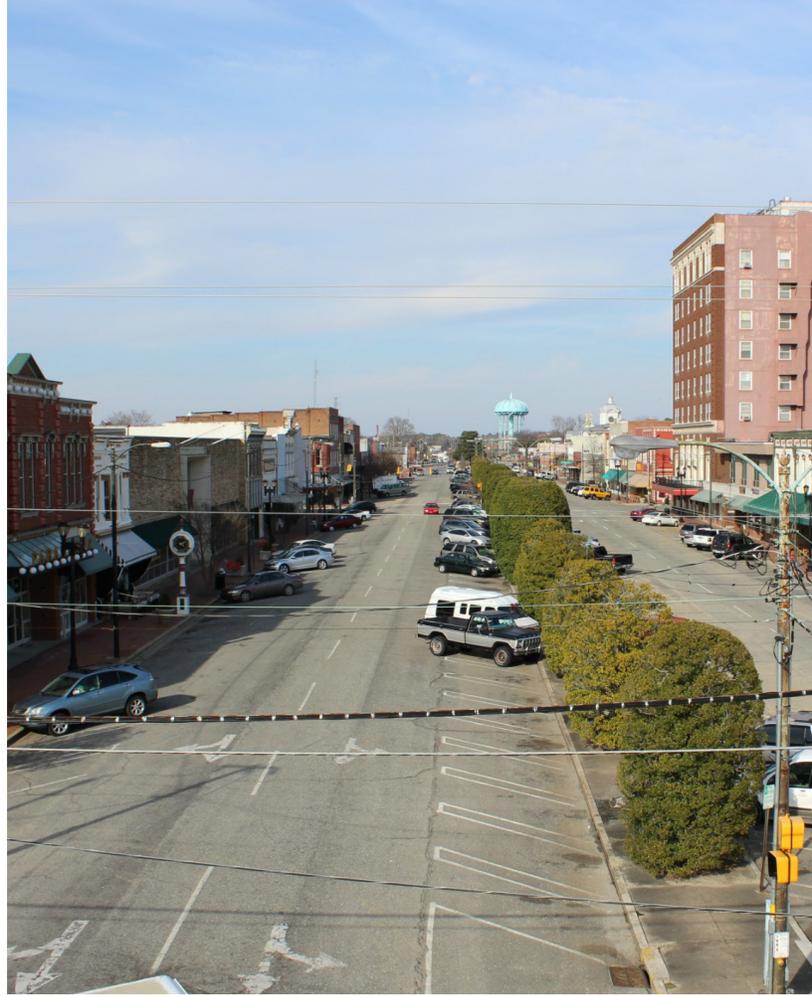




GOLDSBORO, NC

Traffic and Parking Study





Executive Summary

The City of Goldsboro and the Downtown Goldsboro Development Corporation are moving the downtown towards becoming “a destination with a more urban, organic quality” according to the DGDC. To further this goal the City recently completed over \$15M worth of public investment projects in the downtown area, all of which were transportation related, including a significant streetscape project and construction of a new transit center. Based on this positive community growth, reinvestment and new development, and the City’s desire to be vigilant in planning for its future, this study was undertaken to evaluate the current and potential parking and traffic conditions in downtown Goldsboro.

Vision

This project’s vision was to: *Enable private investment to strengthen and support Downtown Goldsboro’s historic mixed-use district by mitigating any potential traffic or parking constraints.* The intent of the study was to identify existing parking conditions, study existing traffic patterns, understand current and future development opportunities, determine if areas exist where an inadequate amount of parking is available for current needs and determine if areas exist where future development patterns may have inadequate parking that would hinder private investment and future mixed- use development projects.

Public Involvement

Obtaining feedback from local stakeholders was essential to the project in order to discuss perceived versus actual parking issues. City staff coordinated schedules and invited stakeholders to participate. The Stakeholder Group included representatives from the City of Goldsboro and Wayne County, the City Manager's Office and City Council as well as the Wayne County Manager and Chamber of Commerce. Members of the Wayne County Arts Council, The Paramount Theatre, and several downtown property owners were also included within the Stakeholder Group.

Two meetings were held with the Stakeholder Group to review and refine a list of future projects for the preliminary parking demand analysis and to review draft findings.

An online survey was conducted to gather additional public input and comment.

The project team hosted a public meeting on Thursday June 9th, 2016 to present the preliminary findings of the project study and ask for rankings and feedback on the parking management strategies that they would most likely prefer.

Existing Conditions Analysis

Parking Conditions

VHB assessed the existing parking supply of all public and private parking spaces in downtown. With this inventory VHB performed field data collection of parking utilization at five (5) periods throughout a typical weekday, between 8 AM and 8 PM. The data collection effort observed 680 on-street parking spaces, and 1,249 off-street public parking lots. The total number of public parking spaces was observed to be 1,929 within the defined downtown study area.

VHB observed a maximum of 883 parked vehicles within public parking areas during the 11 AM to 1 PM peak period, which represents 46% occupied parking lots (less than half full). Not all on-street parking areas or parking lots were equally full however, some were 100% occupied while others were less than 25%. The highest-demand areas included the Wayne County Courthouse, City Hall, and Center Street near Walnut Street.

Traffic Conditions

Existing traffic analyses were conducted based on current roadway geometrics and intersection turning movement counts collected by VHB in March 2016, supplemented with 2014 traffic counts provided by the City of Goldsboro.

All study intersections included in the analysis are operating at acceptable levels of service (LOS D or better) during all peak hours. Most intersections are operating at either LOS A or LOS B with little or short traffic delay during all peak hours.

Future Conditions Analysis

Future Parking Conditions

VHB estimates that the City of Goldsboro has an existing parking surplus of +579 public parking spaces during the busiest time of the day (11 AM – 1 PM).

In consultation with the Stakeholder Group, the project team identified 17 development projects that are expected to be completed by 2019. These projects should generate demand for +382 parking spaces that can be absorbed by the current surplus of public parking, with an additional cushion remaining.

Forecasting further into the future, the Stakeholder Group identified seven (7) additional development projects that are expected by 2026, which may generate an additional demand for +593 parking spaces that will meet the current surplus of public parking and potentially exceed the supply for certain high-demand areas. This parking demand analysis included model assumptions that are described in more detail within the Future Conditions Analysis section of the report.

Future Traffic Conditions

The future year build analysis was performed under two (2) scenarios: Short-Term Build (2019) and Long-Term Build (2026). Based on historic growth and input from City staff, an annual growth rate of two percent (2%) was applied to the existing traffic to account for the ambient traffic growth between the base year (2016) and the build years (2019 and 2026). Traffic from approved developments within the study area was also included where applicable to the project.

Based on future year analysis, all study area intersections are projected to continue to operate acceptably during the future years (2019 and 2026) with the addition of background traffic growth. Therefore, it is concluded that the existing network has sufficient capacity to accommodate the planned downtown developments, and no additional traffic improvements are needed.

Management Strategies and Implementation

Parking management strategies are presented for the purpose of balancing the estimated future parking demand to delay or eliminate the need to build new public parking lots. Strategies are grouped as Educational, Encouragement, Enforcement, and Evaluation and separated by time frame.

Stage One: Very Near-Term

- Education - Signage audit to increase visibility and remove confusing signs
- Encouragement - Identify long-term parking options for employees
- Evaluation - Sidewalk and lighting improvements, especially side streets.
- Evaluation - Pavement management plan program to address on-street parking striping maintenance

Stage One initiatives focus on the “low-hanging fruit” items that may have a relatively quick return on investment. Continual evaluation will be critical to track changes to the pattern of parking demand as affected by some of these initiatives.

Stage Two: 3-5 Years

- Education - Creation of a downtown walk-times map
- Encouragement - Shared parking agreements between businesses
- Encouragement - Healthy Lifestyles campaign to promote walking
- Enforcement - Parking Enforcement program
- Evaluation - Additional parking occupancy counts to collect data over time

Stage Two initiatives represent the next logical step in the evaluation of the parking management system in downtown. These initiatives will involve more stakeholders to organize and implement successfully, plus they will likely need to be in place for several months to years to have an impact on parking demand.

Stage Three: 6-10 Years

- Evaluation – Discuss parking administration program; special events-focus
- Evaluation – Review paid-parking technologies for on-street parking

The final stage involves a transition of towards a formal Downtown Parking Advisory Board, or similar administration, and the possibility for implementing a paid on-street parking system. These initiatives should only be considered after the City has attempted to balance future parking demand by Stage One and Stage Two initiatives, and measured their relative success.

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1 Introduction

Project Background

The City of Goldsboro is located on US HWY 70 about halfway between Raleigh and the coast. Originally a railroad town incorporated in 1847, Goldsboro became the Wayne County Seat in 1850. In the early 1900's, the development of Union Station led to the rapid growth of the city. Much of the commercial and residential architecture from that time remains, concentrated in the downtown and surrounding neighborhoods, providing a rich historical and cultural heritage for the community.

Goldsboro currently has just over 35,500 residents and is home to Seymour Johnson Air Force Base (SJAFB). SJAFB is a major Air Combat Command Base and home to the 4th Fighter Wing and the 916th Refueling Wing. The Base's civilian and military payroll exceeds \$339 million annually, and their annual economic impact to the community/region exceeds \$520M, comprised of 6,227 military personnel, 1,397 civilians, and 5,688 dependents. Wayne County's 2012 population was projected to be 122,623 persons based on 2010 Census data, an 8.9% increase from the 2010 Census population. Agriculture is big business in Wayne County, with annual total gross farm sales of approximately \$330 million and livestock and poultry production valued at more than \$236 million.

The City of Goldsboro is a Main Street Community, first designated in 1984 and an active community in that program ever since. As an accredited Main Street Program, Goldsboro is committed to valuing historic preservation and incorporates this methodology into their comprehensive revitalization approach. The leadership and guidance for downtown is provided by the City in partnership with the Downtown Goldsboro Development Corporation (DGDC). Together the City and DGDC are moving the downtown towards becoming “a destination with a more urban, organic quality” according to the DGDC. To further that aim the City recently completed over \$15M worth of public investment projects in the downtown area, all of which were transportation related, including a significant streetscape project and construction of a transit center. This investment was due, in part, to a successful USDOT TIGER grant that was awarded in September 2013. Since the announcement of that grant, Goldsboro has had over 28 new businesses open and 23 new property acquisitions.

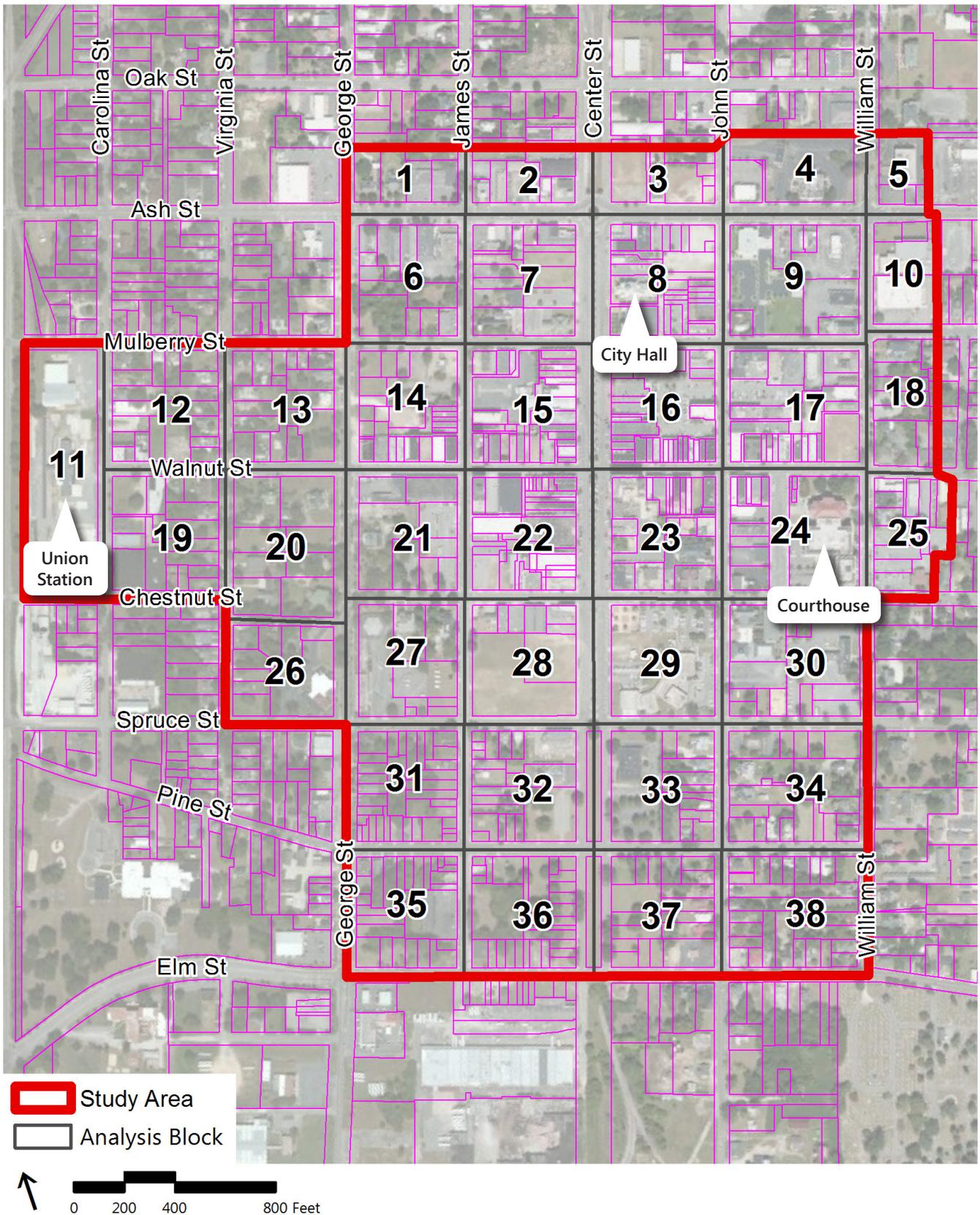
Based on this positive community growth, reinvestment and new development, and the City’s desire to be vigilant in planning for its future, a study was undertaken to evaluate the current and potential parking and traffic conditions in downtown Goldsboro. This reports is a synopsis of that effort and findings.

Acknowledgments

VHB Engineering NC, P.C. was retained by the City of Goldsboro to analyze the potential parking and traffic impacts of the proposed development and to identify any necessary roadway improvements. They were joined by The Office of Rodney Swink to assist with the downtown and Main Street elements of the study area. This report summarizes data collection, parking and traffic projections, parking supply/demand analysis, trip generation and traffic assignment, roadway and intersection capacity analysis, and potential mitigation and management strategies commensurate with the planned growth scenarios in downtown Goldsboro.

