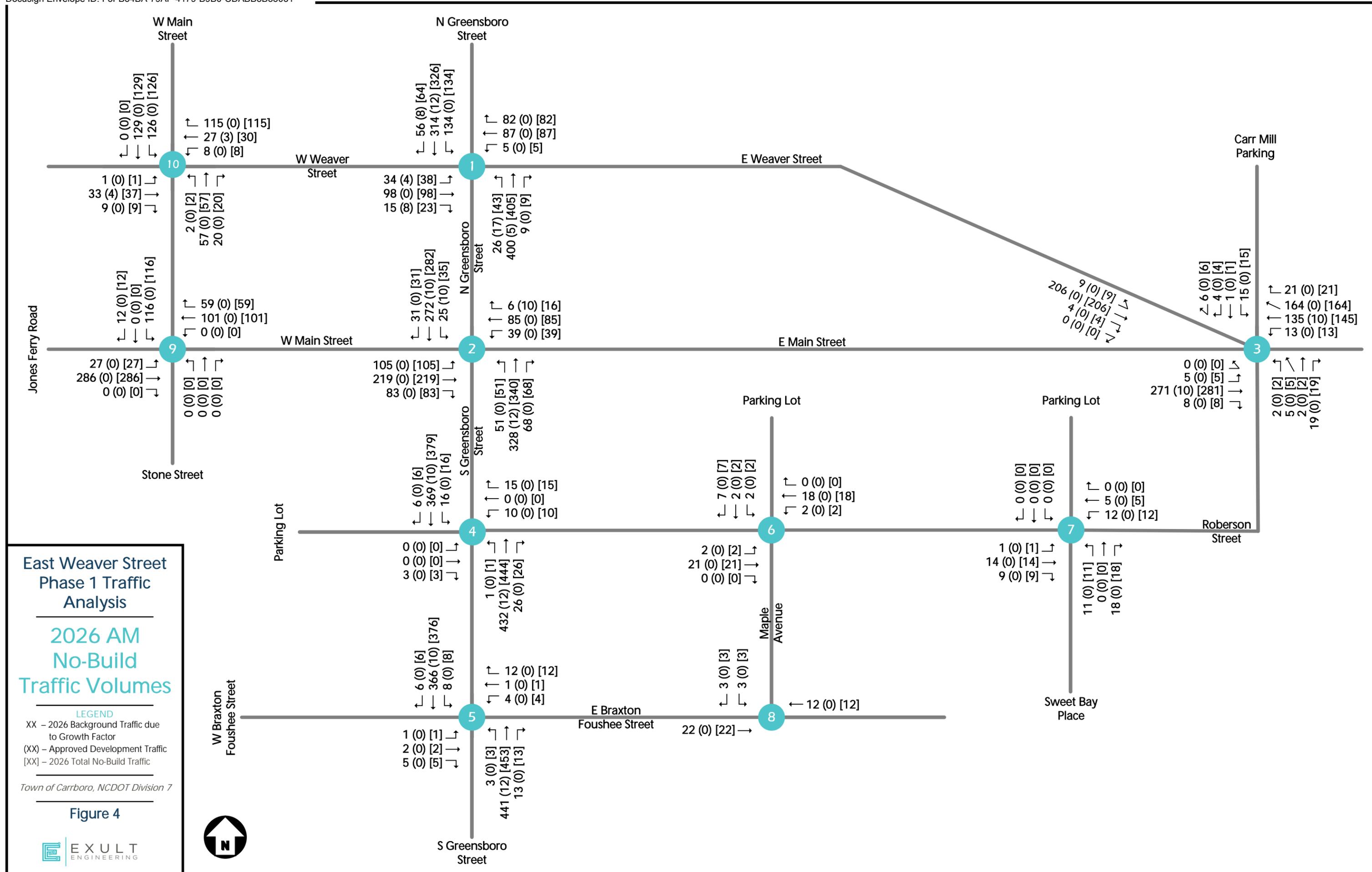
### 2026 Build Traffic Volumes

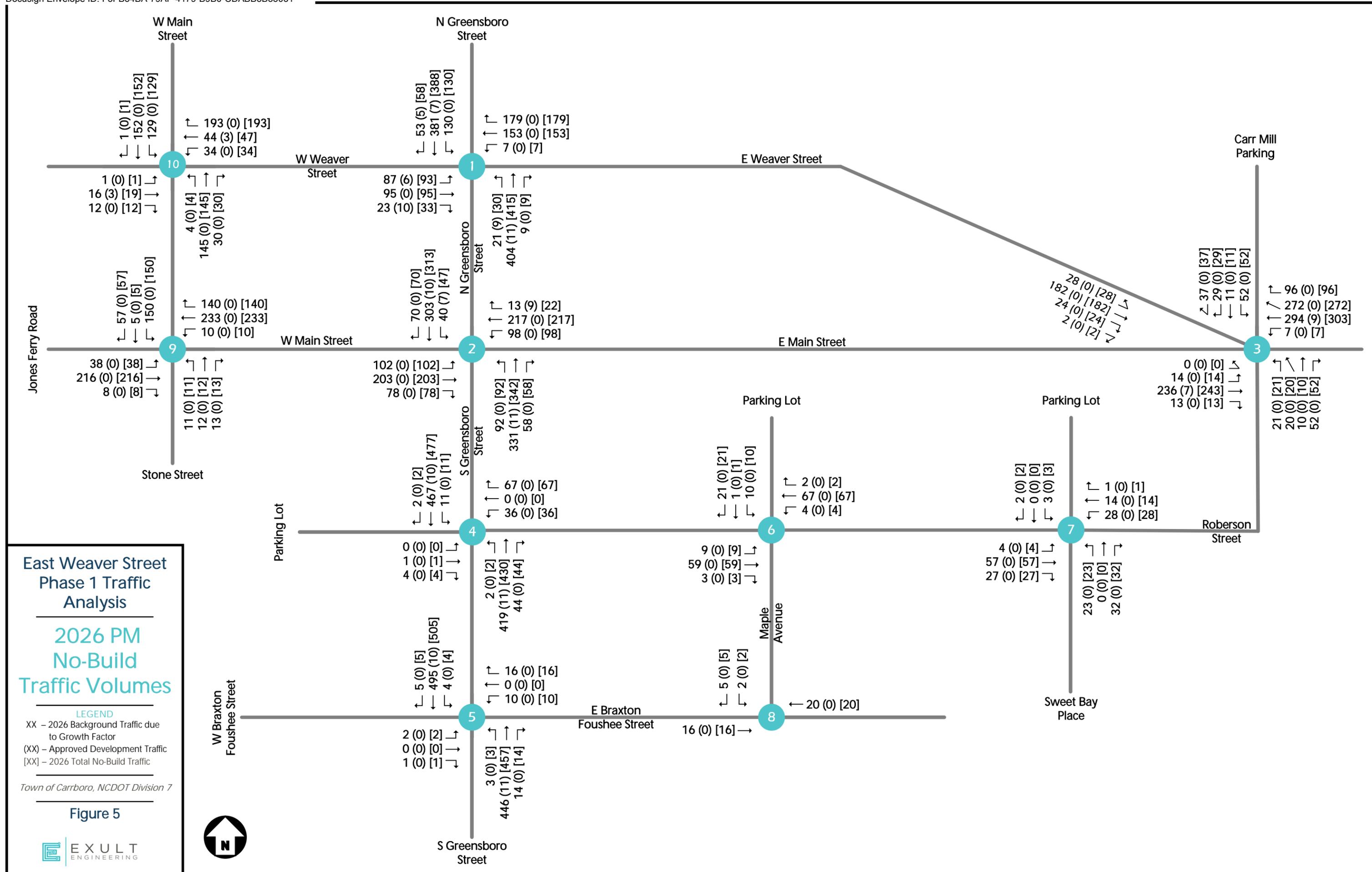
The closure of East Weaver Street in the build scenario is expected to divert traffic to North and South Greensboro Street, East and West Main Street, and Roberson Street as shown in Figure 7 (2026 AM Build Traffic Volumes), Figure 8 (2026 PM Build Traffic Volumes), and Figure 9 (2026 Saturday Build Traffic Volumes).

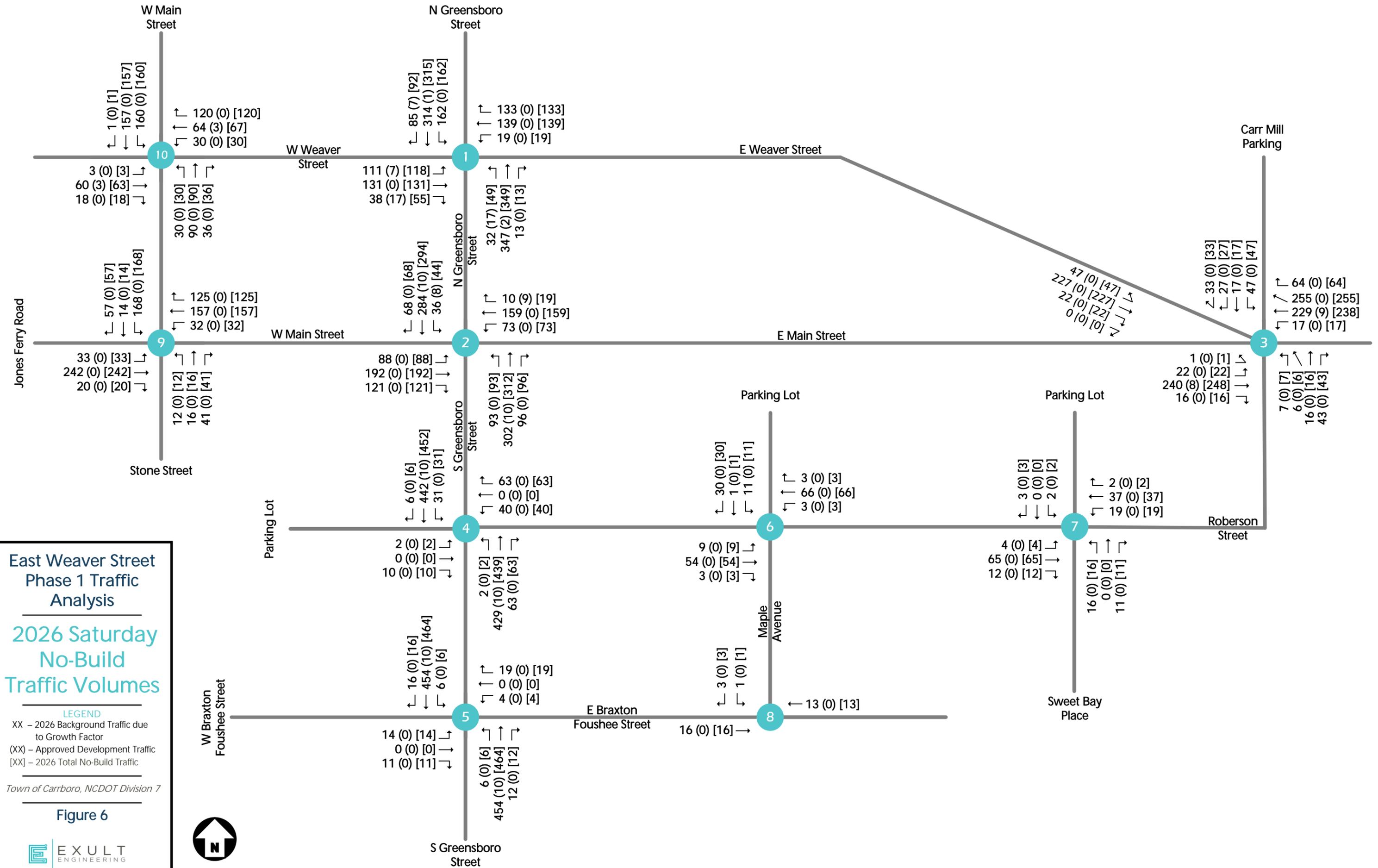
With the closure of East Weaver Street, it was assumed that traffic traveling to/from the north on North Greensboro Street would re-route to the intersection of North/South Greensboro Street and East/West Main Street to continue to their destination.

