Town of Clayton
Regular Town Council Meeting Agenda
Monday, August 17, 2020 @ 6:00 PM
Council Chambers

THE TOWN OF CLAYTON WILL FOLLOW GUIDELINES FROM THE CENTERS FOR DISEASE CONTROL AND THE NORTH CAROLINA DEPARTMENT OF HEALTH AND HUMAN SERVICES WITH REGARD TO SOCIAL DISTANCING.

BELOW PLEASE FIND CHANGES TO THE COUNCIL MEETING FORMAT:

THE AUGUST 17, 2020 TOWN COUNCIL MEETING WILL BE HELD IN PERSON.

ANY MEMBER OF THE PUBLIC THAT WISHES TO ADDRESS THE COUNCIL, MAY DO SO IN PERSON, HOWEVER YOU ARE ASKED TO CONTACT THE TOWN CLERK IN ADVANCE OF THE MEETING.

IF YOU DO NOT WISH TO ATTEND THE MEETING IN PERSON BUT DO WISH TO SHARE ANY PUBLIC COMMENT WITH THE COUNCIL, PLEASE FORWARD YOUR COMMENT(S) TO THE TOWN CLERK NO LATER THAN NOON THE DAY OF THE MEETING. PLEASE INCLUDE YOUR NAME AND ADDRESS. PUBLIC COMMENT(S) RECEIVED WILL BE READ INTO THE RECORD BY THE TOWN CLERK.
EMAIL: KMOFFETT@TOWNOFCLAYTONNC.ORG

BELOW PLEASE FIND ADDITIONAL INFORMATION REGARDING PROCEDURES FOR IN-PERSON MEETINGS:

- **ALL persons attending must wear a mask.**
- **We will be following proper social distancing at all times.**
- **We will have a separate entrance door and separate exit door.**
  Entrance will be main door on Horne Street.
  Exit will be rear door facing Horne Street in the council chambers.
- **Any member of the public attending will be asked to wait in the lobby until item they wish to address is ready for discussion.**
- **Lobby will be set to encourage social distancing.**
  Chairs will be at least 6' from each other.
- **We will have TWO staff members attending the meeting(s) to ensure smooth transition with those attending the meeting.**
- ***One person will serve as LOBBY staff and the other will serve as CHAMBER staff.***
- **The meeting will be shown on the monitor in the lobby. (YouTube)**
- **All council or board members will be socially distanced in the council chambers and wearing face masks.***
- **Staff will be socially distanced and seated within the council chambers. Face masks will be worn.***
- **Hand sanitizer will be available, both in the lobby and council chambers.**
- **Podium/microphone will be sanitized after each speaker.**

Masks may be lowered when speaking.

1. CALL TO ORDER

Pledge of Allegiance and Invocation

2. ADJUSTMENT OF THE AGENDA

3. CONSENT AGENDA

(Items on the consent agenda are considered routine in nature or have been thoroughly discussed at previous meetings. Any member of the Council may request to have an item removed from the consent agenda for further discussion.)

a. Warranty Acceptances
- Parkview, Phase 13
- Badger Pass, Phase 7B

Parkview, Phase 13
Badger Pass, Phase 7B

b. DRAFT Minutes
June 15, 2020 - Closed Session
July 20, 2020 - Regular Session
July 20, 2020 - Closed Session
July 20 2020 DRAFT Minutes

c. Town Hall Basement Renovation
Ordinance #2020-08-01

d. Resolution - NC Governor's Highway Safety Program Grant Agreement
Resolution #2020-24

e. Resolution - Directing Clerk to Certify Sufficiency
- Annexation - Shoppes at Glen Laurel - 2020-23-ANX

Resolution #2020-25

f. Resolution - Directing Clerk to Certify Sufficiency
- Annexation - West End - 2020-115-ANX

Resolution #2020-26

POTENTIAL ACTION: Adoption of Consent Agenda as Presented

4. ADMINISTRATIVE ITEMS

a. Amended - NC State Ordinance #1076840 - Speed Limit .004 E of SR 1552 & .044 W of Laurel Ridge Drive
Presenter: Kimberly Moffett, Town Clerk
Cover
Amended NCDOT Ordinance #1076840
Original NCDOT Ordinance #1076840

5. INTRODUCTIONS AND SPECIAL PRESENTATIONS

a. Presentation of DDA Awards
Presenters: Patrick Pierce, Economic Development Director & Jody McLeod, Mayor
- Tony Johnson
- Kim Lawter
- Jessica Lloyd

- James Lipscomb

b. Comp Plan Update & 160D Regulations
Presenter: Stewart Engineering

6. OLD BUSINESS

a. 2020-17-RZ - Tract on Powhatan Road
Presenter: Samantha Wullenwaber, Planning Director
Public Hearing for this item was held on July 20, 2020. A minimum period of 24 hours was allowed for receipt of additional public comments. All those received in the state time frame are attached to this agenda as part of the official record.
Follow Up Public Comments Received
Applicant Email Attachments Received
Motion Form
Ordinance

POTENTIAL ACTION: Adoption/Denial of Ordinance #2020-08-02

b. Delinquent Account Update & Resolution Amending Temporary Changes Related to Town Utility Policy
Presenter: Ann Game, Customer Service
Resolution #2020-11 - Authorizing Temporary Changes to Utility Police
Resolution #2020-18 - Amending 2020-11
Resolution #2020-27

POTENTIAL ACTION: Adoption of Resolution #2020-27

7. PUBLIC HEARINGS

a. 2019-130-SUP - The Quad - Special Use Permit (Quasi-Judicial)
Presenter: Samantha Wullenwaber, Planning Director
Cover
Application and Owner Consent Form
Staff Report
Signed Recommended Conditions of Approval
Staff Report Map
Neighborhood Meeting Material
Adjacent Property Owner Letter
Newspaper Ad
Motion Form

POTENTIAL ACTION: Approval/Denial of 2019-130-SUP

b. 2019-129-SD - The Quad - Preliminary Plat (Quasi-Judicial)
Presenter: Samantha Wullenwaber, Planning Director
Cover
Applicant and Owner Consent Forms
Staff Report
Signed Recommended Conditions of Approval
Staff Report Map
Site Plans
Neighborhood Meeting Material
Adjacent Property Owner Letter

Newspaper Ad
TRC Certification Letter
Storm Water Statement
Letter of Understanding - 2003
Letter of Understanding - 2019
Wastewater Allocation Request <10,000
Motion Form

POTENTIAL ACTION: Approval/Denial of 2019-129-SD

c. 2020-22-PDD - Shoppes at Glen Laurel - Rezoning
Presenter: Haley Hogg, Senior Planner
Cover
Application
Owner Consent Form
Staff Report
Staff Report Map
Neighborhood Meeting Materials
Boundary Survey
Adjacent Property Letter
Newspaper Ad
Consistency And Reasonableness Statement
Public Comment Received after May 26 2020 Planning Board Meeting
Planning Board Recommendation
Motion Form
Ordinance

POTENTIAL ACTION: Adoption of Ordinance #2020-08-03

d. 2020-39-SD - Shoppes at Glen Laurel - Preliminary Plat (Quasi-Judicial)
Presenter: Haley Hogg, Senior Planner
Cover
Application - Modified
Owner Consent Forms
Staff Report
Staff Report Map
Neighborhood Meeting Materials
Final Plan Set
Newspaper Ad
Adjacent Property Letter
TIA - Full/Optimized
TIA Addendum - Updated
NCDOT TIA Review
Updated Stormwater Mgmt Statement
Wastewater Allocation Request >10,000
Wastewater Score Sheet
TRC Certification Letter
Developer Signed Recommended Conditions of Approval
Motion Form
Resolution Wastewater Allocation

POTENTIAL ACTION: Approval/Denial of 2020-39-SD

POTENTIAL ACTION: Adoption of Resolution #2020-28 (Wastewater Allocation)

8. NEW BUSINESS

a. Firing Range Remediation
Presenter: Rich Cappola, Public Services Director
Cover
Soil Remediation Services Contract - Firing Range

POTENTIAL ACTION: Authorize Town Manager to Execute Contract

9. STAFF REPORTS

a. Town Manager
- Budget Update
  Presenter: Nancy Medlin, D/Town Manager

b. Town Attorney

c. Town Clerk

d. Other Staff
- Digital Meter Update
  Presenter: Ann Game, Customer Service Director

Digital Meter Update

10. OTHER BUSINESS

a. Informal Discussion & Public Comment

b. Council Comments

11. CLOSED SESSION

a. Pursuant to NCGS 143-318.11.(a)(1) & (6)

POTENTIAL ACTION: Motion to Go Into Closed Session

12. ADJOURNMENT

Quasi-Judicial (evidentiary) – These hearings are different from other public hearings in that they resemble a court hearing where testimony is presented and the Town Council acts like a court of law. During evidentiary hearings, the Town Council receives only sworn testimony and other credible evidence. In addition, the Town Council must make findings of fact based upon the evidence presented. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

TOWN OF CLAYTON
Engineering & Inspections
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

MEMORANDUM

To: Kimberly Moffett, Town Clerk

From: Chris Rowland, Construction Project Administrator CR

Copy: Donnie Adams, Adams & Hodge Engineering
Karen Durham, Engineering & Inspections Coordinator

Date: July 29, 2020

Subject: Parkview, Phase 13

Please place a warranty acceptance request for the subject public water, sewer, associated storm drainage utilities, and all pertinent easements on the next available agenda. Record drawings have been reviewed and accepted. Following acceptance, the utilities will be subject to a one-year warranty period. Following warranty expiration, a final inspection will be done with all deficient items corrected by the developer prior to final acceptance.

TOWN OF CLAYTON
Engineering & Inspections
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

MEMORANDUM

To: Kimberly Moffett, Town Clerk

From: Chris Rowland, Construction Project Administrator CR

Copy: Donnie Adams, Adams & Hodge Engineering
Dave DeYoung, River Wild
Karen Durham, Engineering & Inspections Coordinator

Date: August 5, 2020

Subject: Badger Pass, Phase 7B

Please place a warranty acceptance request for the subject public water, sewer, storm drainage utilities, and all pertinent easements on the next available agenda. Record drawings have been reviewed and accepted. Following acceptance, the subject infrastructure will be subject to a one-year warranty period. Following the warranty, a final inspection will be done and all deficient items corrected by the developer prior to final acceptance.

Town of Clayton
Regular Town Council Meeting Minutes
Monday, July 20, 2020 @ 6:00 PM
Council Chambers

COUNCIL PRESENT:
Mayor McLeod
Mayor Pro Tem Thompson
Council Member Grannis
Council Member Holder
Council Member Bunn
Council Member Everett

STAFF PRESENT:
Adam Lindsay, Town Manager
Katherine Ross, Town Attorney
Kimberly Moffett, Town Clerk
Patrick Pierce, Economic Development Director
Robert McKie, Finance Director
Samantha Wullenwaber, Planning Director
Rich Cappola, Public Services Director
Joshua Baird, Town Engineer
Sharon Locklear, Stormwater Engineer
Stacy Beard, Communications Director

COUNCIL ABSENT:

1 CALL TO ORDER
Pledge of Allegiance and Invocation

a) Mayor McLeod called the meeting to order at 6:07 p.m. He led everyone in the Pledge of Allegiance and offered the Invocation.

2 ADJUSTMENT OF THE AGENDA

a) Removal of June 15, 2010 Closed Session Minutes

3 CONSENT AGENDA
(Items on the consent agenda are considered routine in nature or have been thoroughly discussed at previous meetings. Any member of the Council may request to have an item removed from the consent agenda for further discussion.)

a) DRAFT Minutes
- June 15, 2020 - Regular Session
- ~~June 15, 2020 - Closed Session~~
- June 18, 2020 - Regular (Recessed) Session

b) Warranty Acceptances
- Academy Point, Phase 3
- Ashcroft Subdivision, Phase 4B
- Bristol at Cobblestone, Phase 4 (FINAL)

ACTION: Adoption of Consent Agenda as Presented

Motion: Mayor Pro Tem Thompson
Second: Council Member Bunn
Vote: Unanimous (Roll Call Completed by Town Clerk)

4 ADMINISTRATIVE ITEMS

a) Recommendation of Appointments to Downtown Development Association Advisory Board
Presenter: Patrick Pierce, Economic Development Director

- Christi Thompson
- Judy Ryan
- Shannon Austin
- Bernice Lopes

Mr. Pierce provided recommendation for appointments to the DDA. Vacancies were advertised and all applicants were interviewed.

ACTION: Appointment of DDA Members

Motion: Council Member Bunn
Second: Council Member Grannis
Vote: Unanimous (Roll Call Completed by Town Clerk)

5 INTRODUCTIONS AND SPECIAL PRESENTATIONS

a) Racial Equality Coalition
Presenter: Elizabeth McCullough

Ms. McCullough was present and shared information and background about the coalition. She shared personal experiences of those who have experienced racism. She spoke about micro-aggression and implicit bias. She stated her mission is to promote fair and equal treatment for all citizens. She spoke about education and advocacy for reform and deeper understanding of one another as well as compassionate and change. She stated she would like to strengthen her personal and profession ties within the community. She stated she is blessed to be a resident of Clayton. Council Member Grannis offered his thanks to Ms. McCullough and the board. He believes she has already made a difference and he offered his assistance to the coalition. Council Member Everett stated he was very happy to hear from her and looked forward to working together. Mayor Pro Tem Thompson stated he had heard great things about the coalition and look forward to working together to advance Clayton to where we all need to be regarding equality. Council Member Bunn offered his thanks and appreciation. Mayor McLeod offered his thanks for all the great work. He asked that she stay connected with the Council. Ms. McCullough offered her thanks and appreciation.

b) 2nd Quarter 2020 Update - New Neuse River WRF Project
Presenter: JD Solomon

Mr. Solomon was present and provided a quarterly update. He stated we are on budget and schedule. Major risks and issues that we are facing are waiting for approval from LGC, final funding and the town's residential growth boom. Geographic location information was provided. Mr. Solomon spoke about the project team to include finance advisory, nutrient credit advisory, planning & engineering and program management. He discussed how Grifols and Novo are growing and have invested over $2 billion each in their campus. He went into discussion about the current future infrastructure. He stated there would be a public meeting held on Wednesday, July 22, 2020. He stated the current plant is at the end of its useful life and does not have sufficient capacity nor will it continue to meet environmental regulations. He shared information regarding new technologies that would enhance protection to the environment. He shared details about the program delivery. After analyzing industrial needs/schedule and Johnston County and Raleigh agreement options, the Design-Build project delivery would be the only option. He stated we would be very close with timing. He stated he would return to council shortly with figures. Mr. Solomon stated this is the biggest project ever for this town and there is not a lot of slack with time to complete this project. Council Member Grannis offered thanks for the update. He stated he felt it was encouraging. He asked about the statute of limitation for activities to start in order to retain the allocation already distributed. Council Member Grannis also asked what type of setback that would be in reference to LGC not providing the $30 million. Mr. Solomon stated there are several options available to us. There were no other questions from Council. Mayor McLeod offered his thanks and appreciation for all the hard work and dedication in moving this project forward.

6 PUBLIC HEARINGS

a) 2020-17-RZ - Tract on Powhatan Road

Presenter: Samantha Wullenwaber, Planning Director

There will be several options available to anyone wishing to share their comments and thoughts.

- **PRIOR TO THE HEARING**: You may provide your written comments to the Town Clerk via email kmoffett@townofclaytonnc.org or via phone at 919-553-5002. All comments must be received no later than 12:00 noon on 7/20//20. All comments received will be read into the record during the hearing.
- **DAY OF THE PUBLIC HEARING**: You are invited to speak live during the Public Hearing. If you wish to do so, please contact the Town Clerk via email kmoffett@townofclaytonnc.org or via phone at 919-553-5002, no later than 12:00 noon on 7/20/20 to be provided with the log on information to join the meeting.
- **AFTER CLOSING PUBLIC HEARING**: Following the closing of the hearing, an additional 24 hour period will be provided to share comments. You are asked to contact the Town Clerk via email kmoffett@townofclaytonnc.org or via phone at 919-553-5002, no later than midnight on 7/21/20. All comments received will be read into the record at the next meeting; which will be held on Monday, August 3, 2020.

Ms. Wullenwaber stated this a request to rezone from R-E to I-1. The property is 22.23 acres and is currently vacant. The location is approximately 100 feet west of Mohican Trail and Powhatan Road. It is not considered spot zoning. Views of the street site were provided. She provided brief information regarding the cemetery on the property. She stated this is consistent with the Future Land Use Map and with the Comprehensive Plan Land Uses. Staff recommends approval as does the Planning Board. She stated there are no

known immediate plans for the property at this time. She spoke about possible uses that could be allowed in Industrial District.

Council Member Everett asked about questions raised at Neighborhood meeting. Ms. Wullenwaber stated the applicant could address that. Council Member Everett was concerned about the number of concerns and why an approval is suggested. Ms. Wullenwaber shared information about how planning decisions are made. She stated comprehensive plans help guide how we develop our town. She stated that it does abut two very large industrial use properties. Council Member Bunn asked about the sewer capacity in the area. Ms. Wullenwaber stated the tract is contiguous with current industrial zone. She stated at this time there is no known use for this property. Council Member Bunn asked if the property was being rezoned for marketing purposes. Ms. Wullenwaber provided information about should the rezoning be turned down, the applicant would need to wait a year before their application for rezoning would be allowed. Ms. Wullenwaber also spoke about 160D and Conditional Zoning.

Attorney Ross reminded this is request to a general district, meaning the owner could use property for any allowed uses.

Council Member Grannis asked about the map included in the agenda packet and the majority of area being currently zoned RE. It is considered abutting because industrial is directly across the street and residential all around as well. Council Member Grannis stated he has some heartburn with rezoning as currently around and adjacent is zoned RE. He stated until today, he was unaware there was a cemetery located on the property. He stated he is interested to hear from the applicant.

Mr. Orringer, applicant, was present and stated the tract is in vision for Employment Center Use. He stated he did not have an end use for the property at this time. He stated there are RE zones near the property. He feels the property is a great location for Employment Center Use. With reference to cemetery, he stated it is possible to move. He believed it is a 4 or 6 person cemetery. He stated that Clayton is growing like crazy and feels this area is a good rezone. He stated he was happy to have staff's support for approval. He stated there were several concerns from the neighborhood meetings, mostly about Novo. He stated another concern was traffic on Powhatan Road. He understands that folks don't want to be surrounded by Industrial Park, however, it is already there with Novo. He spoke about the property valuation and stated the appraiser felt it would increase property valuation.

Council Member Grannis asked if he was aware of the parcel being an animal habitat. He stated he had seen the signs but did not know anything about what it was. Council Member Grannis shared concerns about the comparison of properties by Sheetz and properties here. He does not feel that the properties would increase to the level that those around Sheetz did.

All public comments received prior to the meeting were read into the record by the Town Clerk and by attachment are made part of the official record.

Mayor McLeod read a statement regarding having an additional 24 hours period to receive public comments. Any additional comments should be forwarded to the Town Clerk no later than 11:00 p.m. On Tuesday, July 21, 2020.

ACTION: Place on August 3, 2020 Agenda for Decision

7 OLD BUSINESS

8 NEW BUSINESS

a) Resolutions - Vactor Truck Finance & Electric Fund Reimbursement
Presenter: Robert McKie, Finance Director

Mr. McKie provided information on this item.

Council Member Grannis asked about payment schedule. Mr. McKie stated this is a capital lease and has a balloon payment. Along with the normal principal interest, there is also a $12,000 a year, per truck, maintenance agreement, which is not being financed. Council Member Grannis verified with Mr. McKie the cost of these two trucks. Council Member Holder asked if we are leasing these trucks. Mr. McKie stated this is a capital lease, at the end of the term we can make the balloon payment and take ownership or sell them back to the bank. Council Member Holder asked about the ownership of the vactor truck the town currently has. Mr. McKie went into detail on this subject.

Mr. McKie stated Resolution 2020-22 allows the town to reimburse itself for capital projects for new development in electric fund.

There were no further questions.

ACTION: Adoption of Resolution 2020-21

Motion: Council Member Everett
Second: Mayor Pro Tem Thompson
Vote: Unanimous (Roll Call Completed by Town Clerk)

ACTION: Adoption of Resolution 2020-22

Motion: Council Member Holder
Second: Council Member Everett
Vote: Unanimous (Roll Call Completed by Town Clerk)

b) Street Abandonment - Enterprise Drive Right of Way
Presenter: **Joshua Baird, Town Engineer**

Mr. Baird provided background on this project. He stated with the new alignment there is no longer a need to maintain the old right-of-way to Enterprise Drive. The town utilities have been reworked and are now located in the new right of way. Mr. Baird provided details about steps to be taken next.

There were no questions or comments.

ACTION: **Adoption of Resolution 2020-23**

Motion: Council Member Grannis
Second: Council Member Holder
Vote: Unanimous (Roll Call Completed by Town Clerk)

ACTION: **Set Public Hearing for September 8, 2020**

c) Stormwater Program Development Update
Presenters**: Joshua Baird, Town Engineer & Susan Locklear, Stormwater Engineer**

Mr. Baird shared an update on the Stormwater Program which transitioned from the County to an in-house program. He stated a stormwater engineer, Susan Locklear, was hired in March 2020. This program will be supported by three ordinances; erosion & sediment control, stormwater, and illicit discharge. He shared information about Ms. Locklear and her experience. He provided details regarding erosion and sediment control.

Council Member Grannis asked why we are moving to an in-house program. Mr. Baird shared details about the growth and the County staff being unable to keep up with the demand. He stated having an in-house staff and resources will help the development of the community. Council Member Grannis wanted to confirm that development community had notice about feedback. Mr. Baird stated it was put out on two list serves and the feedback period was open for over a week. He stated one set of comments about the program was received. Council Member Grannis asked for additional information regarding fees. Mr. Baird stated he would provide additional information when this is brought back before Council.

There were no further questions.

ACTION: **None - Informational Only**

d) Illicit Discharge Ordinance
Presenters: **Joshua Baird, Town Engineer & Susan Locklear, Stormwater Engineer**

Mr. Baird provided details about this Ordinance. He discussed what illegal discharge would include. He stated the purpose is to ensure we are

protecting water quality in Clayton. He discussed that a big part of this will be educating the public.

There were no questions or comments.

ACTION: Adoption of Ordinance #2020-07-01

Motion: Council Member Grannis
Second: Mayor Pro Tem Thompson
Vote: Unanimous (Roll Call Completed by Town Clerk)

e) Economic Development Strategy
Presenter: Patrick Pierce, Economic Development Director

Mr. Pierce provided an overview of the Economic Development Strategy. He provided details about the creation of the strategy. He stated this process began in mid-2019 and over 350 people provided input. He shared strategy goals, some of which include increasing job for Clayton, build on a charming and historic downtown, build sense of community, and develop infrastructure necessary to improve quality of life.

Near-term priorities are to create a business retention and expansion program, inventory and publish available sites/buildings for new employers, develop a "Start A Business in Clayton" toolkit, and communicate goals and value proposition to Economic Development partners locally, regionally and statewide.

Mayor McLeod offered his thanks for the great presentation. Mayor Pro Tem Thompson stated he appreciated the great work done by Mr. Pierce so far. Council Member Grannis also offered his appreciation for the great road map. Mayor McLeod offered thanks to Electricities as well for their assistance and partnership.

9 STAFF REPORTS

a) Town Manager
- Budget Tracking Update

Mr. Lindsay provided an update and stated the good news is we have another month of sales tax revenues that has come in. He stated the May report was stronger than expected, however, we do not know if this would continue. He stated we are working on identifying costs/expenditures that could be held back until we get further into the budget so we know what to expect.

b) Town Attorney

c) Town Clerk

d) Other Staff
- Food Truck Ordinance Update
  Presenter: Samantha Wullenwaber, Planning Director

Ms. Wullenwaber stated there had been an increase in food trucks recently. She stated that Planning had recently received some complaints. The town's ordinance states trucks must be 400' from any brick and mortar facility. She stated with the pandemic, everyone is struggling. With this in mind, she would like to possibly update the current food truck ordinance. She would like to benchmark and see where other communities are. Mayor McLeod would like to see information on the proximity between food trucks and residential areas for prolonged periods of time as well as any possible repercussions.

Council Member Bunn agreed and thought the noise needed to be looked at. He also asked about grease traps. Ms. Wullenwaber stated Brandon Carroll, who is in charge of grease traps and backflow, would be involved in this process. She stated she would like to do research as well as benchmarking and return to council with additional information in about a month.

Council Member Grannis asked if the current ordinance could be sent to everyone. Ms. Wullenwaber stated she would provide that information.

10 OTHER BUSINESS

a) Informal Discussion & Public Comment

b) Council Comments

Council Member Grannis stated he had been contacted from a citizen near First Street Tavern about noise after 10:00 p.m. He asked that it be looked into. Ms. Wullenwaber stated she would look into this. Ms. Beard stated noise ordinance is 10:00 p.m. She asked that anyone call 911 when this happens.

Mayor McLeod stated Moore Street, heading down towards Highway 70, the last apartment complex on left, is often in a state of chaos. He stated there are spaces filled with lumber and covered with plastic, work trucks that have not been moved in weeks and tarps in the side yards. Ms. Wullenwaber stated this property has been ticketed in the past and she would take a look into this.

11 CLOSED SESSION

a) Closed Session Pursuant to NCGS 143-318.11.(a)(6)

ACTION: Motion to Go Into Closed Session at 8:39 p.m.

Motion: Council Member Grannis
Second: Council Member Everett
Vote: Unanimous

12 ADJOURNMENT

a) Adjourn the Meeting

With there being nothing further, the meeting was adjourned at 10:04 p.m.

ACTION: **Motion to Adjourn**

Motion: **Council Member Grannis**
Second: **Council Member Bunn**
Vote: **Unanimous**

Duly adopted this the 17th day of August, 2020 while in regular session.

Jody L. McLeod
Mayor

ATTEST:

Kimberly A. Moffett, CMC, NCCMC
Town Clerk

From: LSMITH368@nc.rr.com
To: Kimberly Moffett
Cc: "teresaandjessescott@yahoo.com"
Subject: 2020-17-RZ Tract on Powhatan Road - Re-Zoning
Date: Thursday, July 16, 2020 1:05:42 PM
Attachments: 2020 Rezoning.docx
May 27, 2020 Rezoning Email.docx

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

We would like to provide written comments on subject for the July 20, 2020 Town Council meeting. The comments we have are those previously expressed before the Planning Board by letter dated March 14, in the virtual public meeting of May 26 and by follow up email comments of May 27. I am attaching a copy of my March 14 letter and a copy of my May 27 email which also reflect my comments made in the May 26 virtual public meeting. Please have this email, attached letter and attached email read into the council's public hearing record at the July 20, 2020 meeting.

Even though this rezoning request has been approved by the Planning Board, we wish to reiterate our strong opposition to this requested change for all of the reasons set forth in our previous correspondence. We feel the Planning Board had already made up its mind to approve this rezoning prior to its public hearing and did not give our concerns and opposition the appropriate consideration.

Therefore, we are requesting that the Town Council override the Planning Board's decision and disapprove this requested rezoning.

Thank you,
Larry and Linda Smith

March 6, 2020

Dear Clayton Planning Board/Town Council Members:

On March 4, 2020 my husband and I attended a Neighborhood Meeting at True Line Surveying regarding the rezoning request by Mr. David Orringer of a tract of land on Powhatan Road. The tract of land in question borders our property, where we live at 3366 Powhatan Road. At present this land is zoned RE, with the petitioner requesting it be rezoned to I1.

I respectfully ask the Town of Clayton to deny this request for rezoning this property. While I understand why Mr. Orringer has requested the change, I do not believe it is in the best interest of our neighborhood or the Clayton community at this time.

Powhatan Road is a semi-rural community; mostly residential or agricultural from Powhatan Church to Wilson's Mills, on the left side of the road. We would very much like to keep it as rural as possible. In addition, the bordering tract of land between the one in question and Powhatan Church is owned by Grifols and has not been rezoned. It is still zoned RE and has been established as "Corporate Lands for Learning-Wildlife Habitat Council", by Grifols.

In keeping with a spirit of farmland vs "pharmland", we believe this particular tract of land should be kept as it is, at least where zoning is concerned. While it would financially benefit

Mr. Orringer for the zoning to be changed to I1, it would not benefit the community as a whole. I am sympathetic to his plight, however. Since my family owned this property in the past, I can relate to his wanting to sell it. However, rezoning to I1 could bring any number of businesses to our community and leave us virtually surrounded by industry. In addition, it would significantly decrease our property value.

Powhatan Road is not a major thoroughfare. It is a rural, two lane road. With the construction of the second Novo Nordisk plant, the road has taken quite a beating. Noise and light pollution is ongoing, 24 hours a day. If this tract of land were to be rezoned to I1, more industry would just compound the issues we already face and virtually surround us.

This area of Powhatan Road is rich with history, all the way back to the 1500's and Chief Powhatan, the father of Pocahontas, who camped in the area many times. Up to more recent times when it was farmed by my family and friends.

I believe it would be much more beneficial to Clayton to maintain this area RE and possibly expound on the history, the wildlife and ruralness of this area, instead of paving over it and making it another industrial park.

Further, maybe one of our healthcare neighbors (Novo or Grifols) would like to take it on and make it a nature park or greenway to benefit employees as well as the community. Another option would be a small sub-divided neighborhood. A park or neighborhood would help sustain the rich heritage of

the Powhatan Community instead of covering it with more pavement. Either way, rezoning to I1 should not be allowed.

Sincerely,

Teresa Scott

May 19, 2020

Dear Clayton Planning Board/Town Council Members:

On March 4, 2020 my husband and I attended a Neighborhood Meeting at True Line Surveying regarding the rezoning request by Mr. David Orringer of a tract of land on Powhatan Road. The tract of land in question borders our property, where we live at 3366 Powhatan Road. At present this land is zoned RE, with the petitioner requesting it be rezoned to I1.

I respectfully ask the Town of Clayton to deny this request for rezoning this property. While I understand why Mr. Orringer has requested the change, I do not believe it is in the best interest of our neighborhood or the Clayton community at this time.

Powhatan Road is a semi-rural community; mostly residential or agricultural from Powhatan Church to Wilson's Mills, on the left side of the road. We would very much like to keep it as rural as possible. In addition, the bordering tract of land between the one in question and Powhatan Church is owned by Grifols and has not been rezoned. It is still zoned RE and has been established as "Corporate Lands for Learning-Wildlife Habitat Council", by Grifols.

In keeping with a spirit of farmland vs "pharmland", we believe this particular tract of land should be kept as it is, at least where zoning is concerned. While it would financially benefit Mr. Orringer for the zoning to be changed to I1, it would not benefit the community as a whole. I am sympathetic to his plight, however. Since my family owned this property in the past, I can relate to his wanting to sell it. However, rezoning to I1 could bring any number of businesses to our

community and leave us virtually surrounded by industry. In addition, we believe, it would significantly decrease our property value.

Powhatan Road is not a major thoroughfare. It is a rural, two lane road. With the construction of the second Novo Nordisk plant, the road has taken quite a beating. Noise and light pollution is ongoing, 24 hours a day. If this tract of land were to be rezoned to I1, more industry would just compound the issues we already face and virtually surround us.

This area of Powhatan Road is rich with history, all the way back to the 1500's and Chief Powhatan, the father of Pocahontas, who camped in the area many times. Up to more recent times when it was farmed by my family and friends.

I believe it would be much more beneficial to Clayton to maintain this area RE and possibly expound on the history, the wildlife and ruralness of this area, instead of paving over it and making it another industrial park.