The consultants would like to thank the City of Goldsboro for initiating this study and we would especially like to thank Assistant Planning Director Jennifer Collins, DGDC Executive Director Julie Metz, City Traffic Engineer Bobby Croom, and Assistant City Manager Randy Guthrie for serving as the Study Team for this project. Their guidance and oversight were invaluable. We would also thank the stakeholders who made time to help us understand current and future development opportunities. A list of stakeholders may be found at the end of this report.

Figure 1: Project Study Area





SEYMOUR JOHNSON AIR FORCE BASE



2 Project Description

Plan Vision

The project vision explains the purpose of the project and guides the analysis of data and recommendations. This project's vision is to:

Enable private investment to strengthen and support Downtown Goldsboro's historic mixed-use district by mitigating any potential traffic or parking constraints.

This study examined the built and non-built spaces within the downtown area to determine whether traffic flow is being managed adequately and whether the public and private parking opportunities for both on and off street parking meet the current and future parking needs of the commercial business district. The intent of the study was to identify existing parking opportunities, study existing traffic patterns, understand current and future development opportunities, determine if areas exist where an inadequate amount of parking is available for current needs and determine if areas exist where future development patterns may have inadequate parking that would hinder private investment and future mixed-use development projects.

The project intent can be summarized as follows:

Identify traffic and/or parking needs and opportunities within the downtown area that will support a stronger mixed use district and enable private investment opportunities.

Plan Goals

Project goals are the analyses that are to be undertaken. The City's Request for Proposals which led to this study provided the basis for the project goals. VHB worked with the project Study Team using the initial ideas to develop more specific project goals:

- Involve and seek input from downtown stakeholders
- Promote economic development opportunities
- Preserve/enhance historical architecture
- Identify potential barriers and possible mitigation measures relating to traffic and parking
- Identify areas with potential future parking deficits
- Develop tools for continual evaluation of parking
- Seek a transportation balance between cars and pedestrians

Plan Objectives

Project objectives are measurable outputs that support the project goals. VHB and the project Study Team crafted the following project objectives:

- Assess existing peak hour traffic conditions
- Quantify existing/future traffic capacity
- Identify roadway modifications that would improve traffic capacity
- Quantify existing parking supply XLSX and ArcGIS
- Analyze existing parking utilization patterns
- Estimate future parking demand and evaluate supply/demand balance
- Identify under-utilized historic properties and mitigate potential impact
- Identify vacant land as potential infill and measure traffic/parking impact, particularly 2nd floor space for residential use



3 Stakeholder Involvement

Obtaining feedback from local stakeholders was essential to the project in order to discuss perceived versus actual parking issues. City staff coordinated schedules and invited stakeholders to participate in the project as the official Stakeholder Group.

Project Stakeholder Group

Comprised of members from various public and private interests within the downtown area, the project Stakeholder Group included representation from:

- City of Goldsboro Staff
- City Manager's Office
- City Council
- Wayne County Staff
- Wayne County Manager
- Wayne County Chamber of Commerce

- Wayne Arts Council
- Goldsboro Downtown Development Corporation
- Downtown property owners/merchants/developers
- Allison Platt & Associates
- The Paramount Theatre

Stakeholder Meetings

The initial Stakeholder Group was held on Wednesday April 6, 2016 in the Goldsboro Downtown Development Corporation. The purpose of this meeting was to provide an introduction to the project team, present the timeline and study area as well as discuss the project vision, goals and objectives. VHB presented findings from the parking utilization analysis, collected on Thursday March 24, 2016. The remainder of the meeting was spent collecting feedback and perspectives from stakeholders relating to the existing parking challenges within downtown, and identifying potential future projects that would generate new traffic and parking demands. This anecdotal information was essential to the project because it confirmed some assumptions from the field data collection, and discussed the validity of other perspectives relating to parking availability. The initial list of development projects was generated by the Stakeholder Group and used for the future demand analysis.

In between Stakeholder Group meetings, VHB held a teleconference call on Thursday April 21, 2016 with City staff to review and refine the list of future projects, and prepare visuals for the preliminary parking demand analysis.

The second Stakeholder Group meeting was held on Wednesday May 4, 2016 in the Goldsboro Downtown Development Corporation. VHB reviewed the project timeline and presented draft findings from the future parking demand analysis. The Stakeholder Group recommended slight adjustments to parking demand model such as removing public parking areas west of George Street from the analysis because it was perceived as too far from Center Street. Stakeholders also suggested edits to several projects and the addition of two new projects, the expansion of the Cornerstone Commons open space area and new on-street parking along two blocks of Center Street south of Spruce Street. VHB also presented findings from the traffic intersection level of service analysis.

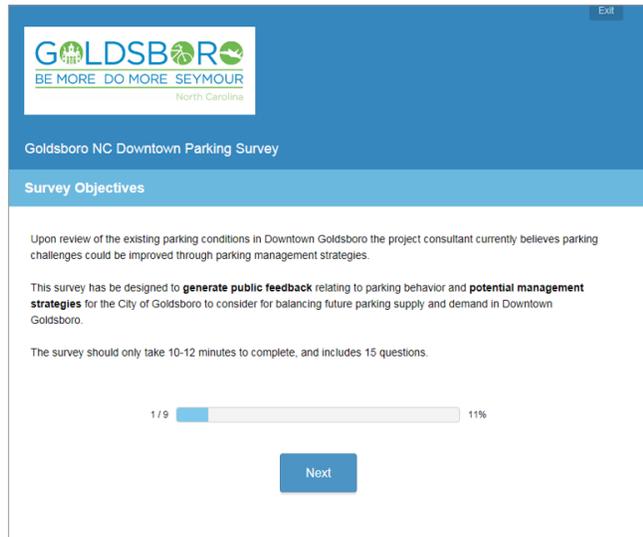


STAKEHOLDER MEETING

Public Input

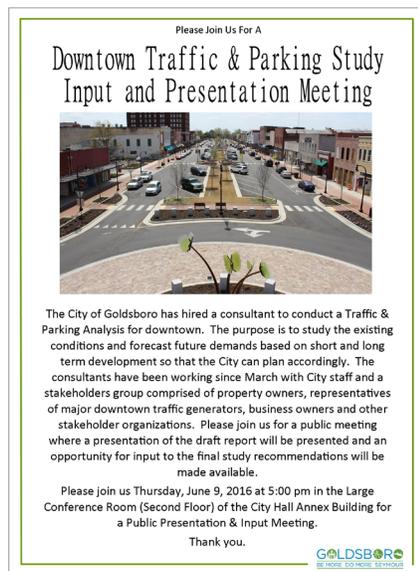
Feedback from downtown visitors and residents was incorporated into the project through an online survey and public meeting, in addition to stakeholder group input. An online survey was made available through Survey Monkey, and communicated by the City of Goldsboro through the City webpage, emails, and various public announcements. The online survey remained open for a period of two (2) weeks in June of 2016.

Respondents were asked 15 questions relating to the project findings and asked to rank the potential strategies in order of their perceived effectiveness. The survey results allowed the project team to prioritize recommendations in order of preference.



SURVEY

The project team hosted a Public Forum on Thursday June 9, 2016 in the Goldsboro City Hall building. The purpose of this public meeting was to present the preliminary findings of the project study and ask for rankings and feedback on the parking management strategies that would most likely prefer. Rankings were used by the project team to order the description of recommendations within this report.



PUBLIC MEETING INVITATION



STAKEHOLDER MEETING



4 Existing Conditions Analysis

The current parking and traffic systems within the downtown provide the initial analysis upon which the future conditions are modeled. The precision and reliability of the future demand estimates will depend upon the quality of modeling the existing conditions. VHB spent a significant amount of time and effort collecting data, auditing and refining modeling of current parking and traffic conditions prior to the initial project meeting.

VHB was tasked with constructing an existing parking supply inventory of all public and private parking spaces. With this inventory VHB performed field data collection of parking utilization at five (5) periods throughout a typical weekday. With both of these resources constructed, VHB was able to evaluate the future parking demand that is anticipated through 2026, and identify areas of parking deficit and parking surplus.

To estimate future traffic conditions VHB collected peak period traffic counts for four (4) roundabout intersections and supplemented these data with 2014 traffic counts for 15 additional intersections. This information was modeled using Synchro, a traffic engineering software, to analyze traffic operations at study area intersections and along roadway segments through the 2026 design year.

Study Area

The project study area is loosely defined as properties along Ash Street to the north, William Street to the east, Elm Street to the south, and George Street to the west (**Figure 1**). Six (6) blocks were included west of George Street extending all the way to the Union Station and Gateway Transit Transfer Station along Carolina Street, though a limited number of parking is available within these blocks.

Parking Supply

The study team organized and conducted a field inventory of the existing parking supply as well as determined the pattern of existing parking utilization in advance of the first project meeting. VHB used a combination of aerial imagery from multiple sources as well as online resources and field collection/verification. The downtown study area was divided into 38 parking analysis blocks, and each parking lot or on-street parking area was assigned to a block for aggregating total parking spaces. Parking areas were identified as either on-street, public, or private parking lots. **Table 1** is a summary of the existing parking supply.

There are a grand total of 3,595 parking spaces within the downtown study area, 680 on-street, 1,249 public off-street, and 1,666 private off-street parking spaces (**Table 1**). Each of these parking types is described below. Full parking inventory tables are provided in **Appendix B**.

On-Street Parking

A total of 680 parallel and angled parking spaces were found along nine (9) downtown streets. On-street parking constitutes 19% of total parking within the study area.

Table 1. Total Parking by Type

Parking by Type	Spaces	% of Total
On-Street	680	19%
Public Off-Street	1,249	35%
Private Off-Street	1,666	46%
TOTAL	3,595	100%

Source: VHB inventory on March 24, 2016

Center Street has a total of 182 on-street parking spaces along its four blocks, averaging 46 spaces per block, or 23 spaces per block face (one block has two block faces, on opposite sides of the roadway). Because Center Street has parking along both sides of each block face, there are twice as many spaces as all remaining streets. The remaining streets average 12 spaces per block face, ranging from a low of nine (9) spaces per block face along Chestnut Street, to a high of 22 spaces per block face along Ormond Ave.

Center Street alone accounts for 27% of all on-street spaces (**Table 2**). All streets west of Center Street account for 185 on-street spaces (27%), while all streets east of Center Street have 313 on-street spaces (46%).

Table 2. On-Street Parking Spaces

On-street parking	Spaces	% of Total
Center St	182	27%
West of Center St	185	27%
East of Center St	313	46%
TOTAL	680	100%

On-street parking is unreserved and available to the public. Most on-street spaces are signed as 2 hour time limit, with the exception of a limited number of 15 minute parking spaces (77 in total) that were observed along Chestnut Street, John Street, Ormond Avenue, Walnut Street and William Street.

Markings to define on-street parking spaces were observed to be in need of maintenance. Many of the markings were heavily worn and barely visible. Other markings had been partially removed by a pavement rehabilitation project or underground utility repair, leaving only half of the marking. This was particularly apparent along John Street, William Street, and James Street, though not exclusively.

Public Parking

A total of 21 public parking lots were identified, totaling 1,249 parking spaces and accounting for 35% of total parking. These lots are made available to the general public and owned by the City of Goldsboro, Wayne County, Goldsboro Wayne Transportation Authority (Gateway), as well as one private land owner.

Most public parking lots were observed to be within two blocks of the Center Street at Walnut Street intersection. The average size of public parking lots is 59 spaces, with 12 public lots offering fewer than 59 spaces and nine (9) lots offering more than 59 spaces.

The six (6) largest parking lots were all public parking (94 spaces to 154 spaces). The largest private parking lot, for comparison, was 92 spaces in size (BB&T bank). Five (5) of these six (6) largest parking lots are all owned by Wayne County, while only one (1) of these lots is owned by the City of Goldsboro (N John Street lot, which is one block south of City Hall).

Signage for these public parking lots was observed to be limited and inconsistent. City Hall parking is very clearly signed for public parking, though the sign was a temporary sandwich board style. Other public parking lots are completely unsigned leaving potential users confused as to whether they are owned by the City, County, or private entity, and whether the parking is time-limited.

Private Parking

A total of 65 private parking lots were identified, totaling 1,666 parking spaces and accounting for 46% of total parking. Private lots were observed in various conditions, from pavement to gravel, and even compacted earth. Only spaces that were clearly defined by either pavement markings or a wheel stop were counted.

A total of 42 private parking lots are located north of Walnut Street totaling 1,094 private spaces (66%). Compare this with the 23 private lots that are south of Walnut Street, totaling 572 private spaces (34%). The location of the Wayne County Courthouse and Wayne County administration buildings, south of Walnut Street, is one possible explanation for this private parking imbalance.

The average size of private parking lots is 26 spaces, with 41 lots offering fewer and 24 lot offering more than 26 spaces. The typical private parking lot has fewer than half of the number of parking spaces (26) compared with a typical public parking lot (59).

Parking Utilization Analysis

The purpose of a parking utilization analysis is to determine the “busiest time” of a “typical weekday”, that is, the time of day when the maximum number of parked vehicles are observed. With the existing parking counts collected the study team is able to visualize the pattern of current demand, and model the future year supply and demand pattern. Special events such as a Paramount Theatre show, or the North Carolina Main Street Conference (scheduled for March 16, 2016) would be non-typical and therefore not an accurate representation of the typical parking conditions in downtown. These types of events, including sporting events or evening concerts, are generally handled by a stand-alone traffic control and parking management plan, which is beyond the scope of work for this project.

Traffic engineering principles suggest that Mondays and Fridays are non-typical weekdays for traffic and therefore parking. Courthouse visitors are the only significant generator of visitor parking that would potentially offset this pattern, if Monday has an abnormally heavy court schedule. Mr. David Brantley, Chief Court Judge of the Wayne County Courthouse, was contacted prior to field data collection. It was determined that court was in session between Monday and Thursday each week, and that each day was equally challenging for parking with no particular day representing a heavier schedule of court cases.

Parking Occupancy Counts - March 2016

Parking occupancy data was collected on Thursday March 24, 2016. Wayne County public schools were in session. The study area was divided into 38 analysis blocks (**Figure 1**) to aggregate total parking spaces. The street centerline served as the dividing line between blocks; therefore, on-street parking spaces on opposite sides of the street were aggregated to different blocks. VHB staff observed parked vehicles by lot at five (5) periods throughout the day, displayed in **Table 3** below.