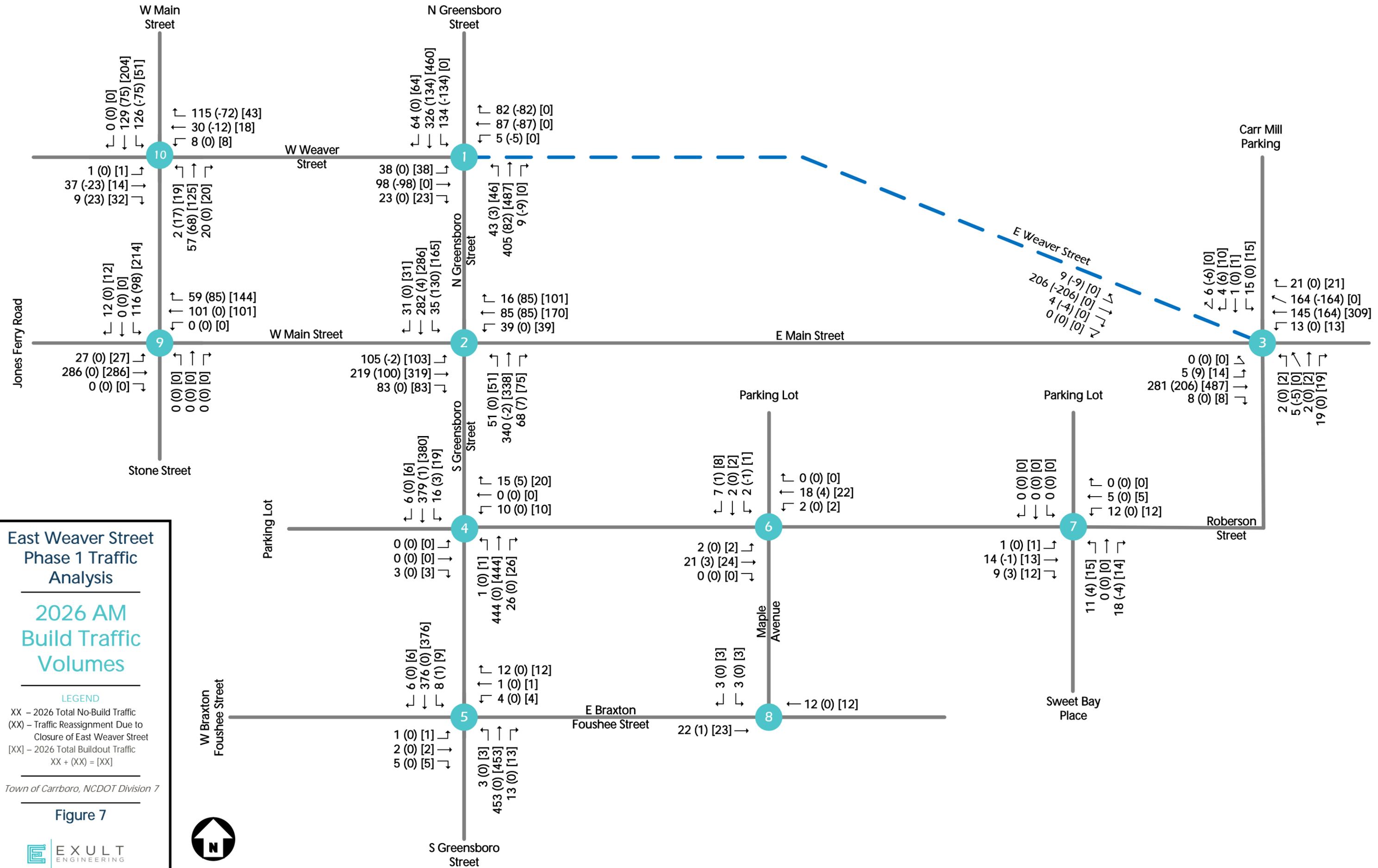
Based on available capacity at the intersections of West Main Street at West Weaver Street and West Main Street at East Main Street/Jones Ferry Road, it was assumed that traffic traveling to/from the north on West Main Street and to/from the west of West Weaver Street would instead re-route to the intersection of West Main Street at East Main Street/Jones Ferry Road to continue to their destination.

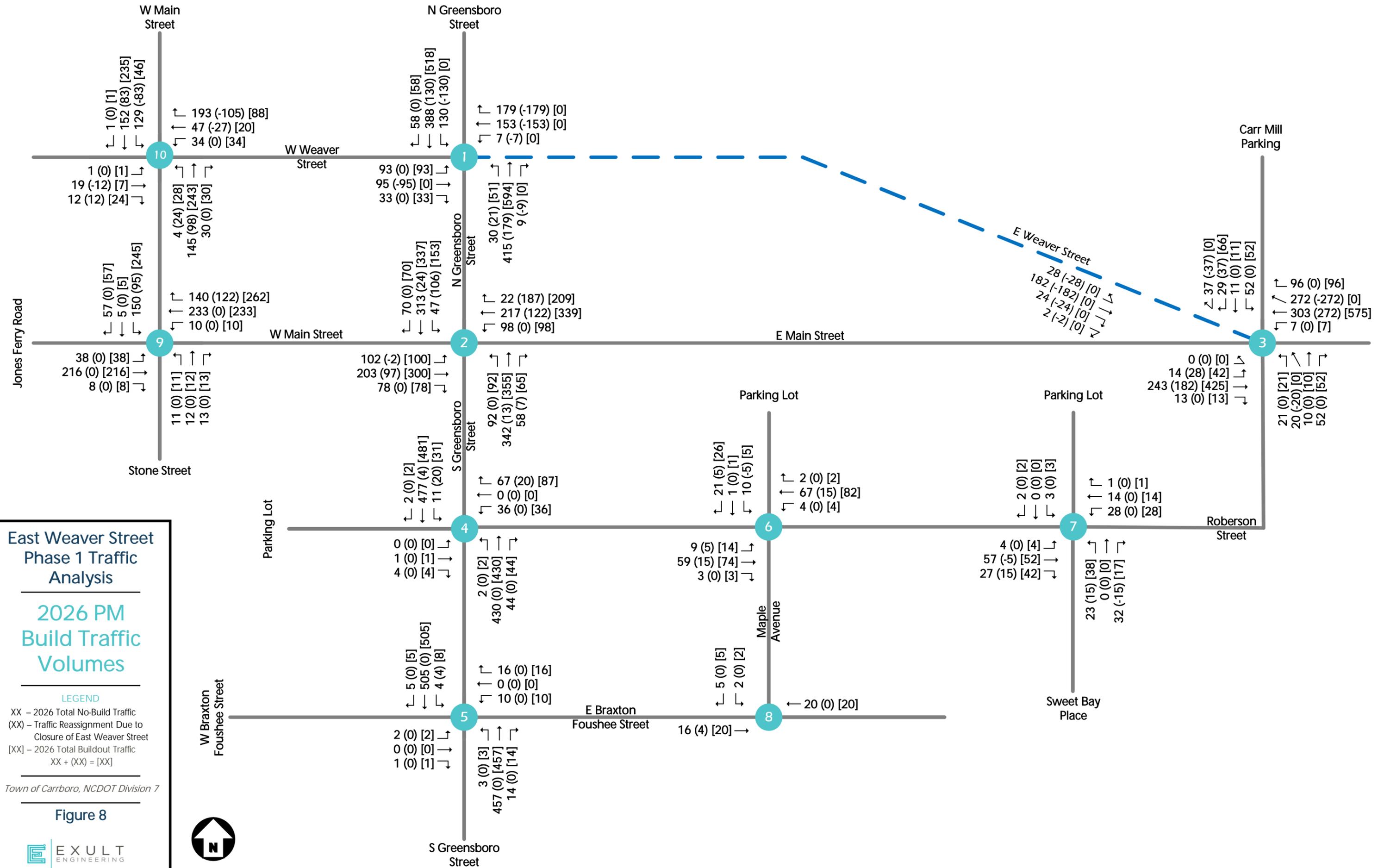
It was assumed that some traffic may also re-route along Roberson Street as shown in Figures 7, 8, and 9.