Further, maybe one of our healthcare neighbors (Novo or Grifols) would like to take it on and make it a nature park or greenway to benefit employees as well as the community. Another option would be a small sub-divided neighborhood. A park or neighborhood would help sustain the rich heritage of the Powhatan Community instead of covering it with more pavement. Either way, rezoning to I1 should not be allowed.

Sincerely,

Teresa and Jesse Scott

From:	Teresa and Jesse Scott
To:	Kimberly Moffett
Cc:	lsmith368@nc.rr.com
Subject:	Powhatan Road tract 2020-17-RZ rezoning
Date:	Thursday, July 16, 2020 2:10:28 PM
Attachments:	Letter to planning board 3-7-20.docx Updated Letter to planning board 51920.docx

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please find attached two documents that we would like read into the public comments for the July 20, 2020 Town Council Meeting. These documents reflect our previous comments to the Planning Board. These documents will express our strong opposition to the rezoning request made by Mr. Orringer.

Although the Planning Board has approved this rezoning request, we respectfully ask the Town Council to disapprove of this rezoning request and override their decision. We feel the Planning Board had already decided to rezone this property before the meeting was held and did not give our various concerns the proper consideration or attention.

Thank you,
Teresa and Jesse Scott
3366 Powhatan Rd
Clayton, NC

919-631-2577

March 14, 2020

Mr. Robert Ahlert, Chairman
Clayton Planning Board
111 E Second Street
Clayton, NC 27520

Subject: Request to rezone Powhatan Road vacant parcel from R-E zoning to I1: Parcel 05105004

I attended the March 4, 2020 Neighborhood Meeting held by Mr. Curk Lane at True Line Surveying. At this meeting I expressed my and my wife's objections to this rezoning request. Also in attendance, along with others, were my next door neighbor and sister, Mrs. Teresa Scott and her husband Jesse. Mrs. Scott has sent a letter dated March 6, 2020 to the Planning Board setting forth several objections that she has to this proposed rezoning. My wife and I are in total agreement with Mrs. Scott's objections.

We had planned on attending the Planning Board's March 23, 2020 meeting to present our objections to this proposed rezoning in person. However, due to our age, health and the current situation with the Covid19 virus, we feel that we should not be attending any meetings at this time. Therefore, we are requesting that you take this letter under consideration in lieu of an oral presentation from us.

As stated previously we are opposing this rezoning to I1. Since Novo Nordisk has and are continuing to build across the road from our property there has been a tremendous increase in noise, dust, vibrations to our house and the traffic on Powhatan road is now really bad. When I cross the road to my mailbox I nearly always have to wait for numerous vehicles to pass by and at times it is really a dangerous situation. If this rezoning is approved, then my sister's and my residential properties would be **¾** surrounded by Industry. I believe this would have a severe negative impact on our residential property values. Also there is only one other large (about 15 acres) piece of property adjacent to this proposed rezoning parcel before reaching the neighborhood of Powhatan Glen, and if this rezoning is approved it is only a matter of time before I believe this other property would also be requested for rezoning. If that happens, my sister's and my residential properties will be completely surrounded (**360 degrees**) by Industry.

Also, the applicant has not stated any intended use for this property if it is rezoned. Could it be something in the I1 Zoning that may be offensive to neighbors? It is our understanding that if this rezoning request is approved, any use listed in I1 Zoning could be put on this property. There are many uses listed in the I1 Zoning that we would not want next door to our family and we feel other neighbors, like those in Powhatan Glen, would not want in this neighborhood either.

Again, we want to reiterate our opposition to this rezoning request and ask that the planning board recommend denial of this application to the Town Council. We also ask that this letter be included in the records pertaining to subject rezoning request.

Sincerely,

Larry G. Smith & Linda T. Smith
3352 Powhatan Road

CC: Planning Board Members (ETJ)
Mr. Frank Price
Mr. Marty Bizzell
Mr. James Lipscomb

Ex-Officio Member
CC: Mr. Bob Satterfield – Council Member

CC: Mrs. Teresa Scott & Mr. Jesse Scott

2020-17-RZ Tract on Powhatan Road - Re-Zoning

Wed, May 27, 2020 3:18 PM
From: LSMITH368@nc.rr.com
To: cfreeman@townofclaytonnc.org
Cc:teresaandjessescott@yohoo.com

Thank you for the opportunity of participating in the virtual public meeting held May 26 on subject. Mr. Jeff Caines, Town Planner, stated at the outset of the meeting that the staff recommends approval of this request, so it is obvious that the planning staff had already made up its mind before hearing any public comments, but I do appreciate the opportunity to express my concerns with this rezoning request and hope that the Board will see fit to reject this rezoning in spite of the planning staff's position.

Some of our concerns were set forth in our letter of March 14 which was read into the record by the clerk. We apologize for our letter not being addressed properly. At the time we sent the letter those were the names shown for the ETJ members of the Planning Board on the town's website. We do request that Ms. Freeman make sure all current board members have a copy of that 3/14/20 letter and also are furnished a copy of this email. In addition to the concerns expressed in our letter, I stated in the public hearing my concern that the adjoining property west, north and east of this property is all zoned RE. Mr. Caines had stated that the proposed rezoning was consistent with the lands west of this property and that is incorrect. Therefore, none of the adjoining property on the north side of Powhatan Road is zoned I1. This appears to me to be spot or leap frog zoning. This was one of the main reasons rezoning of this property was not recommended by the planning board in 2014. At that time they also found that this proposed rezoning would not be compatible with the surrounding properties. The only physical changes that have occurred in this area since 2014 is that even more single family housing has been added east along Powhatan Road and Novo is building its new facility across Powhatan Road from our property and the subject property. At least now, Powhatan Road provides some separation between Novo's south side industrial property and the RE properties on the north side of the road. If this rezoning is approved there will no longer be any separation.

During the public hearing the only real reason I heard that the requested rezoning should be allowed is that it is in line with the "Comprehensive Plan of 2040". I am just a regular county citizen and did not even know about the 2040 Plan until this rezoning request. I know I did not have any imput into this Plan and I doubt seriously that any of my neighbors did either. What changed between 2014 and 2015? Novo's planned expansion?! While we were not particularly happy that they were building across the road, we didn't object to it because of the great good they could do for a lot of people with their products. But the noise, dust, vibrations and traffic have been much worse than we ever imagined. Hopefully once construction is completed this will finally improve. Please keep Powhatan Road as a separation between the I1 and RE zoned properties from Novo's original facility eastward, by not approving this requested rezoning.

The only other reason for rezoning this property at this time would be to enhance Mr. Orringer's return on his investment in this property. According to the numbers I know of and have heard tossed about, Mr. Orringer stands to obtain approximately an 800% return on his original investment if this rezoning is approved. While that would be great for Mr. Orringer, our property (and others) is not vacant property and the greater value is in my 12 year old home, not my <2 acres of land. This proposed rezoning will have a significant negative personal financial impact on our property and the property of others.

For all the previously stated and above reasons, we respectfully request that the Planning Board disapprove this rezoning request.

Sincerely,
Larry and Linda Smith

Ordinance #2020-08-01

Town of Clayton
Amendment to the FY 20-21 Budget

BE IT HEREBY ADOPTED BY THE TOWN COUNCIL FOR THE TOWN OF CLAYTON that the following amendments shall be made to the FY 20-21 Budget:

Fund: General Fund

Line Item	Previous Appropriation	Adjustment	Revised Appropriation
Revenue			
100-40-00-48 99	Fund Balance Appropriated		
	$52,650	+488,000	$540,650
Expenditures			
100-55-20-58 20	Building Improvements		
	$0	+488,000	$488,000

Explanation:

Amendment to relocate the Inspections Department to the basement for operational efficiencies in conjunction with providing flexibility for future growth in Town Hall. The project includes waterproofing and remodeling costs. G.S. 160A-414 requires that inspection fees will only be spent for activities of the Inspections Department and for no other purpose.

Duly adopted this 17th day of August, 2020 while in regular session.

_____
Jody L. McLeod
Mayor

Attest:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

July 8, 2020

James Herring
TOWN OF CLAYTON POLICE DEPT
PO Box 879
CLAYTON NC 27520-2403

Application #: 1000008959
Program: GHSP2021-PERSONNEL/EQUI
Project : TOWN OF CLAYTON POLICE DEPT

Ref : Application Approval

Dear James Herring,

Congratulations! The NC Governor's Highway Safety Program (GHSP) has approved your agency to begin the next phase of GHSP's FY 2021 Funding process.

This phase allows your agency to complete a grant agreement with NC GHSP to provide the outcomes outlined in the final grant application. Although your application has been approved, this does not assure funding. Final approval of funds will not be made until late September, once your Agreement is finalized.

The next step of the funding process is the submission of several key documents via the Grants Management System. Please contact your Highway Safety Specialist if you have any questions about completing these documents.

The GHSP appreciates your dedication and contribution to highway safety.

Sincerely,

Mark Ezzell
Director

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
GOVERNOR'S HIGHWAY SAFETY PROGRAM
1508 MAIL SERVICE CENTER
RALEIGH, NC 27699-1508

Telephone: (919) 814-3650

Website: www.ncdot.gov/programs/GHSP/

Location
750 NORTH GREENFIELD PARKWAY
GARNER, NC 27529

Resolution #2020-24

North Carolina Governor's Highway Safety Program

LOCAL GOVERNMENTAL RESOLUTION

WHEREAS, the Clayton Police Department (herein called the "Agency")
(The Applicant Agency)

has completed an application contract for traffic safety funding; and that Clayton Town Council
(The Governing Body of the Agency)

_____ (herein called the "Governing Body") has thoroughly considered the problem identified and has reviewed the project as described in the contract;

THEREFORE, NOW BE IT RESOLVED BY THE Clayton Town Council IN OPEN
(Governing Body)

MEETING ASSEMBLED IN THE CITY OF Clayton, NORTH CAROLINA,

THIS _____ DAY OF _____, 20 _____, AS FOLLOWS:

1. That the project referenced above is in the best interest of the Governing Body and the general public; and
2. That Blair Myhand, Chief of Police is authorized to file, on behalf of the Governing
(Name and Title of Representative)
Body, an application contract in the form prescribed by the Governor's Highway Safety Program for federal funding in the amount of $ $30,481.00 to be made to the Governing Body to assist in defraying
(Federal Dollar Request)
the cost of the project described in the contract application; and
3. That the Governing Body has formally appropriated the cash contribution of $ $30,480.00 as
(Local Cash Appropriation)
required by the project contract; and
4. That the Project Director designated in the application contract shall furnish or make arrangement for other appropriate persons to furnish such information, data, documents and reports as required by the contract, if approved, or as may be required by the Governor's Highway Safety Program; and
5. That certified copies of this resolution be included as part of the contract referenced above; and
6. That this resolution shall take effect immediately upon its adoption.

DONE AND ORDERED in open meeting by _____
(Chairperson/Mayor)

ATTESTED BY _____ **SEAL**
(Clerk)

DATE _____

Rev. 7/11

Resolution #2020-25

ANNEXATION PETITION 2020-23-ANX
Shoppes at Glen Laurel
Parcel: 05I04016E
Owners: Clayton Partners LLC
Contiguous; 10.4652 Acres

TOWN OF CLAYTON
RESOLUTION DIRECTING THE CLERK TO INVESTIGATE A PETITION RECEIVED UNDER G.S. 160A-31

WHEREAS, a petition requesting annexation of an area described in said petition was received on August 17, 2020 by the Town of Clayton; and

WHEREAS, G.S. 160A-31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Clayton deems it advisable to proceed in response to this request for annexation:

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Clayton that:

The Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify as soon as possible to the Town Council the results of her investigation.

Duly adopted this 17th day of August 2020, while in regular session.

_____
Jody L. McLeod,
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

Resolution #2020-26

ANNEXATION PETITION 2020-115-ANX
West End Annexation
Parcel: 165911-76-3307
Owners: Hubert & Bonnie Lee
Contiguous; 1.701 acres

TOWN OF CLAYTON
RESOLUTION DIRECTING THE CLERK TO INVESTIGATE A PETITION RECEIVED UNDER G.S. 160A-31

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WHEREAS, G.S. 160A-31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Clayton deems it advisable to proceed in response to this request for annexation:

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Clayton that:

The Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify as soon as possible to the Town Council the results of her investigation.

Duly adopted this 17th day of August 2020, while in regular session.

_____
Jody L. McLeod,
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Administrative

Item Title
Certification of Municipal Declaration to Enact Speed Limit

Presenter
Kimberly Moffett

Summary/Description
On February 3, 2020 NCDOT Ordinance #1076840 was forwarded to the Town of Clayton. This ordinance declared the speed limit for NC 42 "between 0.004 mil east of SR 1552 and 0.044 mile west of Laurel Ridge Drive to be 55 MPH for Cars and 55 MPH for Trucks.

It was discovered there was an error in that Ordinance and the speed limit at this location for BOTH Cars and Trucks should be 45 MPH. This amended ordinance will correct this.

Requested Action
Approval/Denial

Funding Source (If Applicable):
N/A

Cost: **N/A** **Yes** ☐ **No** ☒

Additional Documents to be Included in Agenda Packet

AMENDED Certification of Municipal Declaration from NCDOT

Meeting Timeline
Click or tap here to enter text.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

February 17, 2020

Ms. Kimberly Moffett
P.O. Box 879
Clayton, NC 27528

Ms. Moffett

Please find enclosed, Certification of Municipal Declaration to Enact Municipal speed zone in Clayton NC. Please have your municipal governing body certify this document and return original back to me at your earliest convenience.

If you have any questions regarding the speed zone studies or this document, please feel free to contact me at (252) 640-6520 or (919) 581-7740.

Sincerely,

Mark R. Manriquez
Assistant Division Traffic Engineer

MRM/

Cc: FILE

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 4 TRAFFIC SERVICES
PO BOX 3165
WILSON, NC 27895-3165

Telephone: (252) 640-6500
Fax: (252) 234-6174
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
509 WARD BLVD.
WILSON, NC 27893

Certification of Municipal Declaration
To Enact Speed Limits and Request for Concurrence

Concurring State Ordinance Number: 1076840

Division: 4 **County:** JOHNSTON **Municipality:** CLAYTON

Type: Municipal Speed Zones

Road: NC 42 **Car:** 45 MPH **Truck:** 45 MPH

Description: Between 0.004 mile east of SR 1552 and 0.044 mile west of Laurel Ridge Drive.

Municipal Certification

I, _____, Clerk of _____, do hereby certify that the municipal governing body, pursuant to the authority granted by G.S. 20-141(f), determined upon the basis of an engineering and traffic investigation and duly declared, on the _____ day of _____, 20_____, the speed limits as set forth above on the designated portion of the State Highway System, which shall become effective when the Department of Transportation has passed a concurring ordinance and signs are erected giving notice of the authorized speed limit.

The said municipal declaration is recorded as follows:

Minute Book: _____ Page:_____ Ordinance Number: _____

In witness whereof, I have hereunto set my hand and the municipal seal this _____ day of _____, 20_____.

_____
(signature) (municipal seal)

Department of Transportation Approval

Division: _____ Title: _____ Date: _____

Region: _____ Title: _____ Date: _____

Certification of Municipal Declaration
To Enact Speed Limits and Request for Concurrence

Concurring State Ordinance Number: 1076840

Division: 4 **County:** JOHNSTON **Municipality:** CLAYTON

Type: Municipal Speed Zones

Road: NC 42 **Car:** 55 MPH **Truck:** 55 MPH

Description: Between 0.004 mile east of SR 1552 and 0.044 mile west of Laurel Ridge Drive.

Municipal Certification

I, Kimberly A. Moffett, Clerk of Clayton, do hereby certify that the municipal governing body, pursuant to the authority granted by G.S. 20-141(f), determined upon the basis of an engineering and traffic investigation and duly declared, on the 3rd day of February 2020, the speed limits as set forth above on the designated portion of the State Highway System, which shall become effective when the Department of Transportation has passed a concurring ordinance and signs are erected giving notice of the authorized speed limit.

The said municipal declaration is recorded as follows:

Minute Book: 110 Page:_____ Ordinance Number: _____

In witness whereof, I have hereunto set my hand and the municipal seal this 3rd day of February, 2020.

Kimberly A. Moffett
(signature)

TOWN OF CLAYTON
INCORPORATED
APRIL 1869
CLAYTON, N.C.
(municipal seal)

Department of Transportation Approval

Division: _____ Title: _____ Date: _____

Region: _____ Title: _____ Date: _____

rctd. via mail - 2-11-20

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 21, 2020

Ms. Kimberly Moffett
P.O. Box 879
Clayton, NC 27528

Ms. Moffett

Please find included, Certification of Municipal Declaration to Repeal and Enact Municipal speed zones in Clayton NC. Please have your municipal governing body certify these documents and return originals back to me at your earliest convenience.

If you have any questions regarding the speed zones studies or these documents, please feel free to contact me at (252) 640-6520 or (919) 581-7740.

Sincerely,

Mark R. Manriquez
Assistant Division Traffic Engineer

MRM/

Cc: FILE

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 4 TRAFFIC SERVICES
PO BOX 3165
WILSON, NC 27895-3165

Telephone: (252) 640-6500
Fax: (252) 234-6174
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
509 WARD BLVD.
WILSON, NC 27893

SMITH F/U COMMENTS

From: LSMITH368@nc.rr.com
To: Kimberly Moffett
Subject: 2020-17-RZ Tract on Powhatan Road - Re-zoning
Date: Tuesday, July 21, 2020 11:35:54 AM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for the opportunity to offer follow up comments to the July 20 Town Council's Public Hearing on Subject. I would like to briefly summarize our objections to this rezoning:

1. Subject property is currently completely surrounded by RE zoned property, except for a small "across the road" abutment.
2. The North side of Powhatan road, from Powhatan church to Wilson Mills is presently residential or agricultural. No industrial that I know of.
3. Many dozens of additional residents have been and are currently being added East of here on the North side of Powhatan road.
4. There has thus far been no stated use given for the development of this property.
5. No plan has been put forth regarding the cemetery on this property.
6. The only reason known to rezone at this time is to increase the "potential" value of this property.
7. Our current Property value will be adversely affected. That value is in our home, not our small parcel of land.
8. This rezoning is not compatible with surrounding properties in this area on the North side of Powhatan road.
9. Powhatan road is a small country road, not a "Major Corridor" as stated by the Planning Director.
10. Please keep Powhatan Road as a buffer between the Industrial south side and the residential north side from Powhatan church eastward.

We lived in the town of Clayton for 37 years and moved to this location and built our home 12 years ago to get back to the "country" in which we were raised. In the past few years we have, and continue to, put up with quite a lot of inconveniences with the building of Novo's new facility across Powhatan road from our home. I think it is too much to ask us to go through all this again for the next few years if this rezoning request is approved. I believe it is time for the Town Council to put its citizens concerns ahead of gaining just another potential industrial facility which would have a negative effect on this entire Powhatan neighborhood.

Therefore, we respectfully request that you reject this rezoning request.

Sincerely,

Larry and Linda Smith
3352 Powhatan Road

919-553-6766

From: Teresa and Jesse Scott
To: Kimberly Moffett
Subject: Powhatan Rd Tract Rezone Request
Date: Monday, July 20, 2020 8:03:45 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Kimberly,
I sincerely apologize for sending the same letter twice, forcing to read and re-read my letter to the planning board! The second letter should have been the email below. Please accept my apologies. In addition, please submit this email as part of the public comments.

Sincerely,
Teresa Scott

From: Teresa and Jesse Scott <teresaandjessescott@yahoo.com>
Sent: Wednesday, May 27, 2020 4:04 PM
To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Cc: Mayor <Mayor@townofclaytonnc.org>; Jason Thompson <jthompson@townofclaytonnc.org>; Michael Grannis <mgrannis@townofclaytonnc.org>; Art Holder <aholder@townofclaytonnc.org>; Bobby Bunn <bbunn@townofclaytonnc.org>; Avery Everett <aeverett@townofclaytonnc.org>; Town Council <TownCouncil@townofclaytonnc.org>
Subject: Comment Re:2020-17-RZ # 05105001
Sent: Wednesday, May 27, 2020 4:04 PM
To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Cc: Mayor <Mayor@townofclaytonnc.org>; Jason Thompson <jthompson@townofclaytonnc.org>; Michael Grannis <mgrannis@townofclaytonnc.org>; Art Holder <aholder@townofclaytonnc.org>; Bobby Bunn <bbunn@townofclaytonnc.org>; Avery Everett <aeverett@townofclaytonnc.org>; Town Council <TownCouncil@townofclaytonnc.org>
Subject: Comment Re:2020-17-RZ # 05105001

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To: Clayton Planning Department

Re: Powhatan Road tract rezone request

In regards to the virtual meeting held last night (May 26, 2020) to discuss the rezoning of 22 acres of vacant land on Powhatan Road, I submit the following:

As I stated previously in my letter to the Planning Board, my husband and I object to this parcel being rezoned to I-1 from R-E. While rezoning might fit into the 2040 plan for Clayton, it does not allow for quality of life for residents who live here. In addition, it does not take into account the wildlife in this area and the need to maintain their habitat. This area is rich with Ground Hogs, Deer, Opossum, Beaver and many species of birds, just to name a few. Furthermore, this area is rich with history and culture.

At the meeting last night it was obvious that the town of Clayton wishes to pave over much of our rural property. The traffic, congestion, over crowding of schools, diminished quality of life for residents, does not seem to concern the Planning Board. Is this really what Clayton is becoming-money motivated at the expense of its citizens? Is that what we want to be known for?

When Mr. Caines offered a recommendation to approve the rezoning, it was obvious that our opposition would most likely not matter in the big scheme of things. I find it quite sad that Clayton intends to bring more and more industry to our community with little regard for the reason many people live here and have moved here from other areas.

I respectfully ask that the Planning Board consider our position and reject this rezoning request at this time. If the long term plan is for 2040, what exactly is the hurry to rezone now, in 2020? Leave our community alone and let us absorb the "progress" that has already invaded our area. Let the dust settle, so to speak, before adding insult to injury. Give us time to evaluate our situation and make adjustments as we feel led, do not force us to be surrounded by industry or to move unwillingly.

Sincerely,

Teresa Scott

From: Teresa and Jesse Scott
To: Kimberly Moffett
Subject: Powhatan Rd Tract Rezone Request
Date: Monday, July 20, 2020 8:03:45 PM

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Kimberly,
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Sincerely,
Teresa Scott

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To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Cc: Mayor <Mayor@townofclaytonnc.org>; Jason Thompson <jthompson@townofclaytonnc.org>; Michael Grannis <mgrannis@townofclaytonnc.org>; Art Holder <aholder@townofclaytonnc.org>; Bobby Bunn <bbunn@townofclaytonnc.org>; Avery Everett <aeverett@townofclaytonnc.org>; Town Council <TownCouncil@townofclaytonnc.org>
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To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Cc: Mayor <Mayor@townofclaytonnc.org>; Jason Thompson <jthompson@townofclaytonnc.org>; Michael Grannis <mgrannis@townofclaytonnc.org>; Art Holder <aholder@townofclaytonnc.org>; Bobby Bunn <bbunn@townofclaytonnc.org>; Avery Everett <aeverett@townofclaytonnc.org>; Town Council <TownCouncil@townofclaytonnc.org>
Subject: Comment Re:2020-17-RZ # 05105001

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To: Clayton Planning Department

Re: Powhatan Road tract rezone request

In regards to the virtual meeting held last night (May 26, 2020) to discuss the rezoning of 22 acres of vacant land on Powhatan Road, I submit the following:

As I stated previously in my letter to the Planning Board, my husband and I object to this parcel being rezoned to I-1 from R-E. While rezoning might fit into the 2040 plan for Clayton, it does not allow for quality of life for residents who live here. In addition, it does not take into account the wildlife in this area and the need to maintain their habitat. This area is rich with Ground Hogs, Deer, Opossum, Beaver and many species of birds, just to name a few. Furthermore, this area is rich with history and culture.

At the meeting last night it was obvious that the town of Clayton wishes to pave over much of our rural property. The traffic, congestion, over crowding of schools, diminished quality of life for residents, does not seem to concern the Planning Board. Is this really what Clayton is becoming-money motivated at the expense of its citizens? Is that what we want to be known for?

When Mr. Caines offered a recommendation to approve the rezoning, it was obvious that our opposition would most likely not matter in the big scheme of things. I find it quite sad that Clayton intends to bring more and more industry to our community with little regard for the reason many people live here and have moved here from other areas.

I respectfully ask that the Planning Board consider our position and reject this rezoning request at this time. If the long term plan is for 2040, what exactly is the hurry to rezone now, in 2020? Leave our community alone and let us absorb the "progress" that has already invaded our area. Let the dust settle, so to speak, before adding insult to injury. Give us time to evaluate our situation and make adjustments as we feel led, do not force us to be surrounded by industry or to move unwillingly.

Sincerely,

Teresa Scott

RITA JONES F/U COMMENTS

From: rita jones
To: Kimberly Moffett
Subject: Comments - Powhatan tract
Date: Monday, July 20, 2020 9:23:56 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I listened to the public meeting on Monday evening and wish to enter further comments. Just how many of my ancestors is the Town going to dig up in the name of progress? When the growth began, there were 5 graves moved from a family plot by the railroad tracks at Powhatan and added to the cemetery at the church. Among those were the remains of the one and only U.S. Postmaster that served at the Powhatan Post Office in the early 1900's - Isaac W. Jones, Jr. His father, Isaac Sr., was also moved at the same time, having survived the end of the Civil War as a prisoner of war at the infamous Point Lookout Camp in Maryland. This family was moved to make room for the first phase of building in the 1970's. Isaac Sr. was my great-great-great-grandfather.
Next, there were 12 graves moved for the athletic park to be built on Glen Laurel Road around 2010-2011 before the family even knew it was happening. My great-great-grandfather's sister and her husband and family were buried there.
Before the Gordon development began at the other end of Glen Laurel Road, we attended the meetings in order to insure that the family cemetery there would be protected and that proper access would be made available. My grandparents are buried there along with at least 8 others.
The land owner made a statement at tonight's meeting making it seem the cemetery on the current plot being considered for rezoning could easily be relocated with little fuss. I disagree. The 2 markers there are for Matthew & Ella Jones who lived between 1850 and 1943 and for Doctor Luther Jones, one of their 14 children. Several rocks mark other graves (at least 2 or 3 more). William (b. 1799) & Sarah Jones (Matthew's parents) are buried there. It is some of the original Jones land where the church and its cemetery is established. Their house still stands as a barn at one of the adjoining land owners of the plot under rezoning consideration. Their youngest son was a barber on main street in Clayton for many, many years - Elbert Jones; his wife, a teacher at Clayton High School. The Powhatan Community has a very interesting history and I wrote a booklet about it for the opening of the Powhatan Elementary School in 2008 discussing it along with the original "Powhatan" school that was located on the side of the current church property.
All of this is said to let you know how much of a rich history you are looking at destroying if this becomes an industrial area. There are roots in this land that cannot be just dug up and cast aside. We will ask the same protection and access be given for this cemetery as shown by the Gordon developers. They replaced our wooden fence with a nice iron fence and built up around it for protection.
This cemetery is in the middle of the tract so it may present a problem to future developers. Please consider all of this as you make your decision. I know the residents in this area do not want more industry beside them. And how would you like to visit your family cemetery in the middle of a parking lot or strip mall? By the way, if my estimation is correct, it is over 30 of my ancestors y'all have tried to mess with now! Rita Otto Jones, 2452 Vinson Rd., Clayton NC 27527

From: Sandy P
To: Kimberly Moffett
Subject: Rezoning from R-E (residential estate) to I-1 (Industrial-1).
Date: Monday, July 20, 2020 10:02:41 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Kimberly and all of the Clayton Town Council,

Please stop the rezoning from R-E (residential estate) to I-1 (Industrial-1) east of Clayton. This area is already way over populated and the roads are over loaded.

Many people in the area are hoping and praying the Town Council will reject this request. This area of Clayton (especially the Powhatan community), adds so much historical value to the Town of Clayton. Did you know that the Powhatan community is named after Chief Powhatan, the tribe of Indians that once settled this land? I grew up there and my brother and sister still live there. I live around the corner on Glen Laurel and the traffic on both Glen Laurel and on Powhatan Road is a nightmare.

Did you know you can still find arrowheads if you walk much of the land in and around Powhatan? To this day, you still find pottery shards and arrowheads too. If anything, this area should be preserved and not paved over. We residents of the area are firmly against this rezoning. I've been told that the Town Council doesn't care. I can't believe that.

Sincerely,

Sandra Smith Provenzano
2276 Glen Laurel Road
Clayton, NC 27527

Virus-free. www.avast.com

From: Sandy P
To: Kimberly Moffett
Subject: And one more thing
Date: Monday, July 20, 2020 10:45:16 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

P.S. And one more thing – our great-grandparents, and many of my great aunts and uncles and cousins are buried in the cemetery behind Powhatan Church. Please Town Council – do not disturb their (and the relatives of many others) final resting place. I'm counting on you all.

Sincerely,

Sandra Smith Provenzano
2276 Glen Laurel Road
Clayton, NC 27527

From: Sandy P [mailto:sansmith@nc.rr.com]
Sent: Monday, July 20, 2020 10:03 PM
To: 'kmoffett@townofclaytonnc.org'
Subject: Rezoning from R-E (residential estate) to I-1 (Industrial-1).

Dear Kimberly and all of the Clayton Town Council,

Please stop the rezoning from R-E (residential estate) to I-1 (Industrial-1) east of Clayton. This area is already way over populated and the roads are over loaded.

Many people in the area are hoping and praying the Town Council will reject this request. This area of Clayton (especially the Powhatan community), adds so much historical value to the Town of Clayton. Did you know that the Powhatan community is named after Chief Powhatan, the tribe of Indians that once settled this land? I grew up there and my brother and sister still live there. I live around the corner on Glen Laurel and the traffic on both Glen Laurel and on Powhatan Road is a nightmare.

Did you know you can still find arrowheads if you walk much of the land in and around Powhatan? To this day, you still find pottery shards and arrowheads too. If anything, this area should be preserved and not paved over. We residents of the area are firmly against this rezoning. I've been told that the Town Council doesn't care. I can't believe that.

Sincerely,

Sandra Smith Provenzano

2276 Glen Laurel Road
Clayton, NC 27527

Virus-free. www.avast.com

MARC JONES F/U COMMENTS

From: Marc Jones
To: Kimberly Moffett; David Orringer
Subject: 2020-17-RZ Tract on Powhatan Road
Date: Tuesday, July 21, 2020 2:06:43 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Moffett

Mr. David Orringer has contacted me and asked that I offer any additional data I may have concerning the above item. I spoke on this issue before the planning board and was not aware of the Town Council hearing this item last night. So in that light of that I offer the following commentary:

I am a state-certified general real estate appraiser. I have been in practice for 22+ years in this capacity and as a general appraiser I am certified without limit as to the nature of property to consider. The only limitation is that which I place on myself. I have a great amount of experience in commercial land and improved parcels, and feel comfortable in commenting on the subject at hand.

The property I have considered is located on Powhatan Road and is located adjoining the present expansion of the Novo Nordisc plant and is located in close proximity to the existing Novo facility. The land is presently zoned RE Residential Estate, however is considered by the adopted future land use plan of the Town as Employment Center. This adopted future zoning, coupled with the current land use of a great amount of the area, leads this appraiser to consider the highest and best use of this tract to be for some sort of commercial use in support of the present industries.

In terms of impact on the adjoining lands, the site does adjoin two existing residential uses along the road frontage and also to the rear. The remaining adjoinders are undeveloped parcels that are likewise candidates for commercially oriented uses.