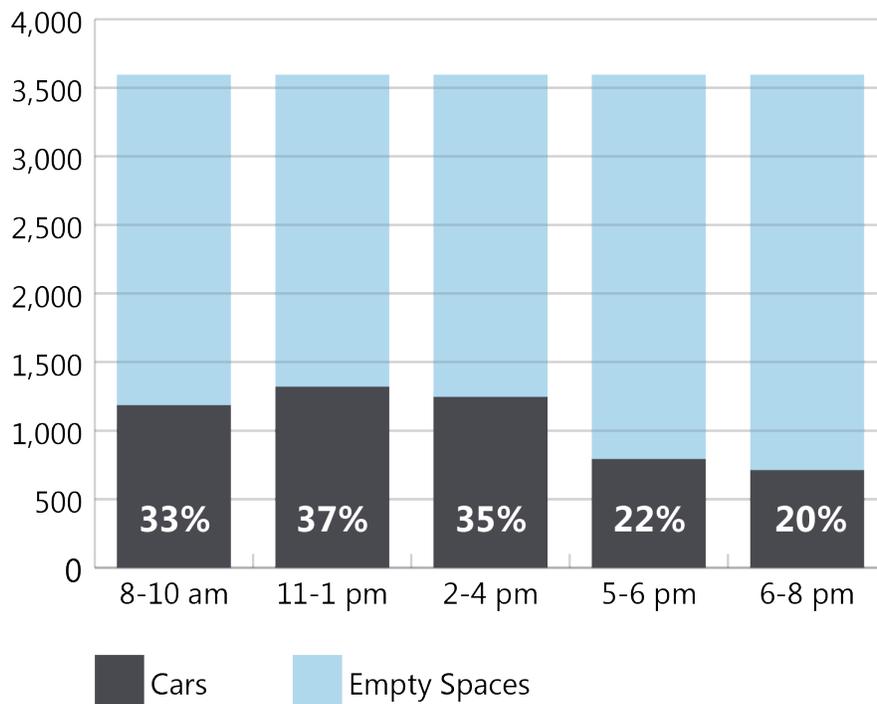
Table 3. Observed Parked Cars by Time of Day

Parking by Type	8-10 AM	11-1 PM	2-4 PM	5-6 PM	6-8 PM
On-Street	243	323	309	223	206
Public	544	560	526	350	313
Private	398	437	411	220	193
TOTAL	1,185	1,320	1,246	793	712

Source: VHB parking utilization analysis on March 24, 2016

As an entire system, Goldsboro experiences peak parking utilization of 37% occupied between 11 AM and 1 PM (**Figure 2**). On-street parking peaks at 48% occupied, while public lots peak at 45% occupancy. Private lots peaked at 26% occupancy during the midday (lunchtime) peak. The trend throughout the day is the same for all parking lot types, with an increasing number of parked cars until lunch, followed by a gradual decrease in the afternoon, and a sharp drop off after 5 pm. Private lots were generally half as full as on-street or public lots, and therefore their occupancy rate was observed in the 20% or lower range throughout the day.

Figure 2. Total Parking Occupancy by Time of Day



The pattern of parking occupancy by individual lot reveals that not all public or private lots are equally occupied, or desirable. **Figure 3** displays the occupancy percentage for individual parking lots/areas during the busiest time of the day (11 AM to 1 PM).

Orange and red lots represent highest demand lots, with more than 70% of their spaces occupied by a parked car. These lots are generally near the City Hall and Wayne County Courthouse areas, to the east side of Center Street.

Yellow parking lots represent slightly lower demand area with 50-70% occupancy rates. These areas are also generally located along and east of Center Street near the Wayne County Courthouse.

Green parking lots (both light and dark green) represent lowest demand parking areas, with less than 50% occupancy rates. These lots have more empty spaces than occupied spaces, and are generally found wrapped around the outside of the higher demand areas. These lots are roughly 1 to 2 blocks further from City Hall and Wayne County Courthouse.

Although private lots were included the parking utilization analysis, only public parking lots are under the control of the City of Goldsboro. The pattern of public parking occupancy is displayed in **Figure 4**. A total of 883 vehicles were observed within the 1,929 public parking spaces (on-street and public lots) during the midday (lunchtime) peak period. This total number of cars represents the existing parking demand and the basis for this project. The existing parking demand will be used to model the future parking demand analysis, which is discussed in a later section.

Figure 3: Parking Occupancy by Lot (11 AM – 1 PM Peak Period)

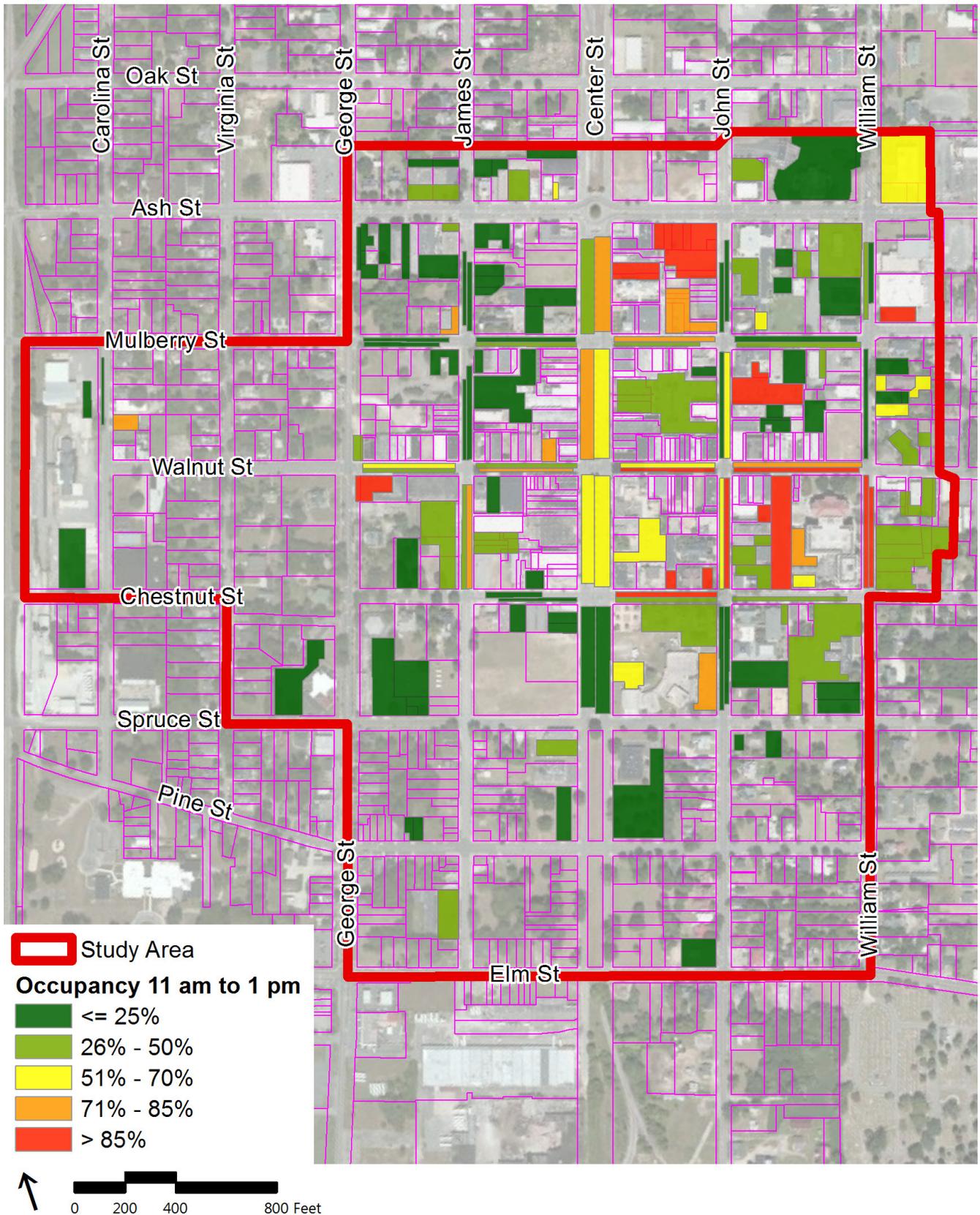
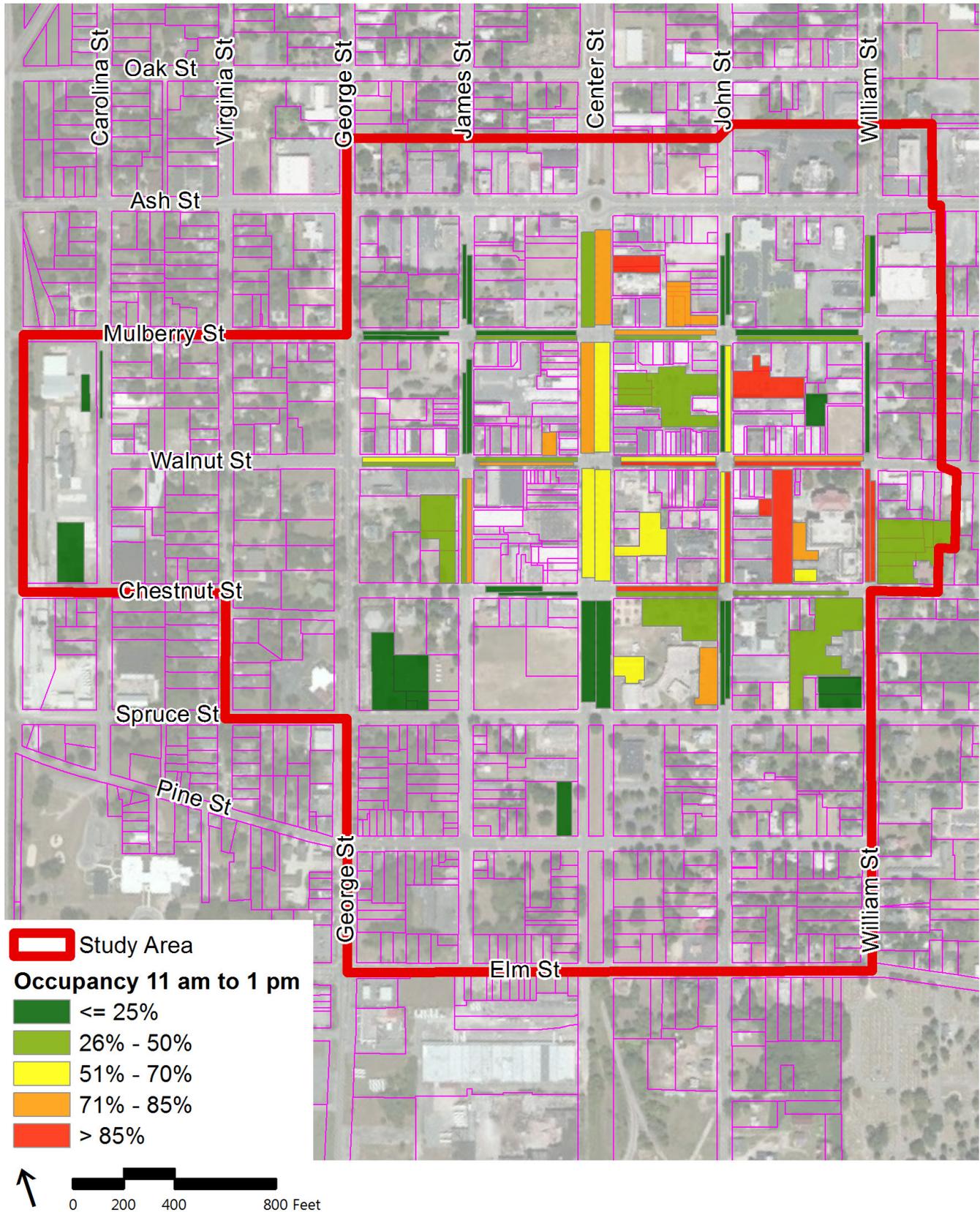


Figure 4: Public Parking Occupancy by Lot (11 AM – 1 PM Peak Period)





INTERSECTIONS, GOLDSBORO, NC

Street and Intersections

VHB assessed current peak hour traffic conditions in the study area defined by Ash Street to the north, William Street to the east, Elm Street to the south, and George Street to the west. This section describes the critical roadways and key intersections in the study area of this Parking and Traffic Study. Average Annual Daily Traffic (AADT) data for the crossing streets were obtained from the North Carolina Department of Transportation (NCDOT). The most recent AADT counts from the NCDOT are for 2014 on the study area roadways.

Ash Street (US 70 Business)

- Ash Street is a four/five-lane roadway running east-west, with a posted speed limit of 35 miles per hour (mph) outside downtown and 20 mph in the downtown area.
- The study area includes four signalized intersections (George Street, James Street, John Street, and William Street) and one roundabout (Center Street) along Ash Street.
- According to the NCDOT, the 2014 AADT on Ash Street was 5,600 vehicles per day (vpd) west of George Street, 9,100 vpd between George Street and James Street, 11,000 between Center Street and John Street, and 13,000 east of and west of William Street.

Mulberry Street

- Mulberry Street is a two-lane roadway running east-west with a speed limit of 20 mph in the downtown area.
- Traffic analysis includes three signalized intersections (James Street, John Street, and William Street) and one roundabout (Center Street) along Mulberry Street.
- No AADT information is available from NCDOT along Mulberry Street in the study area.

Walnut Street

- Walnut Street is a two-lane roadway running east-west with a speed limit of 20 mph in the downtown area and 25 mph east of William Street.
- Traffic analysis includes three signalized intersections (James Street, John Street,

and William Street) and one roundabout (Center Street) along Walnut Street.

- According to the NCDOT, the 2014 AADT on Walnut Street was 760 vpd between George Street and James Street, and 1,300 between Center Street and John Street.

Chestnut Street

- Chestnut Street is a two-lane roadway running east-west with a speed limit of 20 mph in the downtown area, 35 mph west of George Street, and 25 mph east of William Street.
- Traffic analysis includes three signalized intersections (George Street, John Street, and William Street) and one roundabout (Center Street) along Walnut Street.
- No AADT information is available from NCDOT along Chestnut Street in the study area.

Elm Street

- Elm Street is an east-west roadway with a speed limit of 35 mph with various cross-section along its length.
- Traffic analysis includes two signalized intersections (George Street and John Street) along Elm Street.
- According to the NCDOT, the 2014 AADT on Elm Street was 3,200 vpd west of George Street, 5,900 vpd between George Street and James Street, 6,200 between Center Street and John Street, and 5,800 vpd between John Street and William Street.

George Street (US 117 Business)

- George Street is a two-lane, north-south roadway with a speed limit of 35 mph along its length.
- Traffic analysis includes three signalized intersections (Ash Street, Chestnut Street, and Elm Street) along George Street.
- According to the NCDOT, the 2014 AADT on George Street was 6,900 vpd north of Ash Street, 6,700 vpd between Walnut Street and Chestnut Street, and 8,200 vpd north of Elm Street.