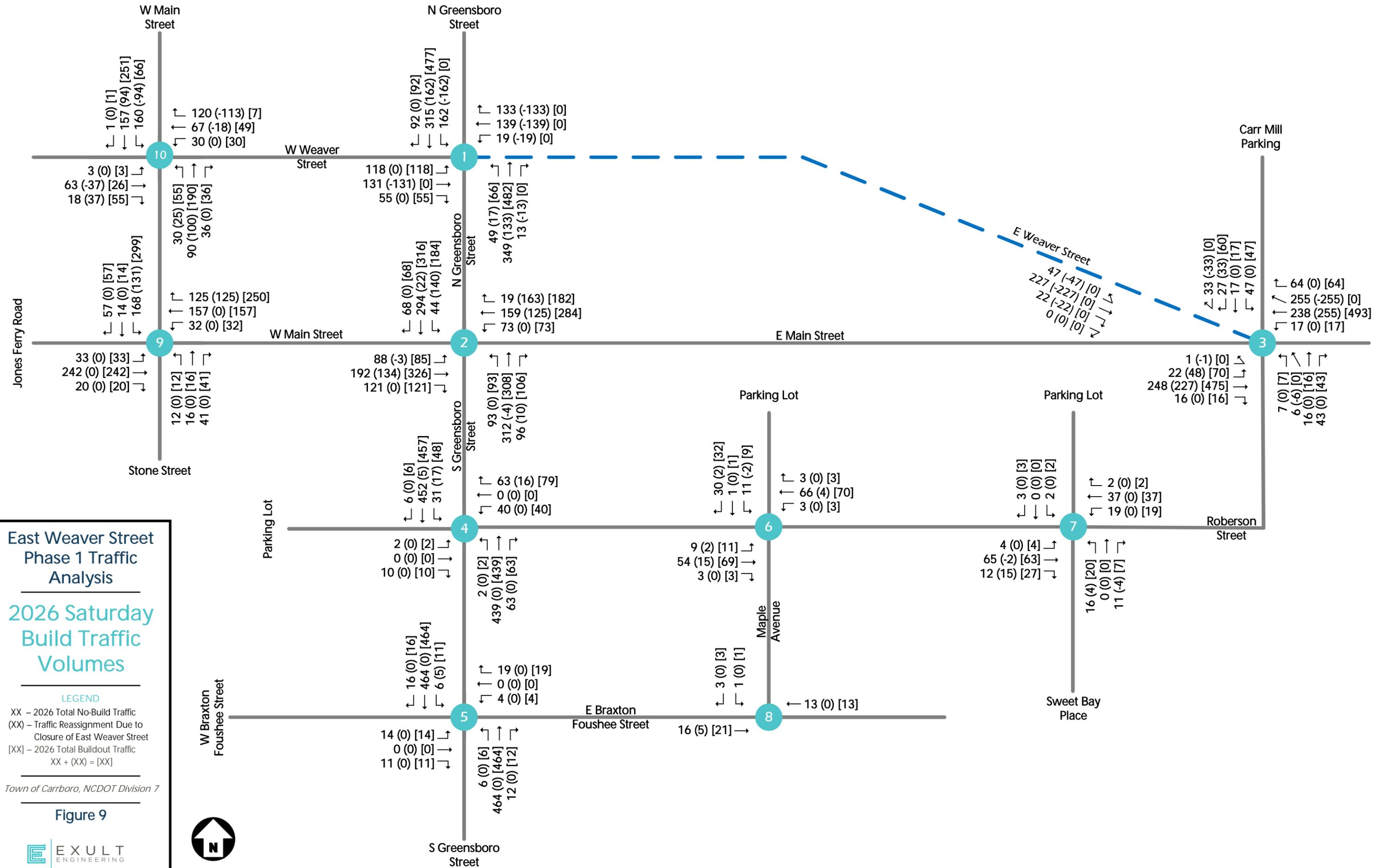






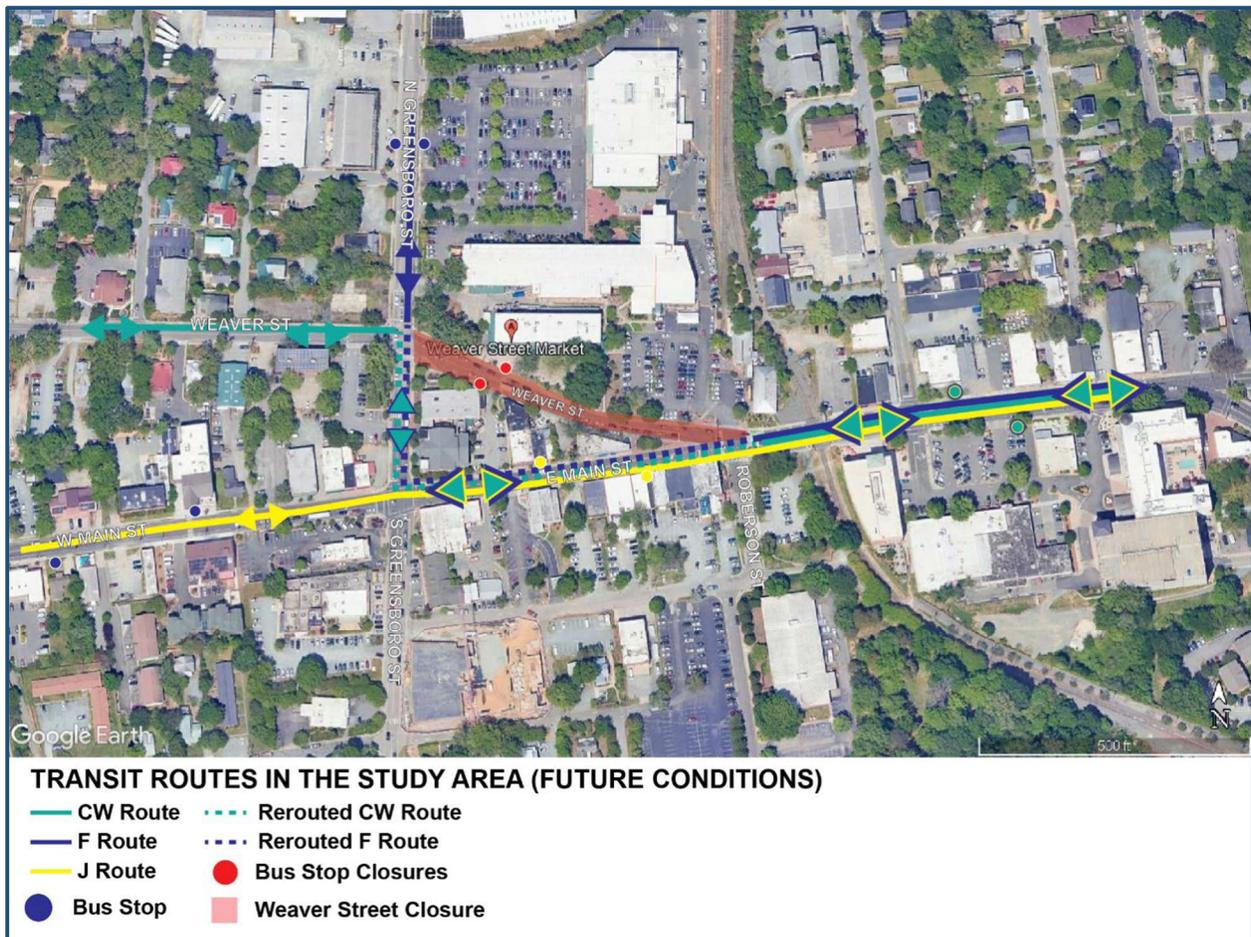






## TRANSIT CONSIDERATIONS

Based on the *Weaver Street Conversion – Assessment of Impacts on Transit Service* memo prepared by Chapel Hill Transit, two Chapel Hill Transit routes will be directly impacted by the closure of East Weaver Street to vehicular traffic, including the F Route and the CW Route. Additionally, two existing transit stops will need to be closed at East Weaver Street at Weaver Street Market and East Weaver Street at Carrboro Century Center. As illustrated below by Chapel Hill Transit, it is recommended that the F Route and CW Route re-route from East Weaver Street to the intersection of North Greensboro Street at East Main Street. Additionally, it is recommended to re-direct transit users to the transit stops located at East Main Street at Jade Palace and East Main Street at Weaver Street Realty.



## PARKING CONSIDERATIONS

There are 11 existing parking spaces along East Weaver Street that will be impacted by the closure of East Weaver Street shown in red below. Five of the parking spaces are on-street parking spaces with a one-hour time limit from 7:00 am to 5:30 pm, and six of the parking spaces are located in private lots. With only 11 parking spaces impacted, it is recommended that vehicles utilizing these spaces instead park in the Century Center Lot, East Main Lot, or other Public Parking Lots with availability. If parking availability becomes challenging, it is recommended that the Town complete a parking occupancy study to identify where there may be available capacity for parking and provide signage to direct vehicles to the available parking lots.



## OTHER CONSIDERATIONS

There are two existing loading zones along East Weaver Street that would be impacted by the closure of East Weaver Street shown below in red.

There are also two dumpsters with access only to East Weaver Street that would be impacted by the closure of East Weaver Street shown below in yellow. It is recommended to place removable bollards at each end of East Weaver Street to allow garbage trucks to access the properties once per week for trash pickup. Removable bollards may also allow delivery trucks to access properties along East Weaver Street as well, when needed.



## CAPACITY ANALYSIS

The intersections identified within the study area were analyzed under 2025 existing, 2026 no-build, and 2026 buildout conditions to identify recommended roadway improvements. Roadway improvements were recommended based on the level-of-service (LOS), delay, and queuing results.

This study includes analysis of the following traffic scenarios:

- Existing traffic (2025)
- No-Build traffic (2026) with existing travel patterns along East Weaver Street
- Build-out traffic (2026) with the closure of East Weaver Street to vehicular traffic
- Build-out traffic (2026) with Recommended Improvements

LOS is a qualitative measurement of traffic operations that is a measure of delay time. The Transportation Research Board’s *Highway Capacity Manual* (HCM) defines six levels of service for intersections with LOS “A” representing the best operating condition and LOS “F” representing the worst. The following table summarizes the criteria for signalized intersections and stop-controlled intersections.

**Table 3: Highway Capacity Manual (LOS and Delay)**

Signalized Intersection		Stop-Controlled Intersection	
Level-of-Service (LOS)	Average Control Delay (Seconds per Vehicles)	Level-of-Service (LOS)	Average Control Delay (Seconds per Vehicle)
A	≤ 10.0	A	≤ 10.0
B	> 10.0 and ≤ 20.0	B	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	C	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	D	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	E	> 35.0 and ≤ 50.0
F	> 80.0	F	> 50.0

Version 11.1 of Synchro Professional software was used to determine the LOS, delay, and expected queue length at the signalized and unsignalized intersections. SimTraffic was also used to determine the maximum queue length experienced at the study intersections. This software is based on the analysis procedures defined in the HCM. For unsignalized intersections, Synchro reports were created using the HCM 6<sup>th</sup> Edition option for unsignalized intersections. Queue lengths for the turn lanes are shown in the summary tables. Detailed Synchro and SimTraffic reports are included in the Appendix of this report.

LOS for a two-way stop-controlled (TWSC) intersection is determined by the control delay and is defined for the minor approaches. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. With respect to field measurements, this summation of control delay is defined as the total time elapsed from the time a vehicle stops at the end of the queue to the time the

vehicle departs from the stop line. Capacity analysis results between LOS A and LOS C for the minor street stop-controlled approaches are assumed to represent short delays. Results between LOS D and LOS E for the minor street stop-controlled approaches are assumed to represent moderate delays, and LOS F for the minor street stop-controlled approaches is assumed to represent long delays. It is typical for minor street stop-controlled approaches and driveways intersecting major streets to experience long delays during peak hours, particularly for left-turn movements. However, the majority of the traffic moving through the intersection experiences little or no delay on the major street approaches.

#### Capacity Analysis Inputs

The following inputs were used for all intersections:

- Peak Hour Factor (PHF) was based on existing count data for existing scenarios for each approach. For no-build and buildout scenarios, a PHF of 0.90 was used.
- To remain conservative, heavy vehicles percentage for existing, no build, and build scenarios was based on existing traffic count data for each intersection, or 2%, whichever was higher.
- For allowable movements where zero (0), one (1), two (2), or three (3) volumes are projected, a value of four (4) was used in the Synchro capacity analysis model.
- Default values for detectors, vehicle extension, and minimum gap were used.
- Right-turns on red were not permitted in any scenario.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- For movements with existing protected + permitted left-turn phasing, the phasing in future year conditions was set to protected-only based on *NCDOT's Capacity Analysis Guidelines Standards* for left-turn treatment.
- Enter Blocked Intersection was set to 1 vehicle for all stop-controlled approaches.

For unsignalized intersections, queue length for HCM from Synchro is given in terms of number of vehicles. To convert to queue length in feet, an estimated 25 feet per vehicle was applied.

The following subsections summarize the LOS and queue length results for the capacity analysis under 2025 existing, 2026 no-build, and 2026 buildout scenarios for each study intersection.

North Greensboro Street at East/West Weaver Street

North Greensboro Street at East/West Weaver Street is currently a four-legged signalized intersection. The intersection is coordinated and part of the Chapel Hill – Carrboro Signal System. Existing signal plans and timings obtained from the Town of Chapel Hill were used in the 2025 existing analysis scenarios. The signal and timing plans are included in the Appendix of this report.