In the prior commentary, I offered as an example the conversion of residential parcels in the WR Peele SD on US 70 to commercial uses for the construction of the Sheetz store in which the prices paid were well in excess of the value as residential, and the same has occurred on the other corner of that intersection for the future fast food restaurant to be built. In addition to this location, at a lower level, teh same has occurred along Powhatan Road in the conversion of residential uses into the self storage facility located to the rear of the Speedway Store.

I am presently undertaking an estate project in the Fuquay Varina area, located on a minor thoroughfare, in which +/-14 acres of a 65 acre tract are zoned commercially. This commercially zoned area includes a separate one acre parcel with a single family home, and my preliminary research has indicated that the underlying land value, as a commercial parcel, appears to exceed the value of the parcel if considered as a residence. As said, this is based on preliminary research.

It has been my experience that when older residential parcels are rezoned to a commercial use, the potential sales value tends to increase. As a side note, this is for tracts that are able to physically be used for a commercial type use. As with the smaller lots in the WR Peele SD, these increased due to combining to form a larger parcel that was able to be used in a stand alone manner. In the instance of the two road front parcels adjoining the subject tract, these are good candidates for combination with the subject to create a more uniformly shaped parcel.

I appreciate the opportunity to provide this information, and should any questions or comments arise, please let me know,

Marc Jones
State Certified General Appraiser

SISK F/U COMMENTS

From: Ben Sisk
To: Kimberly Moffett
Subject: Comments on July 20th Council Meeting
Date: Tuesday, July 21, 2020 8:37:18 PM

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Town Council,

My name is Ben Sisk, and I own the home at 421 Hogan Circle in the Glen Ridge neighborhood. I would like these comments read at the Town hearing on August 2nd. This email is in regards to the rezoning request on Powhatan Road (2020-17-RZ), and I would like the Town Council to deny the request to rezone the residential area to I-1. I purchased this home on March 9th, and was not aware of the plans to rezone the area behind my home. I had the pleasure of listening in on the July 20th council meeting, and full heartedly disagree with the rezone of the area. I have seen the lasting effects that a rezone can have on a residential area, and do not want to see that happen here.

There are many reasons that this plot of land should not be allowed to be rezoned. Powhatan road cannot support the level of occupation this will ultimately bring, and with the amount of industry that is already here, the road is falling apart. A side road off of a highway should not be grandfathered into this rezone simply because it connects to a larger highway. The vague responses to the questions from Town Council members Avery, Bobby, and Michael, give way to a number of unknown builds that could potentially fill that area. For the numerous residences directly surrounding this area, and the larger neighborhoods connecting to these properties, there would be a substantial decrease in the property values of these homes. Having lived in Raleigh for the past two years, the attractiveness of this town for someone moving away from these heavily populated areas will be severely impacted. This will ultimately have a lasting negative impact on the town as a whole.

It seems as though this land is being rezoned for the sake of rezoning with no real reason behind it, and not taking into account the numerous families that will be hurt by this proposal.

As a first time home buyer, and new resident of this town, I respectfully request that the planning board deny this request.

Sincerely,
Ben Sisk

DAVID ORRINGER F/U COMMENTS

From:	David Orringer
To:	Kimberly Moffett; Mayor; Michael Grannis; Art Holder; Jason Thompson; Bobby Bunn; Avery Everett
Cc:	Samantha Wullenwaber; Jeff Caines
Subject:	22 Acres Powhatan Rd Rezoning-Orringer
Date:	Tuesday, July 21, 2020 9:22:00 AM
Attachments:	Acknowledgements 1.pdf Marc Jones Testimony.pdf Powhatan Park Presentation 2-2.pdf Powhatan Rezoning Minutes.pdf

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Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Town Council. I would like to apologize last night for my lack of preparedness with my formal presentation to present to you. I am a novice in this process, and didn't realize that was my time to present, but I am a fast learner! Please take the time to read my presentation. I would be more than happy to make an oral presentation at the next meeting, or however it can be done. Otherwise, the following is what I presented to the planning board plus other details....

Thank you for hearing my rezoning petition. Things are rapidly changing in Clayton. And it's going to continue to change! Bottomline-we need a plan!...and we have one! The Comprehensive Plan 2040 Adopted October 5, 2015.
It is an important document.

Open Attachment: Powhatan Park Presentation 2.pdf (1,448K) *(Please see red lines that highlight details on each page).*

This is my case…

1. This parcel is located inside the designated (EC) Employment Center area of the Future Land Use Map. (Map located on Page 4)

2. This plan will help the community answer some of these questions and keep Clayton on a path to proactively manage growth in a way that results in a stronger and more prosperous community.

3. The reason I decided I-1 zoning is because- Since the pharmaceutical industry in this area is zoned I-1, I thought this would be the highest and best use. I am in the Storage/Warehouse business and am contemplating developing the property for that use. Which warehouse space is very needed in Clayton.

*Please note my opinion...*Single Family residential is not desirable there. Multi Family would work, but didn't feel like it was the best location for high density residential. B3 Highway Business didn't seem like the correct zoning for the area.
Note: The zoning chart on slide 8 doesn't even allow any residential use.

Open Attachment Powhatan Rezoning Minutes.pdf (712K))

4. Neighborhood Minutes-(we discussed and addressed the issues that were brought up in this meeting, like we said we would do. Property values was the only tangible item we could address. Marc Jones, a local, professional appraiser and expert witness in real property matters, gave his professional opinion on how change of zoning from residential to commercial usually has positive monetary reward. The 2 neighboring properties have tax values of $143,810 and $267,510 respectively.

See Attachment Marc Jones Testimony.pdf (2,457K).)

Not taking lightly the fact that these are their homes and all precautions have to be taken to assure quiet enjoyment of their property. Buffers and setbacks are designed to mitigate this.

Open Attachment Acknowledgements 1.pdf (54K)

5. All the above organizations and individuals support the direction of this plan. The Town of Clayton Planning and Zoning Staff is supporting this project, and the Town of Clayton Planning Board supports and recommends this project to you. I am hopeful that the Town Council will also support this project.

Thank you again for giving me your time. I am glad to answer any questions.

--
Sincerely,

Town Council members,

As the wife of David Orringer and property owner, I would respectfully like to voice my support for the rezoning of the subject property to I-1 Industrial. We are happy to have the support of the town staff and the Planning Board on our rezoning request.
We purchased the subject property in 2013 from the bank after it was foreclosed on. In the years since, we have maintained and improved the property as I'm sure the neighbors will agree. In 2014 we applied for rezoning to Industrial but decided to withdraw our application because, at that time, we didn't think the town staff was in support of it. Everything changed in 2015 when the town adopted the Comprehensive Plan 2040 which clearly included our property as an employment center. Great news that there is an area of town designated to places that will employ people! Three of the current Council members were in office when this plan was approved. In the years since, we have watched the $2 billion Novo facility being built across the street from our property. What a blessing for Clayton! Grifols also purchased property that adjoins ours. There are proposed concept drawings from Novo in which Powhatan Road dead ends at Glen Laurel Road to give Novo more of a campus setting. Although this has not been approved, it gives further evidence that Powhatan Road is no longer a rural residential road.
I have been a full-time realtor for 12 years and Clayton resident for almost 30 years. I love my town and only want to improve it for its citizens. I am happy that Clayton took the time and expense to develop the Comprehensive Plan 2040 for the future of Clayton. I do understand that a select few homeowners wish Powhatan Road was still a rural country road, but that ended when the largest expansion of an industrial facility in the state began construction across the street from their home. The letters of concern read during the public hearing were almost all from two sibling homeowners. They expressed the desire to keep the left side of Powhatan Road residential. The fact is that from Highway 70 to the subject property there are only 2 residential properties on the left side of Powhatan Rd and they are both investor owned. From Hwy 70 to the subject property here is the order of properties on the left side of Powhatan Road: Gas station, self storage business, 2 investor owned rental homes, temporary soccer fields, regional waste water treatment facility, Novo's main campus (which is .2 miles from our property), Powhatan church, & vacant land owned by Grifols.
In reference to the concern about the graves on the property, we are happy to adhere to all regulations and follow directions from town and county officials.

Thank you for your consideration,

DocuSigned by:
Nicole Orringer
Nicole Orringer
919-464-4145

July 21, 2020

Subject: Rezone 22.33 acres on Powhatan Road

Dear Town Council-

As a lifetime Clayton resident, being born and raised on Powhatan Road, I would like to publicly voice my support for the subject parcel of land to be rezoned to I-1 industrial. It is true that 20 years ago Powhatan Road was a rural road consisting of farmers and a few homes. This has all changed in the years since Clayton and specifically Powhatan Road has become a major Pharmaceutical hub. Powhatan road is no longer a small country road as it holds the largest Pharmaceutical expansion in the country directly across the street from the subject property. I respect the few homeowners that are in opposition to this project but they are not being realistic. I want to stress that this property is in the Comprehensive Plan 2040 adopted in 2015 as an employment center. I have developed my family farm, Gordon Park on Powhatan Road into a subdivision of 177 single family homes. The buyers in Gordon Park know and expect the area on Powhatan Road to be industrial because they see the 2 billion dollar Novo expansion that has been in progress for years. I do think if Novo or another Pharma company owned this property it would be rezoned without issue. There is talk of Novo wanting to close Powhatan Road for its own use which I'm sure some of you have heard. It is unrealistic to think that this area of Powhatan Road is a residential area.

Again, I wholeheartedly support the subject property being rezoned to I-1 industrial since it is in the Comprehensive Plan 2040 adopted in 2015 and is directly across from the largest manufacturing expansion in the state. Thank you for hearing what I have to say.

Sincerely,

Brad Gordon

MLS #:**853652** **EXPIRED** **LAND** LP: **$520,000**

Exterior Front

3366 Powhatan Drive

Lot #:

SubArea: 325/O

Road Frontage 150
Property Leased
Lease Expires

Clayton , NC 27520

Subdivision:

Neighborhood:

Seller Name: Toma

SP:

Est Closing Dt:

School Information

ElemSch1 Johnston - E Clayton
MidSch1 Johnston - Riverwood
HighSch1 Johnston - Clayton

ElemSch2
MidSch2
HighSch2

Directions From Raleigh 70 East, Left on 42 East, R/T Glen Laurel Rd, R/T Powhatan, about 300 ft on R/S

Remarks Ideal for a developer, soils, environment, survey completed Aproximatly 30 lots approved with water at the street. About 150 yards form sewer, water at street

General Information

Approximate Acres 22.000
Wooded Acres 6.00
Cleared Acres 16.00
Price per Acre 23,500.00
Perk Test No
Perk Test Date
# of Beds Yielded 30
Water/Sewer Fee $1
Deed Restrictions yes
Lot Dimensions .5

Restrictive Covenant Rmks Restrictive covenants to be set in near futur

Financing & Taxes

Tax Value $151,510.00
Tax Rate 0.78000
Tax Map/Blk/Prcl/Lot
Zoning
Total HOA Dues: /
PIN # 1678-62-3275

Legal Description 1678-62-3275
Inside City No
Financial Comments

Features

Property Type **Vacant**
Location
Utilities **Telephone on Site**
Documents Available **Environmental Study, Site Plan, Soil Survey, Subdivision Plan, Survey**
Vegetation **Cleared, Hardwoods**
Water Supply **County On Site**
Transportation **Airport 3-5 Mi**

Topography **Level**
Road Description **Public Maintenance, Street Paved**
Restrictions **Can Divide**
Sewer/Septic **Conventional**

Showing Instructions

List Agent - License ID 14774
List Agent - Agent Name and Phone William E Parrish - PrfPh: 919 -269-7439
List Agent - Firm License C2332
Listing Office - Office Name and Phone Parrish Realty Company of Zebulon - OFC: 919-269-7439
Co-Agent - Agent Name and Phone

Showing Instructions Vacant
Appointment Phone 919-595-8989
Possession At Time Of Closing
CDOM 86
DOM 86
Prospect Exempt

Commission to Buyer Agent 2.4 **%**
Commission to Sub Agent 2.4 **%**
Variable Rate No

Waterfront

Waterfront Access
Water Body Name
Waterfront Type
Approx Ft of Wtr Frontage

Comparable Information

Selling Agent - License ID
Selling Agent - Agent Name and Phone
Selling Office - Firm License
Selling Office - Office Name and Phone
Terms of Sale
Sold Price
Closing Date

Pending Date:

Selling Info:

Financial Concessions (CC):

Other Concessions:

Special Circumstances:

Agent Only Remarks

Present offers with qualified buyer. Gross acres 22.33/ net acres 21.12

Filed in JOHNSTON COUNTY, NC CRAIG OLIVE, Register of Deeds Filed 12/19/2013 03:57:24 PM
DEED BOOK: 4394 PAGE: 143-144 INSTRUMENT # 2013406957
Real Estate Excise Tax: $300.00 Deputy/Assistant Register of Deeds: Amy Zieverink

Excise Tax: $300.00 Tax Parcel ID: 05I05004

Prepared by and Return to: MORRIS MANNING AND MARTIN, LLP
1000 Park 40 Plaza, Ste. 350
Durham, NC 27713

Hold for: Kristoff Law Offices, P.A.

Brief Description for the Index

21.12 Acres of Land on Powhatan Road, Clayton, NC as shown upon a plat recorded in Plat Book 67, Pages 162

NORTH CAROLINA SPECIAL WARRANTY DEED

THIS DEED made this 12 day of Dec., 2013 by and between

GRANTOR	GRANTEE
SunTrust Bank 3620 Six Forks Rd Suite 202 Raleigh, NC 27609	Kan-D Holdings, LLC whose mailing address is: 444 East Main Street Raleigh, NC 27520

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee, as used herein, shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that Grantor, for and in consideration of the sum of Ten and No/100 Dollars ($10.00) and other good and valuable consideration in hand paid at and before the delivery of these presents, the receipt and sufficiency of which are hereby acknowledged, has granted, bargained, sold, transferred, conveyed and confirmed and by these presents does grant, bargain, sell, and convey unto the Grantee in fee simple, all that certain tract or parcel of land lying and being in Johnston County, North Carolina, more particularly described as follows:

BEING ALL OF TRACT 1, CONTAINING 22.240 GROSS ACRES, AS IS THE SAME AS SHOWN ON MAP ENTITLED "RECOMBINATION FOR TERESA BARBOUR WILLIAM SMITH, ET AL, CLAYTON TOWNSHIP, JOHNSTON COUNTY, NORTH CAROLINA" AND RECORDED IN PLAT BOOK 67, PAGE 162, JOHNSTON COUNTY REGISTRY.

The Property hereinabove described was acquired by Grantor by instrument recorded in Book 67, Page 162, Johnston County Registry.

All or a portion of the Property herein conveyed does not include the primary residence of Grantor.

TO HAVE AND TO HOLD the aforesaid Property and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And Grantor covenants with Grantee, that Grantor has done nothing to title to impair such title as Grantor received, and Grantor will warrant and defend the title against the lawful claims of all persons claiming by, under or through Grantor, except for the exceptions hereinafter stated.

Title to the Property is subject to the following exceptions: (i) any lien of real estate taxes, taxes imposed by special assessment and water, sewer, vault, public space and other public charges which are not yet due and payable, (ii) all applicable laws (including zoning, building ordinances and land use regulations), (iii) all easements, restrictions, covenants, agreements, conditions, or other matters of record, and (iv) all matters that may be revealed by a current and accurate survey or inspection of the property.

Grantor makes no warranty or representation as to the condition of the property or any improvements thereon, including without limitation, any latent or environmental defects in the property or in any improvements thereon and the serviceability or fitness for a particular purpose of the property or any improvements thereon, and Grantee accepts the property and any improvements thereon "AS IS" without recourse against Grantor.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name this 12 day of December, 2013 and delivered as of the date indicated on the first page of this Deed.

GRANTOR:

SUNTRUST BANK

By: _____

Name: Tim Laumakis

Title: First Vice President

Wake County, North Carolina

I certify that the following person personally appeared before me this day and acknowledged to me that he voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: Tim Laumakis, First Vice President.

Date: December 12, 2013

My Commission Expires:

March 24, 2018

[Affix Notary Stamp or Seal]

_____
Notary Public

Print Name: David S. Cadwallader

DAVID S CADWALLADER
Notary Public
Durham County
North Carolina
My Commission Expires Mar 24, 2018

Following are the people of Clayton who took their time to cast the vision, write the vision, revise the vision, review the vision, discuss the vision, and agree on the the vision. Please read the names and the positions of these folks.

Acknowledgements

Thank you to all the organizations and individuals who committed their time, energy and resources to this effort. This plan would not have been possible without the support of many throughout the process.

ADVISORY COMMITTEE

Lynn Auclair, Deep River Brewery
Debbie Austermuehle, Downtown Business Owner
Rob Bailey, Developer
Donna Bailey-Taylor, Johnston County Tourism
Amy Beshgetoorian, Clayton Visual Arts
Paul Black, Southern Traditions
Debra Bridges, Johnston County Schools
Skip Browder, Former Planning Director
Candace Collier-Lang, Glen Laurel Home Owners Association
Jim Godfrey, Chamber of Commerce
Berry Gray, Johnston County Planning Director
Melinda Hall, Real Estate Broker
Tim Hamm, Grifols
Ivan Hampton, Downtown Business Owner
Jason Hardy, Public Arts Advisory Board
Jiles Harrell, NCDOT
Katie Holverson, Youth Representative
Michael Hubbard, Entrepreneur, Advertising Executive
Chris Johnson, Johnston County Economic Development
Claude King, Youth Representative
Butch Lawter, Town Council
Terence Leathers, Community Leader
Margaret Lee, Women's Club
Jenny Massey, Unique Boutiques & Marketplace
Kelly Norman, Downtown Business Owner
Frank Price, Planning Board
Charenne Riley-Monk, Glen Laurel Home Owners Association
Jean Sandaire, Planning Board
Bob Satterfield, Town Council
Matt Starr, Neuse RiverKeeper
Chris Walker, Riverwood Home Owners Association

TOWN COUNCIL

Jody McLeod, Mayor
Michael Grannis, Mayor Pro-Tem
Bob Satterfield, Councilman
Art Holder, Councilman
R.S. "Butch" Lawter, Jr., Councilman
Jason Thompson, Councilman

TOWN STAFF

Tony Atkinson, Deputy Fire Chief
Larry Bailey, Parks & Recreation Director
Lee Barbee, Fire Chief
Stacy Beard, Public Information Officer
Emily Beddingfield, Planner
Steve Biggs, Town Manager
Steve Blasko, Property Maintenance Supervisor
Howard Creech, Energy Services Technician
David DeYoung, Planning Director
Beth Franson, GIS Analyst
John McCullen, Town Engineer
Jay McLeod, Planner
Dale Medlin, Electric Systems Director
Bruce Naegelen, Downtown Development Coordinator
Byron Poelman, Water/Sewer Superintendent
Tim Simpson, Public Works/Utilities Director
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James Lipscomb
Jean Sandaire

CONSULTANT TEAM

Meg Nealon, LandDesign
Kate Pearce, LandDesign
Jake Petrosky, LandDesign
Cara Murph, LandDesign
Dale Stewart, LandDesign

Town of Clayton Census Population
1880 - 2010

Census	Population	%±
1880	352	—
1890	478	35.8%
1900	754	57.7%
1910	1,441	91.1%
1920	1,423	−1.2%
1930	1,533	7.7%
1950	2,229	30.3%
1960	3,302	48.1%
1970	3,103	−6.0%
1980	4,091	31.8%
1990	4,756	16.3%
2000	6,973	46.6%
2010	16,116	131.1%

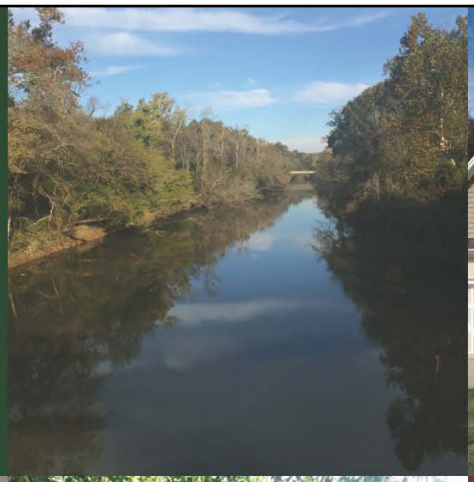
Source: U.S. Census Bureau

1974 Cutter
1976 NATVAR
1978 Data General
1991 Caterpillar
1995 Bayer
1996 Novo Nordisk
2005 Talecris
2011 Northeast Foods
2014 Grifols
2020 Novo Nordisk

Town of Clayton Population Forecast
2010-2030

Population Estimates (as of July 1st each year)	
Year	**Population**
2010	**16,116**
2011	16,529
2012	17,031
2013	17,542
2014	18,068
2015	**18,610**
2016	19,168
2017	19,743
2018	20,335
2019	20,945
2020	**21,573**
2021	22,220
2022	22,887
2023	23,574
2024	24,281
2025	**25,009**
2026	25,759
2027	26,532
2028	27,328
2029	28,148
2030	**28,992**

Sources: 2010-2012 - U.S. Bureau of the Census, Population Estimates Program (PEP).
2013-2030 – Town of Clayton Planning Department (assuming an annual average growth rate of 3 percent)



Think
CLAYTON.

Think
B.I.G.

Think CLAYTON. Think B.I.G.

Bold. Innovative. Growth.

Comprehensive Plan 2040

ADOPTED OCTOBER 5, 2015

Think Clayton. Think B.I.G.

Bold. Innovative. Growth.

Comprehensive Plan 2040

ADOPTED
OCTOBER 5, 2015

Acknowledgements

Thank you to all the organizations and individuals who committed their time, energy and resources to this effort. This plan would not have been possible without the support of many throughout the process.

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Lynn Auclair, Deep River Brewery
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Donna Bailey-Taylor, Johnston County Tourism
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Berry Gray, Johnston County Planning Director
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Chris Johnson, Johnston County Economic Development
Claude King, Youth Representative
Butch Lawter, Town Council
Terence Leathers, Community Leader
Margaret Lee, Women's Club
Jenny Massey, Unique Boutiques & Marketplace
Kelly Norman, Downtown Business Owner
Frank Price, Planning Board
Charenne Riley-Monk, Glen Laurel Home Owners Association
Jean Sandaire, Planning Board
Bob Satterfield, Town Council
Matt Starr, Neuse RiverKeeper
Chris Walker, Riverwood Home Owners Association

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Bob Satterfield, Councilman
Art Holder, Councilman
R.S. "Butch" Lawter, Jr., Councilman
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T.R.LEE COUNTRY STORE
CHURCH S
RAIL ROAD CROSSING
ffee Mill
ROBERTSON MULE COMPA
STOP
R
CLAYTON

Think Clayton.

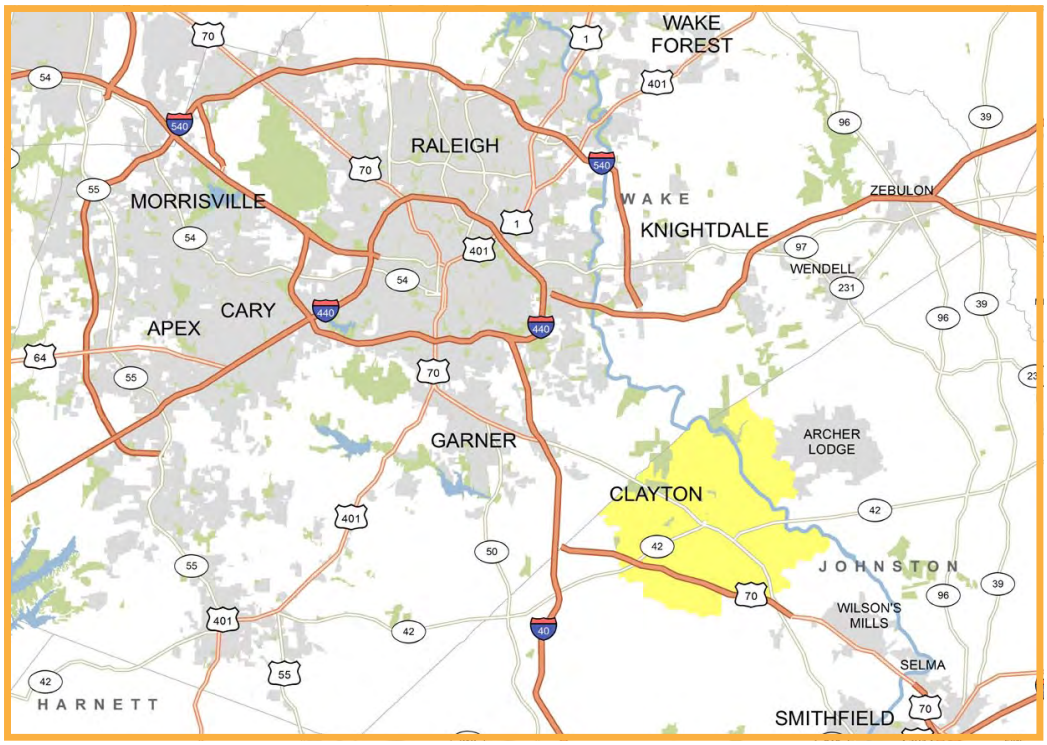
Successful businesses, shops and restaurants.
A place rich with recreation, arts, and culture.
Walkable. Safe. Vibrant. Active.
A unique Downtown experience.

These are all qualities valued by the citizens of Clayton. The community envisions a place where neighbors are able to safely walk and bike; a downtown that offers a variety of activities and opportunities for people to live, create, shop and eat; businesses that are successful and growing; a system of parks and greenways that connect people and places to nature and the Neuse River; neighborhoods with a variety of living options.

This Plan for Clayton advances the ideas described in the Vision. It is organized by themes that expand on the vision and provide specific goals, objectives and strategies necessary to facilitate implementation.

Clayton Yesterday and Today

Clayton looks much different than it did 20 years ago. Major employers including Grifols, Novo Nordisk and Caterpillar opened state-of-the-art facilities within the Town's Planning Area. Johnston UNC Health Care opened a full-service hospital at the intersection of NC 42 and Highway 70. In addition, the Town built a variety of new facilities to serve the growing population. These facilities include the Clayton Community Center, the new Law Enforcement Center and numerous parks and greenways. Clayton is now a unique combination of old and new. From the historic Downtown to Riverwood, Clayton is a place where individuals prosper, families thrive and businesses grow.



SOURCE: ESRI DATE: 2015

Clayton Tomorrow

The population of Clayton has grown by more than 150% from 2000 to 2013. If current projections maintain, the Town could double in size during the next 20 years.

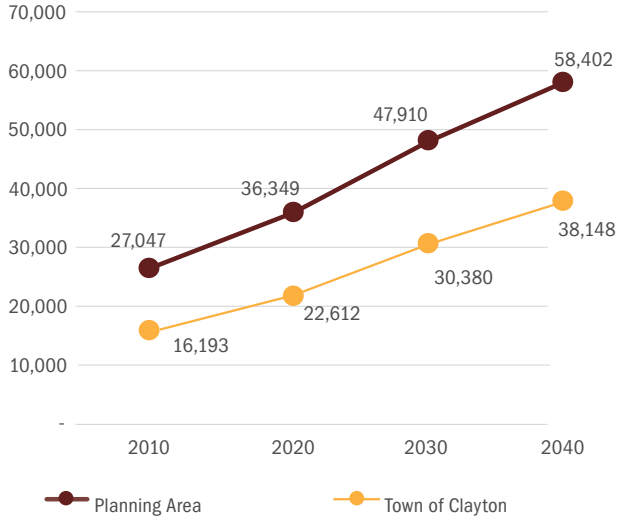
Where will people live? What steps can the Town take to ensure quality development? How will growth impact the region's resources? Can the existing systems of infrastructure support additional people, housing, jobs and cars?

These are all important questions that deserve careful thought. This plan will help the community answer some of these questions and keep Clayton on a path to proactively manage growth in a way that results in a stronger and more prosperous community.

Top: Jones Lunch, est. 1958

Bottom: Deep River Brewing Company, est. 2014

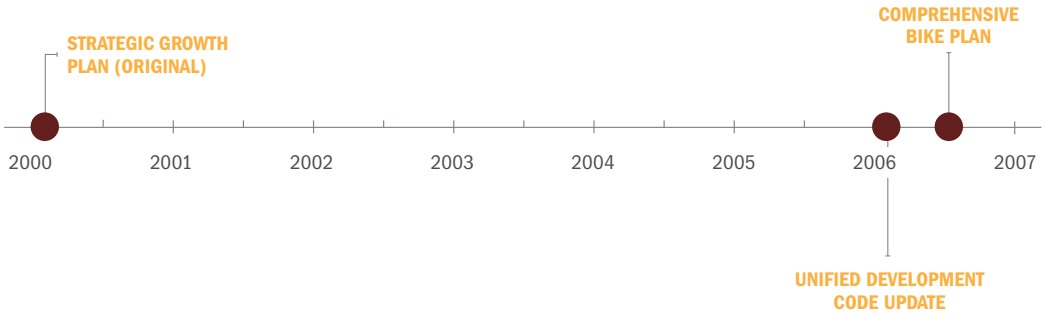
PROJECTED POPULATION



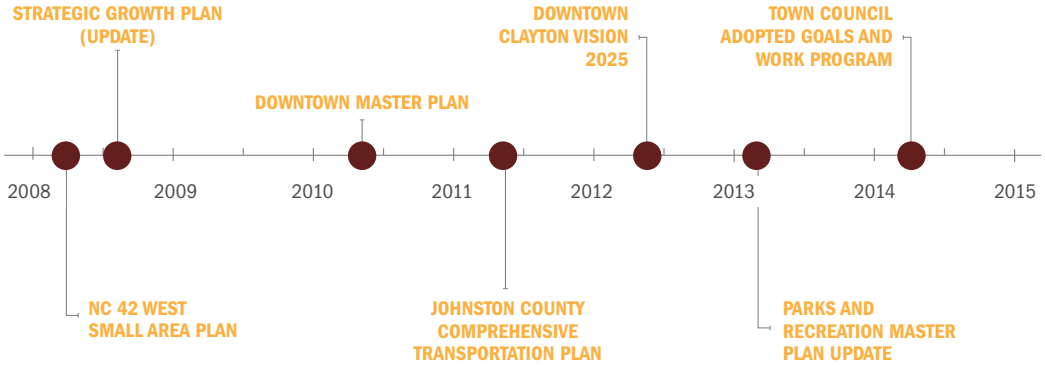
SOURCE: LANDDESIGN AND TOWN OF CLAYTON

A Plan for Clayton's Future

The Town has a long-standing tradition of preparing plans and making investments to proactively manage growth and create opportunities within the community. The most recent effort, the Strategic Growth Plan, was completed in 2008. The five key goals identified in that plan set Clayton on a course to become a regionally recognized arts and recreation community with an alive downtown, strong employment base and quality neighborhoods. This plan recognizes that a lot has been accomplished since completion of the 2008 plan. It is the next step to ensure that as Clayton grows it continues to be defined by the values that make it a unique, inviting and prosperous place.



GREAT PLANS



transform communities into **GREAT PLACES.**

Plan Development

The process to update Clayton's Comprehensive Plan was divided into five phases. Each phase of work was guided by an inclusive public engagement process (detailed on page 8). The first phase focused on project initiation tasks such as data collection, a review of existing plans, and studies and a kick-off meeting and study area tour. During Phase Two, the consultant team inventoried existing conditions in the study area to provide an overview of issues and opportunities to be considered in subsequent phases. Land use concepts supported by illustrations and imagery were developed in Phase Three. Based on the results of the previous phases, a set of recommendations and implementation strategies that support the concepts were developed during Phase Four. The final phase of the process consisted of merging all plan components into a single comprehensive document. This report is the deliverable of this final phase of work.