James Street

- James Street is a two-lane, north-south roadway with a speed limit of 25 mph at the Ash Street intersection and 20 mph along the rest of its length in the study area.
- Traffic analysis includes three signalized intersections (Ash Street, Mulberry Street, and Walnut Street) along James Street.
- According to the NCDOT, the 2014 AADT on James Street was 1,600 vpd between Mulberry Street and Walnut Street.

Center Street

- Center Street is a two-lane, north-south roadway with a speed limit of 25 mph in the study area.
- Traffic analysis includes four roundabout intersections (Ash Street, Mulberry Street, Walnut Street, and Chestnut Street) along Center Street.
- No AADT information is available from NCDOT along Center Street in the study area.

John Street

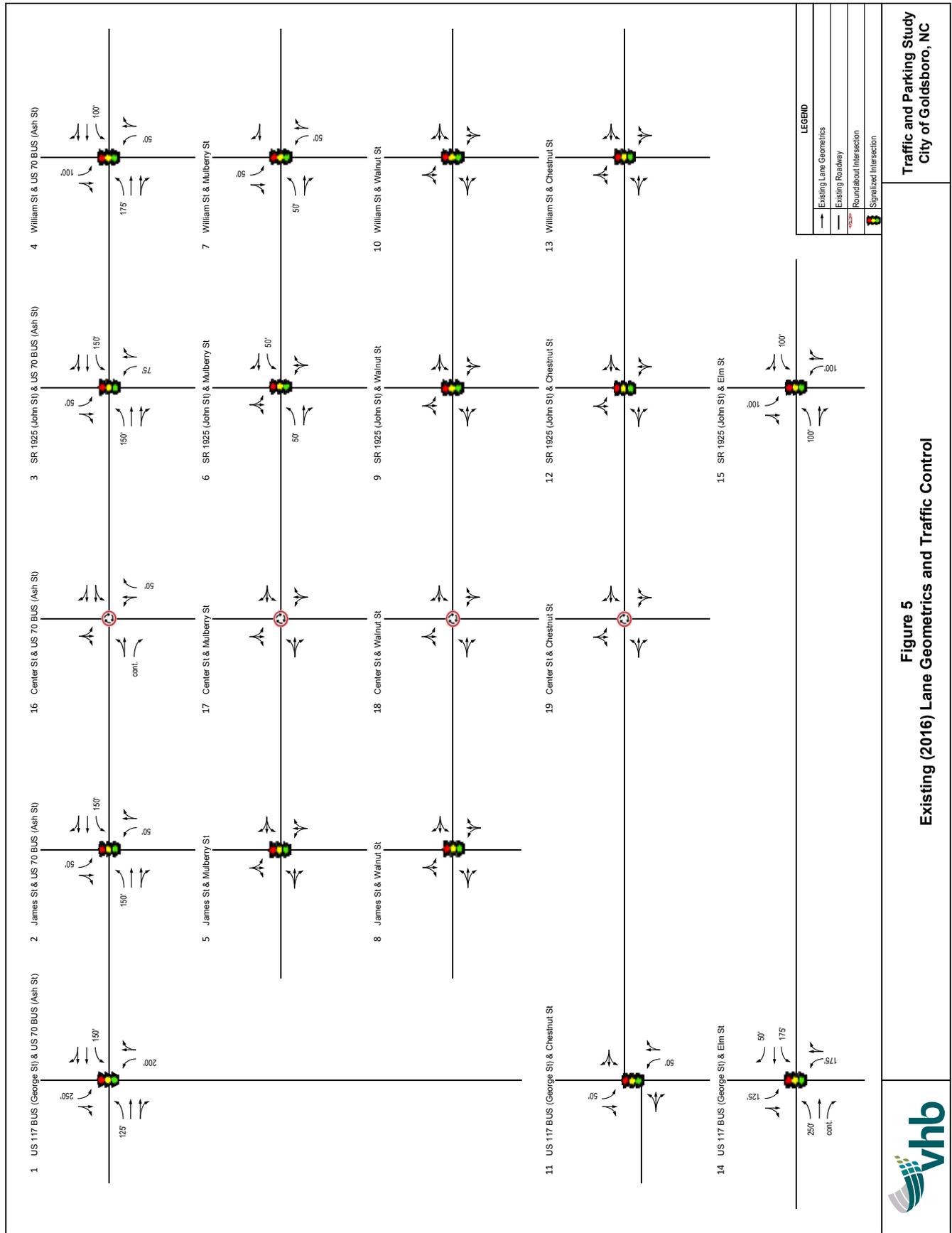
- John Street is a two-lane, north-south roadway with a speed limit of 25 mph north of Ash Street and 20 mph along the rest of its length in the study area.
- Traffic analysis includes four signalized intersections (Ash Street, Mulberry Street, Walnut Street, and Chestnut Street) along John Street.
- According to the NCDOT, the 2014 AADT on John Street was 3,900 vpd south of Ash Street, and 2,900 vpd south of Chestnut Street.

William Street

- William Street is a two-lane, north-south roadway with a speed limit of 35 mph north of Ash Street and 20 mph along the rest of its length in the study area.
- Traffic analysis includes four signalized intersections (Ash Street, Mulberry Street, Walnut Street, and Chestnut Street) along William Street.
- According to the NCDOT, the 2014 AADT on William Street was 8,300 vpd south of Ash Street.

Figure 5 provides a schematic diagram of the existing roadways and traffic control near the proposed development including the intersection geometrics.

Figure 5. Existing (2016) Lane Geometric and Traffic Control



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Figure 5
Existing (2016) Lane Geometrics and Traffic Control



Existing Turning Movement Data

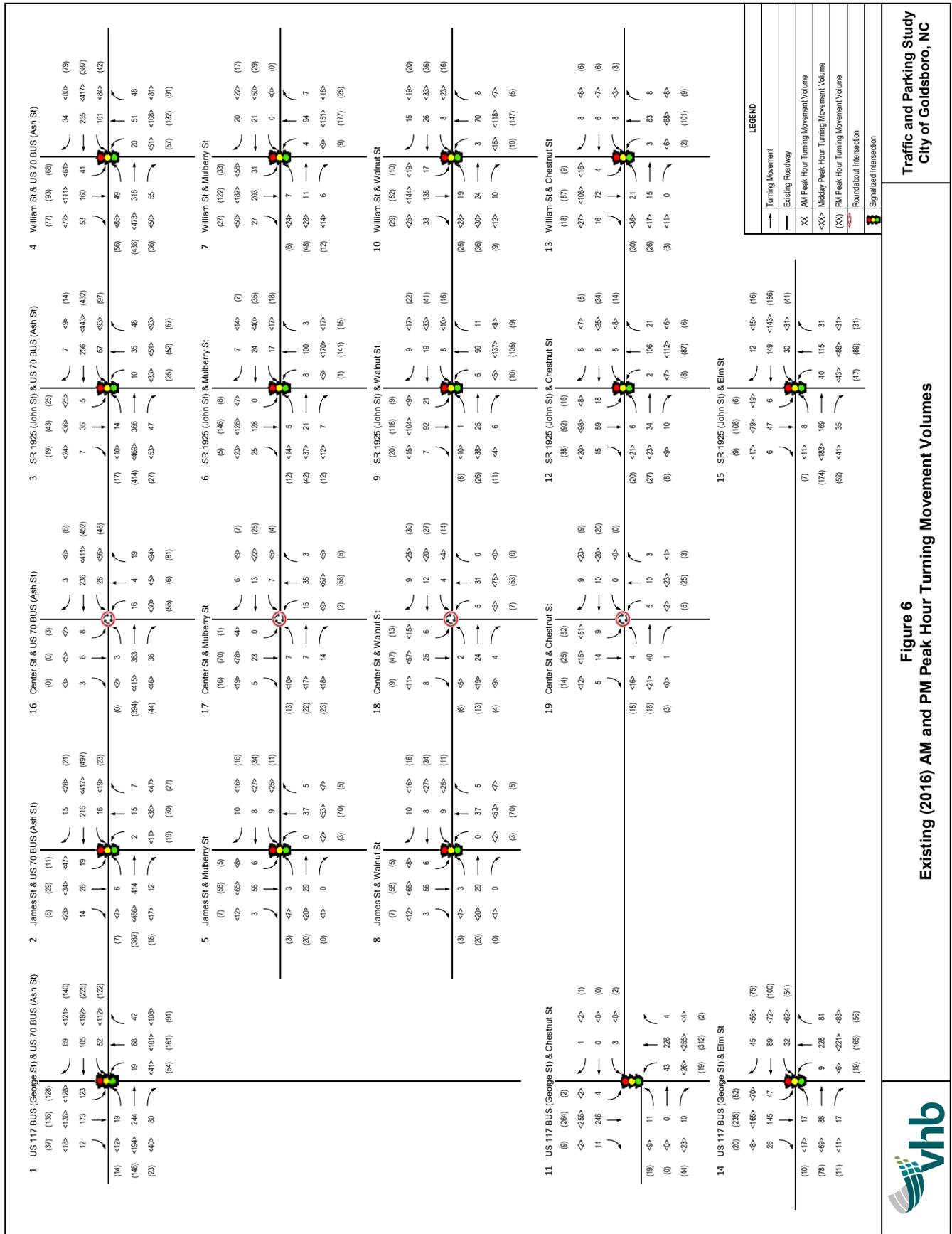
VHB Engineering NC, PC collected the AM, midday, and PM peak hour intersection turning movement counts at the four roundabout intersections along Center Street in this study. For the remaining study intersections, recent year turning movement counts were obtained from the City of Goldsboro, and a traffic growth rate of two percent (2%) per year was applied to previous year data to account for ambient traffic under the Existing (2016) traffic conditions. **Table 4** summarizes the schedule used to obtain the turning movement data. A detailed summary of the traffic counts can be found in **Appendix C**.

Table 4. Weekday Peak Hour Turning Movement Count Schedule

Intersection	Time Period	Data Collection Date
Center Street and Ash Street (US 70 Business)	7:00 AM – 9:00 AM	Tuesday March 22, 2016
	11:30 AM – 1:30 PM	
	4:00 PM – 6:30 PM	
Center Street and Mulberry Street	7:00 AM – 9:00 AM	Tuesday March 22, 2016
	11:30 AM – 1:30 PM	
	4:00 PM – 6:30 PM	
Center Street and Walnut Street	7:00 AM – 9:00 AM	Tuesday March 22, 2016
	11:30 AM – 1:30 PM	
	4:00 PM – 6:30 PM	
Center Street and Chestnut Street	7:00 AM – 9:00 AM	Tuesday March 22, 2016
	11:30 AM – 1:30 PM	
	4:00 PM – 6:30 PM	

Minor volumes adjustments were made to ensure proper balancing within the study area. The resulting Existing (2016) peak hour turning movement volumes are shown in **Figure 6**.

Figure 6: Existing (2016) AM and PM Peak Hour Turning Movement Volumes



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Figure 6
Existing (2016) AM and PM Peak Hour Turning Movement Volumes



Level of Service Criteria

Peak hour level of service (LOS) measures the adequacy of the intersection geometrics and traffic controls of a particular intersection or approach for the given turning volumes. Levels of service range from A through F, based on the average control delay experienced by vehicles traveling through the intersection during the peak hour. Control delay represents the portion of total delay attributed to traffic control devices (e.g., signals or stop signs). The engineering professional generally accepts LOS D as an acceptable operating condition for signalized intersections in urban areas and LOS C for rural areas.

For unsignalized intersections, LOS E is generally considered acceptable only if the side street encounters the delay. Nevertheless, side streets sometimes function at LOS F during peak traffic periods; however, the traffic volume often does not warrant a traffic signal to assist side street traffic. **Table 5** provides a general description of various levels of service categories and delay ranges.

Table 5: Level of Service Description for Intersections

Level of Service	Description	Signalized Intersection	Unsignalized Intersection
A	Little or no delay	<= 10 sec.	<= 10 sec.
B	Short traffic delay	10-20 sec.	10-15 sec.
C	Average traffic delay	20-35 sec.	15-25 sec.
D	Long traffic delay	35-55 sec.	25-35 sec.
E	Very long traffic delay	55-80 sec.	35-50 sec.
F	Unacceptable delay	> 80 sec.	> 50 sec.

Level of Service Analysis

Intersection levels of service analyses were performed for the typical weekday AM and PM peak hours using *Synchro/SimTraffic Professional Version 9*. A summary of the findings for the Existing (2016) scenario LOS analysis can be found in **Table 5** and the full *Synchro/HCS* output can be found in **Appendix F**.

As reported in **Table 6**, all study intersections included in the analysis are operating at acceptable levels of service (LOS D or better) during all peak hours. Most intersections are operating at either LOS A or LOS B during all peak hours, while three intersections (Ash Street at George Street, Ash Street at Williams Street, and Elm Street at George Street) are operating at LOS C during the AM, midday and PM peak hours.

Table 6: Existing (2016) LOS Results

Total = Overall signalized intersection LOS; X = Approach LOS

Intersection	AM Peak Hour					Midday Peak Hour					PM Peak Hour				
	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB
1: US 117 BUS (George St) & US 70 BUS (Ash St)	C	C	B	D	B	C	C	B	D	B	C	C	B	D	B
2: James St & US 70 BUS (Ash St)	A	A	A	C	D	A	A	A	D	D	A	A	A	D	C
3: SR 1925 (John St) & US 70 BUS (Ash St)	A	A	A	D	C	B	A	A	D	C	A	A	A	D	C
4: William St & US 70 BUS (Ash St)	C	C	C	C	C	C	C	C	D	C	C	C	C	D	C
5: James St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
6: SR 1925 (John St) & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
7: William St & Mulberry St	A	C	C	A	A	A	C	C	A	A	A	C	C	A	A
8: James St & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9: SR 1925 (John St) & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10: William St & Walnut St	A	C	C	A	A	B	C	C	A	A	B	C	C	A	A
11: US 117 BUS (George St) & Chestnut St	A	C	C	A	A	A	C	C	A	A	A	C	C	A	A
12: SR 1925 (John St) & Chestnut St	A	B	B	A	A	A	B	B	A	A	A	C	C	A	A
13: William St & Chestnut St	A	C	C	A	A	A	C	C	A	A	A	C	C	A	A
14: US 117 BUS (George St) & Elm St	C	C	C	D	C	C	C	C	D	C	C	C	B	D	C
15: SR 1925 (John St) & Elm St	B	C	C	A	A	B	C	C	A	A	B	C	C	A	A
16: Center St & US 70 BUS (Ash St)	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A
17: Center St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
18: Center St & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
19: Center St & Chestnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A



5 Future Conditions Analysis

Background Growth and Development

The project Stakeholder Group provided local context for generating a list of potential projects that would generate new traffic and parking demand within the next 10 years. There are twenty four (24) development projects in the study area. Site traffic generated from those planned projects was included in the Future (2019) and Future (2026) scenarios, as described in more details later in the next section. In addition, an annual growth rate of 2% was applied to all study area intersections.