**Northbound Approach of North Greensboro Street at East/West Weaver Street**

For future no-build and build scenarios, the following input values were used in accordance with NCDOT Congestion Management *Capacity Analysis Guidelines*:

- Cycle length and splits were optimized. NCDOT Congestion Management minimum cycle length recommendations were applied.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- Default values for vehicle extension and minimum gap were used.

The build scenario considers the following modifications to the intersection of North Greensboro Street at East/West Weaver Street:

- Close the east leg of East Weaver Street to vehicular traffic.
- Remove the exclusive southbound left-turn lane on North Greensboro Street and replace it with a painted island.
- Modify signal for a 3-legged intersection.

Traffic is also re-routed at this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.

The capacity analysis results for the signalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 4. As shown in Table 4, the intersection of North Greensboro Street at East/West Weaver Street currently operates at LOS C during the AM, PM, and Saturday peak hours.

Under 2026 no-build conditions, the intersection is expected to operate at LOS C during the AM peak hour and LOS D during both the PM and Saturday peak hours. With the closure of the east leg of East Weaver Street to vehicular traffic and the removal of the southbound left-turn lane on North Greensboro Street in the build scenarios, the intersection is expected to operate at LOS A during the AM and PM peak hours and LOS B during the Saturday peak hour.

While the intersection of North Greensboro Street at East/West Weaver Street operates acceptably under build conditions without the east leg and southbound left-turn lane at this intersection, excessive southbound queueing at this intersection and at the intersection of North Greensboro Street at East/West Main Street was observed in the 2026 build condition due to the southbound left-turning vehicles at East Weaver Street re-routed to the southbound left at East Main Street. Therefore, a build with improvements

scenario was analyzed to restripe the exclusive southbound left-turn lane on North Greensboro Street to a southbound through lane, restripe the existing exclusive northbound left-turn lane on North Greensboro Street to a second southbound receiving lane, and restripe the existing northbound through lane on North Greensboro Street to a shared through/left lane. With these improvements in place, the intersection is still expected to operate at LOS A during the AM and PM peak hours and LOS B during the Saturday peak hour. The expected southbound queueing is also minimized when compared to 2026 build conditions. Therefore, the following is recommended to accommodate future year traffic:

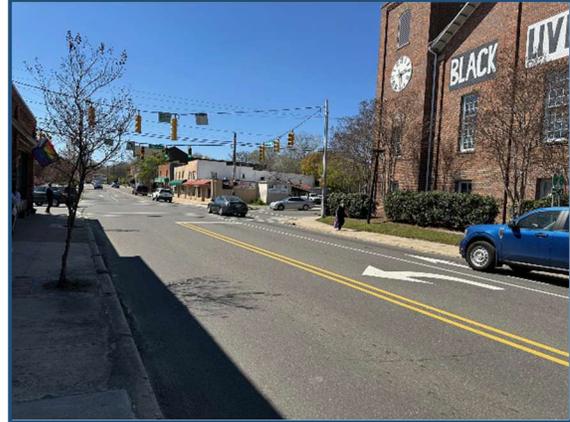
- Close the east leg of East Weaver Street to vehicular traffic.
- Restripe the exclusive southbound left-turn lane on North Greensboro Street to a southbound through lane.
- Restripe the existing exclusive northbound left-turn lane on North Greensboro Street to a second southbound receiving lane.
- Restripe the existing northbound through lane on North Greensboro Street to a shared through/left lane.
- Modify signal for a 3-legged intersection.

**Table 4: Level-of-Service: North Greensboro Street at East/West Weaver Street (Signalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	Overall – C (32.0) EB – B (15.2) WB – B (17.3) NB – E (55.4) SB – C (21.6)	EBL – 28'/63' EBT/R – 73'/118' WBL – 10'/22' WBT/R – 152'/137' NBL – 7'/116' NBT/R – 385'/234' SBL – 85'/220' SBT/R – 236'/287'	Overall – C (30.8) EB – B (15.4) WB – C (21.3) NB – E (56.1) SB – C (22.8)	EBL – 56'/111' EBT/R – 72'/129' WBL – 3'/37' WBT/R – 285'/274' NBL – 6'/113' NBT/R – 369'/229' SBL – 78'/171' SBT/R – 263'/360'	Overall – C (26.9) EB – B (15.8) WB – C (28.7) NB – D (38.3) SB – C (23.5)	EBL – 72'/120' EBT/R – 104'/156' WBL – 26'/103' WBT/R – 225'/261' NBL – 8'/124' NBT/R – 211'/228' SBL – 100'/260' SBT/R – 254'/383'
2026 No-Build	Overall – C (27.2) EB – C (33.5) WB – C (26.1) NB – C (20.9) SB – C (31.0)	EBL – 69'/93' EBT/R – 126'/165' WBL – 7'/36' WBT/R – 174'/186' NBL – 16'/109' NBT/R – 316'/230' SBL – 179'/213' SBT/R – 247'/333'	Overall – D (52.9) EB – D (41.5) WB – E (55.2) NB – E (73.6) SB – D (39.6)	EBL – 151'/179' EBT/R – 111'/373' WBL – 12'/172' WBT/R – 406'/412' NBL – 30'/124' NBT/R – 346'/232' SBL – 199'/582' SBT/R – 369'/708'	Overall – D (40.2) EB – D (38.4) WB – E (59.2) NB – C (30.8) SB – D (38.2)	EBL – 174'/193' EBT/R – 157'/237' WBL – 37'/159' WBT/R – 344'/317' NBL – 23'/124' NBT/R – 302'/230' SBL – 217'/265' SBT/R – 332'/406'
2026 Build	Overall – A (5.9) EB – E (55.1) NB – A (2.9) SB – A (3.2)	EBL – 67'/90' EBR – 48'/102' NBL – 6'/54' NBT – 66'/152' SBT – 132'/497'	Overall – A (8.6) EB – E (56.4) NB – A (2.1) SB – A (5.6)	EBL – 132'/141' EBR – 60'/119' NBL – 1'/66' NBT – 20'/86' SBT – 188'/966'	Overall – B (11.4) EB – D (45.3) NB – A (3.8) SB – A (8.4)	EBL – 151'/168' EBT/R – 81'/152' NBL – 4'/88' NBT/R – 31'/163' SBT – 251'/1176'
2026 Build with Improvements	Overall – A (5.9) EB – E (55.1) NB – A (4.0) SB – A (2.1)	EBL – 67'/89' EBR – 48'/76' NBL/T – 76'/200' SBT – 53'/91' SBT/R – 53'/171'	Overall – A (8.1) EB – E (56.4) NB – A (2.9) SB – A (3.3)	EBL – 132'/140' EBR – 60'/146' NBL/T – 21'/248' SBT – 73'/390' SBT/R – 73'/277'	Overall – B (11.1) EB – D (45.5) NB – A (5.7) SB – A (5.8)	EBL – 151'/148' EBR – 81'/189' NBL/T – 58'/249' SBT – 98'/221' SBT/R – 98'/259'

### North/South Greensboro Street at East/West Main Street

North/South Greensboro Street at East/West Main Street is currently a four-legged signalized intersection. The intersection is coordinated and part of the Chapel Hill – Carrboro Signal System. Existing signal plans and timings obtained from the Town of Chapel Hill were used in the 2025 existing analysis scenarios. The signal and timing plans are included in the Appendix of this report.



**Westbound Approach of East Main Street  
at North Greensboro Street/South  
Greensboro Street**

For future no-build and build scenarios, the following input values were used in accordance with NCDOT Congestion Management *Capacity Analysis Guidelines*:

- Cycle length and splits were optimized. NCDOT Congestion Management minimum cycle length recommendations were applied.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- For movements with existing protected + permitted left-turn phasing, the phasing in future year conditions was set to protected-only based on *NCDOT's Capacity Analysis Guidelines Standards* for left-turn treatment.
- Default values for vehicle extension and minimum gap were used.

The build scenario does not consider any geometric improvements to the intersection of North/South Greensboro Street at East/West Main Street. However, traffic is re-routed to this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.

The capacity analysis results for the signalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 5. As shown in Table 5, the intersection of North/South Greensboro Street at East/West Main Street currently operates at LOS D during the AM peak hour and LOS C during the PM and Saturday peak hours.

Under 2026 no-build conditions, the intersection is expected to operate at LOS D during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street to vehicular traffic in the build scenarios, the intersection is expected to operate at LOS D during the AM peak hour and LOS E during the PM and Saturday peak hours.

Excessive southbound queueing was observed along North Greensboro Street due to the southbound left-turning vehicles at East Weaver Street re-routed to the southbound left at East Main Street. Therefore, a build with improvements scenario was analyzed to restripe the exclusive southbound left-turn lane on North Greensboro Street to provide full storage. Furthermore, the southbound left-turn lane stop bar will need to move approximately 25 feet north of the current position to allow heavy vehicles to turn right from East Main Street.

Additionally, long northbound queues were observed under build conditions. To improve the northbound LOS and queueing, the 2026 build with improvements scenario also considered striping an exclusive

northbound right-turn lane on South Greensboro Street utilizing existing pavement. However, based on coordination with NCDOT and the Town, this improvement was not desired or feasible. Therefore, a second build with improvements scenario was analyzed without this northbound right turn lane. It should be noted that when this northbound right turn lane was removed under a new “build with improvement – without NBR recommendation”, the LOS, delay, and queueing is not expected to change significantly at the surrounding intersections as seen in the Synchro and SimTraffic reports in the Appendix.

With the southbound left turn lane improvement in place, the intersection is expected to operate at LOS D during the AM peak hour and LOS E during the PM and Saturday peak hours. The expected southbound queueing is also minimized when compared to 2026 build conditions. Therefore, the following is recommended to accommodate future year traffic:

- Restripe the exclusive southbound left-turn lane on North Greensboro Street to provide full storage.
- Restripe the existing southbound left-turn lane stop bar on North Greensboro Street approximately 25 feet north of the current position to allow heavy vehicles to turn right from East Main Street.