THE PLANNING PROCESS

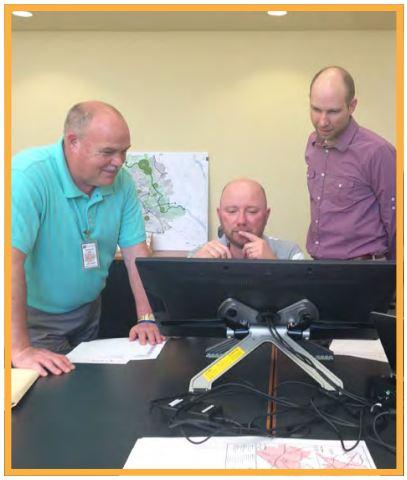
1 **Project Initiation**
Data collection, review of existing plans & studies, kick-off meeting, study area tour

2 **Inventory and Assessment**
Assessment of current and emerging conditions, identification of issues and opportunities

3 **Plan Development**
Development of land use concepts with supporting illustrations and imagery

4 **Recommendations and Implementation Strategies**
Creation of policies and action steps to realize the desired Future Land Use Plan

5 **Plan Documentation**
Collection of plan components into a final plan report document to be presented for adoption



How to Use this Plan

The Town's Comprehensive Plan provides the basis for Clayton's regulations and policies that guide its physical development. The Plan establishes priorities for public action and direction for complementary private decisions. It provides a flexible framework that can be updated, revised, and improved upon over time to stay relevant to the issues the Town must confront as well as the opportunities the Town chooses to pursue. This Plan serves as a tool to evaluate new development proposals and direct capital improvements and to guide public policy in a manner that ensures that Clayton continues to be a premier community within the Research Triangle region of North Carolina.

This Plan is made up of the following 10 elements. Within each element is a vision statement describing the guiding values of how Clayton should grow. The vision and values were derived primarily from public input. Supporting each vision statement is a set of goals, objectives and strategies. The goals are the overarching principles toward which the Town will direct effort. The objectives provide a measurable, intermediate end that directs progress toward a goal. The strategies provide a specific action or recommendation to achieve an identified goal or objective.

Land Use

Downtown

Economic Development

Recreation and Open Space

Housing

Mobility

Utilities

Intergovernmental Coordination

Natural Resources

Arts and Culture

Public Engagement

Understanding community values today ensures that this plan, implemented in accordance with the recommendations, supports and advances those priorities over the long term. The process included traditional methods and new techniques to encourage a diverse group of citizens to contribute to the plan.

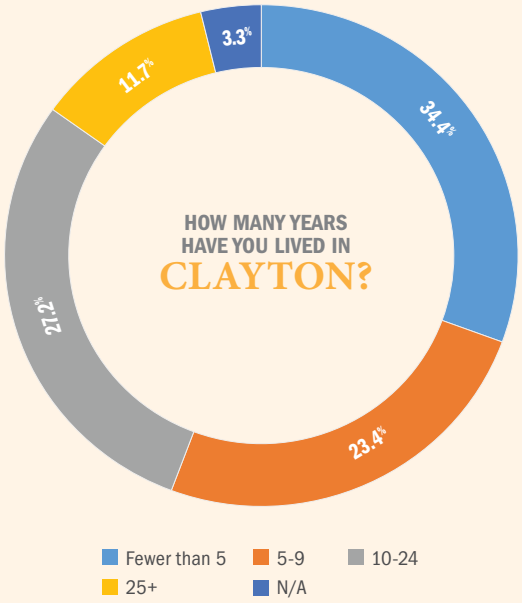
This effort was guided by an Advisory Committee, made up primarily of residents and business owners, and also included representatives from Town Council, Downtown Development Association, Clayton Visual Arts and the development community. This group met regularly through the process to set goals, provide feedback, and advise the project team on plan concepts and recommendations. A list of the Advisory Committee members can be found in the Acknowledgements section of this document.

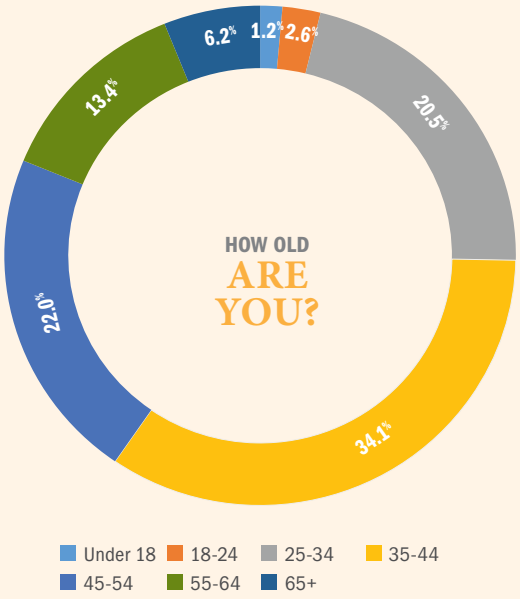
Opportunities for the community to participate included large public meetings and small stakeholder interviews, online surveys, a project web page and social media engagement. Each method encouraged the public to learn and convey their opinions on what was important for the Town to consider over the next 20 years.

Survey Results

The following is a summary of the survey responses which helped inform the recommendations and implementation strategies that are included in this plan. Nearly 950 people completed the survey which was made available online, in print and at public meetings.

DEMOGRAPHICS OF RESPONDENTS



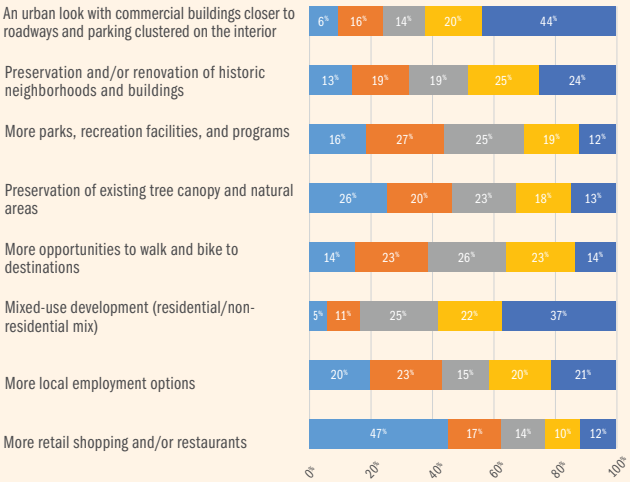


Survey Results (continued)

LOCATION PREFERENCES: WHAT ARE THE TOP THREE REASONS FOR LIVING IN CLAYTON?

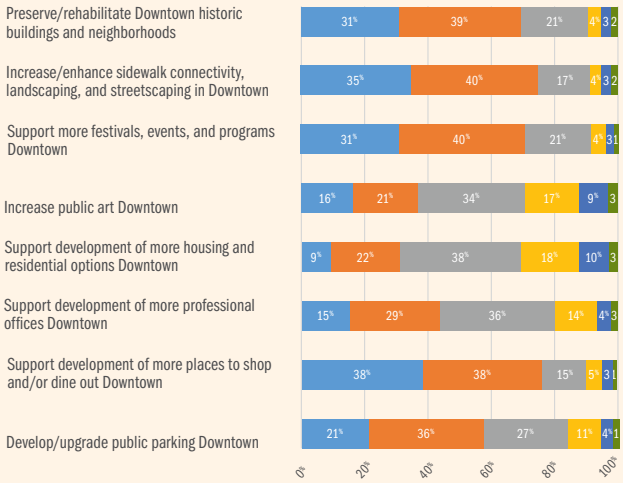
BUDGET AND SPENDING PREFERENCES: "I WOULD BE WILLING TO DEDICATE MORE TAXES AND PUBLIC FEES TO..."

Growth and Development



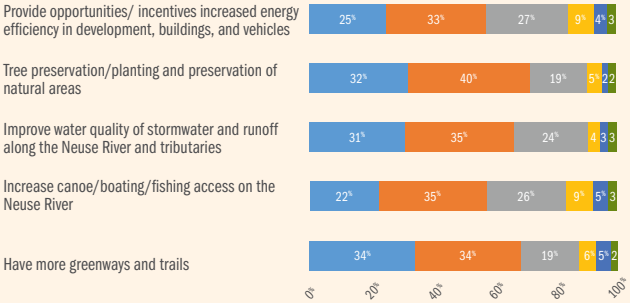
*157 OUT OF 942 RESPONDENTS SKIPPED THIS QUESTION.

Downtown



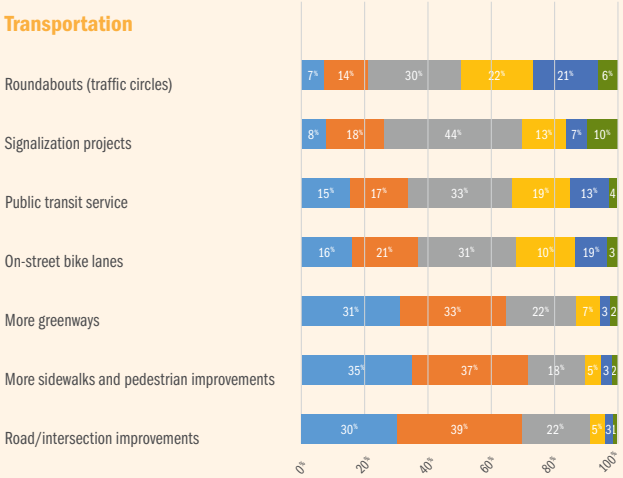
*239 OUT OF 942 RESPONDENTS SKIPPED THIS QUESTION.

Environment



*190 OUT OF 942 RESPONDENTS SKIPPED THIS QUESTION.

Transportation



*193 OUT OF 942 RESPONDENTS SKIPPED THIS QUESTION.

Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion

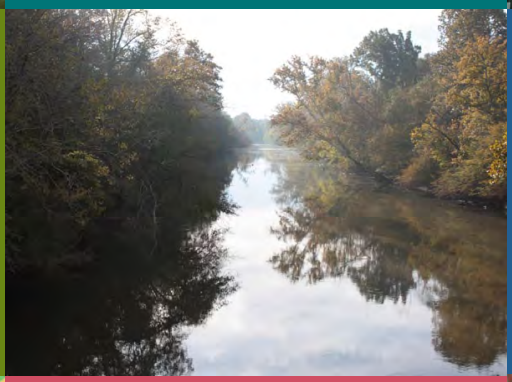
Think
Land Use.

Think
Economic
Development.

Think
Recreation and
Open Space.

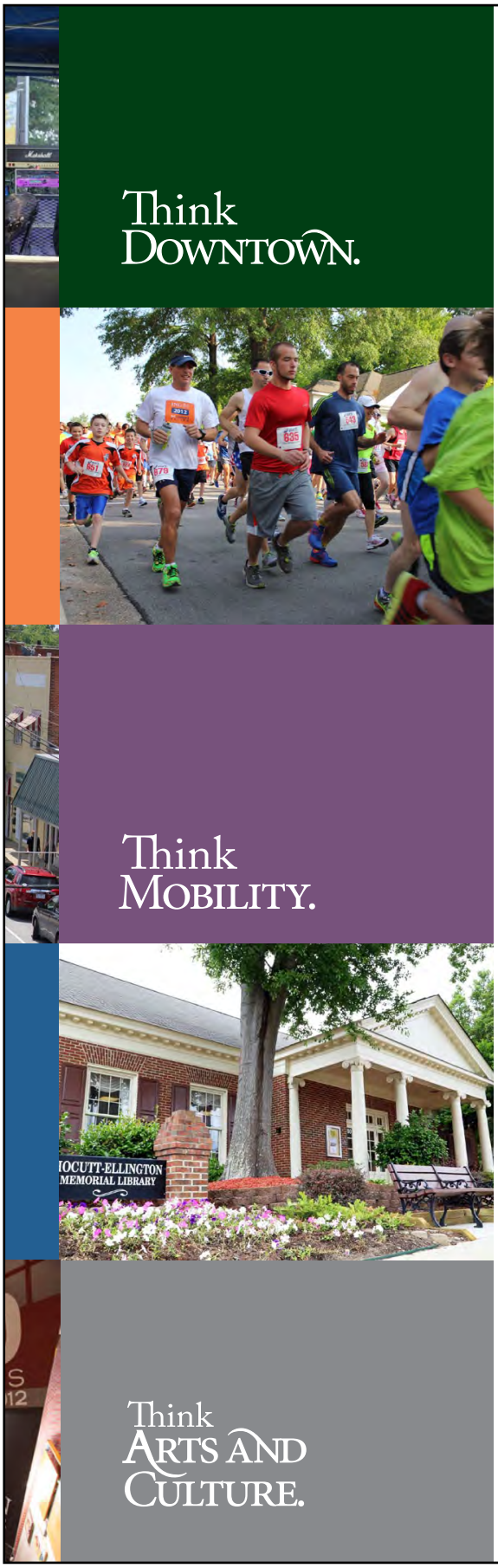
Think
Housing.

Think
Natural
Resources.



Think
Utilities.

Think
Intergovernmental
Coordination.



Think Clayton. Think B.I.G.

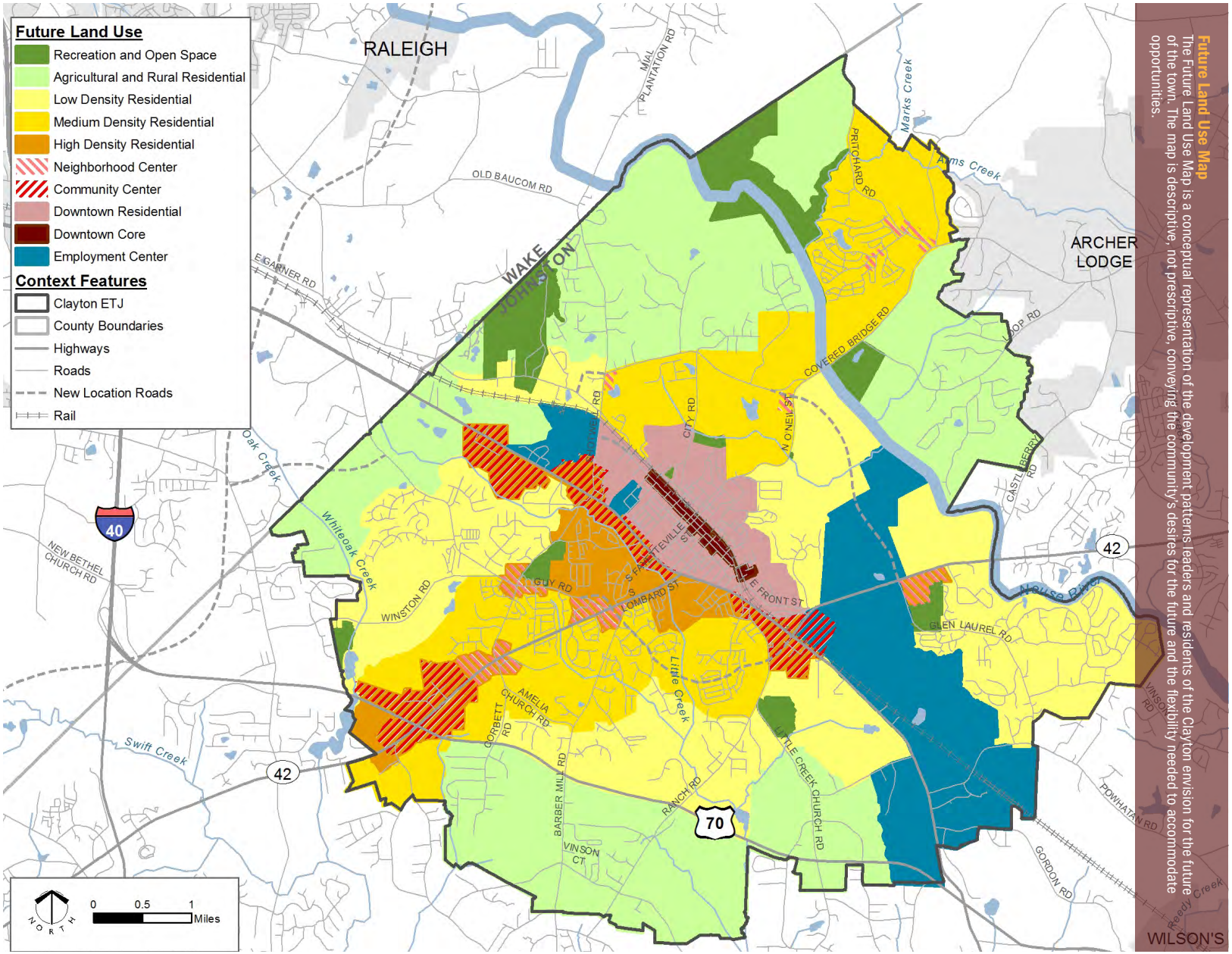
Bold. Innovative. Growth.

The Clayton Comprehensive Plan is a policy document intended to guide development of the Town of Clayton to desired community outcomes. By defining a direction forward, public investment decisions can be better informed and result in opportunities that will improve Clayton's quality of life and competitive position in the region, and potentially stimulate subsequent private-sector investment. The plan presents a clear vision for the future of Clayton and outlines strategies so that the public and private sectors can jointly implement the plan.

THE
FLIPSIDE
RESTAURANT & PUB
THE COFFEE MILL

Think Land Use.

Clayton grows in a way that maintains its small town character while accommodating new opportunities for quality growth and development. The development pattern balances the social, economic and environmental interests of Clayton residents and maximizes return on investment. Land use decisions support Downtown Clayton's development as the social, civic and cultural center of town.



Future Land Use Map

The Future Land Use Map is a conceptual representation of the development patterns leaders and residents of the Clayton envision for the future of the town. The map is descriptive, not prescriptive, conveying the community's desires for the future and the flexibility needed to accommodate opportunities.

Description of Future Land Uses

Ten future land use categories are depicted on the map. Each category is intended to indicate a predominant land use—or set of uses—as well as other features that define the character of the category. A brief description of each category is provided below. Each is consistent with the community's ideas and vision for the future development pattern. Furthermore, these descriptions do not propose a change to existing development within each category; instead, they suggest a direction for moving forward.

RESIDENTIAL LAND USES

Agricultural/Rural Residential (ARR)

Agricultural/Rural Residential areas are primarily located outside of existing and future sewer service areas. Most of these areas rely on septic systems for wastewater treatment, have a limited road network and, in some cases, lie within the watershed protection overlay of the Neuse River. The predominate existing land uses in these areas include low-density residential uses, as well as large tracts of agriculture land. The lack of utility and transportation infrastructure, the established low-density development pattern and ongoing agricultural activities in these areas contribute to their rural character. This character can be enhanced by encouraging only low-intensity uses and context-sensitive rural design. Single family residential at gross densities up to two units per acre are appropriate.

Typical Uses: Agriculture, Large Lot Single-family Residential, Clustered Single-family Residential (dependent on soils or utility availability), Parks and Conservation
Gross Residential Density: up to 2 dwelling units/acre

Low-Density Residential (LDR)

Areas designated as Low-Density Residential are intended to remain predominantly suburban in character and provide for low-density, single-family residential development on lots smaller than those in Rural Residential areas. Low Impact Development (LID) techniques such as clustering of dwellings to the degree that soils and/or available water and sewer infrastructure allows and flexibility to allow for innovative street cross sections that improve stormwater filtration via swales or other features are appropriate. However, mixed-residential uses may occur under a Planned Development - Residential District to support conservation of open space, so long as a density of 3 units per acre is not exceeded.

Typical Uses: Single-family Residential, Agriculture, Parks and Conservation
Gross Residential Density: up to 3 dwelling units/acre

Example: Agriculture/Rural Residential

Example: Low Density Residential

Top: Example: High Density Residential; Bottom Example: Downtown Core; Right Example: Neighborhood Commercial

Medium Density Residential (MDR)

The Medium Density Residential area is comprised predominantly of neighborhoods with housing units that are more urban in character and in closer proximity to commercial services and centers. This area provides a transition from the more suburban areas of the Town to more developed areas. The density of development in this area will vary based on the presence of utilities, topography and environmental features. This designation is applied to land which is developed, or is to be developed, at a density between three and five units per acre. Densities as high as seven units per acre may occur under a Planned Development - Residential District.

Typical Uses: Residential (all forms)
Gross Residential Density: up to 5 dwelling units/acre. Densities up to 7 dwelling units/acre may be approved as part of a Planned Development – Residential District.

High Density Residential (HDR)

The High Density Residential area provides for housing options located in close proximity to major transportation corridors, existing commercial areas and Downtown services. These areas have a connected street network, adequate pedestrian and bicycle facilities, and are served by public water and sewer. High Density Residential is designed to include all housing types. In some instances, this designation provides for a transition between lower-density residential use and commercial uses. In other instances, this designation allows the establishment of neighborhood commercial uses such as a grocery store or neighborhood services which are compatible with higher-density residential uses. When neighborhood-serving commercial uses are placed within or adjacent to a residential area, such uses shall be limited to a size which is sufficient to accommodate the needs of an immediate residential neighborhood. These transitional areas will have opportunities for slightly higher-density development than the other residential categories.

Typical Uses: Residential (all forms), Limited Neighborhood Commercial Services
Gross Residential Density: up to 12 dwelling units/acre. Densities greater than 10 dwelling units/acre may be approved as part of a Planned Development.

Downtown Residential (DR)

The Downtown area provides for housing options and office-residential uses located in close proximity to the Downtown Core. The Downtown category is designed to retain established neighborhoods and maintain the historic character while allowing a variety of higher-density housing types that support and foster growth of the Downtown Core. Higher-density development should be directly bordering the Downtown Core or along US 70 Business Highway West. The Downtown area should have a connected street network with short block lengths, a grid-style street system, and adequate pedestrian and bicycle facilities.

Typical Uses: Residential (single-family, with higher density residential uses limited to areas as described above); Neighborhood Commercial in appropriate locations
Gross Residential Density: up to 12 units/acre, up to 20 units/acre with PD

NON-RESIDENTIAL LAND USES

Downtown Core (DC)

This designation is applied to the Town's Downtown Core area where the highest-density commercial, employment, residential and other uses are located. It is intended to foster an urban environment characterized by a sensitive blending of carefully preserved older structures, high-quality and context-sensitive new construction, and public spaces all working together and integrated with surrounding neighborhoods. The Downtown Core is the most flexible category and accommodates a variety of uses including commercial services (restaurants, retail, professional services, and entertainment), office, high-density residential, upper-story apartments, and older homes renovated to accommodate commercial uses. A mix of uses that creates a regional draw as well as serving the immediate community is desired. The Downtown Core provides a convenient road network with future transit opportunities and a pedestrian friendly system of sidewalks or greenways for non-motorized accessibility.

Gross Residential Density: up to 30 units/acre

Neighborhood Center (NC)

A Neighborhood Center is generally located near concentrations of existing or planned residences, and areas with access to major thoroughfares and utilities. These areas incorporate neighborhood-serving commercial uses including grocery stores, retail establishments, restaurants and services. A limited amount of office, civic and institutional uses are also appropriate. Higher-density residential including small-lot, single-family, townhouses and apartments should be located in close proximity to shopping and service destinations to provide more walking opportunities to internal and external pedestrian facilities and destinations. The scale of the Neighborhood Center varies depending on the market and competition. Typical Neighborhood Centers have a service area of one to two miles.

Community Center (CC)

Compared to the Neighborhood Center category, a Community Center typically serves a larger population and includes a typical trade area of three-to-six miles, and is located adjacent to major thoroughfares or situated at a major intersection. A Community Center includes at least one major anchor such as a grocery store or retailer and incorporates community-serving commercial uses and opportunities for office, civic, and institutional uses. Where the market permits, multi-family housing opportunities may be integrated as part of a mix of uses. As with Neighborhood Centers, apartments and townhouses should be located in close proximity to shopping and services. All portions of the development should be accessible by both a convenient road network and a system of sidewalks or greenways.

Employment Center (EC)

Clayton's Employment Center is designated on the Future Land Use Map to provide locations for primary employment and economic development opportunities. The Employment Center is located along a major transportation corridor, and has adequate levels of infrastructure along access to rail and parcels large enough to accommodate future employment growth. Uses encouraged in the Employment Center include but are not limited to, industrial, warehouse, office, research and development, tech-flex, hospital, renewable energy, recycling, fabrication, assembly, and technology. Employment Center use may also include a limited amount of supporting commercial uses, such as restaurants and convenience retailers to serve employees. However, these uses should only be situated where not in conflict with existing employment land uses and should not be built in such a way as to jeopardize the use of those lands most suitable for office or industrial development.

Recreation and Open Space (ROS)

The Recreation and Open Space designation applies to public recreational areas and open-space areas. Uses include wildlife management, active and passive recreation, environmental restoration/mitigation/preservation, open space, and educational uses. Structures that support or are associated with the intended uses shall be permitted. Land shown under this designation shall not be used for any purpose other than recreation, open space, or conservation.

The following table identifies which zoning districts are consistent with the Future Land Use Map categories (designations).

Future Land Use Designation	COMPATIBLE ZONING DISTRICTS												
	R-E	R-10	R-8	R-6	O-R	O-I	B-1	B-2	B-3	I-1	I-2	PF	PDD
ARR	X											X	
LDR	X	X										X	
MDR		X	X	X								X	
HDR			X	X								X	
DR			X	X	X	X	X					X	X
NC						X	X	X				X	X
CC								X	X			X	X
DC							X					X	X
EC									X	X	X	X	X
ROS												X	

Goals and Recommendations

GOAL LU1

Preserve Clayton's small-town character while allowing for growth and development in appropriate areas.

Objective LU1.1

Manage future growth and encourage quality development through the implementation of the Comprehensive Plan, the Unified Development Code (UDC), and other plans and regulations adopted by Town Council. Encourage developments which incorporate high-quality design and enhance the quality of life for existing and future residents of the Town.

Strategy LU1.1.1
Review development proposals for consistency with the Future Land Use Map.

Strategy LU1.1.2
Support residential development at varying densities based on the Future Land Use Map.

Strategy LU1.1.3
Review the existing Design Guidelines and incorporate applicable updates into the Unified Development Code.

Strategy LU1.1.4
Annually review and update Unified Development Code to ensure consistency with the Goals, Objectives and Strategies of the Comprehensive Plan.

Objective LU1.2

Encourage the redevelopment or adaptive reuse of under-utilized commercial development.

Strategy LU1.2.1
Consider increased densities and intensities to encourage existing under-utilized commercial properties to redevelop.

Objective LU1.3

Encourage a mix of residential and non-residential land uses within Neighborhood and Community centers identified on the Future Land Use Map.

Strategy LU1.3.1
Create and implement small area plans to attract infill development and redevelopment to areas identified as Neighborhood and Community centers on the Future Land Use Map.

Objective LU1.4

Protect and enhance the historic downtown character while promoting quality redevelopment and infill.

Strategy LU1.4.1
Implement the Goals, Objectives and Strategies of the Downtown Chapter of this Plan.

GOAL LU2

Encourage quality development which maximizes existing infrastructure, promotes walking and biking, and enhances travel safety.

Objective LU2.1

Promote location and intensity of development that mitigates impacts to the transportation network and leads to reduced vehicle trips and/or shorter trip lengths, enhanced circulation, and increased public safety.

Strategy LU2.1.1
Consider higher densities and intensities for mixed-use projects which reduce internal vehicular trips and promote pedestrian circulation.

Strategy LU2.1.2
Require vehicular interconnectivity between existing and future adjacent development.

Strategy LU2.1.3
Provide and incentivize street cross-section alternatives that support multi-modal transportation, such as bicycle lanes and multi-modal, off-road pathways.

Strategy LU2.1.4
Require development to integrate sidewalks internally and provide pedestrian connections to existing and future adjacent development and/or destinations.

Strategy LU2.1.5
Prohibit isolated, mid-block or strip commercial development which negatively impacts existing infrastructure, has poor circulation, and inadequate access.

GOAL LU3

Provide a sense of place and enhance aesthetics along major corridors.

Objective LU3.1

Identify and develop gateways into Clayton.

Strategy LU3.1.1

Identify primary and secondary gateway locations into town, and establish a highly visible gateway design which reflects Clayton's brand.

Strategy LU3.1.2

Utilize the US 70 Façade and Site Element Improvement Grant to enhance the aesthetic appearance of businesses along the corridor.

Objective LU3.2

Utilize regulatory standards which preserve or enhance aesthetic standards within and adjacent to the main corridors in town.

Strategy LU3.2.1

Review the Scenic Highway and Thoroughfare Overlay Districts for necessary updates to ensure that regulations support Town character, enhance aesthetics along the roadways, and support successful commercial development.

Objective LU3.3

Utilize landscaping to enhance collector streets that traverse through higher-density land uses to soften the visual impacts of high-intensity/density development.

Strategy LU3.3.1

Update the Town's roadway cross-sections to incorporate street tree requirements and landscaped medians/protected stems.

Think
CLAYTON
DISCOVER
Think
Downtown
downtownclayton.org
TOWNE REALTY
HTR AUCTION
Think
CLAYTON
SHOP
Dine
DISCOVER

Think Downtown.

Downtown Clayton is the social, civic and cultural center of town. New shops and restaurants fill storefronts along Main Street while infill development complements the existing historic fabric. In addition, more people are living and working Downtown. Parking is convenient and accessible. Visitors are able to easily navigate the Town and residents are able to walk and bike from their neighborhoods to Downtown via a convenient and connected system of greenways, bike lanes and sidewalks.

Goals and Recommendations

GOAL D1

Promote quality new, adaptive re-use, and infill development projects Downtown while preserving its historic character and small-town charm.

Objective D1.1

Utilize the Main Street Four Point Approach® to identify barriers and establish initiatives to revitalize and grow the Downtown Core.

Strategy D1.1.1
Allow increased densities and intensities for new development, adaptive re-use and infill projects located in the Downtown Core.

Strategy D1.1.2
Create and implement plans to actively attract development and redevelopment to the existing Downtown area.

Strategy D1.1.3
Enhance the aesthetic quality of Downtown through the continuation of the Façade Grant Program, building rehabilitation, and code enforcement.

Strategy D1.1.4
Support the Downtown Development Association in its duties, activities and events including participation in the NC Main Street Program.

Objective D1.2

Support the renovation and redevelopment of under-utilized sites and buildings in an effort to invigorate investment and/or revitalization in Downtown.

Strategy D1.2.1
Market available properties Downtown.

Strategy D1.2.2
Develop a database of grants and incentives available to support Downtown redevelopment including the following:

- Tax incentives/abatements
- Incentive grants for projects that meet goals
- Crowd-funding/local fundraising
- State and National grant programs

Objective D1.3

Increase the residential activity Downtown and promote mixed-use projects in Downtown.