Future Demand Parking Analysis

Projects List

The project Stakeholder Group served an essential role to identify potential downtown redevelopment projects that would generate new parking demand within the next ten (10) years. Projects were initially documented during the first Stakeholder Group meeting in April of 2016. These individual projects were summarized by VHB and reviewed by the Study Team. The full list of projects were used to estimate future parking demand and presented to the Stakeholder Group for further review, discussion and approval in May of 2016. Additional projects were identified at this time and added to the future demand analysis.

The final list includes seventeen (17) Short-term projects that are expected by 2019, and seven (7) Long-term projects that are expected by 2026 (**Table 8**). Each project was assigned to its corresponding parking analysis block (**Figure 7**). The existing building square footage, current land use(s), and number of floors were documented for projects with an existing building.

Table 7: Summary of Future Projects

Time Frame	# Projects	New Sq.Ft.	New Beds
Short-Term	17	27,350	85
Long-Term	7	328,600	546
TOTAL	24	355,950	631

Note: Not all projects will generate new building square footage (net-neutral) or new parking demand.

Project Assumptions

Assumptions were made based on the best available information, contributed by members of the Stakeholder Group. The future year parking demand model has been intentionally constructed with dynamic inputs so that it may be updated as new information is available. Approximated building square footages were estimated using GIS software and referencing adjacent building setback, height, and bulk.

Future land uses were categorized by the Stakeholder Group and reviewed by the project Study Team. Number of residential units and number of beds per unit were described by stakeholders or approximated based on available property.

A column for parking modifications is included within the future projects table to account for removed or added parking as part of the development project. Seven (7) projects include a parking modification value, five (5) of these are parking lot construction or expansion projects (#5, 7, 14, 17, and 19), one (1) project will result in the removal of on-street parking (#9), and one (1) project is assumed to provide a limited number of new parking for the development (#19).

Figure 7. Future Development Projects

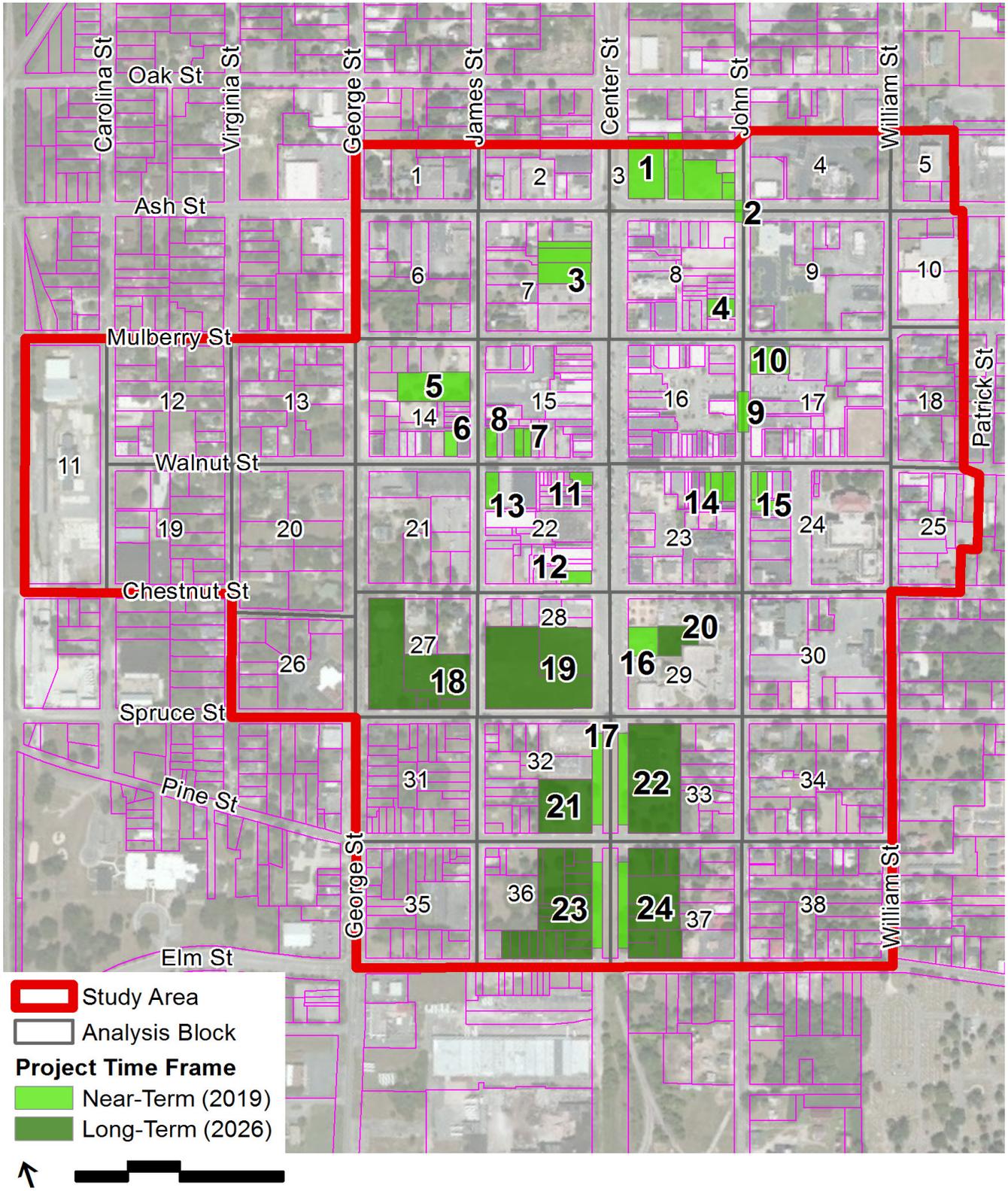


Table 8. Future Development Projects List

Future Year Projects List			EXISTING		1st Floor		Upper Floors		Project Type		FUTURE		1st Floor		Upper Floors		Parking Modification		New Demand		
#	Time	Block	Address	Acres	Bldg SqFt	Land Use	Upper Floors	Land Use	Land Use	Project Type	Bldg SqFt	Land Use	Land Use	Land Use	Land Use	Land Use	Bed	Bed	Bed	Bed	
1	Short	3	101-115 E Ash St	0.81	12,050	Vacant	Vacant	Vacant	Vacant	Redevelopment	12,050	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant	-	-	-	-	59
2	Short	3	-	0.00	-	-	-	-	-	Roadway modification	-	-	-	-	-	-	-	-	-	-	-
3	Short	7	215-221 N Center St	0.04	-	-	-	-	-	Infill construction	8,000	Office	Office	Office	Office	Office	-	-	-	-	20
4	Short	8	205 N John St	0.18	10,900	Vacant	Vacant	Vacant	Vacant	Redevelopment	10,900	Restaurant	Restaurant	Residential-Condo	Residential-Condo	Residential-Condo	10	0	0	0	34
5	Short	14	121 N James St	0.74	-	-	-	-	-	Redevelopment	32,400	Parking	Parking	-	-	-	-	74	0	0	-
6	Short	14	205 W Walnut St	0.12	15,000	Vacant	Vacant	Vacant	Vacant	Redevelopment	15,000	Office	Office	Office	Office	Office	-	-	-	-	37
7	Short	15	123-125 W Walnut St	0.17	-	-	-	-	-	Infill construction	7,400	Parking	Parking	-	-	-	-	20	0	0	-
8	Short	15	139 W Walnut St	0.12	38,000	Vacant	Vacant	Vacant	Vacant	Redevelopment	38,000	Commercial	Commercial	Residential-Apartment	Residential-Apartment	Residential-Apartment	46	0	0	0	81
9	Short	16	112 N John St	0.00	-	-	-	-	-	Roadway modification	-	-	-	-	-	-	-	-	-	-	-
10	Short	17	143 N John St	0.38	25,500	Office	Office	Office	Office	Relocation/Backfill	25,500	Office-Government	Office-Government	Office-Government	Office-Government	Office-Government	-	-	-	-	-
11	Short	22	101-105 S Center St	0.10	8,500	Grocery/Rest	Office	Office	Office	Redevelopment	8,500	Restaurant-Sit Down	Restaurant-Sit Down	Residential-Condo	Residential-Condo	Residential-Condo	8	0	0	0	27
12	Short	22	101 W Chestnut St	0.14	1,250	Vacant	-	-	-	Redevelopment	4,600	Restaurant-Sit Down	Restaurant-Sit Down	-	-	-	-	-	-	-	23
13	Short	22	130 W Walnut St	0.17	31,200	Office	Office	Office	Office	Relocation/Backfill	31,200	Office-Government	Office-Government	Office-Government	Office-Government	Office-Government	-	-	-	-	62
14	Short	23	138 E Walnut St	0.14	18,000	Vacant	Vacant	Vacant	Vacant	Redevelopment	18,000	Retail	Retail	Residential-Condo	Residential-Condo	Residential-Condo	18	0	0	0	28
15	Short	24	132 E Walnut St	0.12	-	-	-	-	-	Infill construction	5,300	Parking	Parking	-	-	-	-	16	0	0	-
16	Short	24	130 E Walnut St	0.06	5,200	Retail	Residential	Residential	Residential	Redevelopment	5,200	Retail	Retail	Residential-Condo	Residential-Condo	Residential-Condo	3	0	0	0	8
17	Short	24	202 E Walnut St	0.07	8,000	Office-Gov	Office	Office	Office	Relocation/Backfill	8,000	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	-	-	-	-	-
18	Short	24	204 E Walnut St	0.09	9,000	Office	Office	Office	Office	Relocation/Backfill	9,000	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	-	-	-	-	-
19	Short	24	106 S John St	0.10	9,000	Office	Office	Office	Office	Relocation/Backfill	9,000	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	-	-	-	-	-
20	Short	29	200 S Center St	0.00	12,000	Open Space	-	-	-	Infill construction	28,000	Open Space	Open Space	-	-	-	-	0	0	0	3
21	Short	32	S Center St	0.00	-	-	-	-	-	Roadway modification	-	Parking	Parking	-	-	-	-	12	12	12	-
22	Short	33	-	-	-	-	-	-	-	Roadway modification	-	Parking	Parking	-	-	-	-	12	12	12	-
23	Short	36	-	-	-	-	-	-	-	Roadway modification	-	Parking	Parking	-	-	-	-	12	12	12	-
24	Short	37	-	-	-	-	-	-	-	Roadway modification	-	Parking	Parking	-	-	-	-	12	12	12	-
18	Long	27	208 W Chestnut St	4.01	9,000	Office-Gov	Office	Office	Office	Relocation/Backfill	9,000	Office-Government	Office-Government	Office-Government	Office-Government	Office-Government	-	-	-	-	-
19	Long	28	207-219 S Center St	3.08	8,400	Office-Gov	Office	Office	Office	Relocation/Backfill	8,400	Demolish	Demolish	-	-	-	-	-	-	-	-
20	Long	29	200 S Center St	0.36	7,300	Office-Gov	-	-	-	Relocation/Backfill	7,300	Office-Government	Office-Government	Office-Government	Office-Government	Office-Government	-	-	-	-	-
21	Long	32	309 S Center St	1.03	-	-	-	-	-	Infill construction	21,700	Office-Government	Office-Government	Office-Government	Office-Government	Office-Government	-	-	-	-	86
22	Long	32	309 S Center St	1.03	-	-	-	-	-	Infill construction	120,000	Shopping Center	Shopping Center	Residential-Condo	Residential-Condo	Residential-Condo	298	50	50	50	323
23	Long	33	300 S Center St	2.03	-	-	-	-	-	Infill construction	15,000	Parking	Parking	-	-	-	-	45	45	45	-
24	Long	36	403-415 Center St	2.47	11,500	Vacant	-	-	-	Infill construction	40,000	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	20	25	25	25	33
25	Long	36	403-415 Center St	2.47	-	-	-	-	-	Redevelopment	11,500	Office-Medical	Office-Medical	-	-	-	-	0	0	0	-
26	Long	37	400-414 S Center St	2.01	-	-	-	-	-	Infill construction	90,000	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	30	60	60	60	67
27	Long	37	400-414 S Center St	2.01	-	-	-	-	-	Infill construction	90,000	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	Residential-Townhome	38	75	75	75	84
975																					

Reuse of existing building
 New construction on greenspace
 Net-neutral for parking
 Project occurs within roadway

Redevelopment
 Infill construction
 Relocation/Backfill
 Roadway modification

Demand Quantification

The project team created a spreadsheet-based parking demand model to estimate the number of parking spaces needed to meet the expected demand for these developments. The model may be adjusted or updated as additional information is obtained, or assumptions are revised.

VHB consulted the ITE Parking Generation Manual, 4th Edition to estimate the future parking demand generated by each of the 24 development projects. The ITE manual contains research from transportation engineering and planning professionals, and is regularly updated with actual parking occupancy counts from urban and suburban locations across the country. This resource is universally accepted as the standard resource for parking generation and guidance.

VHB assigned parking demand rates with guidance from the ITE Manual and approval by the City (**Table 9**), to each development project. Future parking demand estimates represent the maximum number of parked vehicles during the peak period, regardless of the time of day (i.e. the worst case condition). This is important because it relates back to the project Vision to enable private investments (the project list) by identifying and mitigating potential barriers (supply and demand) to parking and traffic, as well as project Goals by estimating the future parking demand and evaluating the supply/demand balance.

Table 9: Parking Demand Rates by Land Use Type

Land Use	ITE Use Code	Unit	Parking Demand Rate
Residential	221-230	per bed	0.75
Light Industrial	110	per 1,000 GSF	1.0
Commercial/Retail	800's	per 1,000 GSF	2.5
Mixed Use	800's	per 1,000 GSF	2.5
Office-General	701	per 1,000 GSF	2.5
Office-Medical	720	per 1,000 GSF	3.0
Office-Government	730	per 1,000 GSF	4.0
Open Space-Recreation	411	per acre	5.0
Restaurant	932	per 1,000 GSF	5.0
Restaurant-Sit Down	932	per 1,000 GSF	5.0
Restaurant-Breakfast	936	per 1,000 GSF	6.0

Note: ITE Manual provides Average, Low, 33rd %, 85th %, and High values for each.

Different land uses will have different peak periods during the day. For example, offices are generally busy between 9 AM and 5 PM, while restaurants may experience a lunchtime peak between 11 AM and 1 PM, and an evening peak after 6 PM. For the purposes of this planning-level analysis it is important to quantify the worst case scenario. These potential projects are still in the conceptual stage, and will change over time or may be dropped from consideration. A traffic impact analysis (TIA) for an individual project involves the evaluation of site-specific traffic and parking demand. At this stage in development, a licensed traffic engineer could revisit the time of day factors relating to parking demand.