**Table 5: Level-of-Service: North/South Greensboro Street at East/West Main Street (Signalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	Overall – D (44.4) EB – C (22.6) WB – B (14.2) NB – F (89.1) SB – C (22.4)	EBL – 72’/141’ EBT/R – 267’/266’ WBL – 14’/84’ WBT/R – 95’/132’ NBL – 40’/89’ NBT/R – 421’/206’ SBL – 6’/113’ SBT/R – 131’/241’	Overall – C (33.2) EB – C (24.2) WB – B (13.8) NB – E (57.3) SB – C (28.7)	EBL – 66’/120’ EBT/R – 227’/226’ WBL – 14’/128’ WBT/R – 204’/222’ NBL – 61’/126’ NBT/R – 365’/212’ SBL – 10’/129’ SBT/R – 335’/245’	Overall – C (33.8) EB – C (25.6) WB – C (21.6) NB – D (50.4) SB – C (29.0)	EBL – 60’/153’ EBT/R – 263’/255’ WBL – 51’/98’ WBT/R – 140’/199’ NBL – 63’/119’ NBT/R – 393’/205’ SBL – 12’/129’ SBT/R – 260’/241’
2026 No-Build	Overall – D (40.2) EB – D (39.5) WB – D (37.7) NB – D (51.6) SB – C (27.0)	EBL – 149’/248’ EBT/R – 325’/333’ WBL – 77’/109’ WBT/R – 59’/160’ NBL – 88’/118’ NBT/R – 419’/210’ SBL – 66’/129’ SBT/R – 307’/248’	Overall – D (44.2) EB – D (46.6) WB – D (46.2) NB – D (48.4) SB – D (35.7)	EBL – 144’/267’ EBT/R – 313’/700’ WBL – 118’/380’ WBT/R – 238’/461’ NBL – 136’/142’ NBT/R – 408’/212’ SBL – 76’/129’ SBT/R – 416’/246’	Overall – D (46.4) EB – D (41.8) WB – E (59.3) NB – D (50.3) SB – D (38.0)	EBL – 130’/260’ EBT/R – 345’/368’ WBL – 121’/141’ WBT/R – 232’/229’ NBL – 137’/154’ NBT/R – 421’/208’ SBL – 75’/129’ SBT/R – 250’/246’
2026 Build	Overall – D (50.8) EB – D (50.5) WB – D (40.4) NB – E (62.4) SB – D (46.6)	EBL – 178’/270’ EBT/R – 474’/515’ WBL – 58’/107’ WBT/R – 299’/337’ NBL – 88’/124’ NBT/R – 518’/204’ SBL – 254’/130’ SBT/R – 312’/260’	Overall – E (63.7) EB – E (58.6) WB – E (77.6) NB – E (56.9) SB – E (58.1)	EBL – 190’/270’ EBT/R – 462’/548’ WBL – 137’/380’ WBT/R – 752’/583’ NBL – 176’/183’ NBT/R – 490’/221’ SBL – 260’/130’ SBT/R – 422’/261’	Overall – E (60.0) EB – D (54.6) WB – E (67.0) NB – E (64.8) SB – D (54.0)	EBL – 155’/270’ EBT/R – 587’/730’ WBL – 125’/380’ WBT/R – 623’/578’ NBL – 177’/186’ NBT/R – 500’/219’ SBL – 264’/130’ SBT/R – 318’/261’
2026 Build with Improvements	Overall – D (47.2) EB – D (48.2) WB – D (38.5) NB – D (52.0) SB – D (47.0)	EBL – 178’/270’ EBT/R – 474’/506’ WBL – 58’/108’ WBT/R – 299’/317’ NBL – 88’/112’ NBT – 368’/205’ NBR – 91’/100’ SBL – 254’/233’ SBT/R – 312’/255’	Overall – E (60.4) EB – D (52.2) WB – E (58.7) NB – E (57.8) SB – E (71.7)	EBL – 190’/270’ EBT/R – 405’/495’ WBL – 137’/380’ WBT/R – 706’/580’ NBL – 176’/179’ NBT – 400’/224’ NBR – 81’/100’ SBL – 260’/241’ SBT/R – 449’/260’	Overall – D (52.5) EB – D (44.0) WB – D (46.3) NB – D (54.4) SB – E (64.7)	EBL – 155’/270’ EBT/R – 526’/603’ WBL – 125’/357’ WBT/R – 562’/531’ NBL – 139’/167’ NBT – 344’/216’ NBR – 125’/100’ SBL – 263’/239’ SBT/R – 290’/257’
2026 Build with Improvements – Without NBR Recommendation	Overall – D (51.0) EB – D (50.5) WB – D (40.4) NB – E (62.4) SB – D (47.4)	EBL – 178’/270’ EBT/R – 474’/496’ WBL – 58’/102’ WBT/R – 299’/332’ NBL – 88’/122’ NBT/R – 518’/206’ SBL – 254’/240’ SBT/R – 312’/255’	Overall – E (65.3) EB – D (53.3) WB – E (62.9) NB – E (69.7) SB – E (74.2)	EBL – 190’/258’ EBT/R – 405’/492’ WBL – 137’/380’ WBT/R – 706’/584’ NBL – 176’/163’ NBT/R – 550’/224’ SBL – 260’/244’ SBT/R – 449’/261	Overall – E (58.8) EB – D (48.1) WB – D (48.8) NB – E (69.3) SB – E (68.9)	EBL – 155’/270’ EBT/R – 500’/662’ WBL – 125’/330’ WBT/R – 550’/517’ NBL – 166’/181’ NBT/R – 535’/220’ SBL – 299’/246’ SBT/R – 289’/258’

### East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street

East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street is currently a five-legged signalized intersection. The intersection is coordinated and part of the Chapel Hill – Carrboro Signal System. Existing signal plans and timings obtained from the Town of Chapel Hill were used in the 2025 existing analysis scenarios. The signal and timing plans are included in the Appendix of this report.

For future no-build and build scenarios, the following input values were used in accordance with NCDOT Congestion Management *Capacity Analysis Guidelines*:



**Northbound Approach of Roberson Street  
at East Main Street**

- Cycle length and splits were optimized. NCDOT Congestion Management minimum cycle length recommendations were applied.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- Default values for vehicle extension and minimum gap were used.

The 2026 build scenario considers the following improvements at the intersection:

- Close the southeast leg of East Weaver Street to vehicular traffic.
- Restripe the shared westbound left/through lane on East Main Street to an exclusive westbound left-turn lane.
- Restripe the exclusive westbound right-turn lane on East Main Street to a shared through/right lane.
- Modify signal for a 4-legged intersection.

Traffic is also re-routed at this intersection in the 2026 build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.

The capacity analysis results for the signalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 6. As shown in Table 6, the intersection of East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street currently operates at LOS C during the AM, PM, and Saturday peak hours.

Under 2026 no-build conditions, the intersection is expected to continue to operate at LOS C during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street to vehicular traffic in the build scenarios, the intersection is expected to operate at LOS A during the AM, PM, and Saturday peak hours.

The following is recommended to accommodate future year traffic:

- Close the southeast leg of East Weaver Street to vehicular traffic.
- Restripe the shared westbound left/through lane on East Main Street to an exclusive westbound left-turn lane.

- Restripe the exclusive westbound right-turn lane on East Main Street to a shared through/right lane.
- Modify signal for a 4-legged intersection.

**Table 6: Level-of-Service: East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street (Signalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	Overall – C (23.8) EB – C (20.0) WB – B (12.7) NB – D (41.7) SB – D (41.8) SEB – D (40.4)	EBL – 9’/25’ EBT/R – 206’/175’ WBT/L – 99’/211’ WBR – 126’/136’ NBL/T/R – 44’/66’ SBL/T/R – 44’/95’ SEBL/T/R – 215’/254’	Overall – C (31.2) EB – C (26.8) WB – C (22.6) NB – D (41.5) SB – D (45.9) SEB – D (47.9)	EBL – 19’/61’ EBT/R – 200’/150’ WBT/L – 228’/597’ WBR – 334’/140’ NBL/T/R – 100’/128’ SBL/T/R – 121’/199’ SEBL/T/R – 219’/247’	Overall – C (30.6) EB – C (21.0) WB – C (22.8) NB – D (43.2) SB – D (54.2) SEB – D (41.6)	EBL – 31’/35’ EBT/R – 203’/143’ WBT/L – 195’/433’ WBR – 270’/140’ NBL/T/R – 93’/132’ SBL/T/R – 152’/184’ SEBL/T/R – 269’/270’
2026 No-Build	Overall – C (20.7) EB – B (15.9) WB – B (13.3) NB – E (58.7) SB – E (55.1) SEB – C (28.6)	EBL – 9’/1’ EBT/R – 211’/138’ WBT/L – 117’/219’ WBR – 140’/138’ NBL/T/R – 59’/79’ SBL/T/R – 50’/84’ SEBL/T/R – 126’/318’	Overall – C (29.2) EB – B (10.6) WB – C (20.1) NB – E (57.0) SB – E (62.0) SEB – E (55.3)	EBL – 11’/22’ EBT/R – 167’/115’ WBT/L – 260’/984’ WBR – 339’/140’ NBL/T/R – 135’/226’ SBL/T/R – 168’/574’ SEBL/T/R – 212’/268’	Overall – C (34.4) EB – B (18.8) WB – C (25.7) NB – D (47.8) SB – E (62.6) SEB – D (51.2)	EBL – 18’/33’ EBT/R – 142’/135’ WBT/L – 240’/456’ WBR – 322’/140’ NBL/T/R – 104’/127’ SBL/T/R – 168’/224’ SEBL/T/R – 367’/372’
2026 Build	Overall – A (3.2) EB – A (1.1) WB – A (3.7) NB – C (22.7) SB – B (18.0)	EBL – 1’/62’ EBT/R – 32’/232’ WBL – 6’/50’ WBT/R – 80’/152’ NBL/T/R – 24’/60’ SBL/T/R – 27’/61’	Overall – A (9.0) EB – A (6.3) WB – A (7.0) NB – C (27.0) SB – B (17.9)	EBL – 13’/90’ EBT/R – 134’/172’ WBL – 4’/117’ WBT/R – 208’/1072’ NBL/T/R – 58’/118’ SBL/T/R – 68’/206’	Overall – A (6.3) EB – A (1.8) WB – A (6.5) NB – C (22.8) SB – B (17.1)	EBL – 6’/92’ EBT/R – 51’/174’ WBL – 8’/139’ WBT/R – 173’/588’ NBL/T/R – 41’/107’ SBL/T/R – 64’/162’
2026 Build with Improvements	Overall – A (3.7) EB – A (2.0) WB – A (3.7) NB – C (22.7) SB – B (18.0)	EBL – 2’/54’ EBT/R – 66’/228’ WBL – 6’/39’ WBT/R – 80’/153’ NBL/T/R – 23’/64’ SBL/T/R – 27’/63’	Overall – A (9.2) EB – A (6.5) WB – A (7.1) NB – C (27.3) SB – B (18.8)	EBL – 16’/77’ EBT/R – 136’/198’ WBL – 4’/106’ WBT/R – 208’/872’ NBL/T/R – 56’/117’ SBL/T/R – 68’/167’	Overall – A (7.3) EB – A (2.1) WB – A (7.2) NB – C (22.0) SB – C (21.0)	EBL – 8’/105’ EBT/R – 49’/164’ WBL – 9’/116’ WBT/R – 184’/290’ NBL/T/R – 42’/102’ SBL/T/R – 84’/160’

South Greensboro Street at Roberson Street/Parking Lot

South Greensboro Street at Roberson Street/Parking Lot is currently a four-legged unsignalized intersection. The eastbound and westbound minor street approaches (Parking Lot/Roberson Street) operate under stop control while the major street approaches (South Greensboro Street) are free-flow.

The build scenario does not consider any geometric improvements to the intersection. However, traffic is re-routed to this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.



**Westbound Approach of Roberston Street at South Greensboro Street**

The capacity analysis results for the unsignalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 7.