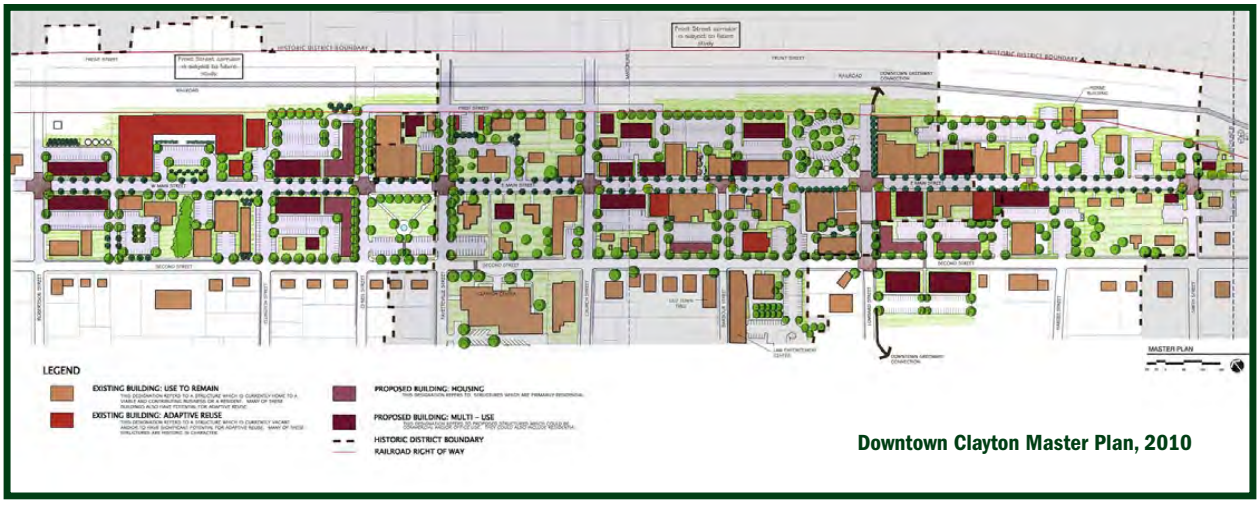
Strategy D1.3.1
Provide incentives to projects which utilize upper stories for residential uses, increase residential density and/or enhance the commercial character in the Downtown Core.

Objective D1.4

Ensure design of new development or redevelopment reflects and contributes to the historic character of the Downtown.

Strategy D.1.4.1
Update the Downtown Overlay District standards and incentives within the Unified Development Code.

Strategy D.1.4.2
Reference the Downtown Master Plan when reviewing development within the Downtown Core.



Downtown Clayton Master Plan, 2010

GOAL D2

Improve aesthetics in the Downtown Core.

Objective D2.1

Enhance the visual environment through streetscaping and screening of infrastructure.

Strategy D2.1.1

Prepare a streetscape plan for Main Street that accomplishes the following:

- Defines a plant palette and standards for placement. The installation of trees, shrubs, groundcovers and seasonal plants for color, particularly along Main Street and connecting to arterials will create a more cohesive appearance and welcoming environment.
- Specifies street furnishings and appropriate use and placement of each type. Lighting, benches, trash cans and other furnishings should improve aesthetics, reinforce the character of Downtown, and add to the comfort and safety of those visiting, living and working Downtown.
- Provides opportunities for increased pedestrian activity.

Strategy D2.1.2

Implement a unified plan for the placement and screening of Dumpsters.

Objective D2.2

Create a visual entry into the Downtown area.

Strategy D2.2.1

Improve wayfinding signage into Downtown and incorporate the Downtown wayfinding signage into a broader town-wide signage plan.

Strategy D2.2.2

Work in partnership with the North Carolina Railroad to identify and implement aesthetic improvements along the rail corridor in Downtown.

GOAL D3

Reinforce Downtown as the social, civic and cultural center of Town.

Objective D3.1

Develop Downtown public spaces and gathering places that provide both programmed and un-programmed recreation.

Strategy D3.1.1

Inventory Downtown public spaces and develop a programming and investment strategy to enhance these areas.

Objective D3.2

Provide pedestrian and bicycle connections from Downtown from existing neighborhoods, parks and activity centers.

Strategy D3.2.1

Complete the connection to Downtown to Sam's Branch Greenway and the Clayton River Walk on the Neuse.

Strategy D3.2.2

Prioritize sidewalk projects that connect neighborhoods and parks to Downtown.

Strategy D3.2.3

Enhance safety of pedestrian crossings over railroad tracks.

Think Economic Development.

Clayton has a sound local economy which attracts investors, creates jobs and generates public revenues. Clayton has the reputation as a business-friendly community which motivates more employers locate within the Town and provide jobs for local residents. Moreover, residents are able to do all of their shopping with Clayton retailers. Since the community shops locally, revenue is not lost to other competitor communities.

Goals and Recommendations

GOAL ED1

Increase opportunities for companies which provide well-compensated, highly-skilled positions.

Objective ED1.1

Partner with Johnston County Economic Development, the Clayton Chamber of Commerce, and the Research Triangle Regional Partnership to market Clayton as a premier destination for employers.

Strategy ED1.1.1

Establish regular meetings with these or other groups to discuss economic development and coordinate on marketing materials.

Objective ED1.2

Market available sites to potential developers.

Strategy ED1.2.1

Establish an inventory of existing available non-residential buildings within the Town.

GOAL ED2

Develop Clayton's brand.

Objective ED2.1

Develop an identity and marketing strategy that promotes the Town's unique and distinctive qualities including Downtown, arts and recreation.

Strategy ED2.1.1

Develop a branding plan to formalize Clayton's image and marketing strategy. The plan should include, but not be limited to, standardization of Town documents and marketing materials, signage and events.

GOAL ED3

Monitor and communicate Clayton's economic position in the region.

Objective ED3.1

Market economic data to potential investors and businesses.

Strategy ED3.1.1

Develop a public dashboard of recent economic data compared to competitor jurisdictions.

CLAYTON COMPETITIVE ANALYSIS

FEATURE	MUNICIPALITY								
	Town of Clayton	Wake Forest	Holly Springs	Knightdale	Garner	Fuquay Varina	Smithfield	Butner	Hope Mills
Population									
POPULATION ESTIMATES (2013)	17,694	34,752	28,915	13,291	26,772	21,277	11560	7699	16248
POPULATION CHANGE - (2010 - 2013)	9.8%	15.5%	17.2%	16.5%	3.9%	18.3%	5.5%	1.4%	4.6%
PERSONS UNDER 18 YEARS	30.9%	32.4%	35.3%	29.4%	24.4%	30.0%	22.5%	26%	30.5%
PERSONS 65 YEARS AND OVER	8.5%	8.1%	4.9%	6.4%	11.8%	11.2%	20.8%	10.4%	7.5%
Households									
AVERAGE HOUSEHOLD SIZE	2.61	2.82	3.02	2.72	2.45	2.68	2.57	2.68	2.74
OWNER-OCCUPIED RATE	65.2%	73.2%	86.2%	65.9%	68.3%	72.8%	52.4%	66.3%	59.8%
MEDIAN OWNER-OCCUPIED HOME VALUE	$152,600	$259,200	$236,300	$168,800	$165,600	$191,500	$133,100	$128,800	$130,500
MEDIAN AGE	34.8	35	35	32.7	38.5	34.5	42.6	41	32.2
Education									
HIGH SCHOOL GRADUATE OR HIGHER	92.1%	95.2%	97.0%	89.6%	92.0%	90.7%	77.0%	79.6%	89.0%
BACHELOR'S DEGREE OR HIGHER	31.3%	50.4%	55.4%	41.6%	34.8%	34.5%	19.4%	9.6%	19.6%
Commute									
AVERAGE WORK COMMUTE TIME (MINS.)	28.4	28.8	27.7	25.4	25.8	30.2	22.5	23.8	24.7
Economy									
MEDIAN HOUSEHOLD INCOME (2013)	$57,456	$75,050	$89,644	$71,066	$60,842	$58,588	$31,947	$46,681	$51,442
PER CAPITA INCOME (2013)	$26,985	$32,474	$33,517	$29,263	$28,829	$26,372	$18,647	$20,530	$22,913
POVERTY RATE	12.4%	6.9%	3.1%	7.5%	8.6%	10.3%	28.4%	15.1%	15.6%
UNEMPLOYMENT RATE (2013)	4.9%	4.1%	4.6%	5.4%	6.2%	9.2%	7.8%	5.0%	5.5%

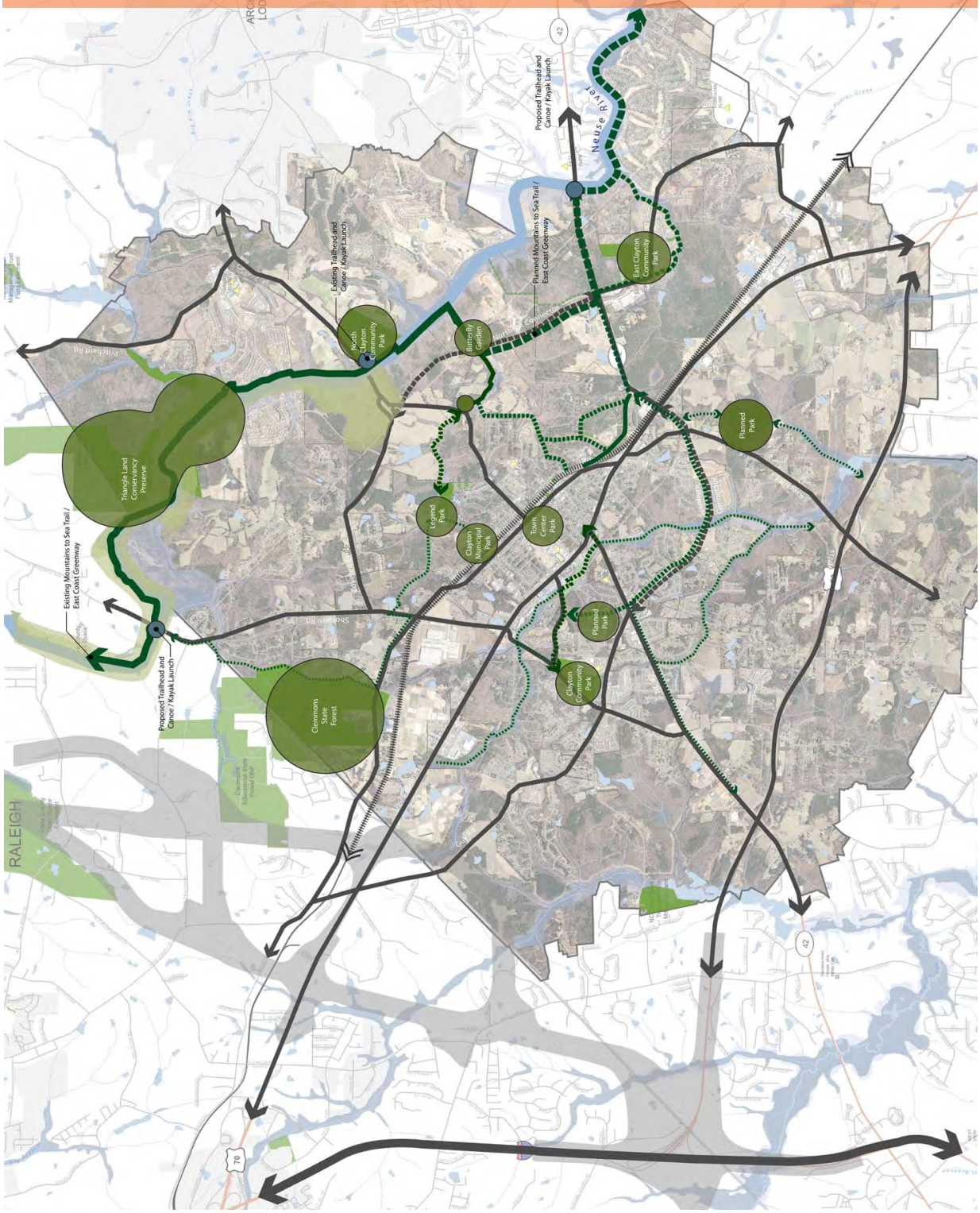
814
824
801

Think Recreation and Open Space.

Clayton is the premier community for active families. The Town provides a wide variety of park and recreation facilities and programs to people of all ages, abilities and skill levels. The local greenway system connects to the Mountains to Sea Trail/ East Coast greenway making Clayton a destination for hikers and nature enthusiasts. Additionally, residents and visitors alike enjoy safe and easy access to the Neuse River.

Parks and Recreation Concept Map

The Parks and Recreation Concept Map represents the system of park and recreation facilities and greenway connections envisioned by the public during the Comprehensive Plan process.



Goals and Recommendations

GOAL ROS1

Support the development of Clayton as a regional destination for recreation and trail-based tourism.

Objective ROS1.1

Provide safe connections to Downtown and neighborhoods from the Mountains-to-Sea Trail.

Strategy ROS1.1.1

Make strong and safe connections between the Downtown Core, neighborhoods and the greenway system.

Strategy ROS1.1.2

Review development applications for trail connections and contributions to the greenway system.

Objective ROS1.2

Continue to develop the Town greenway network including completion of the Mountains-To-Sea Trail, Sam's Branch Greenway and East Coast Greenway through the Town's planning area.

Strategy ROS1.2.1

Partner with state, regional and private entities to design and fund the trail.

Strategy ROS1.2.2

Review development proposals within the vicinity of the proposed trail path to identify potential trail connections, and work with land owners to dedicate trail easements.

Strategy ROS1.2.3

Adopt, maintain and implement a Comprehensive Greenway Map. (A map depicting current and proposed greenways can be found on page 62.)

Objective ROS1.3

Provide destination-based facilities that attract trail and recreation enthusiasts to Clayton.

Objective ROS1.4

Raise awareness of Clayton's recreational amenities and promote the "trail-friendly" character of the Town.

Strategy ROS1.4.1

Initiate a marketing campaign highlighting Clayton's recreational amenities and trails.

GOAL ROS2

Increase public access to the Neuse River.

Objective ROS2.1

Improve access to the Neuse River.

Strategy ROS2.1.1

Develop canoe and kayak access.

Strategy ROS2.1.2

Develop access for recreational fishing.

Strategy ROS2.1.3

Create and maintain an online map showing public access points for recreation on the Neuse River.

GOAL ROS3

Provide sufficient parks and recreation facilities to meet the recreation and open space needs of residents and attract visitors of the Town of Clayton.

Objective ROS3.1

Implement the Parks and Recreation Master Plan, and periodically review the Plan for needed updates.

Strategy ROS3.1.1

Review development proposals for opportunities to provide greenways and parkland that meet the needs identified in the Parks and Recreation Master Plan.

Objective ROS3.2

Maintain and/or increase the amount of integrated, usable, high-quality and connected open space in new developments.

Strategy ROS3.2.1

Ensure that open space requirements are appropriate and provide integrated, usable, high-quality open space.

Objective ROS3.3

Provide destination-based facilities that attract trail, river, and recreation users to Clayton.

Strategy ROS3.3.1

Develop and enhance active and passive, destination-based facilities that attract regional users.

Trevor

Think HOUSING.

People continue to move to Clayton for many reasons including its affordability, small-town lifestyle, high quality of schools and sense of safety. There are a variety of housing types with prices ranging from estate housing to townhouses and apartments that are available to accommodate Clayton's diversifying population. Families continue to build wealth and retirees are able to age-in-place. More people live Downtown or within walking distance of services and amenities. New housing construction meets energy efficiency standards and is developed in a way that is sensitive to the natural environment.

Goals and Recommendations

GOAL H1

Encourage a range of housing types and lot sizes that meets the needs of various income levels, family sizes, and ages.

Objective H1.1

Encourage a range of housing types based on the availability of infrastructure, proximity to services and amenities, and compatibility with existing development as described in the Future Land Use map.

Strategy H1.1.1

Review development proposals for consistency with the Future Land Use Map and work with developers to provide a range of quality housing types within developments.

Strategy H1.1.2

Require residential developments to locate high-density housing types in those areas with closest proximity to services, amenities, and infrastructure.

Strategy H1.1.3

Encourage a range of housing types and styles within Planned Developments that include a residential component.

GOAL H2

Provide safe, sound, and well-maintained housing and neighborhoods.

Objective H2.1

Reduce the number of substandard dwelling units and maintain quality housing.

Strategy H2.1.1

Inspect deteriorated and dilapidated housing, and provide uniform standards to maintain quality housing through the Town's Code Enforcement Program.

Strategy H2.1.2

Reduce the number of substandard dwelling units through rehabilitation and demolition activities.

Strategy H2.1.3

Seek federal, state and local funding for the rehabilitation or demolition of substandard housing.

Strategy H2.1.4

Implement code enforcement activities aimed at reducing or eliminating blighted areas of Town.

Think Mobility.

Clayton's transportation system provides residents and visitors of the Town with a well-functioning array of transportation alternatives, improved connectivity, and an enhanced quality of life. Existing roadways are improved, while new roadways alleviate congestion and provide quick and safe access around the Town. Intersections are safe and traffic moves freely. People are able to walk and bike from their neighborhoods to destinations throughout town, and every resident is within walking distance of a greenway. Furthermore, regional rail stops in Clayton and carries residents and visitors in and out of the Town.

Goals and Recommendations

GOAL M1

Develop a multi-modal transportation system.

Objective M1.1

Coordinate with Regional, State and Federal Agencies to improve Clayton's transportation network.

Strategy M1.1.1

Partner with the Capital Area Metropolitan Planning Organization to identify and seek funding for roadway, pedestrian, bicycle, and transit opportunities.

Strategy M1.1.2

Coordinate with Johnston County to identify long-term transportation priorities during updates to the Johnston County Comprehensive Transportation Plan.

Strategy M1.1.3

Coordinate with NCDOT to improve the existing roadway network and identify future transportation priorities.

Strategy M1.1.4

Partner with Johnston County Area Transit System, Triangle Transit, the Capital Area Metropolitan Planning Organization, NCDOT Rail Division and the North Carolina Railroad to identify locations for commuter rail, park-and-ride, and express bus transit stops within the Town.

Objective M1.2

Plan for the construction of roads, sidewalks, greenways, bike facilities, and transit facilities.

Strategy M1.2.1

Update the 2006 Comprehensive Bicycle Plan and convert it to a joint Bicycle and Pedestrian Plan.

Objective M1.3

Promote the development of "Complete Streets".

Strategy M1.3.1

Update the Town's street cross sections to address the needs of automobiles and non-motorized modes of travel such as walking and bicycling.

Strategy M1.3.2

Coordinate with NCDOT to install pedestrian and bicycle facilities on roadways as a part of road improvement projects.

Strategy M1.3.3

Establish a meeting schedule with NCDOT to review planned road improvement projects and facilitate installment of pedestrian and bicycle facilities.

Objective M1.4
Provide sidewalks, multi-use paths, and bicycle infrastructure along roadways as part of new development or redevelopment.

Strategy M1.4.1
Require new development to install pedestrian facilities along roadways except along rural corridors where no demand exists.

Strategy M1.4.2
Require new development to incorporate pedestrian connections when located in proximity to destinations such as existing or future schools, parks, greenways and commercial areas.

GOAL M2

Support interconnected street systems that efficiently disperse traffic.

Objective M2.1
Evaluate and mitigate potential impacts of new or future development on existing and future roadway infrastructure.

Strategy M2.1.1
Require Traffic Impact Analyses (TIA) for development projects which meet or exceed the established trip count thresholds.

Strategy M2.1.2
Require new developments to include: 1) an interconnected system of streets; 2) stub streets for future connections to adjacent parcels where there is potential for future development that is compatible with the developing uses; and 3) street connections that tie into existing adjacent stub streets.

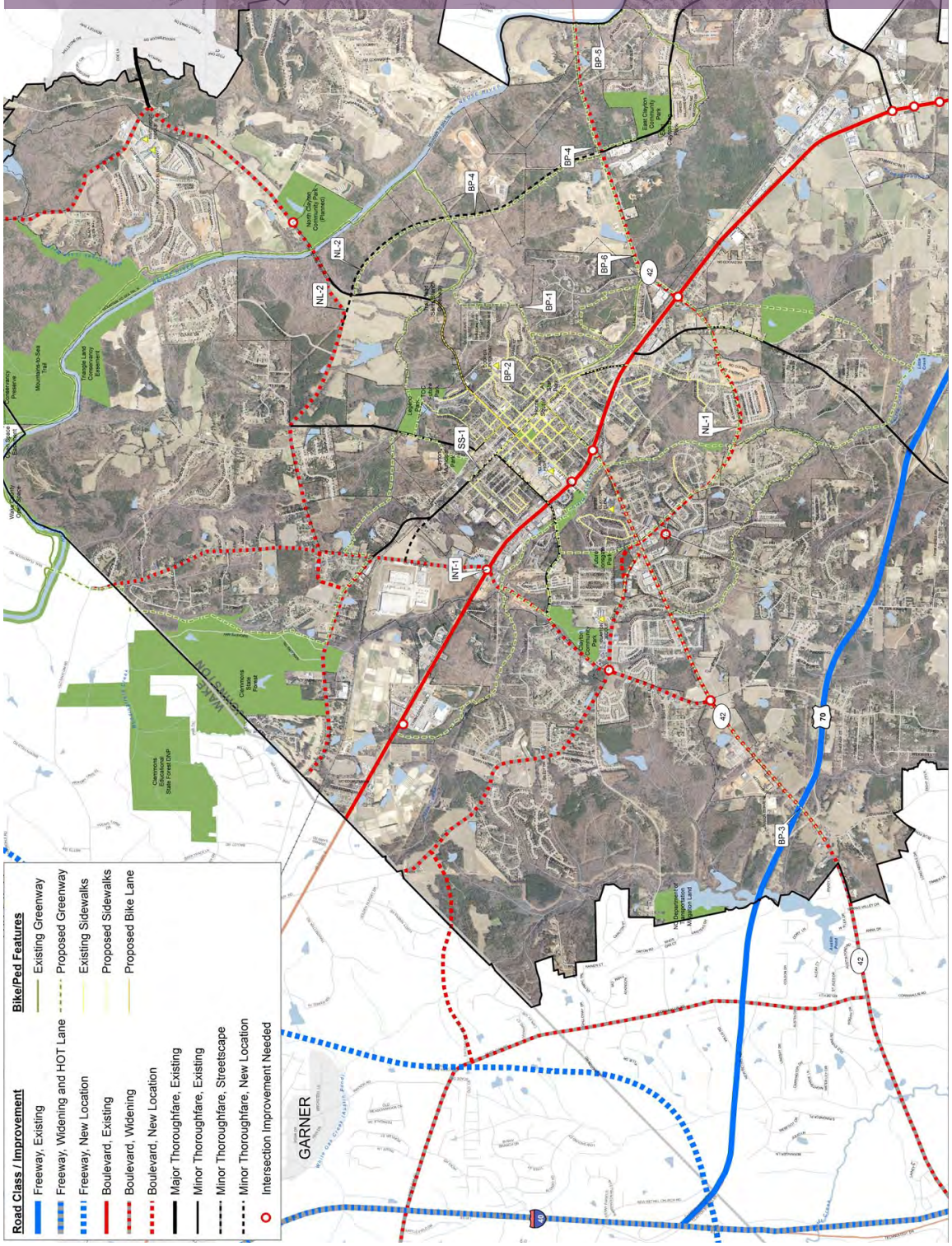
Objective M2.2
Preserve right-of-way for future road widening and new location roads.

Strategy M2.2.1
Develop a thoroughfare map which identifies the facility type (local, collector, arterial) and the ultimate right-of-way width for each facility.

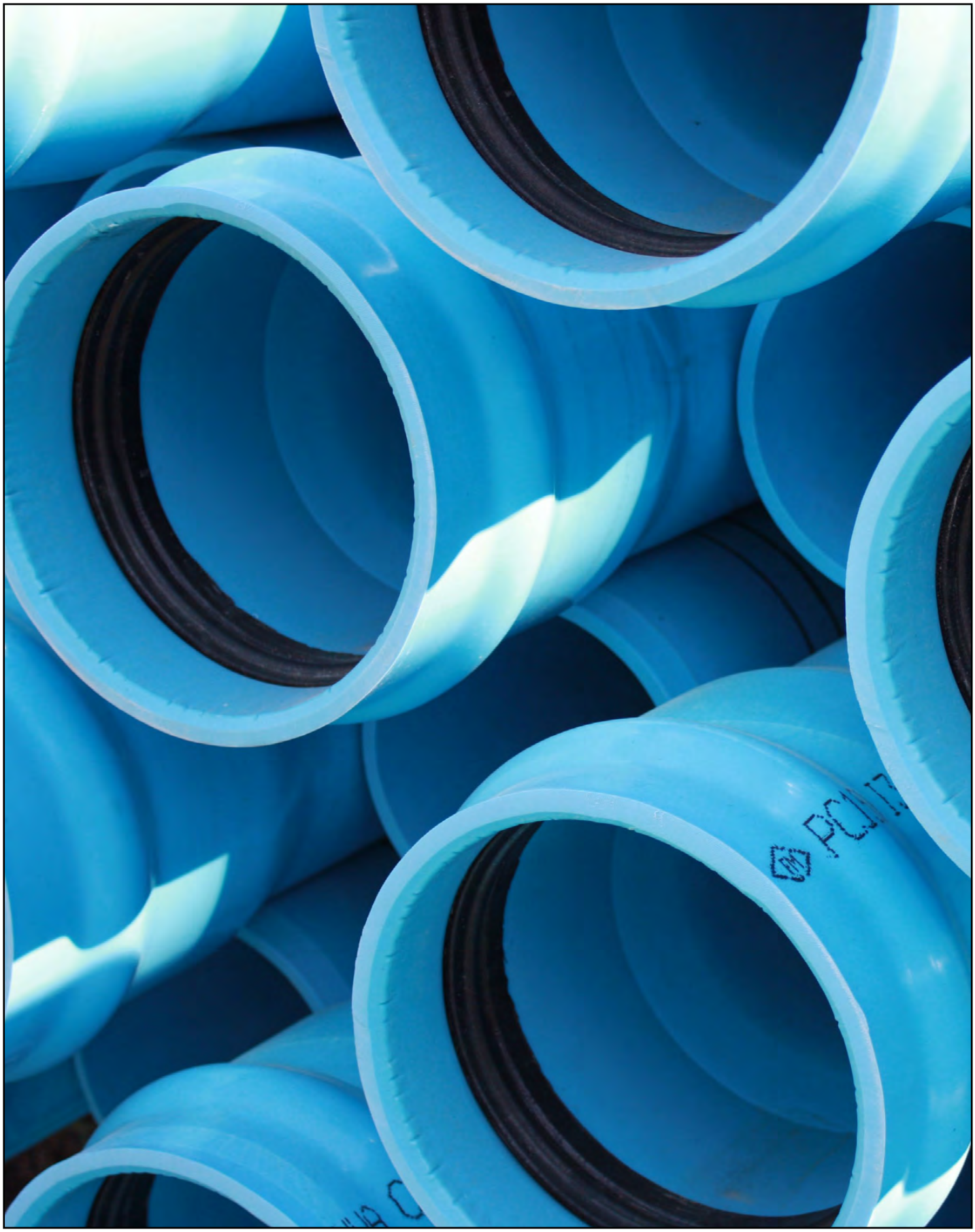
Strategy M2.2.2
Require new development to dedicate right-of-way for widening and new location roads.

Transportation Priority Projects Map

The following map and accompanying table identify ten priority transportation projects for the Town. These projects will be further vetted during the Capital Metro Area Southeast Area Study.



PRIORITY PROJECTS		
Project #	**Name**	**Concern/Source**
INT-1	US 70 Bus Hwy W @ Shotwell Road	Level-of-service and safety improvements
NL-1	Southern Connector	New location roadway from NC 42 to US 70
NL-2	Northern Connector	New location roadway from Covered Bridge Road to NC 42
SS-1	Main Street Streetscape Improvements	Aesthetic and safety improvements into and through Downtown Clayton
BP-1	Downtown-Sam's Branch Greenway Connection	Add greenway connection from Downtown Clayton to Sam's Branch Greenway
BP-2	Cooper Elementary Pedestrian Connections	N Mial Street, E Stallings, Lombard Street, Wilson Street Sidewalks
BP-3	NC 42 West Sidewalks	Add sidewalks during widening (TIP Road Project R-3410)
BP-4	Mountains To Sea Trail (Middle Segment)	Sam's Branch Greenway and Existing MST to NC 42 West
BP-5	Mountains to Sea Trail (East Segment)	NC 42 to East Clayton Community Park
BP-6	Front Street Pedestrian Connection	From Front Street to MST (along Hwy 42) to Glen Laurel on Greenway Map



Think Utilities

Residents have reliable water, sewer, electric and solid waste services. Clayton's growth occurs where adequate infrastructure exists to support the influx of residents and employers.

Goals and Recommendations

GOAL U1

Invest in utility infrastructure that supports land use patterns envisioned by the Future Land Use Map.

Objective U1.1

Consolidate infrastructure where appropriate.

Strategy U1.1.1

Periodically review existing infrastructure for potential efficiency improvements and consolidation opportunities.

GOAL U2

Ensure adequate water and sewer capacity to support quality development.

Objective U2.1

Require that adequate water and sewer infrastructure is available to support development.

Strategy U2.1.1

Review future development to ensure that necessary infrastructure (a) is available or will be in place when development occurs; (b) is funded; or (c) is addressed by a developer through performance guarantees.

Strategy U2.1.2

Track water/wastewater allocation approvals for proposed developments.

Strategy U2.1.3

Require annexation to connect to the Town's water or wastewater system.

Objective U2.2

Plan for adequate future water and wastewater needs.

Strategy U2.2.1

Coordinate closely with Johnston County and the City of Raleigh to ensure the Town's estimates of future wastewater needs and flows based on population projections, development activity, and wastewater generation estimates are met.

Strategy U2.2.2

Implement and update the Five-Year Local Water Supply Plan as required by the State of North Carolina.

Strategy U2.2.3

Study capacity of water and sewer infrastructure as a component an update for the Downtown Master Plan.

GOAL U3

Support the conservation and reuse of water.

Objective U3.1

Support innovative site and street design that reduces the impact of the built environment on water quality including exceeding requirements for riparian buffers and incorporating pervious pavements, rain gardens, bio-swales, stormwater planters and other features in new development.

Objective U3.2

Continue to enforce stormwater ordinances in coordination with Johnston County.

Strategy U3.2.1

Ensure flows are based on population projections and development activity.

GOAL U4

Coordinate the timing and location of electric utilities to minimize cost and service disruptions.

Objective U4.1

Improve electric service to accommodate growth in a timely manner.

Strategy U4.1.1

Encourage new development to utilize the Town's electric system.

Strategy U4.1.2

Construct a new sub-station on the northern side of Town.

GOAL U5

Encourage undergrounding of overhead utilities and co-location of utilities to reduce aesthetic impacts.

Objective U5.1

To the extent feasible, require underground utility networks in new developments in Town's service area.

Strategy U5.1.1

Where significant work in existing rights-of-way will occur, pursue underground or buried lines where existing overhead lines are presently located.

GOAL U6

Continue to provide support for solid waste service.

Objective U6.1

Support and encourage the collection of waste and recycling of materials.

Strategy U6.1.1

Coordinate with waste service providers to provide adequate solid waste facilities for development.

Strategy U6.1.2

Continue to provide yard waste pick-up to residents within Town limits to reduce yard waste in landfills.

CLAYTON
FIRE DEPT.
C.F.D.

Think Intergovernmental Coordination.

Clayton provides unparalleled services and facilities to citizens. From the library, to police and fire service, residents feel safe, secure and comfortable in all areas of Town.

Goals and Recommendations

GOAL IC1

Coordinate with local, regional, state, and federal agencies to ensure consistency among plans and policies, identify and resolve conflicts, and promote cooperation.

Objective IC1.1

Facilitate communication between the Town and other governmental entities.

Strategy IC1.1.1

Support and facilitate coordination of planning with Johnston County Schools for the location and development of public educational facilities to support both existing and future population growth.

Strategy IC1.1.2

Expand coordination with Johnston County Schools by tracking approved developments.

Strategy IC1.1.3

Coordinate and assist Johnston County with the five-year updates to the Multi-Jurisdictional Hazard Mitigation Plan.