The seventeen (17) development projects identified for the Short-term are anticipated to generate a new parking demand for 382 spaces. Nearly half of this new demand could be off-set by the +147 new parking modifications. The seven (7) projects in the Long-term are estimated to generate the greatest amount of new parking demand (593 spaces) which is 61% of the total new parking demand (**Table 10**). Four (4) of these seven (7) Long-term projects include residential land uses, totaling 546 new beds during this time frame.

Table 10: Parking Demand Analysis Summary

Time Frame	# Projects	Parking Modification	New Parking Demand
Short-Term	17	+147	382
Long-Term	7	+95	593
TOTAL	24	+242	975

Note: Parking Modification column accounts for projects that will provide new parking on-site.

Demand-Supply Balance

To visualize areas of (future) high parking demand the project team constructed a spreadsheet-based model to aggregate the existing public parking supply, demand, future parking modifications, and future new parking demand for each of the 38 analysis blocks.

Public parking located west of George Street (100 spaces) were removed from consideration, as it was considered too far from Center Street to be effectively utilized by the public.

It is challenging for visitors to find parking when a lot or the on-street parking area is more than 85% occupied. Often the result is unnecessary circling through the lot or around the block to search for the “best” parking space available. To avoid this unwanted traffic circulation, all public parking areas were capped at 85% occupancy, meaning that a 100 space parking lot has an effective capacity for 85 cars during the peak period.

The maximum number of cars observed within public parking lots and on-street was used as the existing parking demand (878 cars). For modeling purposes, the project team assumed that these 878 cars represented only 90% of the actual existing demand, and the remaining 10% of employees may not have been present on the day of data collection (vacation, sick, working from home, attending an out of office meeting, etc.). This assumption increased the effective demand to 976 cars ($878 \div 0.9$).

The previous section and summaries in **Table 8** present parking modifications and new parking demand generated by the future development projects. With these inputs and model assumptions, the project team is able to estimate the parking supply, demand, and balance (supply-demand) for the existing (2016), Short-term (2019) and Long-term (2026).

Model Assumptions

It is important to restate the assumptions that have been incorporated into this model.

- Future development projects were identified by the Stakeholder Group based on the best available information at the time, and are subject to change.
- Parking demand ratios were selected with guidance from the ITE Manual and project Study Team input.
- Estimates for future parking demand represent the maximum number of parked vehicles during the peak period, regardless of the time of day (i.e. the worst case condition).
- Existing public parking supply does not include areas west of George Street.
- Existing parking demand assumes that only 90% of the actual demand was present on the day of field data collection (March 24, 2016).
- Public parking lots are assumed to be “full” when they reach 85% occupancy.

Table 11. Public Parking Supply and Demand Balance

Time Frame	Public Spaces	Effective Capacity	Cars	Effective Demand	New Demand	Cumulative Demand	Parking Balance
Existing	1,829	1,555	878	976	-	976	+579
Short-Term	1,976	1,680	-	976	+382	1,358	+322
Long-Term	2,071	1,760	-	976	+975	1,951	-191

*Note: *Public Spaces represents the total number of public parking spaces east of George Street, and including parking modifications from projects.*

**Effective Capacity represents [Public Spaces] * 0.85.*

**Cars represents the maximum number of vehicles observed from field data collection.*

**Effective Demand is calculated as [Cars] ÷ 0.9, and represents the assumption that only 90% of total existing demand was observed from field data collection.*

**New Demand represents the total number of additional parking spaces needed based on the development projects list and ITE Manual inputs.*

**Cumulative Demand is calculated as [Effective Demand] + [New Demand].*

**Parking Balance is calculated as [Effective Capacity] – [Cumulative Demand].*

Visualization of Parking Spaces

Visualizing the patterns of parking balance by block is an important component of this project because not all blocks have an equal number of public parking spaces or demand. **Table 11** indicates that a total surplus of +322 public parking spaces will be available in the Short-term, and **Figure 8** displays the individual balance for each block. Similarly, a total deficit of -191 public parking spaces is expected for the Long-term, and **Figure 9** displays the individual balance for each block.



GOLDSBORO, NC

Figure 8: Short-term Parking Balance by Block

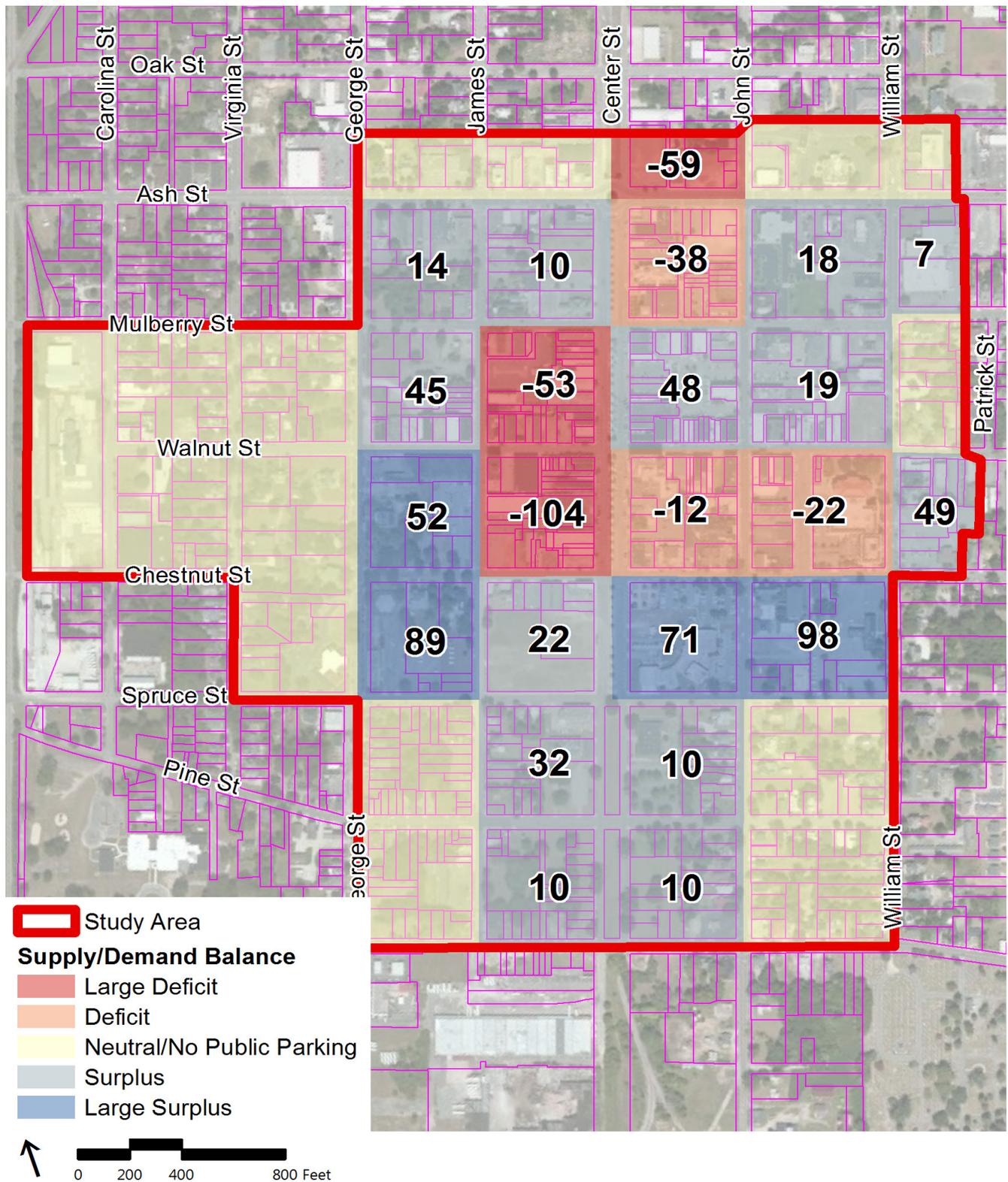
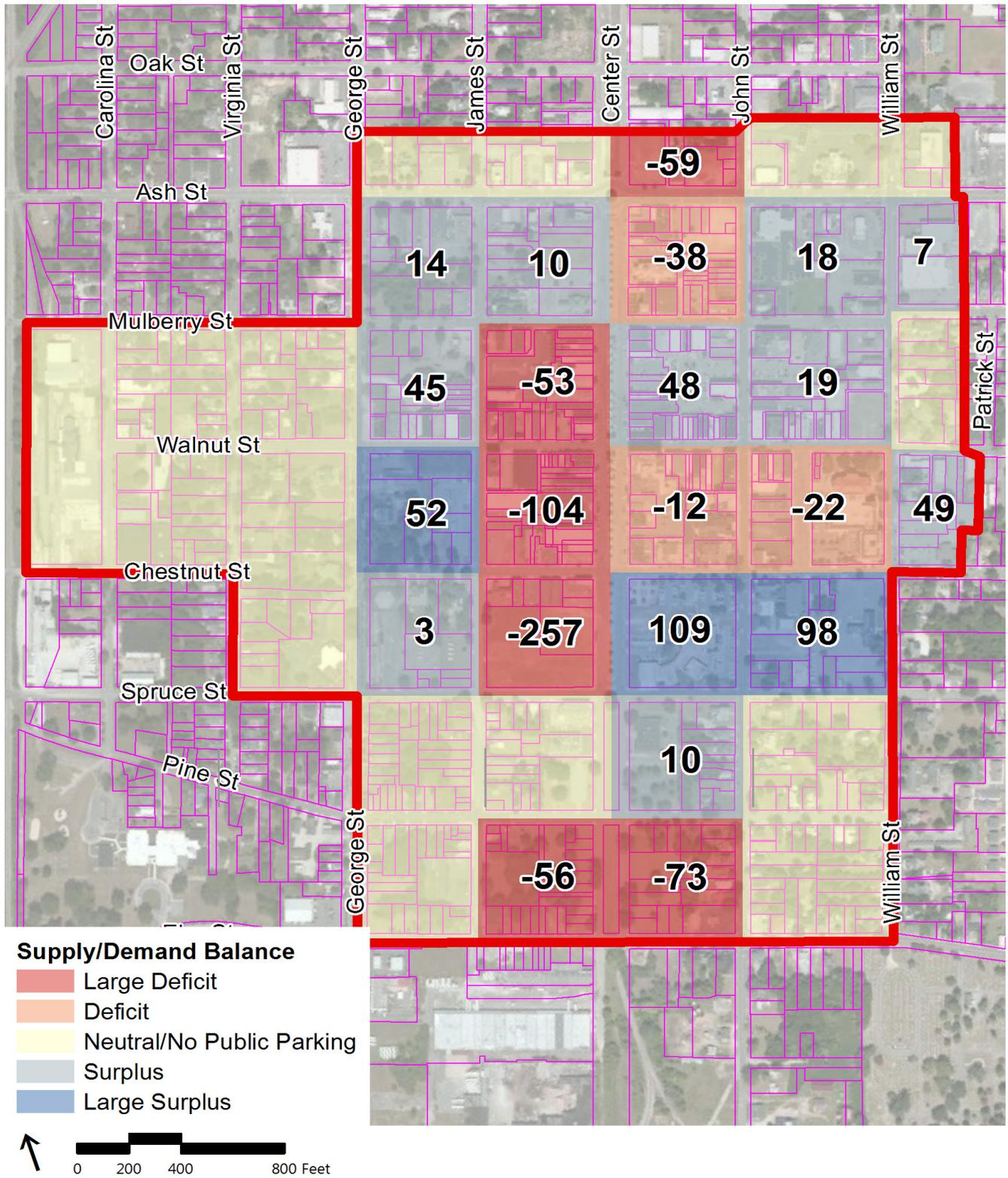


Figure 9: Long-term Parking Balance by Block



Future Traffic Conditions

Traffic Projections

Trip generation was conducted based on the most appropriate corresponding trip generation codes included in the *ITE Trip Generation Manual, 9th Edition*, and NCDOT's suggested method of calculation. Internal capture between mixed use developments and pass-by trips for commercial developments were estimated based on standard ITE practices.

As a result, the proposed development is projected to generate 17,321 additional daily trips with 629 trips (396 entering, 233 exiting) occurring in the AM peak hour, 571 trips (344 entering, 227 exiting) occurring in the midday peak hour, and 513 trips (293 entering, 220 exiting) in the PM peak hour under the 2019 conditions. Under the 2026 conditions, the proposed development is projected to generate 25,520 additional daily trips with 847 trips (504 entering, 342 exiting) occurring in the AM peak hour, 918 trips (522 entering, 396 exiting) occurring in the midday peak hour, and 990 trips (540 entering, 450 exiting) in the PM peak hour.

The development trips were distributed based on the parking supplies on-site and on adjacent blocks within walking distances. Externally, the development trips are distributed in accordance with the existing traffic patterns, planned land uses, and the programmed transportation network changes.

The site trip percentages and resulting site trips are depicted in **Appendix E**. The resulting Future (2019) and Future (2026) AM and PM peak hour turning movement volumes are depicted in **Figure 10** and **Figure 11** respectively.