**Table 7: Level-of-Service: South Greensboro Street at Roberson Street/Parking Lot (Unsignalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	NBL – A (8.2) EB – C (18.2) WB – C (17.4) SBL – A (8.6)	NBL/T/R – 0’/159’ EBL/T/R – 3’/41’ WBL/T/R – 8’/55’ SBL/T/R – 3’/157’	NBL – A (8.4) EB – C (19.8) WB – C (19.7) SBL – A (8.4)	NBL/T/R – 0’/153’ EBL/T/R – 5’/41’ WBL/T/R – 33’/100’ SBL/T/R – 0’/108’	NBL – A (8.3) EB – C (17.6) WB – C (21.9) SBL – A (8.5)	NBL/T/R – 0’/156’ EBL/T/R – 5’/56’ WBL/T/R – 38’/121’ SBL/T/R – 3’/176’
2026 No-Build	NBL – A (8.2) EB – C (18.2) WB – D (17.3) SBL – A (8.6)	NBL/T/R – 0’/160’ EBL/T/R – 3’/33’ WBL/T/R – 8’/58’ SBL/T/R – 3’/166’	NBL – A (8.5) EB – C (21.5) WB – C (22.1) SBL – A (8.5)	NBL/T/R – 0’/156’ EBL/T/R – 5’/54’ WBL/T/R – 40’/136’ SBL/T/R – 0’/179’	NBL – A (8.4) EB – C (19.3) WB – D (25.5) SBL – A (8.7)	NBL/T/R – 0’/165’ EBL/T/R – 5’/44’ WBL/T/R – 48’/128’ SBL/T/R – 3’/175’
2026 Build	NBL – A (8.2) EB – C (18.4) WB – C (16.8) SBL – A (8.6)	NBL/T/R – 0’/159’ EBL/T/R – 3’/41’ WBL/T/R – 10’/54’ SBL/T/R – 3’/166’	NBL – A (8.5) EB – C (23.7) WB – C (23.6) SBL – A (8.6)	NBL/T/R – 0’/162’ EBL/T/R – 5’/44’ WBL/T/R – 50’/169’ SBL/T/R – 3’/184’	NBL – A (8.4) EB – C (20.8) WB – D (27.6) SBL – A (8.8)	NBL/T/R – 0’/163’ EBL/T/R – 8’/50’ WBL/T/R – 58’/173’ SBL/T/R – 5’/189’

As shown in Table 7, the intersection currently operates with short delays for the eastbound and westbound minor street approaches (Parking Lot/Roberson Street) during the AM, PM, and Saturday peak hours. The intersection is expected to operate with short to moderate delays for the eastbound and westbound minor street approaches (Parking Lot/Roberson Street) under 2026 no-build conditions during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street in the 2026 build scenarios, the intersection is expected to continue to operate with short to moderate delays for the eastbound and westbound minor street approaches (Parking Lot/Roberson Street). The closure of East Weaver Street is not expected to significantly change the intersection operations or queuing observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

South Greensboro Street at East/West Braxton Foushee Street

South Greensboro Street at East/West Braxton Foushee Street is currently a four-legged unsignalized intersection. The eastbound and westbound minor street approaches (East/West Braxton Foushee Street) operate under stop control while the major street approaches (South Greensboro Street) are free-flow.



**Westbound Approach of East Braxton Foushee Street at South Greensboro Street**

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is re-routed to this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street. The capacity analysis results for the unsignalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 8.

**Table 8: Level-of-Service: South Greensboro Street at East/West Braxton Foushee Street (Unsignalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	NBL – A (8.2) EB – C (17.4) WB – C (15.6) SBL – A (8.5)	NBL/T/R – 0’/647’ EBL/T/R – 5’/37’ WBL/T/R – 5’/36’ SBL/T/R – 0’/94’	NBL – A (8.5) EB – C (19.1) WB – C (17.4) SBL – A (8.4)	NBL/T/R – 0’/289’ EBL/T/R – 3’/32’ WBL/T/R – 8’/41’ SBL/T/R – 0’/55’	NBL – A (8.4) EB – C (19.4) WB – C (15.5) SBL – A (8.4)	NBL/T/R – 0’/251’ EBL/T/R – 10’/54’ WBL/T/R – 5’/47’ SBL/T/R – 0’/74’
2026 No-Build	NBL – A (8.2) EB – C (17.1) WB – C (15.5) SBL – A (8.5)	NBL/T/R – 0’/437’ EBL/T/R – 3’/36’ WBL/T/R – 5’/41’ SBL/T/R – 0’/92’	NBL – A (8.6) EB – C (20.7) WB – C (18.8) SBL – A (8.5)	NBL/T/R – 0’/521’ EBL/T/R – 5’/58’ WBL/T/R – 10’/80’ SBL/T/R – 0’/70’	NBL – A (8.5) EB – C (21.6) WB – C (15.9) SBL – A (8.5)	NBL/T/R – 0’/376’ EBL/T/R – 10’/50’ WBL/T/R – 8’/62’ SBL/T/R – 0’/100’
2026 Build	NBL – A (8.2) EB – C (17.2) WB – C (15.5) SBL – A (8.5)	NBL/T/R – 0’/392’ EBL/T/R – 3’/34’ WBL/T/R – 5’/45’ SBL/T/R – 0’/102’	NBL – A (8.6) EB – C (21.0) WB – C (19.0) SBL – A (8.5)	NBL/T/R – 0’/330’ EBL/T/R – 5’/36’ WBL/T/R – 10’/53’ SBL/T/R – 0’/98’	NBL – A (8.5) EB – C (22.0) WB – C (16.0) SBL – A (8.5)	NBL/T/R – 0’/556’ EBL/T/R – 10’/55’ WBL/T/R – 8’/47’ SBL/T/R – 0’/107’

As shown in Table 8, the intersection currently operates with short delays for the eastbound and westbound minor street approaches (East/West Braxton Foushee Street) during the AM, PM, and Saturday peak hours. The intersection is expected to continue to operate with short delays for the eastbound and westbound minor street approaches (East/West Braxton Foushee Street) under 2026 no-build conditions during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street in the build scenarios, the intersection is expected to continue to operate with short delays for the eastbound and westbound minor street approaches (East/West Braxton Foushee Street). The closure of East Weaver Street is not expected to significantly change the intersection operations or queueing

observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

Roberson Street at Maple Avenue/Parking Lot

Roberson Street at Maple Avenue/Parking Lot is currently a four-legged unsignalized intersection. The southbound minor street approach (Parking Lot) operates under stop control while the major street approaches (Roberson Street) are free-flow.

Maple Avenue operates as a one-way southbound roadway. However, several vehicles were observed traveling Maple Avenue in the wrong direction. Therefore, those vehicles were re-routed to the correct direction as shown in the Appendix.



**Southbound Approach of Maple Avenue at Roberson Street**

It should be noted that Maple Avenue was previously a two-way roadway. The recent Drakeford Library Complex project converted Maple Avenue to a one-way southbound roadway. Although several vehicles were observed traveling in the wrong direction, Maple Avenue is recommended to remain a one-way southbound roadway due to congestion along South Greensboro Street. Long queues were observed in the northbound direction of South Greensboro Street, often spilling back past Roberson Street. With Maple Avenue as a one-way southbound street, these additional vehicles are expected to enter South Greensboro Street via East Braxton Foushee Street instead of the often blocked Roberson Street.

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is expected to re-route at this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street. The capacity analysis results for the unsignalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 9.

**Table 9: Level-of-Service: Roberson Street at Maple Avenue/Parking Lot (Unsignalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	EBL – A (7.3) WBL – A (7.3) SB – A (8.7)	EBL/T/R – 0’/3’ WBL/T/R – 0’/3’ SBL/T/R – 3’/50’	EBL – A (7.4) WBL – A (7.3) SB – A (9.0)	EBL/T/R – 0’/9’ WBL/T/R – 0’/-’ SBL/T/R – 3’/45’	EBL – A (7.4) WBL – A (7.4) SB – A (9.1)	EBL/T/R – 0’/12’ WBL/T/R – 0’/5’ SBL/T/R – 5’/53’
2026 No-Build	EBL – A (7.3) WBL – A (7.3) SB – A (8.7)	EBL/T/R – 0’/3’ WBL/T/R – 0’/-’ SBL/T/R – 3’/50’	EBL – A (7.4) WBL – A (7.4) SB – A (9.1)	EBL/T/R – 0’/62’ WBL/T/R – 0’/23’ SBL/T/R – 3’/69’	EBL – A (7.4) WBL – A (7.3) SB – A (9.1)	EBL/T/R – 0’/9’ WBL/T/R – 0’/-’ SBL/T/R – 5’/55’
2026 Build	EBL – A (7.3) WBL – A (7.3) SB – A (8.7)	EBL/T/R – 0’/-’ WBL/T/R – 0’/3’ SBL/T/R – 3’/55’	EBL – A (7.4) WBL – A (7.4) SB – A (9.1)	EBL/T/R – 0’/21’ WBL/T/R – 0’/50’ SBL/T/R – 3’/53’	EBL – A (7.4) WBL – A (7.4) SB – A (9.1)	EBL/T/R – 0’/14’ WBL/T/R – 0’/34’ SBL/T/R – 5’/60’

As shown in Table 9, the intersection currently operates with short delays for the southbound minor street approach (Parking Lot) during the AM, PM, and Saturday peak hours. The intersection is expected to continue to operate with short delays for the southbound minor street approach (Parking Lot) under 2026 no-build conditions during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street

in the build scenarios, the intersection is expected to continue to operate with short delays for the southbound minor street approach (Parking Lot). The closure of East Weaver Street is not expected to significantly change the intersection operations or queueing observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

Roberson Street at Sweet Bay Place/Parking Lot

Roberson Street at Sweet Bay Place/Parking Lot is currently a four-legged unsignalized intersection. The northbound and southbound minor street approaches (Sweet Bay Place/Parking Lot) operate under stop control while the major street approaches (Roberson Street) are free-flow.

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is re-routed at this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street. The capacity analysis results for the unsignalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 10.