Strategy IC1.1.4

Operate the Emergency Operation Center for conducting emergency services during major storm events and other natural or human-caused disasters.

Think Natural Resources.

Clayton is celebrated for its unique natural resources and new development respects these assets. Water quality in the Neuse River has improved and supports recreation, tourism and the protection of rare aquatic species.

Goals and Recommendations

GOAL NR1

Protect and enhance Clayton's natural resources.

Objective NR1.1

Preserve key natural areas while accommodating new development.

Strategy NR1.1.1

Continue to discourage development in Primary Resource Conservation Areas (PRCAs), which include floodplains, protected riparian buffers, and wetlands.

Strategy NR1.1.2

Encourage the conservation of Secondary Conservation Areas (SRCA), which includes areas of high biodiversity (identified on the NCDENR Biodiversity and Wildlife Habitat Assessment), Natural Heritage Natural Areas, mature forest, un-protected riparian areas (>50 ft away from perennial streams), rock outcrops, vernal pools, seeps, heath bluffs, steep slopes, vistas, and other unique natural features.

Strategy NR1.1.3

Encourage the incorporation of SRCAs as passive recreational amenities into the design of new developments.

Strategy NR1.1.4

Create and maintain an inventory of public and private open space.

Objective NR1.2

Preserve and enhance the Town's tree canopy and other green infrastructure.

Strategy NR1.2.1

Preserve and enhance the Town's tree canopy by developing a local tree ordinance or by preparing a Street Tree Planting Master Plan to address areas where retrofitting existing streets with trees would add to the comfort of pedestrians and/or improve aesthetics, or where publicly-owned properties would benefit.

Strategy NR1.2.2

Consider the incorporation of green infrastructure planning elements into town funded plans at the planning area, small-area, site and project levels. These elements should address tree canopy and stormwater enhancements needed in the study areas.

Objective NR1.3

Preserve high quality, connected open space.

Strategy NR1.3.1

Consider including the NCDENR Biodiversity and Wildlife Habitat Assessment in the development review process by creating project-specific maps using the North Carolina Natural Heritage Data Explorer.

Strategy NR1.3.2

Support and encourage protection of connected and intact habitats and corridors by locating passive recreation areas adjacent to PRCA and SRCAs on adjacent parcels.

Strategy NR1.3.3

Encourage open space subdivisions, which allow density bonuses in return for preservation of habitat and open space.

Strategy NR1.3.4

Consider requiring an Existing Resources Map (ERM) for all projects over 50 acres. This map should show tree canopy or stands of mature trees, areas high in biodiversity (see NR1.3.1), and any other significant features as determined by a biologist, landscape architect, environmental engineer, or conservation planner based on existing GIS data and a site walk (preferably occurring in the spring).

Strategy NR1.3.5

Support the Johnston County Green Infrastructure Plan by encouraging integrated, usable, high quality and connected open space in new developments.

GOAL NR2

Protect water quality and quantity.

Objective NR2.1

Protect water quality and quantity in the Neuse River and major tributaries by supporting Low-Impact Development (LID) strategies.

Strategy NR2.1.1

Revise the UDC to support additional innovative site and street design that reduces the impact of the built environment on water quality including exceeding requirements for riparian buffers and incorporating pervious pavements, rain gardens, bio-swales, stormwater planters and other features in new development.

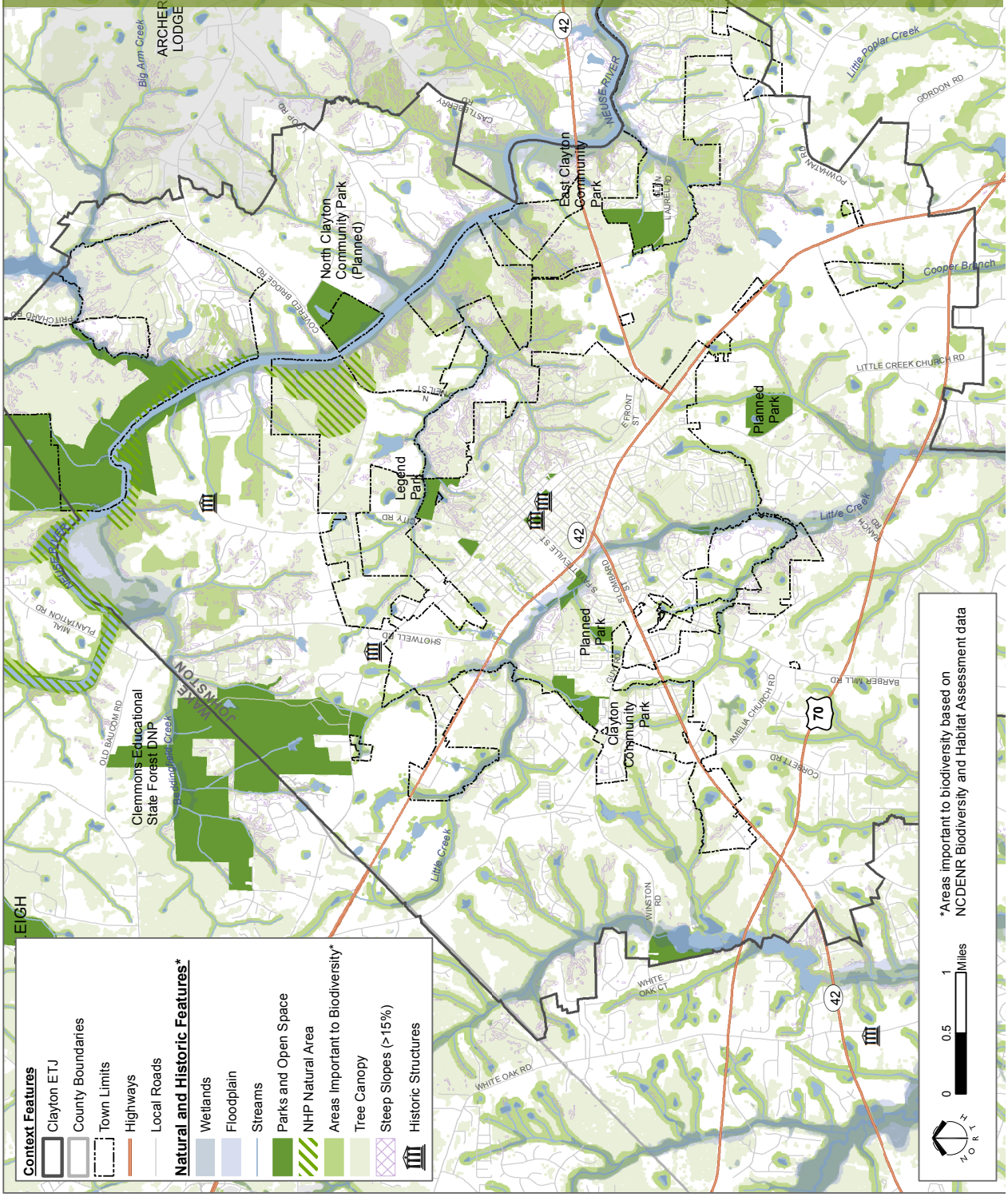
Strategy NR2.1.2

Offer density bonuses for the (1) preservation of large stands of mature upland and riparian forests, (2) restoration of riparian forest on previously cultivated lands that are proposed to transition to residential use.

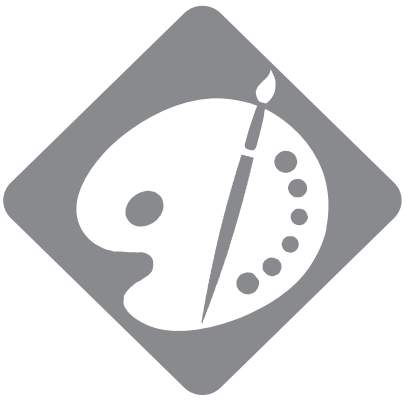
Strategy NR2.1.3

Discourage mass grading in Medium Density Residential, Low Density Residential and Rural Residential areas.

Natural and Historic Features Map



Think Arts and Culture.



Clayton is a regionally-recognized arts, culture and event destination. Creative entrepreneurs continue to live and work in Clayton. Galleries, showrooms and studios line Main Street. Downtown is the epicentre of Clayton's creative economy.

Goals and Recommendations

GOAL AC1

Support Clayton as a regional destination for cultural and arts-based tourism.

Objective AC1.1

Support a strong public art presence and implement strategies to enhance and expand public art in Downtown.

Strategy AC1.1.1

Coordinate with Clayton Visual Arts and the Public Arts Advisory Board to enhance existing or establish new public art events in the Downtown.

Strategy AC1.1.2

Provide opportunities to install public art at key Town gateways:

- Expand the number and type of public art displays; and
- Allow elements of the public realm (sewer manholes, transformers, etc.) which are owned and maintained by the Town) to serve as canvasses for local artists.

Objective AC1.2

Market Clayton as a destination for cultural and arts-based tourism.

Strategy AC1.2.1

Develop a market strategy to position Clayton as a regional destination for cultural and arts-based tourism.

Strategy AC1.2.2

Prepare marketing materials to support public art and culture in Clayton such as the Downtown Sculpture Trail brochure.

JOHNSTON COUNTY NORTH CAROLINA

*** * * DISCLAIMER * * ***

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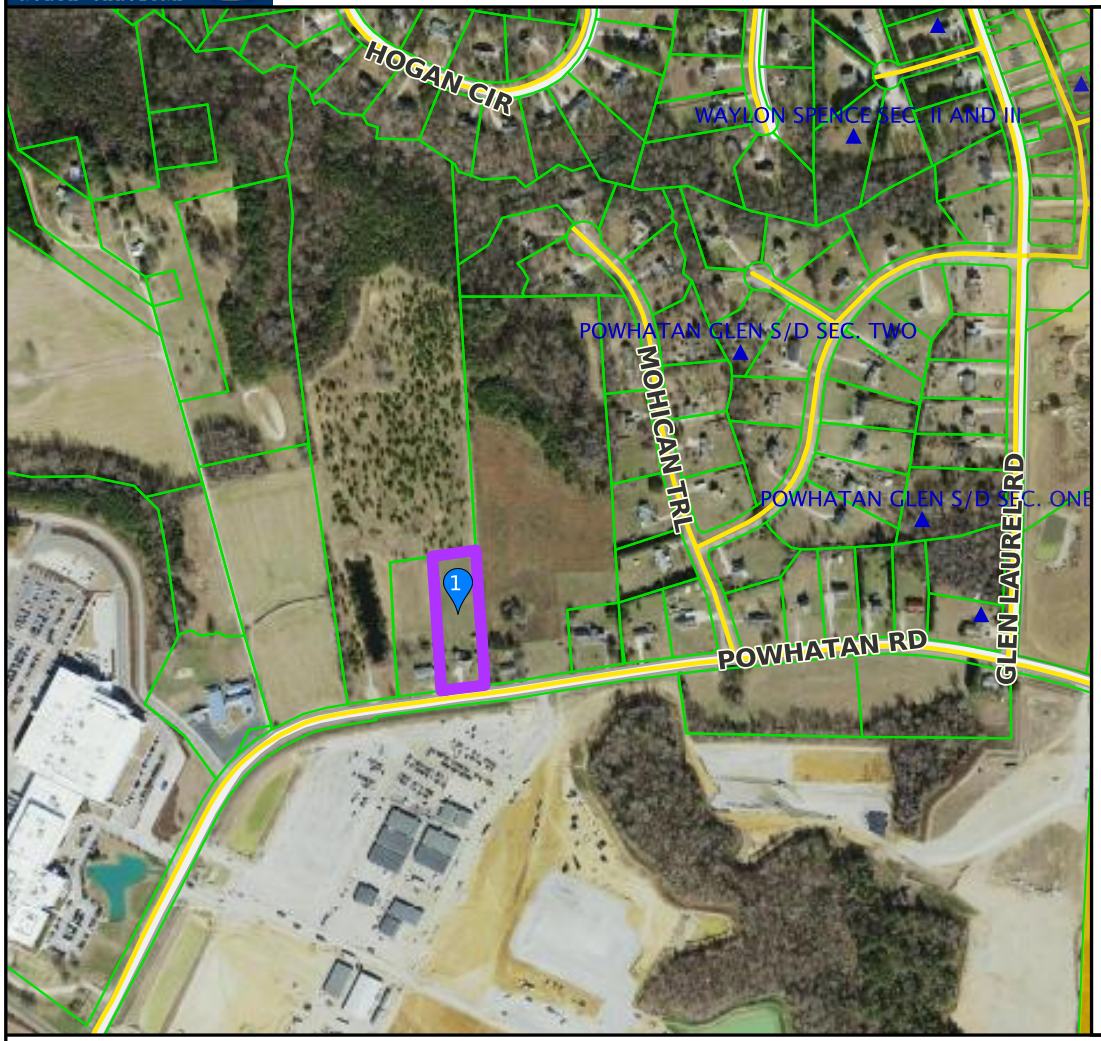

Result 1

id:	05I05004A
Tag:	05I05004A
NCPin:	167804-61-7520
Mapsheet No:	167804
Owner Name 1:	SMITH, LARRY
Owner Name 2:	SMITH, LINDA T
Mail Address 1:	3352 POWHATAN RD
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27527-0000
Site Address 1:	3352 POWHATAN RD
Site Address 2:	CLAYTON, NC 27527-
Book:	03598
Page:	0783
Market Value:	267510
Assessed Acreage:	1.670
Calc. Acreage:	1.680
Sales Price:	0
Sale Date:	2008-09-08

Scale: 1:6976 - 1 in. = 581.37 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
May 19, 2020

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tabs.ultimate-guitar.com

206 :: ZipForm...line :: Login | zipForm® Plus 1711.3 | MADMAN ACR...Guitar.Com | craigslist: ral...ty, and events | Dropbox | TD Ameritrade | DocuSign | Caviness and ... Shared Files | Paragon Login | Inbox (551) -...ger Team Mail | Yahoo | Apple

Inbox (551) - david@orringerteam.com - Nicole Orringer Team Mail | MADMAN ACROSS THE WATER CHORDS (ver 2) by Elton John @ Ultimate-Guitar.Com

Getting Started | Connect by HomeSpott...
help.homespotter.com
Welcome to HomeSpotter mobile app support!

GoToStage.com
gotostage.com
PUBLISH ON GOTOSTAGE ABOUT US SIGN IN Power...

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WebSelfStorage Tutorials & Updates The U-Haul Se...

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https://www.google.com/shop...
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Kichler - 56" 2 Blade Indoor Fan Satin Black wit...

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foxnews.com
Breaking News, Latest News and Current News f...

Basic Search
bttaxpayerportal.com
Johnston County Web Site Basic Search Choose a se...

nicoleorringer
207.198.117.59

Powhatan Rezoning Use Chart

1 message

David Orringer <david@orringerteam.com> Sat, Jul 25, 2020 at 12:40 AM
To: kmoffett@townofclaytonnc.org, bbunn@townofclaytonnc.org, aholder@townofclaytonnc.org, mgrannis@townofclaytonnc.org, jthompson@townofclaytonnc.org, aeverett@townofclaytonnc.org
Cc: Nicole Orringer <nicole@orringerteam.com>
Bcc: James <james@myhtr.com>, "George (Bucky) Coats" <gcoats3@aol.com>

Dear Council members. I wanted to touch base with yall and see if there are any questions or discussions any of yall want to have with me regarding the I-1 rezoning. I have attached **Table 2-1 Use Regulations**-the current zoning use chart in I-1 district. I think it is important to know exactly what is permitted and not, and knowing how S Special Use and C Conditional Use zonings require Town Council Approval or Board of Adjustments approval. **The list of P Permitted uses are exactly what we want in the I-1 zoning category with several exceptions.**

Click on Attachment Powhatan Zoning Uses at the bottom of the page

After studying the permitted uses, they are exactly what I would expect to see in an industrial area with exception to several uses, permitted, special, and conditional. (I red lined them on the attachment) It is very important that all decision makers understand that a gun range or an adult oriented business could **only** be approved as a **Special Use if the Town Council approved it. That would be your decision!** S - Special Use permitted in the zoning district only if approved by the Town Council (TC) (§155.711).

There are several P permitted uses that I would see not desirable (Crematorium, Gas & Fuel Wholesale). Otherwise I think these are exactly the uses that is in demand, and the highest and best uses for this property, and the future of the neighbors properties. Clayton has **zero** of this type of property available for sale or lease. We'll never get the customers if we don't have the zoned sites. Also note this property is located in a federal designated Opportunity Zone.

It's now 2020- 5 years since many of you, your peers, and many others agreed on October 5, 2015 to adopt the vision of the future with **The Comprehensive Plan 2040**. It will be several years before any EC Employment Center development opportunities will be available or constructed if we start right now. It'll be 2025 before you know it. Trust the plan. That's why it was developed. To take the emotions out of it and keep the vision the focus.

I want to do exactly what the comprehensive land plan is requesting.

Please read the uses. What do you think Clayton would want there? I see warehousing, both large and small spaces. Possibly RD facility or a lab. Or, I could see a nice self storage facility there.

I don't see any reasons why the town council would not support any of these P Permitted uses. If other uses are not favorable for the area, please call them out. I don't want uses that would not be good for the town and community, but I want this to happen. Buffers and setbacks will be designed and required to buffer the neighbors property. Please help!

I also attached a copy of the **Comprehensive Plan 2040** to reference.

Please advise your thoughts. Thanks.

--
Sincerely,

Williams-Crocker and Associates, LLC
Appraisals and Land Research
109 S. Third Street, Smithfield, NC 27577
(mail) 119 Hood Farm Road, Clayton NC 27520
919-989-9111

Mr. David Orringer
Owner
Via Email

Dear Mr. Orringer:

Per your request, I have considered the +/-22.15-acre parcel of land located on Powhatan Road. This parcel of land is presently vacant and it is my understanding that you are in the process of seeking the rezoning of the land for commercial purposes.

My understanding is that you wish for me to offer my opinion, as a professional real estate appraiser, as to whether this is the best use of the land, and what impact such use may have on adjoining parcels.

To address this, I offer the following:

To begin, I am a NC State-Certified General Real Estate Appraiser and have held this level of certification for 20+years. I began as a licensed trainee, and following two- and one-half years of the trainee process, gained certification. The General Certification differs from Residential Certification in that Residential is limited in the type of properties that may be appraised, primarily single-family homes, lots, multifamily up to four units and other types with transaction values less than $250,000. General Certification allows the appraiser to consider residential and nonresidential properties with no limitation. My appraisal experience has involved a wide array of residential and commercial properties, both vacant land and improved parcels.

In consideration of your parcel on Powhatan Road, the first item considered is the Highest and Best Use of the land. A definition is attached; however, the basic tenants are, "is the use 1) physically possible, 2) legally permissible, 3) economically feasible and 4) maximally productive." To address these items,

Physically Possible- the parcel is of a size that offers a wide range of potential development scenarios.

Legally Permissible- the present zoning of the land is RE Residential Estate. This zoning was put into place by the Town of Clayton when the planning jurisdiction was expanded from one mile to two miles from the city limits. The RE zoning was generally used as a blanket zoning for all undeveloped lands until such time as the land is considered for development and then rezoning was considered. This is the present case for your property. Though not zoned for other than residential use at this time, the Town of Clayton Comprehensive Plan 2040, adopted October 5, 2015, designates your parcel to be in an area defined as Employment Center, which also includes the Grifols and Novo plants and other commercial uses in and around the intersection of US 70 and Powhatan Road and also Pony Farm Road. As such, though not currently zoned non-residential, the land is considered as a non-residential parcel.

Economically Feasible- the site is well located in terms of proximity to commercial uses and with the continuing growth in the area, evidenced by the ongoing expansion of the Grifols and Novo campuses, along with smaller developments, such as the Automated Rolls plant and the newly constructed flex building adjacent, development of your parcel is considered economically feasible.

Maximally Productive- this aspect is often defined as "how long with this use last?" In consideration of the existing and present development activity in the area, commercial development of the parcel has high potential of having utility for a 50+ year time frame. The area has a lengthy history of commercial uses. Beginning 50+ years ago, the Davis general store was located on the corner of Powhatan Road and US 70 and is now home to the Speedway convenience store. Commercial/industrial use began with Cutter Laboratories and Natvar, and has continued to expand into the largest industrial site in the county and does not appear to offer any indication of abatement.

Based on these four tests, it is my opinion that the Highest and Best Use of the land is for commercial/industrial use.

The second question that you have asked me to address is will the desired zoning change have a negative impact on the value of the adjoining properties. First, I must remind you, this is not an appraisal of the lands, and no value opinion is offered. This is strictly an opinion of impact based on my training, knowledge and experience. Secondly, this is Market Value, definition attached, which is what will the property transact for if placed on the open market with good exposure to the purchasing public.

It is my opinion that the proposed rezoning will not have a negative impact on the adjoining lands. I offer this based on consideration of the adjoining parcels. To the rear, or north of your land is an existing part of Glen Ridge Subdivision, and these lands are in effect

buffered by the creek that forms your rear property line and the wooded and sloping land approaching this creek. The land to the west is comprised of three vacant parcels, one of which is owned by Grifols, and all are included in the future Employment Center plan. The land south, or 'across the street' is a part of a +/-285 acre parcel that is being developed as an expansion of the Novo Nordisc campus and is presently I-1 Industrial. To the east are several parcels, two on the northern end are the rear of large sized residential lots in Powhatan Glen Subdivision, and the rear of these lots are heavily wooded and with the wooded and sloping nature of your land at the rear, these are naturally buffered. The remaining land along this border is vacant woods/cropland/pastureland.

*The two parcels that adjoin your site to the southeast are located with frontage on Powhatan Road and one adjoins your land on their western and northern border and the other adjoins the first to the east and has a common rear border with your land. These parcels are both improved with single family homes. Per the Comprehensive Plan 2040, these parcels are excluded from the Employment Center designation. In consideration of impact on these lands, it is my opinion that the value will not be damaged by a rezoning or your land. I say this based on my experience in the market and having noted a number of historically residential uses being incorporated into commercial use, or development, and that the prices paid equaled or exceeded the value as a residence. This comes into play in downtown areas as the town center expands. Note First Street and Second Street in Clayton, and the expansion of Main Street. The same is true in the downtown Smithfield area where my office has been located 20+ years. In addition to in town areas, the development of the Johnston Health project on NC 42 W involved both vacant lands and also the purchase of several residential parcels. These conveyed in the process, and were either razed for new construction or held for interim use as the development of the area gained traction. For a closer consideration, the land to the rear, or east, of the Speedway store at the intersection of Powhatan Road and US 70 was a large lot with some vacant land and a home, and was purchased, an office constructed, then a self-storage was added and home demolished for outside storage, and then the adjoining home was purchased and demoed for added land. Other homes on Powhatan have been converted to commercial use, while some have remained residential. Once placed on the market, the likely buyer will be for a commercial use. It is my belief that this would be the outcome for the two homes that adjoin your lands.

Please let me know if you have any questions or comments,

Sincerely,

Marc P. Jones
Williams-Crocker & Associates, LLC

JOHNSTON COUNTY
NORTH • CAROLINA

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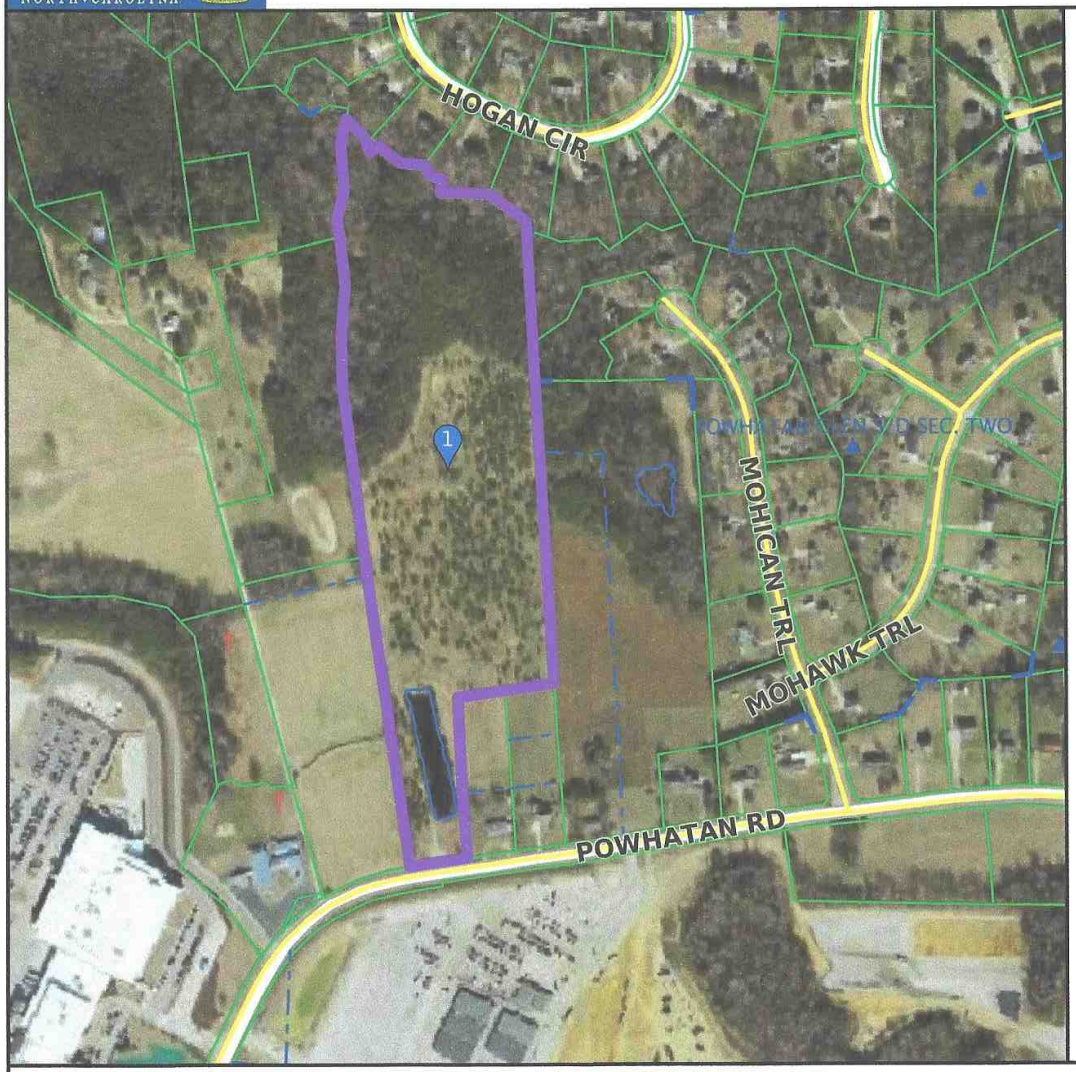


Result 1

id:	05I05004
Tag:	05I05004
NCPin:	167804-62-4440
Mapsheet No:	167804
Owner Name 1:	ORRINGER, DAVID S.
Owner Name 2:	ORRINGER, NICOLE W.
Mail Address 1:	3508 QUEEN ANN DR
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27527-8713
Site Address 1:	
Site Address 2:	
Book:	04885
Page:	0488
Market Value:	198270
Assessed Acreage:	22.150
Calc. Acreage:	22.330
Sales Price:	0
Sale Date:	2016-12-22

Scale: 1:6000 - 1 in. = 500 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
March 14, 2020

HIGHEST AND BEST USE

The highest and best use for real property can be defined as follows:

> *"The reasonably probable and legal use of vacant land or improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value."*[1] It is the highest present value, as defined, as of the date of the appraisal.

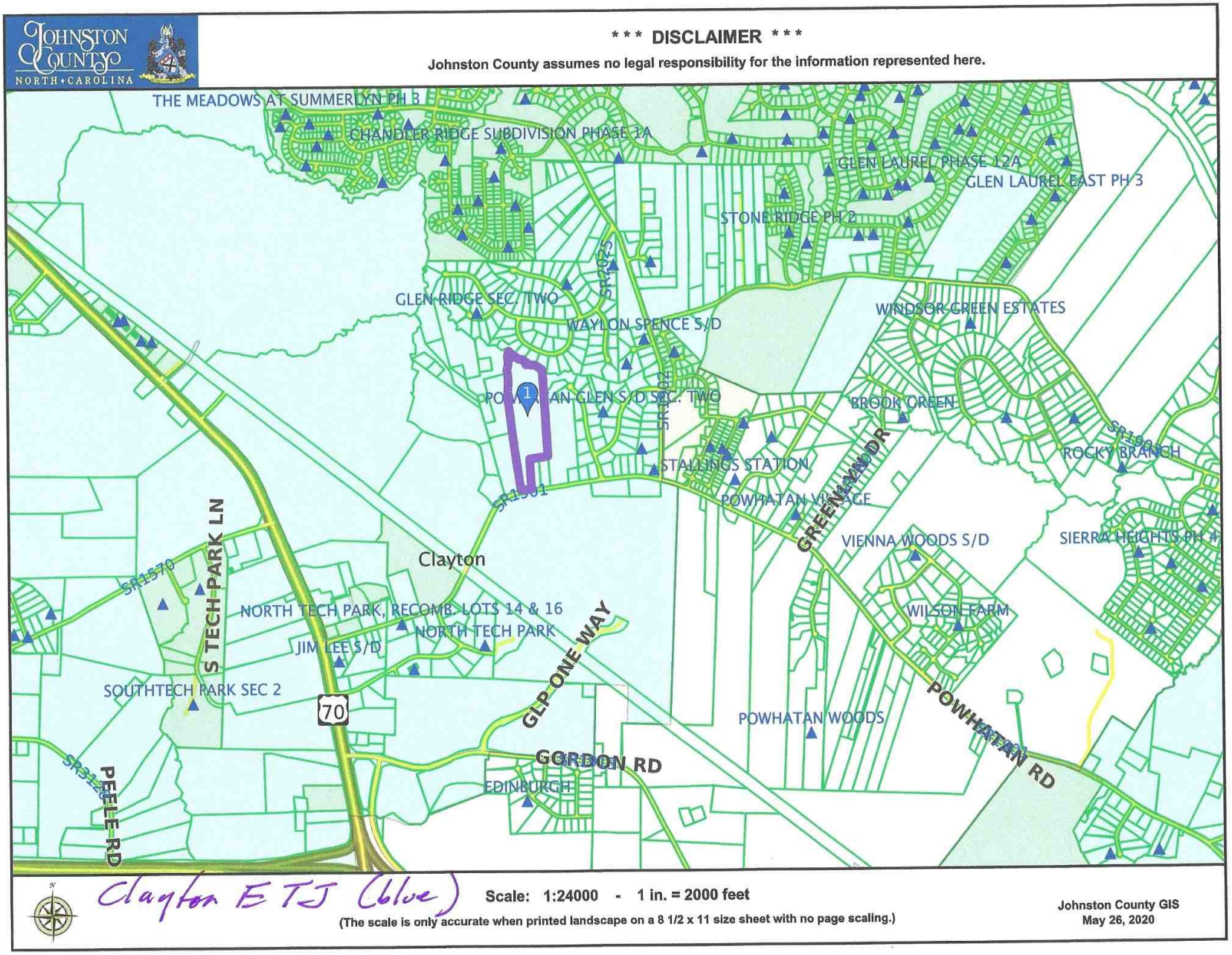
The first type of highest and best use of the land or a site as though vacant, assumes that a parcel of land is vacant or that it can be made vacant through demolition of any improvements. The question to be answered in this type of analysis is "what use would be made of the property?"; that is, what type of building or improvement (if any) should be constructed on the land?