Table 12: Trip Generation Rates (Vehicle Trips)

Land Uses	Daily	AM Peak Hour			Midday Peak Hour			PM Peak Hour		
		Entering	Exiting	Pass-By	Entering	Exiting	Pass-By	Entering	Exiting	Pass-By
Short-Term (2019) Trip Projections										
Office	2,787	170	36	-	87	6	-	5	(23)	-
Restaurant	10,742	191	159	343	182	145	266	174	131	188
Residential	291	4	18	-	11	13	-	17	9	-
Retail	3,501	32	20	27	64	62	65	96	104	103
Total	17,321	397	233	370	344	226	331	292	221	291
Long-Term (2026) Trip Projections										
Office	4,119	257	54	-	139	36	-	22	17	-
Restaurant	10,742	142	112	439	150	114	329	159	116	218
Residential	2,034	26	128	-	74	94	-	122	60	-
Retail	8,625	79	49	66	158	153	160	237	257	255
Total	25,520	504	343	505	521	397	489	540	450	473



GOLDSBORO, NC

Figure 10: Short-Term (2019) AM and PM Peak Hour Turning Movement Volumes

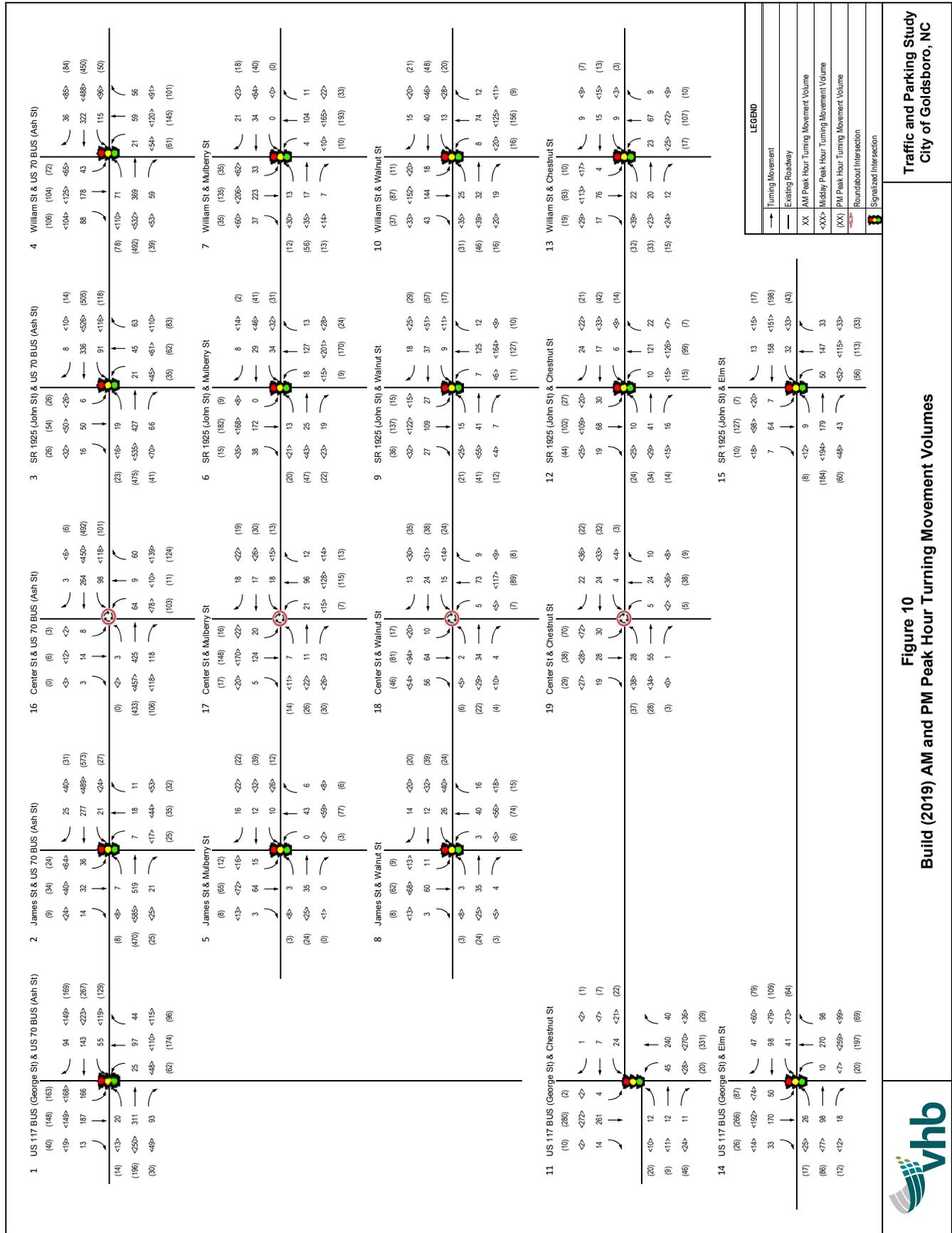
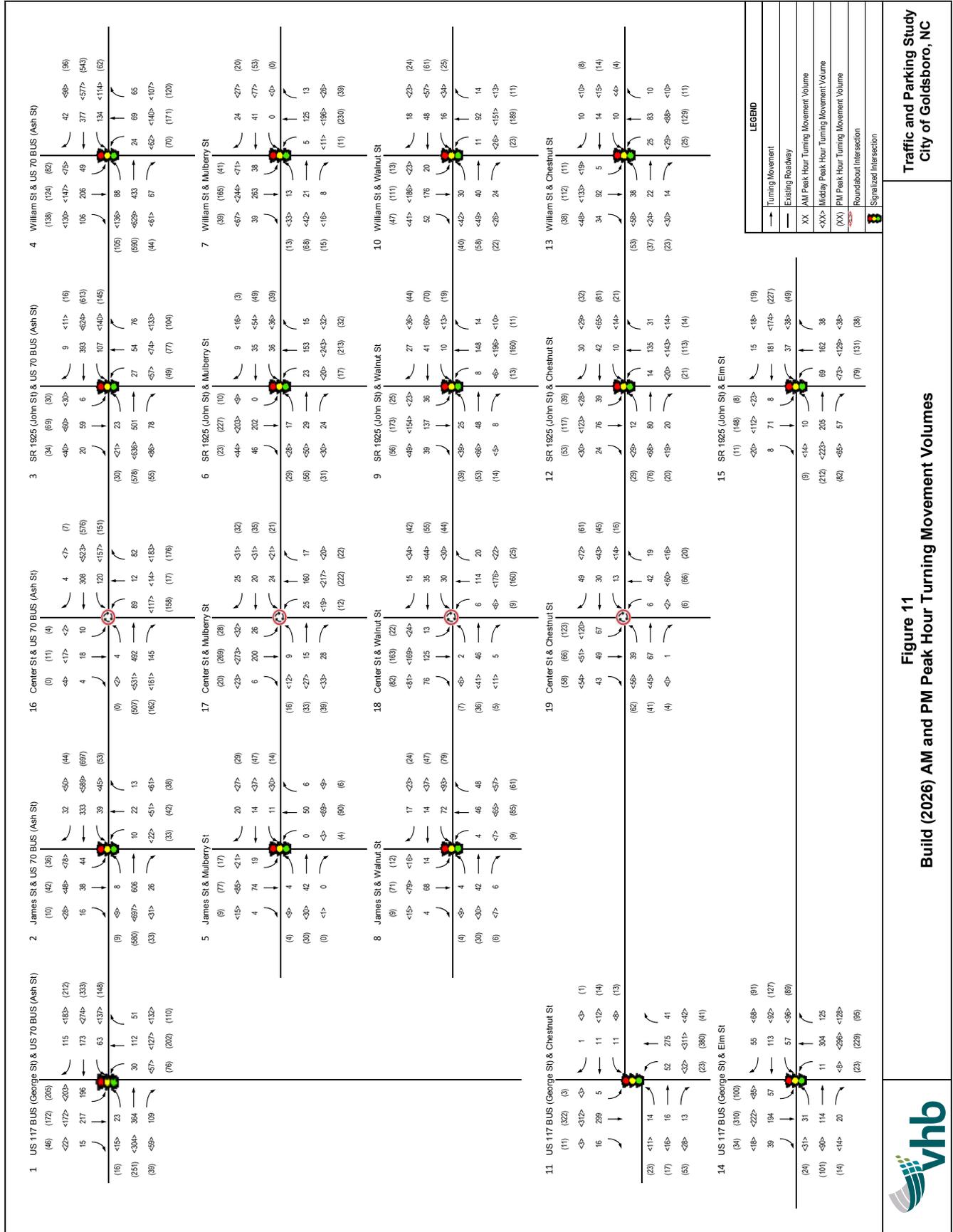


Figure 11: Long-Term (2026) AM and PM Peak Hour Turning Movement Volumes



Traffic and Parking Study
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Figure 11
Build (2026) AM and PM Peak Hour Turning Movement Volumes



Intersection Level of Service

Intersection levels of service analyses were performed for the typical weekday AM and PM peak hours using *Synchro/SimTraffic Professional Version 9*. The signalized intersections were optimized within Synchro as part of the future year analysis. A summary of the findings for the Build (2019) and Build (2026) scenario LOS analysis can be found in **Tables 13** and **14** and the full *Synchro/HCS* output can be found in **Appendix E**.

As reported in **Table 13**, all study intersections included in the analysis remain operating at acceptable levels of service during all 2019 peak hour conditions. Most intersections remain operating at either LOS A or LOS B during all peak hours with little or short traffic delay, while three intersections (Ash Street at George Street, Ash Street at Williams Street, and Elm Street at George Street) remain operating at LOS C during the AM, midday and PM peak hours with moderate traffic delay.

Table 13: Future Conditions (2019) LOS Results

Total = Overall signalized intersection LOS; X = Approach LOS

Intersection	AM Peak Hour					Midday Peak Hour					PM Peak Hour				
	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB
1: US 117 BUS (George St) & US 70 BUS (Ash St)	C	C	B	D	B	C	C	B	D	B	C	C	B	D	B
2: James St & US 70 BUS (Ash St)	A	A	A	C	D	A	A	A	D	D	A	A	A	D	C
3: SR 1925 (John St) & US 70 BUS (Ash St)	A	A	A	D	C	B	A	A	D	C	A	A	A	D	C
4: William St & US 70 BUS (Ash St)	C	C	C	C	D	C	C	C	D	D	C	C	C	D	D
5: James St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
6: SR 1925 (John St) & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
7: William St & Mulberry St	A	C	C	A	A	A	C	C	A	A	A	C	C	A	A
8: James St & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9: SR 1925 (John St) & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10: William St & Walnut St	B	C	C	A	A	B	C	C	A	A	B	C	C	A	A
11: US 117 BUS (George St) & Chestnut St	A	C	C	A	A	A	C	C	B	A	A	C	C	B	A
12: SR 1925 (John St) & Chestnut St	A	C	B	A	A	A	C	B	A	A	A	C	C	A	A
13: William St & Chestnut St	B	C	C	A	A	B	C	C	A	A	B	C	C	A	A
14: US 117 BUS (George St) & Elm St	C	C	C	D	C	C	C	C	D	C	C	C	C	D	C
15: SR 1925 (John St) & Elm St	B	C	C	A	A	B	C	C	A	A	B	C	C	A	A
16: Center St & US 70 BUS (Ash St)	A	A	A	A	A	B	A	B	A	A	B	A	B	A	A
17: Center St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
18: Center St & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
19: Center St & Chestnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

As reported in **Table 14**, all study intersections included in the analysis remain operating at acceptable levels of service during all 2026 peak hour conditions. Most intersections remain operating at either LOS A or LOS B during all peak hours, while the intersection of Ash Street at George Street remain operating at LOS C during the AM, midday, and PM peak hours, and the other two intersections (Ash Street at Williams Street, Elm Street at George Street) are projected to degrade to operate at LOS D during at least one of the AM, midday and PM peak hours with significant traffic delay. In addition, the roundabout intersection of Center Street at Ash Street is projected to operate at LOS C during the midday and PM peak hours.

Table 14: Future Conditions (2026) LOS Results

Total = Overall signalized intersection LOS; **X** = Approach LOS

Intersection	AM Peak Hour					Midday Peak Hour					PM Peak Hour				
	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	EB	WB	NB	SB
1: US 117 BUS (George St) & US 70 BUS (Ash St)	C	C	B	D	C	C	C	B	D	B	C	C	B	D	B
2: James St & US 70 BUS (Ash St)	A	A	A	C	D	A	A	A	D	D	A	A	A	D	C
3: SR 1925 (John St) & US 70 BUS (Ash St)	A	A	A	D	C	B	A	A	D	C	B	A	A	D	C
4: William St & US 70 BUS (Ash St)	C	C	C	C	D	D	D	D	D	D	D	C	C	D	D
5: James St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
6: SR 1925 (John St) & Mulberry St	A	A	A	A	A	A	B	B	A	A	A	B	A	A	A
7: William St & Mulberry St	A	C	C	A	A	A	C	C	A	A	A	C	C	A	A
8: James St & Walnut St	A	A	B	A	A	A	A	B	A	A	A	A	B	A	A
9: SR 1925 (John St) & Walnut St	A	A	A	A	A	A	B	B	A	A	A	B	B	A	A
10: William St & Walnut St	B	C	C	A	A	B	C	C	A	A	B	C	C	A	A
11: US 117 BUS (George St) & Chestnut St	A	C	C	A	A	A	C	C	A	A	B	C	C	B	A
12: SR 1925 (John St) & Chestnut St	B	C	B	A	A	B	C	C	A	A	B	C	C	A	A
13: William St & Chestnut St	B	C	C	A	A	B	C	B	A	A	B	C	B	A	A
14: US 117 BUS (George St) & Elm St	C	C	C	D	C	D	C	C	D	C	C	C	C	D	C
15: SR 1925 (John St) & Elm St	B	C	C	A	A	B	C	B	A	A	B	C	C	A	A
16: Center St & US 70 BUS (Ash St)	A	B	A	A	A	C	B	C	B	A	C	B	D	B	A
17: Center St & Mulberry St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
18: Center St & Walnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
19: Center St & Chestnut St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A



6 Management Strategies

Quantifying the future parking supply-demand balance and visualizing the pattern by block is valuable information for the City. This information serves as the justification for potential management strategies and programs that may be aimed at modifying, mitigating or reducing future parking demand. Strategies have been grouped into four (4) categories based on their desired effect.

Educational strategies try to inform the general public about available parking lots and the importance of a parking management system.

Encouragement strategies try to incentivize the use of the low-demand spaces that may be on the periphery of downtown.

Enforcement strategies deal with Parking Enforcement efforts.

Evaluation strategies include administrative programs for the City to collect further data and information over time, as conditions change as well as add parking supply.

Education

This section outlines examples of parking system management approaches that educate the general public in the hope of changing behaviors. There are many resources available for a broad perspective on parking management strategies, one quality example may be found at the Victoria Transport Policy Institute: <http://www.vtpi.org/>



PARKING SIGNAGE, GOLDSBORO, NC

Parking Signage Audit

Public parking lot signage in Downtown Goldsboro is inconsistent, particularly between City parking lots and County parking lots. To promote simplicity and limit visitor confusion, all public parking lots should display the standard public parking “P”. If these lots are time limited (2-hour or 4-hour) between certain hours of the day (8 AM to 5 PM), then this should be added as a separate sign “plaque” attached to the same sign post, to avoid confusion. The recently completed Wayfinding Master Plan (March 2016) includes the standard signage details, dimensions, and unit costs for this initiative. Please consult the Manual for Uniform Traffic Control Devices (MUTCD) to ensure appropriate signage placement for safety and visibility.

Removal of unnecessary signage will raise general awareness of the remaining regulatory signs and/or new wayfinding signage to be installed. An audit of general signage should also be performed for public and private signs located within the public right of way. This audit would include roadway regulatory signs (e.g. street names, posted speed limits, do not enter, one way, etc.), parking restriction signs (e.g. 2-hour parking, 30-min parking, parking for clients only), business advertisement signs (e.g. for rent/lease, entrance, drive-thru) and others (e.g. historical markers, bus stop, pedestrian crossing). This audit is likely to identify redundant signage, which should be removed where possible. Locations with multiple signs on individual poles should be considered for consolidation. The City and County should coordinate with DGDC to facilitate this interaction between government and the private sector, and involve the City Traffic Engineer for MUTCD and NCDOT compliance.