**Southbound Approach of Roberson Street at Sweet Bay Place**

**Table 10: Level-of-Service: Roberson Street at Sweet Bay Place/Parking Lot (Unsignalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	NB – A (9.0) EBL – A (7.3) WBL – A (7.4) SB – A (9.1)	NBL/T/R – 5’/55’ EBL/T/R – 0’/3’ WBL/T/R – 0’/11’ SBL/T/R – 3’/31’	NB – A (9.7) EBL – A (7.3) WBL – A (7.5) SB – A (9.8)	NBL/T/R – 8’/62’ EBL/T/R – 0’/3’ WBL/T/R – 3’/32’ SBL/T/R – 3’/33’	NB – A (9.7) EBL – A (7.3) WBL – A (7.4) SB – A (9.6)	NBL/T/R – 3’/61’ EBL/T/R – 0’/8’ WBL/T/R – 0’/24’ SBL/T/R – 3’/38’
2026 No-Build	NB – A (8.9) EBL – A (7.3) WBL – A (7.4) SB – A (9.0)	NBL/T/R – 3’/60’ EBL/T/R – 0’/-’ WBL/T/R – 0’/12’ SBL/T/R – 0’/34’	NB – A (9.5) EBL – A (7.3) WBL – A (7.4) SB – A (9.6)	NBL/T/R – 5’/204’ EBL/T/R – 0’/126’ WBL/T/R – 3’/42’ SBL/T/R – 3’/48’	NB – A (9.6) EBL – A (7.3) WBL – A (7.4) SB – A (9.5)	NBL/T/R – 3’/60’ EBL/T/R – 0’/6’ WBL/T/R – 0’/21’ SBL/T/R – 3’/33’
2026 Build	NB – A (8.9) EBL – A (7.3) WBL – A (7.4) SB – A (9.0)	NBL/T/R – 3’/52’ EBL/T/R – 0’/-’ WBL/T/R – 0’/9’ SBL/T/R – 0’/38’	NB – A (9.8) EBL – A (7.3) WBL – A (7.5) SB – A (9.6)	NBL/T/R – 8’/64’ EBL/T/R – 0’/3’ WBL/T/R – 3’/39’ SBL/T/R – 3’/31’	NB – A (9.8) EBL – A (7.3) WBL – A (7.4) SB – A (9.6)	NBL/T/R – 3’/49’ EBL/T/R – 0’/6’ WBL/T/R – 0’/30’ SBL/T/R – 3’/34’

As shown in Table 10, the intersection currently operates with short delays for the northbound and southbound minor street approaches (Sweet Bay Place/Parking Lot) during the AM, PM, and Saturday peak hours. The intersection is expected to continue to operate with short delays for the northbound and southbound minor street approaches (Sweet Bay Place/Parking Lot) under 2026 no-build conditions during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street in the 2026 build scenarios, the intersection is expected to continue to operate with short delays for the northbound and southbound minor street approaches (Sweet Bay Place/Parking Lot). The closure of East Weaver Street is not expected to significantly change the intersection operations or queuing observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

East Braxton Foushee Street at Maple Avenue

East Braxton Foushee Street at Maple Avenue is currently a three-legged unsignalized intersection. The southbound minor street approach (Maple Avenue) operates under stop control while the major street approaches (East Braxton Foushee Street) are free-flow.

Maple Avenue operates as a one-way southbound roadway. However, several vehicles were observed traveling Maple Avenue in the wrong direction. Therefore, those vehicles were re-routed to the correct direction as shown in the Appendix.



**Southbound Approach of Maple Avenue at East Braxton Foushee Street**

It should be noted that Maple Avenue was previously a two-way roadway. The recent Drakeford Library Complex project converted Maple Avenue to a one-way southbound roadway. Although several vehicles were observed traveling in the wrong direction, Maple Avenue is recommended to remain a one-way southbound roadway due to congestion along South Greensboro Street. Long queues were observed in the northbound direction of South Greensboro Street, often spilling back past Roberson Street. With Maple Avenue as a one-way southbound street, these additional vehicles are expected to enter South Greensboro Street via East Braxton Foushee Street instead of the often blocked Roberson Street.

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is expected to re-route at this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street. The capacity analysis results for the unsignalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 11.

**Table 11: Level-of-Service: East Braxton Foushee Street at Maple Avenue (Unsignalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	SB – A (6.8)	EBT – 3’/36’ WBT – 0’/31’ SBL/R – 0’/31’	SB – A (6.8)	EBT – 3’/32’ WBT – 3’/31’ SBL/R – 0’/31’	SB – A (6.8)	EBT – 3’/50’ WBT – 0’/49’ SBL/R – 0’/31’
2026 No-Build	SB – A (6.9)	EBT – 3’/34’ WBT – 0’/36’ SBL/R – 0’/31’	SB – A (6.8)	EBT – 3’/32’ WBT – 3’/36’ SBL/R – 0’/31’	SB – A (6.8)	EBT – 3’/50’ WBT – 0’/52’ SBL/R – 0’/31’
2026 Build	SB – A (6.9)	EBT – 3’/38’ WBT – 0’/36’ SBL/R – 0’/31’	SB – A (6.9)	EBT – 3’/38’ WBT – 0’/41’ SBL/R – 0’/31’	SB – A (6.9)	EBT – 3’/52’ WBT – 0’/47’ SBL/R – 0’/31’

As shown in Table 11, the intersection currently operates with short delays for the southbound minor street approach (Maple Avenue) during the AM, PM, and Saturday peak hours. The intersection is expected to continue to operate with short delays for the southbound minor street approach (Maple

Avenue) under 2026 no-build conditions during the AM, PM, and Saturday peak hours. With the closure of East Weaver Street in the 2026 build scenario, the intersection is expected to continue to operate with short delays for the southbound minor street approach (Maple Avenue). The closure of East Weaver Street is not expected to significantly change the intersection operations or queueing observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

### West Main Street/Jones Ferry Road at West Main Street/Parking Lot

West Main Street/Jones Ferry Road at West Main Street/Parking Lot is currently a four-legged signalized intersection. The traffic signal operates uncoordinated. Existing signal plans obtained from NCDOT were used in the 2025 existing analysis scenarios. The signal plan is included in the Appendix of this report.

For future no-build and build scenarios, the following input values were used in accordance with NCDOT Congestion Management *Capacity Analysis Guidelines*:

- Cycle length and splits were optimized. NCDOT Congestion Management minimum cycle length recommendations were applied.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- Default values for vehicle extension and minimum gap were used.



**Westbound Approach of West Main Street at Jones Ferry Road**

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is re-routed at this intersection in the build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.

The capacity analysis results for the signalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 12. As shown in Table 12, the intersection of West Main Street/Jones Ferry Road at West Main Street/Parking Lot currently operates at LOS A during the AM peak hour and LOS B during the PM and Saturday peak hours.

Under 2026 no-build conditions, the intersection is expected to continue to operate at LOS A during the AM peak hour and LOS B during the PM and Saturday peak hours. With the closure of East Weaver Street in the 2026 build scenario, the intersection is expected to operate at LOS B during the AM, PM, and Saturday peak hours.

The closure of East Weaver Street is not expected to significantly change the intersection operations. The southbound through/left queue is expected to increase with the closure of East Weaver Street; however, it is expected to be reasonable. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

**Table 12: Level-of-Service: West Main Street/Jones Ferry Road at West Main Street/Parking Lot (Signalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	Overall – A (9.7) EB – A (8.7) WB – A (7.4) NB – B (10.5) SB – B (15.0)	EBL/T/R – 107’/119’ WBL/T/R – 55’/108’ NBL/T/R – 11’/39’ SBT/L – 60’/92’ SBR – 11’/47’	Overall – B (10.0) EB – A (8.1) WB – A (9.1) NB – B (10.9) SB – B (13.8)	EBL/T/R – 80’/133’ WBL/T/R – 121’/206’ NBL/T/R – 22’/61’ SBT/L – 72’/112’ SBR – 30’/84’	Overall – B (12.6) EB – B (10.7) WB – B (11.5) NB – B (11.5) SB – B (16.7)	EBL/T/R – 97’/152’ WBL/T/R – 107’/173’ NBL/T/R – 37’/70’ SBT/L – 90’/107’ SBR – 32’/84’
2026 No-Build	Overall – A (9.8) EB – A (9.0) WB – A (7.9) NB – B (10.5) SB – B (14.0)	EBL/T/R – 115’/116’ WBL/T/R – 59’/116’ NBL/T/R – 11’/32’ SBT/L – 63’/94’ SBR – 11’/43’	Overall – B (11.1) EB – A (9.0) WB – B (10.2) NB – B (12.3) SB – B (15.2)	EBL/T/R – 102’/395’ WBL/T/R – 156’/300’ NBL/T/R – 26’/114’ SBT/L – 91’/223’ SBR – 37’/101’	Overall – B (12.4) EB – B (11.2) WB – B (11.8) NB – B (11.3) SB – B (14.9)	EBL/T/R – 121’/137’ WBL/T/R – 132’/195’ NBL/T/R – 39’/84’ SBT/L – 97’/120’ SBR – 34’/90’
2026 Build	Overall – B (13.8) EB – B (13.3) WB – B (12.3) NB – B (10.1) SB – B (16.3)	EBL/T/R – 150’/148’ WBL/T/R – 117’/197’ NBL/T/R – 11’/43’ SBT/L – 119’/159’ SBR – 11’/72’	Overall – B (15.5) EB – A (9.4) WB – B (18.7) NB – A (7.0) SB – B (18.1)	EBL/T/R – 139’/241’ WBL/T/R – 232’/304’ NBL/T/R – 40’/62’ SBT/L – 188’/175’ SBR – 34’/108’	Overall – B (18.5) EB – B (14.0) WB – C (20.0) NB – B (11.9) SB – C (21.4)	EBL/T/R – 139’/240’ WBL/T/R – 232’/335’ NBL/T/R – 40’/82’ SBT/L – 188’/284’ SBR – 34’/114’

### West Weaver Street at West Main Street

West Weaver Street at West Main Street is currently a four-legged signalized intersection. The traffic signal operates uncoordinated. Existing signal plans obtained from NCDOT were used in the 2025 existing analysis scenarios. The signal plan is included in the Appendix of this report.

For future no-build and build scenarios, the following input values were used in accordance with NCDOT Congestion Management *Capacity Analysis Guidelines*:

- Cycle length and splits were optimized. NCDOT Congestion Management minimum cycle length recommendations were applied.
- Lost time was set to 5 seconds, yellow time was set to 5 seconds, and red time was set to 2 seconds in future scenarios.
- Default values for vehicle extension and minimum gap were used.



**Southbound Approach of West Main Street at West Weaver Street**

The 2026 build scenario does not consider any geometric improvements to the intersection. However, traffic is re-routed at this intersection in the 2026 build scenario as shown in Figures 7 – 9 as a result of the closure of East Weaver Street.

The capacity analysis results for the signalized intersection under 2025 existing, 2026 no-build, and 2026 build scenarios are summarized in Table 13. As shown in Table 13, the intersection of West Weaver Street at West Main Street currently operates at LOS A during the AM, PM, and Saturday peak hours.

Under 2026 no-build conditions, the intersection is expected to operate at LOS A during the AM and Saturday peak hours and LOS B during the PM peak hour. With the closure of East Weaver Street in the build scenarios, the intersection is expected to operate at LOS A during the AM, PM, and Saturday peak hours.

The closure of East Weaver Street is not expected to significantly change the intersection operations or queueing observed. Therefore, there are no recommendations to accommodate future year traffic at this intersection.