The second type of highest and best use, the highest and best use of a property as improved, pertains to the use that should be made of the property as it exists. Should the existing improvements be maintained, renovated, expanded, partially demolished or should it be replaced with a different type of use?

The purpose of the highest and best use analysis is different for each type of highest and best use examined. For each type of highest and best use, the criterion in a highest and best use study are that the highest and best use must consider whether something is 1) physically possible, 2) legally permissible, 3) financially feasible, and 4) maximally productive.

According to **THE APPRAISAL OF REAL ESTATE, 14TH EDITION,** as published by the Appraisal Institute, the highest and best use allows the appraiser *"to identify the property's optimum use in light of market conditions on a specific date."*

The Dictionary of Real Estate Appraisal, 3rd Edition, page 171, as published by the Appraisal Institute, Chicago, Illinois 1998


JOHNSTON COUNTY
NORTH • CAROLINA
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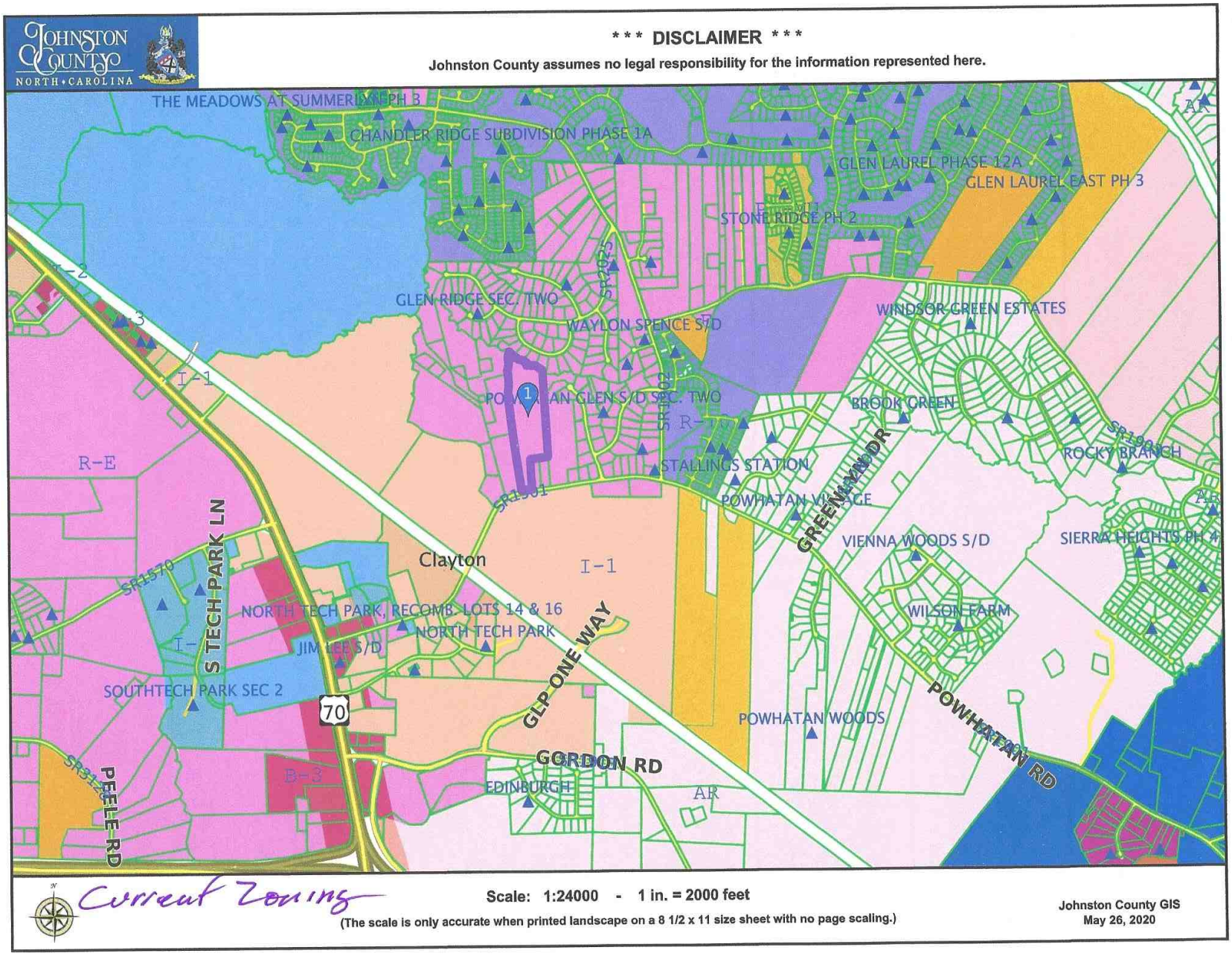
THE MEADOWS AT SUMMERLYN PH 3
CHANDLER RIDGE SUBDIVISION PHASE 1A
GLEN LAUREL PHASE 12A
GLEN LAUREL EAST PH 3
STONE RIDGE PH 2
GLEN RIDGE SEC. TWO
SR1075
WAYLON SPENCE S/D
WINDSOR GREEN ESTATES
POWHATAN GLEN S/D SEC. TWO
BROOK GREEN
SR1900
ROCKY BRANCH
STALLINGS STATION
POWHATAN VILLAGE
GREENHAND DR
SR1901
VIENNA WOODS S/D
SIERRA HEIGHTS PH 4
Clayton
SR1570
S TECH PARK LN
NORTH TECH PARK, RECOMB. LOTS 14 & 16
NORTH TECH PARK
JIM LEE S/D
WILSON FARM
SOUTHTECH PARK SEC 2
70
GLP ONE WAY
POWHATAN WOODS
POWHATAN RD
GORDON RD
EDINBURGH
SR3128
PEELE RD
Clayton ETJ (blue)
Scale: 1:24000 - 1 in. = 2000 feet
(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)
Johnston County GIS
May 26, 2020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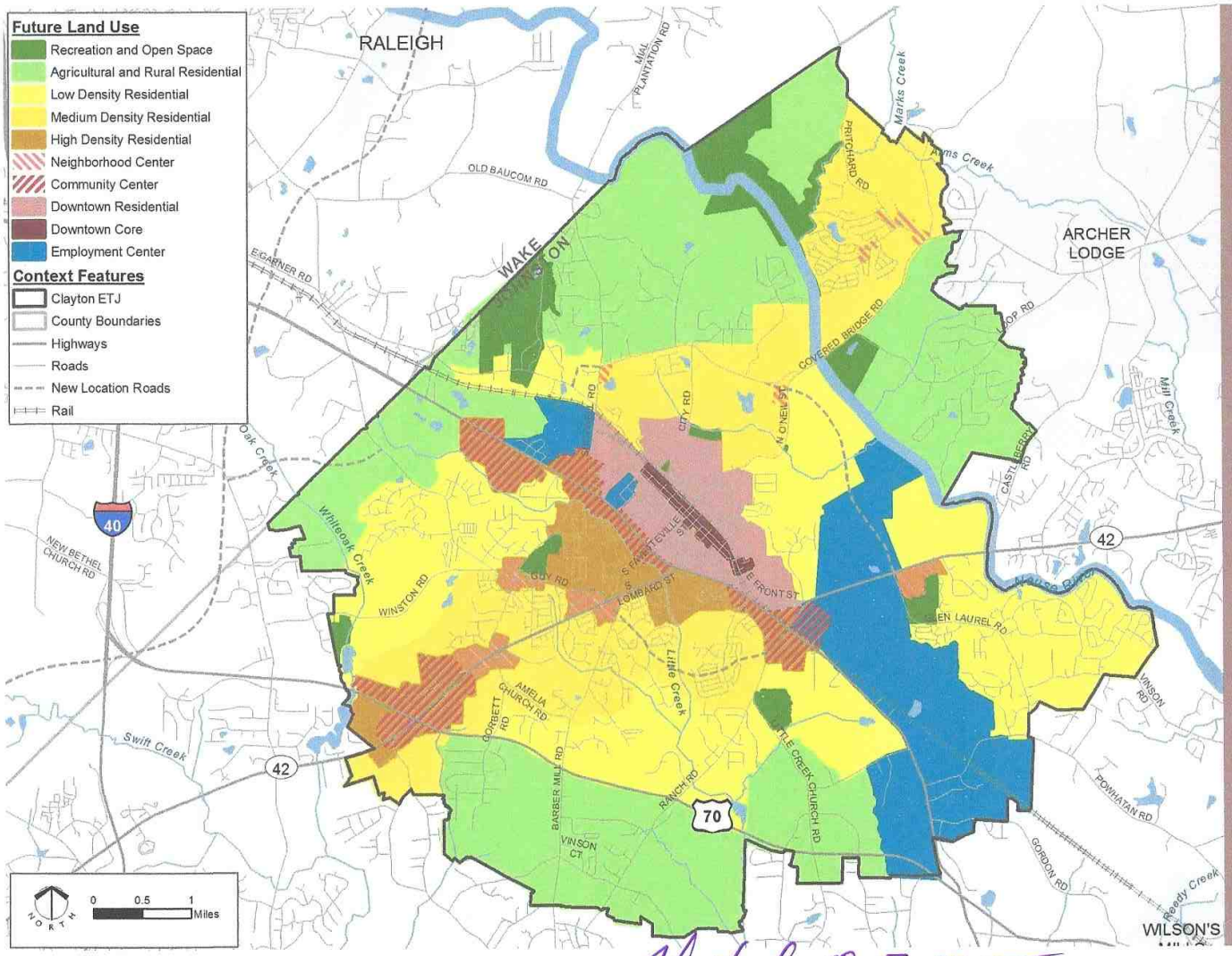
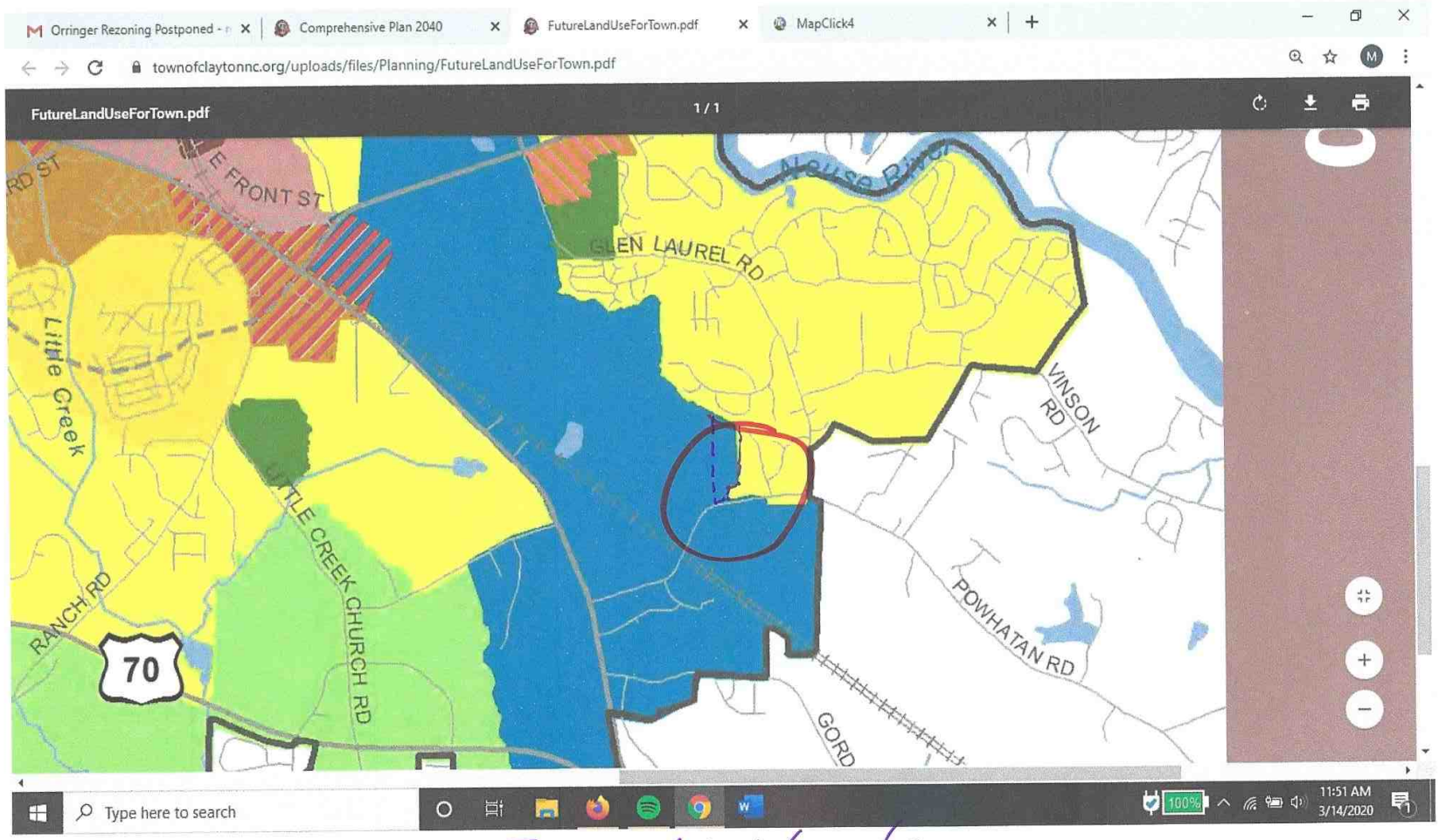
GLEN RIDGE SEC. TWO
WAYLON SPENCE S/D
WINDSOR GREEN ESTATES
POWHATAN GLEN S/D SEC. TWO
BROOK GREEN
ROCKY BRANCH
STALLINGS STATION
POWHATAN VILLAGE
GREENMAN DR
VIENNA WOODS S/D
SIERRA HEIGHTS PH 4
WILSON FARM
POWHATAN WOODS
POWHATAN RD
Clayton
I-1
R-E
S TECH PARK LN
NORTH TECH PARK, RECOMB. LOTS 14 & 16
NORTH TECH PARK
JIM LEE S/D
SOUTHTECH PARK SEC 2
70
GLP ONE WAY
GORDON RD
EDINBURGH
B-3
AR
PEELE RD
SR1570
SR1501
SR2025
SR1900
SR3142
Current Zoning
Scale: 1:24000 - 1 in. = 2000 feet
(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)
Johnston County GIS
May 26, 2020

Future Land Use Map



Adopted 10-5-2015



Zoomed to subject

DEFINITION OF MARKET VALUE

The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sales as of a specified date and the passing of title from seller to buyer under conditions whereby: (1) buyer and seller are typically motivated; (2) both parties are well informed or well advised, and each acting in what he considers his own best interest; (3) a reasonable time is allowed for exposure in the open market; (4) payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and (5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Unless otherwise stated in the body of this report, the source of the definition of market value is defined by the Office of the Controller (CFR) 12 Paragraph 323.2G. Part 34.

*Adjustments to the comparables must be made for special or creative financing or sales concessions. No adjustments are necessary for those costs which are normally paid by sellers as a result of tradition or law in a market area; these costs are readily identifiable since the seller pays these costs in virtually all sales transactions. Special or creative financing adjustments can be made to the comparable property by comparisons to financing terms offered by a third party Institutional lender that is not already involved in the property or transaction. Any adjustment should not be calculated on a mechanical dollar for dollar cost of the financing or concession but the dollar amount of any adjustment should approximate the market's reaction to the financing or concessions based on the appraiser's judgment.

Williams-Crocker and Associates, LLC
Appraisals and Land Research
109 S. Third Street, Smithfield, NC 27577
(mail) 119 Hood Farm Road, Clayton, NC 27520
919-989-9111

PERSONAL RESUME

Marc P. Jones
119 Hood Farm Road
Clayton, NC 27520

North Carolina State-Certified General Real Estate Appraiser #A4726

North Carolina Licensed Real Estate Broker #134824

North Carolina Licensed Auctioneer #4993

General Education		
High School		Graduated 1976, Smithfield Selma Senior High School, College Prep
College	9/76 to 5/78	Western Carolina University Business Administration
	9/78 to 5/81	Campbell University Graduated Double Major Business Administration and Accounting
	Fall/Spring 84-85	University of North Carolina Public Administration School
Employment Specific Education		
Real Estate		Johnston Community College Real Estate Principals Real Estate Finance Real Estate Law Brokerage Operation
Auctioneer		Two Year Apprenticeship Williams Auction Company
Real Estate Appraisal		Residential R-1, R-2, R-3 General G-1, G-2, G-3
Continuing Education		All required and optional continuing education in Real Estate, Auctioneering and Real Estate Appraisal, +/- 20 hours annually. Primary focus is on courses most pertinent to General Appraisal practice.

FIRM RESUME

Williams-Crocker and Associates is a full-service real estate appraisal firm located in Smithfield, NC. The firm currently consists of one real estate appraiser. The firm represents a combined 30+ years of appraisal And real estate experience. The firm offers comprehensive real estate appraisal services of all types of real estate including, but not limited to; commercial, farms, residential, subdivision, estates, equitable distribution and estate settlement. Appraisal services are primarily performed in Johnston, Wake, Harnett, Wayne and Wilson Counties, however appraisal services are offered throughout eastern North Carolina.

Associates of the firm include:

Marc P. Jones
State of North Carolina General Appraiser #A4726. Mr. Jones is a graduate of Campbell University with a degree in Business Administration and Accounting. Mr. Jones has been active in the real estate brokerage field and auctioneering for 30 years and in the real estate appraisal field for 23+ years. Prior experience is 15 years in public and governmental finance. Mr. Jones has experience in residential subdivision development.

In addition to appraisal work, Mr. Jones has been qualified as an expert witness in North Carolina State Courts, District and Superior in Johnston, Wake, Wilson and Wayne Counties and also in both Federal Bankruptcy Court and Federal District Court in North Carolina. In addition, Mr. Jones has offered testimony as an expert witness to local governments in Johnston County.

Current clients include law firms, local and national financial institutions, governmental agencies, corporate and individual clients.

The firm offers timely, professional appraisal service at reasonable rates and are willing to meet the appraisal needs of the public.

Partial List of Clients

Financial Institutions: United Community Bank, First Citizens Bank and Trust, First Bank, KS Bank, Southern Bank, Branch Banking and Trust

Attorneys: Narron Wenzel, Lynch and Eatman, Wilkins and Wellons, Mast Law Firm, Daughtry, Woodard, Lawrence and Starling, Allen R. Tew, Senter, Stephenson and Johnson, Kristoff Law Offices, Spence and Spence, Martin Tetreault

Governmental: Town of Clayton, Town of Smithfield, Town of Selma, Town of Benson, Town of Princeton, Johnston County, Clerk of Superior Court, Johnston County (court appointed commissioner

MLS #:**774615** **CLOSED** **LAND** LP: **$520,000**

Exterior Front

0 Powhatan Drive

Lot #: 0
SubArea: 325/C

Road Frontage
Property Leased
Lease Expires

Clayton , NC 27520

Subdivision: Not in a Subdivision **Neighborhood:**

Seller Name: T.S. Barbour **SP:** $300,000 **Est Closing Dt:**2/16/2006

School Information

ElemSch1 Johnston - E Clayton **ElemSch2**
MidSch1 Johnston - Riverwood **MidSch2**
HighSch1 Johnston - Clayton **HighSch2**

Directions From Raleigh to 70 East, Left on 42 east, Right on Glen Laurel Rd, Right on Powhatan. Property right side.

Remarks This a large tract of land close to the Bayer plant (Hwy 70). Could possibly be divided in 10 acre tracts or development or keep as is. It has a large pond, lots of privacy.....

General Information

Approximate Acres 20.000 **Wooded Acres** 10.00 **Cleared Acres** 10.00 **Price per Acre** 15,000.00
Perk Test No **Perk Test Date** **# of Beds Yielded** **Water/Sewer Fee** $1
Deed Restrictions 0 **Lot Dimensions** 0
Restrictive Covenant Rmks 0

Financing & Taxes

Tax Value $177,120.00 **Tax Rate** 0.78000 **Tax Map/Blk/Prcl/Lot**
Zoning **Total HOA Dues:** / **PIN #** 1678-62-3275
Legal Description 1678-62-3275 **Inside City** No
Financial Comments

Features

Property Type **Farm**
Location
Farm Use **Crop**
Vegetation **Cleared**
Water Supply **County On Site**

Topography **Level**
Road Description **Public Maintenance, Street Paved**
Restrictions **Can Divide**
Sewer/Septic **4 Br Max**

Showing Instructions

List Agent - License ID 14774
List Agent - Agent Name and Phone William E Parrish - PrfPh: 919 -269-7439
List Agent - Firm License C2332
Listing Office - Office Name and Phone Parrish Realty Company of Zebulon - OFC: 919-269-7439
Co-Agent - Agent Name and Phone

Showing Instructions Vacant
Appointment Phone 919-595-8989
Possession At Time Of Closing
CDOM 134
DOM 134
Prospect Exempt

Commission to Buyer Agent 3.0 **%**
Commission to Sub Agent 3.0 **%**
Variable Rate No

Waterfront

Waterfront Access
Water Body Name
Waterfront Type
Approx Ft of Wtr Frontage

Comparable Information

Selling Agent - License ID 14774
Selling Agent - Agent Name and Phone William E Parrish - PrfPh: 919-269-7439
Selling Office - Firm License C2330
Selling Office - Office Name and Phone Parrish Realty Company of Zebulon - OFC: 919-269-7439

Terms of Sale CASH
Sold Price $300,000
Closing Date 2/16/2006

Pending Date: 1/11/2006

Selling Info:

Financial Concessions (CC):

Other Concessions:

Special Circumstances:

Agent Only Remarks

PROPERTY HISTORY DETAIL

Address
0 Powhatan Drive
0
Clayton, NC 27520

MLS #774615

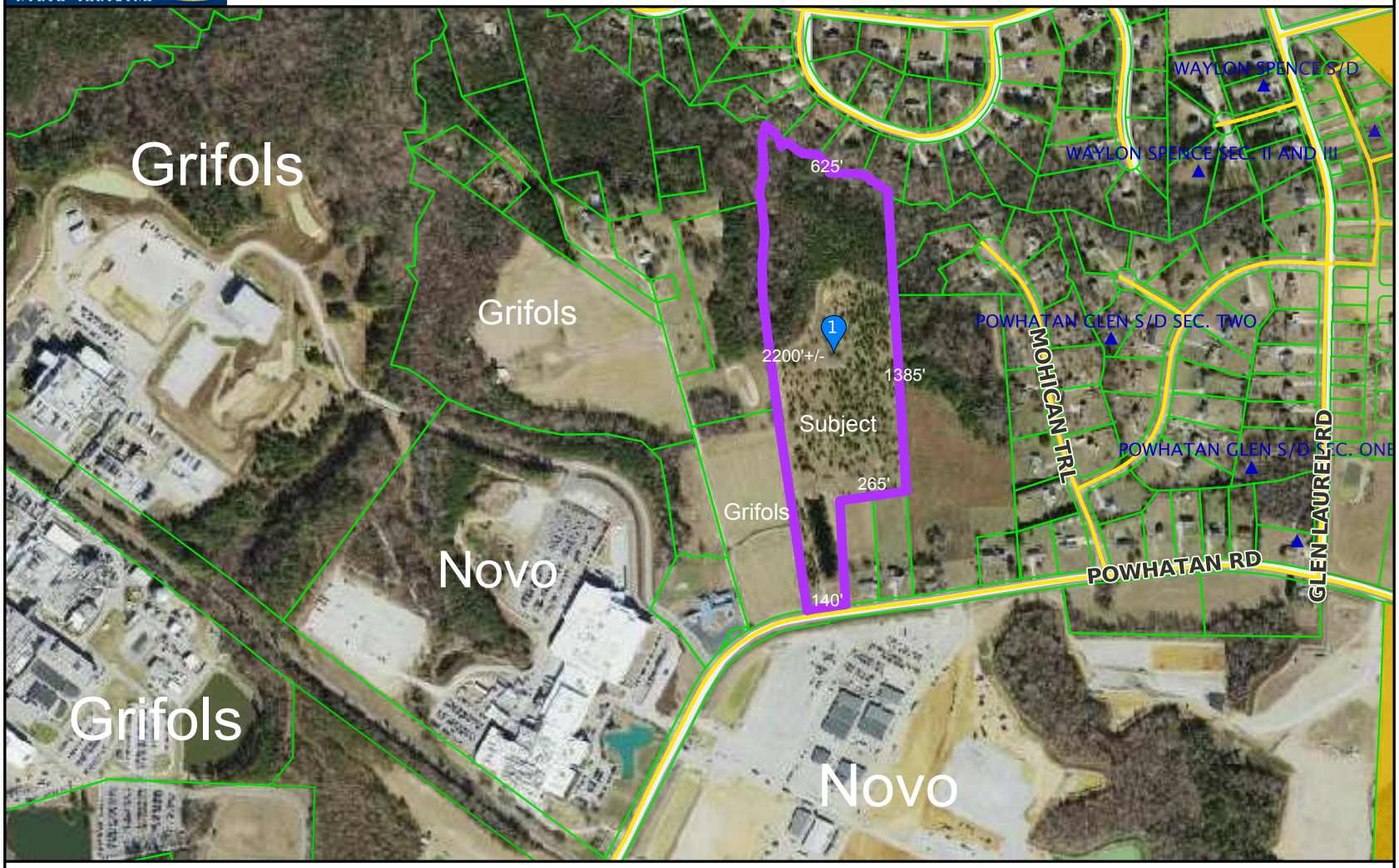
MLS # 774615 **Class** LAND **List Date** 11/22/2004 **CDOM** 134 **DOM** 134

Chg Date	Chg Type	Update Date	Status	Price	Closing Date
03/07/2009 4:27:00 PM	List Price	3/7/2009	CLOSED	$300,000	2/16/2006
02/16/2006 4:50:00 PM	List Price	2/16/2006	CLOSED	$300,000	
02/16/2006 4:49:00 PM	Status, Sold Price	2/16/2006	CLOSED	$300,000	
01/11/2006 3:04:00 PM	Status	1/11/2006	PENDING	$350,000	2/15/2005
01/11/2006 3:01:00 PM	Status	1/11/2006	ACTIVE	$350,000	
07/21/2005 7:53:00 PM	Status	7/21/2005	PENDING	$350,000	8/22/2005
05/26/2005 11:07:00 AM	Status	5/26/2005	ACTIVE	$350,000	
05/23/2005 12:17:00 PM	List Price, Status	5/23/2005	EXPIRED	$350,000	
05/21/2005 12:15:00 AM	Status	5/21/2005	CONTINGENT	$400,000	
02/08/2005 10:07:00 AM	Status	2/8/2005	ACTIVE	$400,000	
02/08/2005 10:06:00 AM	Status	2/8/2005	PENDING	$400,000	2/28/2005
11/22/2004 9:49:00 AM	First Recorded Entry	11/22/2004	ACTIVE	$400,000	

JOHNSTON COUNTY
NORTH CAROLINA

*** * * DISCLAIMER * * ***

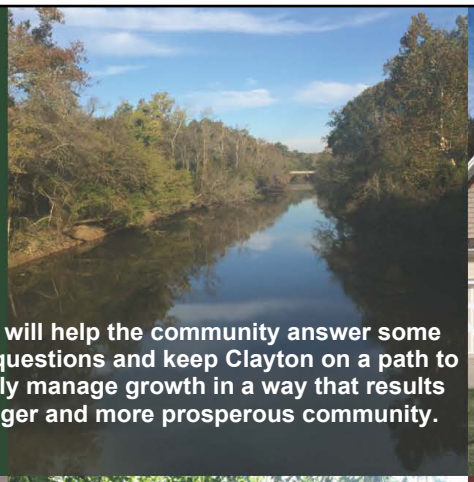
Johnston County assumes no legal responsibility for the information represented here.



Scale: 1:7500 - 1 in. = 625 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
August 3, 2020



This plan will help the community answer some of these questions and keep Clayton on a path to proactively manage growth in a way that results in a stronger and more prosperous community.

Think CLAYTON.

Think B.I.G.

Think CLAYTON. Think B.I.G.

Bold. Innovative. Growth.

Comprehensive Plan 2040

ADOPTED OCTOBER 5, 2015

Acknowledgements

Thank you to all the organizations and individuals who committed their time, energy and resources to this effort. This plan would not have been possible without the support of many throughout the process.

ADVISORY COMMITTEE

Lynn Auclair, Deep River Brewery
Debbie Austermuehle, Downtown Business Owner
Rob Bailey, Developer
Donna Bailey-Taylor, Johnston County Tourism
Amy Beshgetoorian, Clayton Visual Arts
Paul Black, Southern Traditions
Debra Bridges, Johnston County Schools
Skip Browder, Former Planning Director
Candace Collier-Lang, Glen Laurel Home Owners Association
Jim Godfrey, Chamber of Commerce
Berry Gray, Johnston County Planning Director
Melinda Hall, Real Estate Broker
Tim Hamm, Grifols
Ivan Hampton, Downtown Business Owner
Jason Hardy, Public Arts Advisory Board
Jiles Harrell, NCDOT
Katie Holverson, Youth Representative
Michael Hubbard, Entrepreneur, Advertising Executive
Chris Johnson, Johnston County Economic Development
Claude King, Youth Representative
Butch Lawter, Town Council
Terence Leathers, Community Leader
Margaret Lee, Women's Club
Jenny Massey, Unique Boutiques & Marketplace
Kelly Norman, Downtown Business Owner
Frank Price, Planning Board
Charenne Riley-Monk, Glen Laurel Home Owners Association
Jean Sandaire, Planning Board
Bob Satterfield, Town Council
Matt Starr, Neuse RiverKeeper
Chris Walker, Riverwood Home Owners Association

TOWN COUNCIL

Jody McLeod, Mayor
Michael Grannis, Mayor Pro-Tem
Bob Satterfield, Councilman
Art Holder, Councilman
R.S. "Butch" Lawter, Jr., Councilman
Jason Thompson, Councilman

TOWN STAFF

Tony Atkinson, Deputy Fire Chief
Larry Bailey, Parks & Recreation Director
Lee Barbee, Fire Chief
Stacy Beard, Public Information Officer
Emily Beddingfield, Planner
Steve Biggs, Town Manager
Steve Blasko, Property Maintenance Supervisor
Howard Creech, Energy Services Technician
David DeYoung, Planning Director
Beth Franson, GIS Analyst
John McCullen, Town Engineer
Jay McLeod, Planner
Dale Medlin, Electric Systems Director
Bruce Naegelen, Downtown Development Coordinator
Byron Poelman, Water/Sewer Superintendent
Tim Simpson, Public Works/Utilities Director
Christie Starnes, Library Director
James Warren, Laboratory Superintendent

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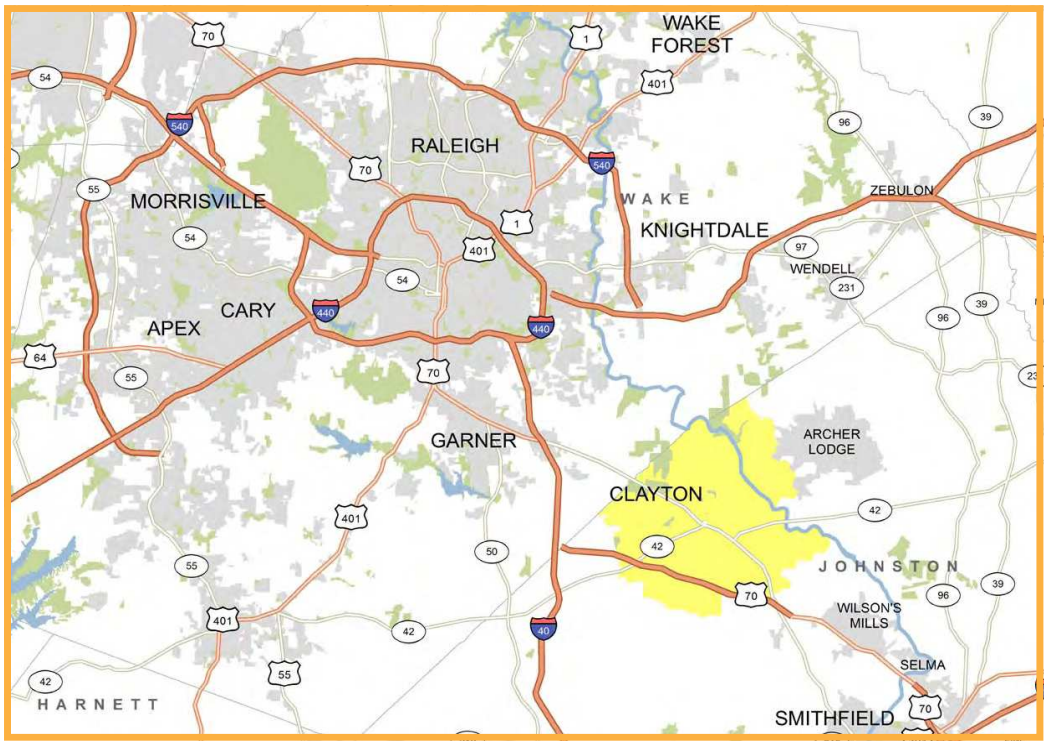
David Teem, Vice-Chair
George Coats
Jim Lee
Ronald Johnson
Dana Pounds
Marty Bizzell
Sarah Brooks
Robert Ahlert
James Lipscomb
Jean Sandaire

CONSULTANT TEAM

Meg Nealon, LandDesign
Kate Pearce, LandDesign
Jake Petrosky, LandDesign
Cara Murph, LandDesign
Dale Stewart, LandDesign

Clayton Yesterday and Today

Clayton looks much different than it did 20 years ago. Major employers including Grifols, Novo Nordisk and Caterpillar opened state-of-the-art facilities within the Town's Planning Area. Johnston UNC Health Care opened a full-service hospital at the intersection of NC 42 and Highway 70. In addition, the Town built a variety of new facilities to serve the growing population. These facilities include the Clayton Community Center, the new Law Enforcement Center and numerous parks and greenways. Clayton is now a unique combination of old and new. From the historic Downtown to Riverwood, Clayton is a place where individuals prosper, families thrive and businesses grow.