Short-term versus Long-term Parking

Considerations can be made for short-term visitor parking and long-term visitor parking signs. One example of these is in Salem, MA, where the city placed signs at key “decision points” to direct visitors to either short-term on-street parking located along certain destination streets, or long-term parking that is further from the center of town. The City may consider designating some of the larger public parking lots that are furthest from Center Street as long-term public parking lots with no time restrictions, and signing these lots accordingly.

Public Parking and Walk-times Map

Using the recently updated parking space inventory created by this project, the visitor parking map should be updated to include all public parking lots and on-street parking areas. This map could also include approximate walk-times from the furthest public parking lots to Center Street. The City could post the revised public parking map to the City and DGDC website (<http://www.dgdc.org/get-around/>), and revise annually or on an as-needed basis. This map should be distributed electronically, not printed, wherever possible.

The City should consider working with the Goldsboro and Wayne County GIS Departments to produce a smartphone app for Downtown, including visitor parking areas and major destinations. This app should be very simple to use and oriented towards visitors. This *should not be* a one-stop resource for all of the attractions that Downtown Goldsboro has to offer.

Guerrilla Wayfinding

Walk Your City (<https://walkyourcity.org/>) is a grass-roots initiative (often referred to as “Guerrilla Wayfinding”) to encourage walking and biking in urban areas. This is not a government-sanctioned wayfinding signage program, but rather a subtle reminder to residents, employees and visitors that “It’s a 3 minute walk to ____”. The Walk Your City website will fabricate and ship these temporary, weather resistant signs for \$23 each. This initiative would work best as a temporary pilot study for a select area of downtown to gauge public interest and promote feedback. If the public responds positively, then a more permanent version of these signs may be added to the Wayfinding Master Plan signs, as supplemental information signs.

Encouragement

This section outlines initiatives that reinforce the use of all parking resources, especially those low-demand areas that are furthest from Center Street.

Shared Parking Resources

On-street parking is a scarce resource and must be prioritized for short-term visitors and customers in high turnover areas (business centers and entertainment districts). This concept must be shared by all downtown stakeholders including residents, merchants, employees, and outside visitors from both the public and private sector. The City and DGDC should communicate and continually reinforce with downtown merchants and residential property managers to encourage their employees and residents to reserve on street parking for

shoppers. This message should be consistently marketed from multiple public and private agencies so that the message is clear: On-street parking is for business. This message should be a constant reminder to employees and employers, bordering on peer-pressure to help encourage.

Incentives are common for those who consistently park and walk from the furthest parking lots. Incentives may include business recognition in a local paper, website or radio broadcast, or perhaps donations from participating businesses, such as coupons for a free cup of coffee, half-price lunch, discounted tickets to an upcoming event, or branded merchandise (t-shirt, coffee tumbler) from participating downtown merchants who benefit from free, available on-street parking. The purpose of such incentives is to publicize the behavior that benefits downtown.

Healthy Lifestyles Initiative

This message may also be rolled into a healthy lifestyles campaign to promote 10,000 steps per day. Pedometers are additional low-cost branded merchandise that can be used as an incentive. This campaign may also consider a monthly step challenge among organizations to see which group can tally the greatest number of steps, and win prizes (donations). Healthcare benefit providers (BCBS, Humana, etc.) offer similar wellness programs to incentivize employees to live more active lifestyles. The concept is to unite groups based on their common business interest of maximizing on-street parking for visitors, while providing incentives to participate.

These encouragement initiatives may only shift parking behaviors temporarily, or on a small scale. This may be all that the City of Goldsboro is seeking for the short-term, and may be effective. For more widespread behavior shifts, the City may consider enforcement initiatives, discussed below.

Enforcement

This section outlines parking enforcement strategies that would more directly influence future parking demand by promoting vehicle turnover along certain on-street parking areas. Strict enforcement through the issuance of citations (fees) should be a last-resort strategy; however, it may be necessary for the highest parking demand areas to include a consistent parking enforcement effort.

The NC Civil Penalty and Forfeiture Fund (CPFF) has limited the parking enforcement efforts of many NC cities by requiring 80% (or more) of the collected fines from traffic and parking tickets to be turned over to the public school system. The legislation references State agencies, such as the University of North Carolina system, who issue parking tickets. The City Attorney's Office should clarify whether the City, as a local government, is subject to or exempt from this requirement.

Parking Ambassador Initiative

The City of Goldsboro does not actively enforce its parking lots or on-street parking areas. This is common for many small to mid-sized cities in North Carolina, because the financial expense related to staff, equipment, administration, appeals and collections is much higher than education and enforcement initiatives described previously. The CPFF described above may also be a factor to not regularly enforce.

Parking Enforcement does not need to be a punitive initiative. Enforcement officers should be visibly present within areas of high parking demand; however, their role should be adjusted towards an "Ambassador of Downtown." This parking study has identified the locations of greatest parking demand, and the busiest time of the day (lunchtime) for a typical weekday. Parking Ambassadors should perform more frequent "tours" of on-street parking areas, be visible and friendly, and offer direction to nearby parking areas for long-term parking. Parking Ambassadors should interact directly with downtown merchants along Center Street, ask what their customer's parking needs are, and report back to the City and DGDC. This strategy does not require new equipment to purchase, but will involve more significant staff time for coordination and communication.

Only after considering the Parking Ambassador Initiative, and also depending upon whether on street parking continues to be a problem for businesses, should the City consider addressing this issue through parking enforcement citations (below).

Citation and Appeals

If the City desires to actively enforce the timed on-street parking areas and issue parking citations, then a full enforcement and appeals process should be initiated, including lengthy public involvement. Some important considerations for such a program would include:

- Increase the standard parking fine amount from the current rate(s) (\$1 to \$5)
- Institute a no-charge warning citation for first-time citations. Include information on where long-term parking is available further from Center Street.
- Offer a streamlined citation appeals process; be fair and consistent to avoid the appearance of favoritism at all costs.
- Offer a discounted citation amount if it is paid within 96 hours (or another specified time); escalate the fee if it is paid after a specified time (four weeks).
- Investigate an electronic parking management and enforcement software solution that integrates with DMV license plate database. Examples include T2 Systems, TickeTrak, or AIMS. However additional software companies exist.
 - » Contact nearby municipalities and inquire about their enforcement software solution capabilities and limitations.
 - » Contact vendors of enforcement software to request a demonstration.
 - » Select a software vendor that offers compatibility with tablet/mobile phone hardware of your choosing (Android most likely).
 - » Coordinate with City and County IT Departments to establish a database of repeat parking offenders (scofflaw list), and include a policy for escalating fees for these individuals.

Enforcement Consistency

Parking Enforcement must be fair and impartial, meaning that all public parking lots are equally enforced within downtown. This initiative builds upon the Parking Ambassador Initiative. All public parking lots must display consistent signage with standard hours of enforcement for visitors (8-5 pm). Exceptions can be made for individually signed spaces; however, these should be limited and very clearly marked to limit or avoid the potential for lengthy appeals.

The City and Wayne County should consider a shared enforcement strategy for all public parking areas to avoid possible confusion or continually pushing violators into different parking lots throughout the day.

Evaluation

This section outlines administrative strategies to collect additional data and utilization trends over time, and evaluate parking demand as it changes.

Continual Evaluation

This project prepared materials for a field data collection of parking lot occupancy for five (5) periods throughout the day. These templates have been provided to the City in order to perform semi-annual parking occupancy counts as needed or requested. These data points are important for separating fact from opinion, and may be used to justify future parking management changes to businesses and the public. Without a record of parking occupancy counts collected across multiple days and months, there may not be a consensus on how to adequately manage public parking.

Parking occupancy collected on different weekdays throughout the year will identify areas that are consistently under-utilized. With this information the City and DGDC can work with property owners on the Shared Parking Resources initiative (Encouragement) to allow shared use of parking lots during low-demand periods of the day. For example, banks and churches have relatively low parking demand during the busiest part of a typical weekday (lunchtime), and offices have very few parked cars during the evening dinnertime period. These are both opportunities for formal or informal arrangements between adjacent businesses, or with the City for public parking. These arrangements must be data-driven.

Survey instruments may be an effective measure of public opinions relating to parking, especially as they change over time. The field counts described above represent actual parking utilization, whereas a public survey will measure the perception of parking and whether any previous management adjustments are having a desired impact. The design of such parking behavior surveys should focus on being brief and repeatable so that many data points may be collected over time (no more than twice a year).

Parking Administration

Parking is typically managed on an ad-hoc basis, however, could be more formalized with stakeholder representation. The City of Goldsboro does not require a Downtown Parking Authority or Board. The City may benefit from discussing on-street and public parking issues during an existing board/committee meeting. Stakeholder involvement is essential, and therefore this existing board or committee must have representation from the City, County, DGDC, Police, Courthouse, downtown merchants, and property owners. Perhaps in time, this group will grow into a more formalized Downtown Parking as needed. In the meantime this group should simply discuss parking challenges related to on street parking in certain high-demand areas.

Special events are considered atypical from weekday trends, and therefore parking accommodations for special events should be handled separately by the Police Department or other agency with staffing capabilities. Paramount Theatre performances, Arts Council of Wayne County events, or Civic events at the Cornerstone Commons are all examples of special events that may require an individual parking plan. The City should identify parking overflow areas that may be used as temporary parking. These areas may not necessarily need to be gravel, however should be well drained (not located near a stream or wetland).

Sidewalk and Lighting

Some downtown stakeholders have remarked that the street and sidewalk lighting conditions vary widely between streets. This is evident when considering the dramatic improvements that have been made along four (4) blocks of Center Street since 2013, leaving the adjacent streets unfavorably comparable to these new conditions. The City should prioritize small-scale sidewalk improvements and lighting maintenance efforts within their Public Works work plan (Capital Improvement Program) within the immediate vicinity of Center Street and public parking lots.

Pavement Management Plan

Some on-street parking spaces are in need of maintenance or re-striping. Other pavement markings are misleading because they do not clearly indicate areas where on-street parking is prohibited. Maintenance of pavement markings should be included within the existing roadway pavement management cycle. Future utility repair or pavement maintenance work should be coordinated between Engineering and Public Utilities departments so that on-street parking spaces are clearly and consistently defined. This may seem like an obvious or insignificant management strategy. However, if the City chooses to actively enforce on street parking and begin issuing citations and hearing appeals, then this will become important.

Traffic Impact Analysis (TIA)

The City should consider requiring a traffic impact analysis (TIA) for development projects. The value of TIA is to ensure that an individual project will not disrupt the system of roadways and signalized intersections that are in place, by forecasting the new traffic and parking demand prior to construction.

Transition to Paid On-Street Parking

Paid on-street parking is something that the City should consider only after fully documenting peak period utilization trends, adjusting parking enforcement strategies, encouraging the use of low-demand parking areas, incentivizing employees to walk, and maximizing available parking supply. Some important considerations for such a pilot program would include:

- Instituting pilot program for pay station kiosks along Center Street (one pay station per block face).
- Selecting pay stations to accept multiple forms of payment (coins, cash, cards, and mobile payment) including extent time via mobile app.
- Including pre-paid or reimbursement options for merchant parking validation, via mobile application, printed codes, or tokens for use at pay stations.
- Including parking token program in cooperation with merchants (see example from City of Wilmington http://www.wilmingtonnc.gov/city_manager/parking/on-street_parking)



PAY STATION EXAMPLE



7 Implementation Plan

Management Strategies discussed in the previous section are illustrative. Not all strategies will work for the City of Goldsboro and its citizens. Some strategies may only be effective after certain strategies have been in place for some time (e.g. pilot study of paid on-street parking along Center Street).

Parking management strategies are presented for the purpose of balancing the estimated future parking demand to delay or eliminate the need to build new public parking lots. Strategies are grouped as Educational, Encouragement, Enforcement, and Evaluation and separated by time frame. VHB suggest the following implementation sequence for management strategies, based on feedback received from the public meeting and online survey:

Stage One: Very Near-Term

- Education - Signage audit
- Education - Public parking and Walk-times map
- Education - Walk [Your City]
- Encouragement - Shared parking agreements between businesses
- Evaluation - Continual evaluation program
- Evaluation - Sidewalks and lighting improvements
- Evaluation - Pavement management plan

Stage One initiatives focus on the “low-hanging fruit” items that may have a relatively quick return on investment. Continual evaluation will be critical to track changes to the pattern of parking demand as affected by some of these initiatives. With this information the City should re-evaluate whether all Stage Two initiatives would be effective to pursue, or perhaps if some Stage One initiatives should be revisited. The Parking Ambassador program is one specific example that may not be necessary based on this evaluation.

Stage Two: 3-5 years

- Encouragement - Healthy lifestyles initiative
- Enforcement - Parking Ambassador program
- Enforcement - Citation and appeals
- Enforcement - Enforcement consistency
- Evaluation – Traffic Impact Analysis (TIAs)
- Evaluation - Continual evaluation
- Evaluation - Parking administration

Stage Two initiatives represent the next logical step in the evaluation of the parking management system in downtown. These initiatives will involve more stakeholders to organize and implement successfully, plus they will likely need to be in place for several months to years to have an impact on parking demand. Similarly to before, continual evaluation is critical to evaluate the relative success and magnitude of change to parking demand patterns (e.g. perhaps hot spot areas have shifted several blocks away, or become more evenly balanced).

Stage Three: 6-10 years

- Evaluation - Parking Administration – re-evaluate options
- Evaluation - Transition to paid on-street parking
- Evaluation - Continual evaluation program

The final stage involves a transition of towards a formal Downtown Parking Advisory Board, or similar administration, and the possibility for implementing a paid on-street parking system. These initiatives should only be considered after the City has attempted to balance future parking demand by Stage One and Stage Two initiatives, and measured their relative success. Formalizing an official board to address downtown parking needs is a tremendous undertaking and should not be rushed without a full understanding of the existing supply, demand, and changes over time to balance demand. Likewise an investment in a paid on-street parking technology (paystation equipment) should not be made without a pilot study or other steps to avoid the potential for their immediate removal based on the initial public response.

Stage Three initiatives must be data driven, and supported by all of the various downtown stakeholders and their diverse parking needs. This level of support is built over time, and is earned by continual evaluation and collaboration efforts. This initial traffic and parking planning study and the process that has been followed represents a terrific first step for the City of Goldsboro, Wayne County, citizens, visitors, and all of the downtown stakeholders who participated.

As indicated in the traffic and parking analyses, the proposed downtown development plan is projected to have a moderate impact on the traffic operations of the surrounding roadway network and intersections. Therefore, the following roadway improvements and driveway configurations are recommended.