**Table 13: Level-of-Service: West Weaver Street at West Main Street (Signalized)**

Condition	AM Peak		PM Peak		Saturday Peak	
	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length	LOS and Delay (sec/veh)	Synchro 95% Queue Length (feet)/SimTraffic Max Queue Length
2025 Existing	Overall – A (8.6) EB – A (8.6) WB – A (9.7) NB – A (6.2) SB – A (8.6)	EBL/T/R – 22’/38’ WBL/T – 18’/47’ WBR – 45’/85’ NBL – 4’/15’ NBT/R – 24’/64’ SBL – 44’/100’ SBT/R – 43’/96’	Overall – A (9.9) EB – A (9.1) WB – B (11.0) NB – A (8.5) SB – B (10.0)	EBL/T/R – 32’/69’ WBL/T – 34’/60’ WBR – 75’/124’ NBL – 5’/16’ NBT/R – 60’/121’ SBL – 55’/98’ SBT/R – 58’/103’	Overall – A (8.9) EB – A (9.8) WB – B (10.5) NB – A (6.4) SB – A (8.9)	EBL/T/R – 38’/54’ WBL/T – 43’/80’ WBR – 53’/75’ NBL – 15’/45’ NBT/R – 36’/86’ SBL – 60’/97’ SBT/R – 53’/99’
2026 No-Build	Overall – A (8.7) EB – A (8.7) WB – A (9.7) NB – A (6.3) SB – A (8.8)	EBL/T/R – 24’/37’ WBL/T – 19’/50’ WBR – 47’/91’ NBL – 4’/19’ NBT/R – 25’/78’ SBL – 46’/105’ SBT/R – 44’/93’	Overall – B (10.2) EB – A (8.4) WB – B (11.1) NB – A (9.0) SB – B (10.3)	EBL/T/R – 19’/71’ WBL/T – 36’/75’ WBR – 78’/118’ NBL – 5’/14’ NBT/R – 65’/132’ SBL – 58’/107’ SBT/R – 62’/218’	Overall – A (9.1) EB – B (10.0) WB – B (10.7) NB – A (6.5) SB – A (8.9)	EBL/T/R – 40’/60’ WBL/T – 45’/82’ WBR – 55’/85’ NBL – 15’/44’ NBT/R – 37’/100’ SBL – 61’/119’ SBT/R – 55’/100’
2026 Build	Overall – A (6.0) EB – A (8.0) WB – A (8.0) NB – A (5.1) SB – A (5.6)	EBL/T/R – 24’/35’ WBL/T – 15’/40’ WBR – 21’/45’ NBL – 10’/32’ NBT/R – 41’/114’ SBL – 20’/61’ SBT/R – 61’/114’	Overall – A (8.5) EB – A (4.0) WB – B (17.7) NB – A (8.7) SB – A (7.2)	EBL/T/R – 40’/26’ WBL/T – 37’/58’ WBR – 8’/70’ NBL – 22’/44’ NBT/R – 62’/147’ SBL – 25’/58’ SBT/R – 74’/122’	Overall – A (7.5) EB – A (10.0) WB – A (10.0) NB – A (6.6) SB – A (7.1)	EBL/T/R – 40’/71’ WBL/T – 37’/64’ WBR – 8’/8’ NBL – 22’/77’ NBT/R – 62’/143’ SBL – 25’/69’ SBT/R – 74’/139’

## ENGINEER’S OPINION OF PROBABLE CONSTRUCTION COST

Planning level engineer’s opinion of probable construction cost (EOPCC) for the recommended traffic signal modifications, pavement markings, signing, and other variable items for **Phase 1 (Temporary Closure)** of East Weaver Street from North Greensboro Street to East Main Street were completed based on the 2026 build with improvements scenario. The conceptual cost estimates utilized NCDOT bid averages, recent bid tabulations and other conceptual OPCCs and incorporated an appropriate level of contingency due to the project size. Table 14 summarizes the cost estimate for the **Phase 1 Temporary Closure**.

**Table 14: Opinion of Probable Construction Cost**

Description	Quantity	Unit	Unit Price	Total
Mobilization (5%)	1	LS	\$7,775.00	\$7,775.00
Signal Modification (East Weaver St @ N Greensboro St)	1	LS	\$20,000.00	\$20,000.00
Signal Modification (Main St @ N Greensboro St)	1	LS	\$10,000.00	\$10,000.00
Signal Modification (East Weaver St @ E Main St)	1	LS	\$7,000.00	\$7,000.00
Traffic Control	1	LS	\$50,000.00	\$50,000.00
Traffic Separator - 40" Curbing and Flex Post (White)	34	EA	\$250.00	\$8,500.00
Thermo and Markers	1	LS	\$15,000.00	\$15,000.00
Signage	1	LS	\$5,000.00	\$5,000.00
Planters and Bollards for Access Management	1	LS	\$20,000.00	\$20,000.00
Adjust Bike Loops and Bike Boxes	1	LS	\$20,000.00	\$20,000.00
<b>Total</b>				<b>\$163,275.00</b>
25% Construction Contingency				\$40,818.75
Engineering Costs				\$100,000
<b>Phase 1 Temporary Closure Preliminary Opinion of Probable Construction Cost</b>				<b>\$304,093.75</b>

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

## RECOMMENDATIONS

The recommended lane geometry is shown on Figure 10.

Based on the capacity analysis presented herein, the following roadway improvements are recommended to be completed **by the Town of Carrboro** to accommodate future traffic:

### North Greensboro Street at East/West Weaver Street

- Close the east leg of East Weaver Street to vehicular traffic.
- Restripe the exclusive southbound left-turn lane on North Greensboro Street to a southbound through lane.
- Restripe the existing exclusive northbound left-turn lane on North Greensboro Street to a second southbound receiving lane.
- Restripe the existing northbound through lane on North Greensboro Street to a shared through/left lane.
- Modify signal for a 3-legged intersection.

### North/South Greensboro Street at East/West Main Street

- Restripe the exclusive southbound left-turn lane on North Greensboro Street to provide full storage.
- Restripe the existing southbound left-turn lane stop bar on North Greensboro Street approximately 25 feet north of the current position to allow heavy vehicles to turn right from East Main Street.

### East Main Street at Roberson Street/Carr Mill Driveway and East Weaver Street

- Close the southeast leg of East Weaver Street to vehicular traffic.
- Restripe the shared westbound left/through lane on East Main Street to an exclusive westbound left-turn lane.
- Restripe the exclusive westbound right-turn lane on East Main Street to a shared through/right lane.
- Modify signal for a 4-legged intersection.

### Transit Routes and Stops:

- Re-route the F Route and CW Route from East Weaver Street to the intersection of East Main Street and North Greensboro Street.
- Re-direct transit users to use the transit stops located at East Main Street at Jade Palace and East Main Street at Weaver Street Realty.

### Parking:

- Re-direct vehicles to park in Century Center Lot, East Main Lot, or other Public Parking Lots with availability.
- If parking availability becomes challenging, it is recommended that the Town complete a parking occupancy study to identify where there may be available capacity for parking and provide signage to direct vehicles to the available parking lots.

Truck Access:

- Install removable bollards at each end of East Weaver Street to allow garbage trucks to access the properties once per week for trash pickup.

Additionally, the **Town of Carrboro** should consider the following improvements to accommodate bicycle and pedestrian users within the study area:

South Greensboro Street at Roberson Street:

- Stripe a crosswalk along South Greensboro Street to accommodate heavy pedestrian traffic.

Roberson Street at Maple Avenue:

- Stripe crosswalks on all approaches to accommodate heavy pedestrian traffic.

West Main Street/Jones Ferry Road at West Main Street:

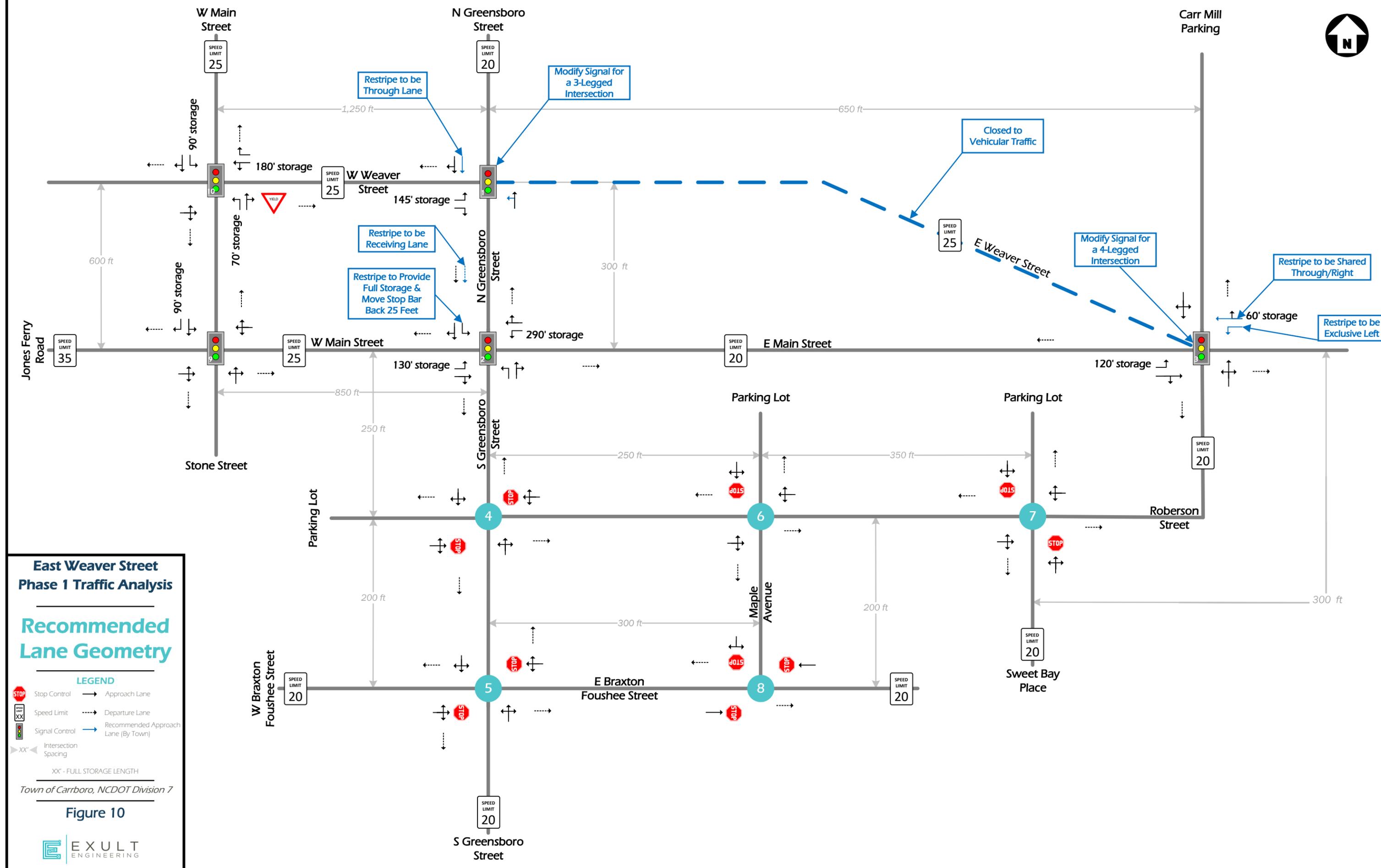
- Stripe a crosswalk on the west leg of Jones Ferry Road to accommodate heavy pedestrian traffic.

Roberson Street, East Braxton Foushee Street, and Maple Avenue:

- Install sidewalk along Roberson Street, East Braxton Foushee Street, and Maple Avenue to accommodate heavy pedestrian traffic.

All Roadway Segments:

- Existing bicycle lanes or sharrows are present along parts of Main Street and Weaver Street. With limited existing pavement, stripe sharrows to accommodate bicycles where dedicated bicycle lanes are not feasible.



**East Weaver Street  
Phase 1 Traffic Analysis**

**Recommended  
Lane Geometry**

- LEGEND**
- Stop Control
  - Speed Limit
  - Signal Control
  - Intersection Spacing
  - Approach Lane
  - Departure Lane
  - Recommended Approach Lane (By Town)

XX' - FULL STORAGE LENGTH

Town of Carrboro, NCDOT Division 7

**Figure 10**