SOURCE: ESRI DATE: 2015

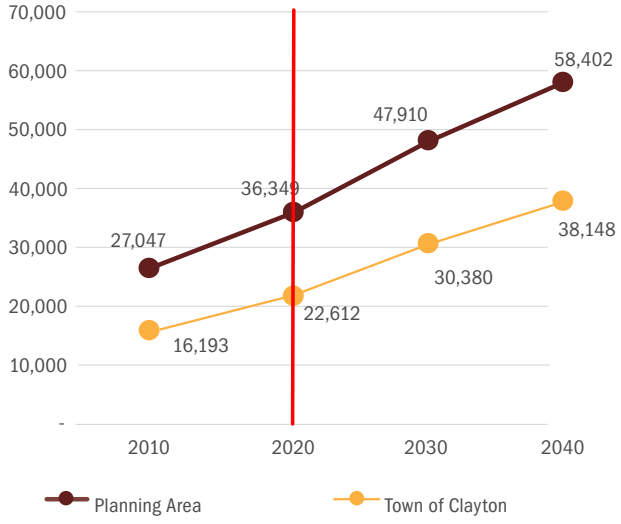
Clayton Tomorrow

The population of Clayton has grown by more than 150% from 2000 to 2013. If current projections maintain, the Town could double in size during the next 20 years.

Where will people live? What steps can the Town take to ensure quality development? How will growth impact the region's resources? Can the existing systems of infrastructure support additional people, housing, jobs and cars?

These are all important questions that deserve careful thought. This plan will help the community answer some of these questions and keep Clayton on a path to proactively manage growth in a way that results in a stronger and more prosperous community.

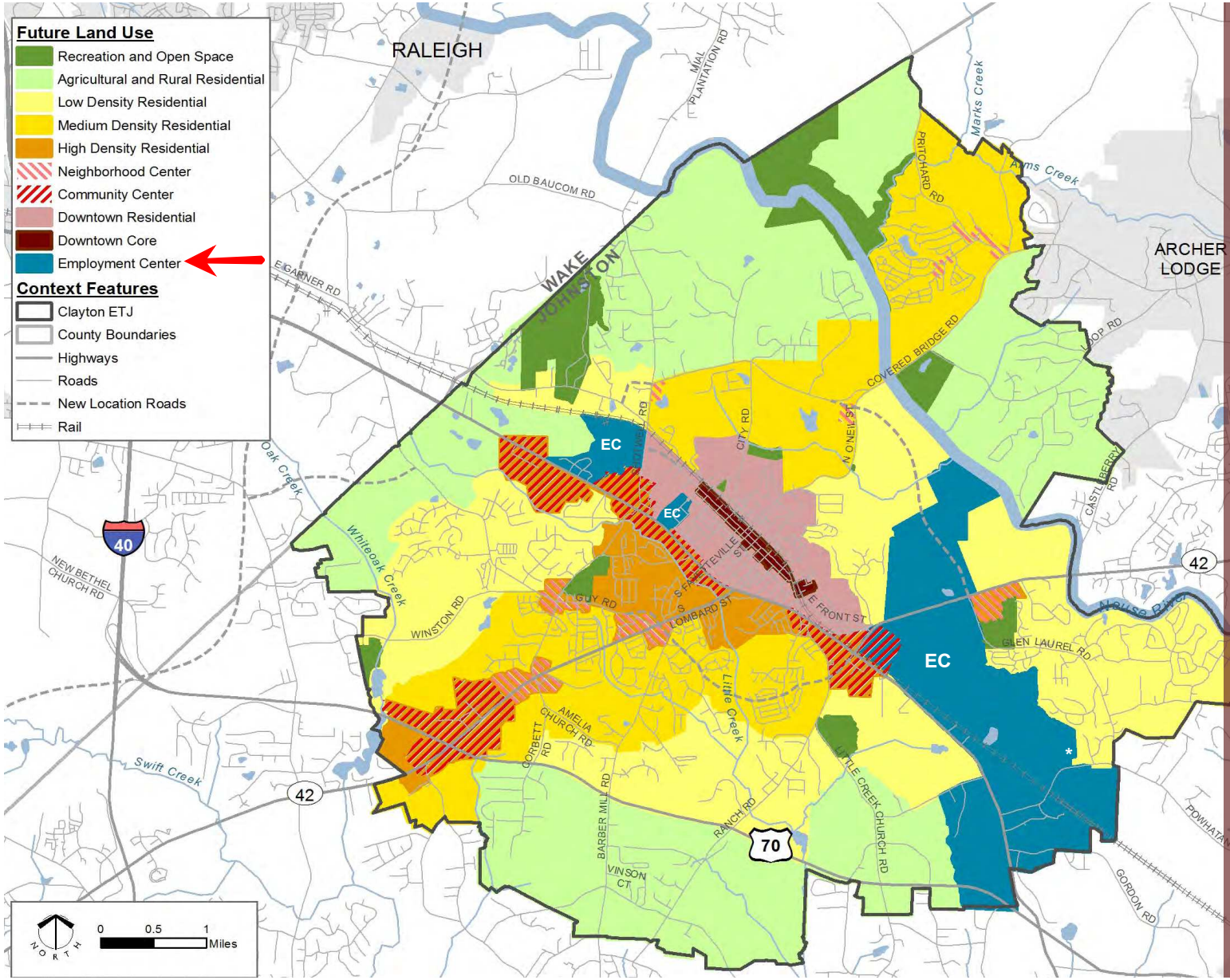
PROJECTED POPULATION



SOURCE: LANDDESIGN AND TOWN OF CLAYTON

Top: Jones Lunch, est. 1958

Bottom: Deep River Brewing Company, est. 2014



Future Land Use Map

The Future Land Use Map is a conceptual representation of the development patterns leaders and residents of the Clayton envision for the future of the town. The map is descriptive, not prescriptive, conveying the community's desires for the future and the flexibility needed to accommodate opportunities.

Description of Future Land Uses

Ten future land use categories are depicted on the map. Each category is intended to indicate a predominant land use—or set of uses—as well as other features that define the character of the category. A brief description of each category is provided below. Each is consistent with the community's ideas and vision for the future development pattern. Furthermore, these descriptions do not propose a change to existing development within each category; instead, they suggest a direction for moving forward.

RESIDENTIAL LAND USES

Agricultural/Rural Residential (ARR)

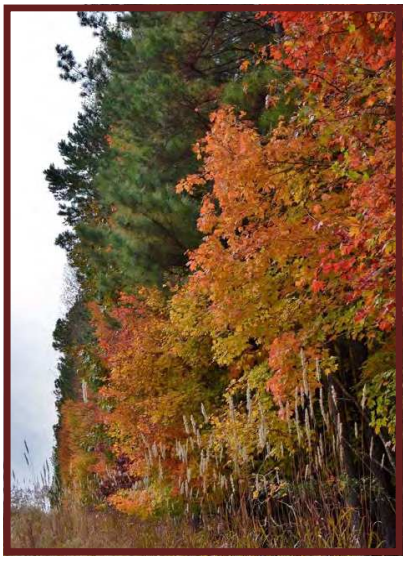
Agricultural/Rural Residential areas are primarily located outside of existing and future sewer service areas. Most of these areas rely on septic systems for wastewater treatment, have a limited road network and, in some cases, lie within the watershed protection overlay of the Neuse River. The predominate existing land uses in these areas include low-density residential uses, as well as large tracts of agriculture land. The lack of utility and transportation infrastructure, the established low-density development pattern and ongoing agricultural activities in these areas contribute to their rural character. This character can be enhanced by encouraging only low-intensity uses and context-sensitive rural design. Single family residential at gross densities up to two units per acre are appropriate.

Typical Uses: Agriculture, Large Lot Single-family Residential, Clustered Single-family Residential (dependent on soils or utility availability), Parks and Conservation
Gross Residential Density: up to 2 dwelling units/acre

Low-Density Residential (LDR)

Areas designated as Low-Density Residential are intended to remain predominantly suburban in character and provide for low-density, single-family residential development on lots smaller than those in Rural Residential areas. Low Impact Development (LID) techniques such as clustering of dwellings to the degree that soils and/or available water and sewer infrastructure allows and flexibility to allow for innovative street cross sections that improve stormwater filtration via swales or other features are appropriate. However, mixed-residential uses may occur under a Planned Development - Residential District to support conservation of open space, so long as a density of 3 units per acre is not exceeded.

Typical Uses: Single-family Residential, Agriculture, Parks and Conservation
Gross Residential Density: up to 3 dwelling units/acre



Example: Agriculture/Rural Residential

Example: Low Density Residential

Top: Example: High Density Residential; Bottom Example: Downtown Core; Right Example: Neighborhood Commercial

Medium Density Residential (MDR)

The Medium Density Residential area is comprised predominantly of neighborhoods with housing units that are more urban in character and in closer proximity to commercial services and centers. This area provides a transition from the more suburban areas of the Town to more developed areas. The density of development in this area will vary based on the presence of utilities, topography and environmental features. This designation is applied to land which is developed, or is to be developed, at a density between three and five units per acre. Densities as high as seven units per acre may occur under a Planned Development - Residential District.

Typical Uses: Residential (all forms)
Gross Residential Density: up to 5 dwelling units/acre. Densities up to 7 dwelling units/acre may be approved as part of a Planned Development – Residential District.

High Density Residential (HDR)

The High Density Residential area provides for housing options located in close proximity to major transportation corridors, existing commercial areas and Downtown services. These areas have a connected street network, adequate pedestrian and bicycle facilities, and are served by public water and sewer. High Density Residential is designed to include all housing types. In some instances, this designation provides for a transition between lower-density residential use and commercial uses. In other instances, this designation allows the establishment of neighborhood commercial uses such as a grocery store or neighborhood services which are compatible with higher-density residential uses. When neighborhood-serving commercial uses are placed within or adjacent to a residential area, such uses shall be limited to a size which is sufficient to accommodate the needs of an immediate residential neighborhood. These transitional areas will have opportunities for slightly higher-density development than the other residential categories.

Typical Uses: Residential (all forms), Limited Neighborhood Commercial Services
Gross Residential Density: up to 12 dwelling units/acre. Densities greater than 10 dwelling units/acre may be approved as part of a Planned Development.

Downtown Residential (DR)

The Downtown area provides for housing options and office-residential uses located in close proximity to the Downtown Core. The Downtown category is designed to retain established neighborhoods and maintain the historic character while allowing a variety of higher-density housing types that support and foster growth of the Downtown Core. Higher-density development should be directly bordering the Downtown Core or along US 70 Business Highway West. The Downtown area should have a connected street network with short block lengths, a grid-style street system, and adequate pedestrian and bicycle facilities.

Typical Uses: Residential (single-family, with higher density residential uses limited to areas as described above); Neighborhood Commercial in appropriate locations
Gross Residential Density: up to 12 units/acre, up to 20 units/acre with PD

NON-RESIDENTIAL LAND USES

Downtown Core (DC)

This designation is applied to the Town's Downtown Core area where the highest-density commercial, employment, residential and other uses are located. It is intended to foster an urban environment characterized by a sensitive blending of carefully preserved older structures, high-quality and context-sensitive new construction, and public spaces all working together and integrated with surrounding neighborhoods. The Downtown Core is the most flexible category and accommodates a variety of uses including commercial services (restaurants, retail, professional services, and entertainment), office, high-density residential, upper-story apartments, and older homes renovated to accommodate commercial uses. A mix of uses that creates a regional draw as well as serving the immediate community is desired. The Downtown Core provides a convenient road network with future transit opportunities and a pedestrian friendly system of sidewalks or greenways for non-motorized accessibility.

Gross Residential Density: up to 30 units/acre

Neighborhood Center (NC)

A Neighborhood Center is generally located near concentrations of existing or planned residences, and areas with access to major thoroughfares and utilities. These areas incorporate neighborhood-serving commercial uses including grocery stores, retail establishments, restaurants and services. A limited amount of office, civic and institutional uses are also appropriate. Higher-density residential including small-lot, single-family, townhouses and apartments should be located in close proximity to shopping and service destinations to provide more walking opportunities to internal and external pedestrian facilities and destinations. The scale of the Neighborhood Center varies depending on the market and competition. Typical Neighborhood Centers have a service area of one to two miles.

Community Center (CC)

Compared to the Neighborhood Center category, a Community Center typically serves a larger population and includes a typical trade area of three-to-six miles, and is located adjacent to major thoroughfares or situated at a major intersection. A Community Center includes at least one major anchor such as a grocery store or retailer and incorporates community-serving commercial uses and opportunities for office, civic, and institutional uses. Where the market permits, multi-family housing opportunities may be integrated as part of a mix of uses. As with Neighborhood Centers, apartments and townhouses should be located in close proximity to shopping and services. All portions of the development should be accessible by both a convenient road network and a system of sidewalks or greenways.

Employment Center (EC)

Clayton's Employment Center is designated on the Future Land Use Map to provide locations for primary employment and economic development opportunities. The Employment Center is located along a major transportation corridor, and has adequate levels of infrastructure along access to rail and parcels large enough to accommodate future employment growth. Uses encouraged in the Employment Center include but are not limited to, industrial, warehouse, office, research and development, tech-flex, hospital, renewable energy, recycling, fabrication, assembly, and technology. Employment Center use may also include a limited amount of supporting commercial uses, such as restaurants and convenience retailers to serve employees. However, these uses should only be situated where not in conflict with existing employment land uses and should not be built in such a way as to jeopardize the use of those lands most suitable for office or industrial development.

Recreation and Open Space (ROS)

The Recreation and Open Space designation applies to public recreational areas and open-space areas. Uses include wildlife management, active and passive recreation, environmental restoration/mitigation/preservation, open space, and educational uses. Structures that support or are associated with the intended uses shall be permitted. Land shown under this designation shall not be used for any purpose other than recreation, open space, or conservation.

The following table identifies which zoning districts are consistent with the Future Land Use Map categories (designations).

Future Land Use Designation	COMPATIBLE ZONING DISTRICTS												
	R-E	R-10	R-8	R-6	O-R	O-I	B-1	B-2	B-3	I-1	I-2	PF	PDD
ARR	X											X	
LDR	X	X										X	
MDR		X	X	X								X	
HDR			X	X								X	
DR			X	X	X	X	X					X	X
NC						X	X	X				X	X
CC								X	X			X	X
DC							X					X	X
EC									X	X	X	X	X
ROS												X	

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Rezoning Date of Mailing: February 18, 2020

Date of Meeting: March 4, 2020 Time of Meeting: 6:00pm

Location of Meeting: True Line Surveying, 205 W. Main St., Clayton, NC 27520

I hereby attest that letters were mailed to the addresses listed on the Adjacent Property Owners List (attached) ten days prior to the Neighborhood Meeting, and that all required information was presented at the Meeting:

Printed Name: Molly Herring Signature: Molly Herring

Meeting Summary/Minutes: *provide a summary of the discussion held at the meeting, including issues raised and any resolution discussed, and any changes made to the application as a result of the meeting.*

Neighborhood meeting was held March 4, 2020, 6:00pm at True Line Surveying. Curk Lane started the meeting at 6:15pm.

Main concern the attendees had was the type of business that was going to be going there.

Other concerns were:

1. Dust control exisiting constrcution from NOVO

2. Noise and vibration from NOVO

3. Powhatan Road Traffic

4. Larry Smith and the Scott's do not want to be surrounded by an Industrial Park.

5.Michael Carman would like the stream buffer to be larger and had questions about the wild life being displaced.

6. Jesse Scott site plan needs to monitor light pollution.

7. Decreased home values of surrounding homes. David Orringer will get a real estate appraiser to give statement on the value.

After each were discussed no one had any further questions.

The meeting ending at 7:45pm.

Please write clearly (or submit a typed summary). Use additional sheets if necessary.

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Tract on Powhatan Rd.

Application: Rezoning

Location/Date: 205 W. Main St. (True Line Surveying) 3/4/2020

	NAME	ADDRESS
1	Larry Smith	3352 POWHATAN RD CLAYTON, NC 27527-0000
2	John Sills	224 MOHICAN TRL CLAYTON, NC 27527-6048
3	Michael Carman	417 HOGAN CIRCLE CLAYTON, NC 27527-0000
4	Jesse Scott	3366 POWHATTAN RD CLAYTON, NC 27527-0000
5	Teresa Scott	3366 POWHATTAN RD CLAYTON, NC 27527-0000
6		
7		
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20		

What if we deleted the following uses...

§ 155.202 LAND USE REGULATIONS.

(A) *Use Regulations Table.* The use regulations table is subject to the explanation as set forth below.

(1) *Key to Types of Use.*

(a) *Permitted.* A "P" indicates that a use is permitted in the respective district subject to the specific use standards in §§ 155.300 through 155.311. Such uses are also subject to all other applicable requirements of this chapter.

(b) *Conditional Use Review.* A "C" indicates a use that may be permitted in the respective general use district only where approved by the Board of Adjustment in accordance with § 155.710. Conditional uses are subject to all other applicable requirements of this chapter, including the specific use standards contained in §§ 155.300 through 155.311, except where such use standards are expressly modified by the Board of Adjustment as part of the conditional use approval.

(c) *Special Use Review.* An "S" indicates a use that may be permitted in the respective general use district only where approved by the Town Council in accordance with § 155.711. Special uses are subject to all other applicable requirements of this chapter, including the specific use standards contained in §§ 155.300 through 155.311, except where such use standards are expressly modified by the Town Council as part of the special use approval.

(d) *Specific Use Section.* The "Specific Use Section" column on the table is a cross reference to any specific use standard listed in §§ 155.300 through 155.311. Where no cross-reference is shown, no additional use standard shall apply.

(e) *Uses Not Permitted.* A blank cell in the use table indicates that a use is not permitted in the respective district. Except as pursuant to §§ 155.110 and 155.300, the following uses are entirely prohibited within the jurisdiction of the Town, although such enumeration shall not necessarily be deemed exclusive or all-inclusive:

1. Open dump;
2. Outdoor gun range; and
3. Any use prohibited by an applicable overlay zoning district.

(2) Uses. Table 2-1 "Use Regulations" lists the principal uses regulated by this chapter for general use districts. For special use districts see § 155.200(B), for overlay districts see § 155.204, for planned development districts see § 155.203(L), and for accessory structures and uses see § 155.308. In all cases, additional clarification and/or restrictions may be found in the Specific Use Standards (Article 3 of this chapter).

Table 2-1 Use Regulations

Use Type	Zoning Districts												Specific Use Section
	Residential				Nonresidential								
	R-E	R-10	R-8	R-6	O-R	O-I	B-1	B-2	B-3	I-1	I-2	PF	
RESIDENTIAL USES													
Adult Care Home (2 to 6 Adults)	P	P	P	P									§ 155.301(A)
Adult Care Home (7 to 12 Adults)	S	S	S	S	S	S		S					§ 155.301(A)
Adult Care Home (13+ Adults)						S		S					§ 155.301(A)
Apartments		S	S	S	S	S	S	S	S				§ 155.301(B)
Boarding House				C		C		C					§ 155.301(C)
Child Care Home	C	C	C	C	C								§ 155.301(D)
Duplex		S	S	S	S								§ 155.301(H)
Manufactured Home	P												§ 155.301(E)
Manufactured Home Park	S												§ 155.301(F)
Nursing Home (Congregate Living Facility)	C					P		S	P				§ 155.301(G)
Townhouse		S	S	S	S	S		S	S				§ 155.301(I)
Security/Caretaker Quarters	C								C			C	§ 155.301(J)

Single Family House	P	P	P	P	P								§ 155.301(K)
Upper-story Residence	S	S	S	S	S	P	P	P	P				§ 155.301(L)
Zero Lot Line House		P	P	P									§ 155.301(M)
PUBLIC AND CIVIC USES													
Assembly	S					P	S	S	S			P	§ 155.302(A)
Cemetery	S								S			P	§ 155.302(B)
Church or Place of Worship	C	C	C	C		C		C	C				§ 155.302(C)
College or University						P						P	§ 155.302(D)
Day Care Facility	C	C	C	C	C	P		P	P				§ 155.302(E)
Government Service	S	S	S	S	P	P	P	P	P	P	P	P	§ 155.302(F)
Hospital or Medical Center						P			P			P	§ 155.302(G)
School (Elementary or Secondary)	S	S	S	S		S						P	§ 155.302(H)
School (Technical, Trade or Business)	S	S	S	S		P			P	P	P	P	§ 155.302(I)
RECREATIONAL USES													
Entertainment, Indoor						C	C	C	P	P		P	§ 155.303(A)
Entertainment, Outdoor									C	P		P	§ 155.303(B)
Fitness/Recreation Center						P	C	P	P	P		P	§ 155.303(C)
Golf Course	P	P	P	P								P	§ 155.303(D)
~~Gun Range~~							~~S~~		~~S~~	~~S~~	S	S	§ 155.303(E)
Park	P	P	P	P	S	P	S	P				P	§ 155.303(F)
Stable, Private	P												§ 155.303(G)
AGRICULTURAL USES													
Agriculture, Livestock	C										C		§ 155.304(A)
Agriculture, Sales and Service	P										C		§ 155.304(B)
Nursery	P					C	S	C	P			P	§ 155.304(C)
COMMERCIAL USES													
~~Adult-Oriented Business~~										~~S~~			§ 155.305(A)
Bed & Breakfast	P			C	C	P	S	P					§ 155.305(B)
Car Wash/Auto Detailing						C		P	P				§ 155.305(C)
Contractor Office						C			C	P	P		§ 155.305(D)
Convenience Store with Gas Sales								C	P	P			§ 155.305(F)
Creative Studio					P	P	P	P	P				§ 155.305(G)
Financial Institution					C	P	S	P	P				§ 155.305(H)
Funeral Home	C				C	P							§ 155.305(I)
Hotel, Motel						S	S	S	P				§ 155.305(J)
Kennel	C							C	C				§ 155.305(K)
Laundry Services								C	C	P	P		§ 155.305(L)
~~Lounge, Cocktail~~							~~S~~	~~S~~	~~S~~	~~S~~			§ 155.305(M)

Microbrewery							P	S	P	P	P		§ 155.305(N)
Publisher						P			P	P	P		§ 155.305(O)
Office, General					P	P	P	P	P	P		P	§ 155.305(P)
Office, Medical					P	P	S	P	P				§ 155.305(Q)
Outdoor Seating/Sidewalk Café						C	P	P	C				§ 155.305(R)
~~Parking Lot~~						~~S~~	~~S~~	~~S~~	~~S~~	~~S~~	S	S	§ 155.305(S)
~~Pawn Shop~~									~~C~~	~~P~~			§ 155.305(T)
Radio or Television Studio									P	P	P		§ 155.305(U)
Restaurant						C	P	P	P				§ 155.305(V)
Retail Sales							P	P	P	P			§ 155.305(W)
Self-Storage Facility									C	P			§ 155.305(X)
Service					S	S	P	P	P				§ 155.305(Y)
Storage Yard										C	P	P	§ 155.305(E)
Tattoo Parlor									S				§ 155.305(Z)
Towing Service and Storage									S	C	C		§ 155.305(AA)
Vehicle Repair or Service									S	P	C		§ 155.305(BB)
Vehicle Sales and Rental									S	P	C		§ 155.305(CC)
Veterinary Clinic						C		C	P				§ 155.305(DD)
~~Video Sweepstakes Operations~~										~~S~~			§ 155.305(EE)
INDUSTRIAL USES													
Building Supplies, Wholesale										P	P		§ 155.306(A)
~~Crematorium~~										~~P~~	P		§ 155.306(B)
~~Gas and Fuel, Wholesale~~										~~P~~	P	P	§ 155.306(C)
Laboratory, Research						P				P	P		§ 155.306(D)
Manufacturing, Light										P	P		§ 155.306(E)
Manufacturing, Heavy											P		§ 155.306(F)
Research and Development						P				P	P		§ 155.306(G)
Warehouse, Freight Movement									C	P	P		§ 155.306(H)
UTILITIES													
~~Recycling Center~~										~~S~~	P	P	§ 155.307(A)
~~Renewable Energy Facility~~	S									~~S~~	S	S	§ 155.307(B)
Telecommunication Facility	S	S	S	S	S	S	S	S	S	S	S	S	§ 155.307(C)
Utility, Minor	P	P	P	P	P	P	P	P	P	P	P	P	§ 155.307(D)
Utility, Major										P	P	P	§ 155.307(E)
~~Waste Service~~										~~C~~	P	P	§ 155.307(F)
ACCESSORY USES													
Accessory Dwelling Unit	C	C	C	C									§ 155.308(C)(1)
Food Truck						P	P	P	P	P		P	§ 155.308(D)(2)

Day Care Facility	C	C	C	C		P		P	P	P	P		§ 155.308(D)(3) § 155.308(E)(3)
Park									P			P	§ 155.308(D)(4)
Outdoor Display/Sales							P	P	P				§ 155.308(D)(5)
Outdoor Dining						P	P	P	P				§ 155.308(D)(6)
Outdoor Storage, Limited									S	P	P	P	§ 155.308(D)(7)
Outdoor Storage, General										P	P	P	§ 155.308(D)(8)

Key:

P - Permitted

C - Conditional Use permitted in the zoning district only if approved by the Board of Adjustment (BOA) (§155.710) **Understand the approval makers**

S - Special Use permitted in the zoning district only if approved by the Town Council (TC) (§155.711) **Town council decision required for approval.**

(Ord. 2005-11-02, passed 11-21-05; Am. Ord. 2006-06-01, passed 6-19-06; Am. Ord. 2007-04-05, passed 4-2-07; Am. Ord. 2007-05-02, passed 5-7-07; Am. Ord. 2009-06-06, passed 6-1-09; Am. Ord. 2009-08-03, passed 8-3-09; Am. Ord. 2012-01-04, passed 1-3-12; Am. Ord. 2012-04-02, passed 4-2- 12; Am. Ord. 2012-12-02, passed 12-3-12; Am. Ord. 2014-12-02, passed 12-1-14; Am. Ord. 2015-09- 03, passed 9-8-15; Am. Ord. 2016-04-04, passed 4-4-16; Am. Ord. 2017-04-06, passed 4-3-17; Am. Ord. 2019-07-04, passed 7-15-19; Am. Ord. 2020-02-06, passed 2-17-20)

Filed in JOHNSTON COUNTY, NC CRAIG OLIVE, Register of Deeds Filed 2/14/2006 12:25:35 PM DEED BOOK 3065 PAGE 502 - 503 INSTRUMENT # 2006118345 Real Estate Excise Tax: $582.00 Deputy/Assistant Register of Deeds: J PLOWMAN

Excise Tax $582.00

Tax Lot No. _____ Parcel Identifier No. **05I05004 (split out)**
Verified by _____ County on the ____ day of _____, 19____
by _____

Mail after recording to **Grantee**
This instrument was prepared by **W. Thurston Debnam, Jr. (wk)**

Brief Description for the index **Tract 1, Plat Book 67, Page 162**

NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made **February 9, 2006**, by and between

GRANTOR	GRANTEE
TERESA S. BARBOUR, Unmarried	**CLAYTON PLANTATION, LLC** **1304 Wescott Drive** **Raleigh, NC 27604**

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g., corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in **Johnston** County, North Carolina and more particularly described as follows:

BEING all of Tract 1, containing 22.240 gross acres, as the same is shown on map entitled "Recombination for Teresa Barbour William Smith, Et Al, Clayton Township, Johnston County, North Carolina" and recorded in Plat Book 67, Page 162, Johnston County Registry.

N.C. Bar Assoc. Form No. 3 © 1977
Printed by Agreement with the N.C. Bar Assoc.
#003

The property hereinabove described was acquired by Grantor by instrument recorded in Book **1384**, Page **762**.

A map showing the above described property is recorded in **Book 67, Page 162.**

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated.

Title to the property hereinabove described is subject to the following exceptions:

1. **Public utility easements and rights of way to public roads and streets.**
2. **Johnston County property taxes for subsequent years.**

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

USE BLACK INK ONLY

_____ (Corporate Name)

By: _____

President

ATTEST:

_____

Secretary (Corporate Seal)

Teresa S. Barbour (SEAL)
TERESA S. BARBOUR

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

NASH COUNTY, N.C. PUBLIC NOTARY WENDY B. KERNS

SEAL-STAMP

USE BLACK INK ONLY

NORTH CAROLINA, Nash County.
I, Wendy B. Kerns, a Notary Public of the County and State aforesaid, certify that **TERESA S. BARBOUR,** Grantors, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing instrument. Witness my hand and official stamp or seal, this 13 **day of February, 2006.**

My commission expires: 9-30-2010 Wendy B. Kerns Notary Public

---

SEAL-STAMP

USE BLACK INK ONLY

NORTH CAROLINA, _____ County.
I, the undersigned, a Notary Public of the County and State aforesaid, certify that personally came before me this day and acknowledged that he/she is Secretary of , a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its President, sealed with its corporate seal and attested by him/her as its Secretary. Witness my hand and official stamp or seal, this __ **day of ___, ____.**

My commission expires: . _____ Notary Public

The foregoing Certificate(s) of _____

_____

is/are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

_____ REGISTER OF DEEDS FOR _____ COUNTY

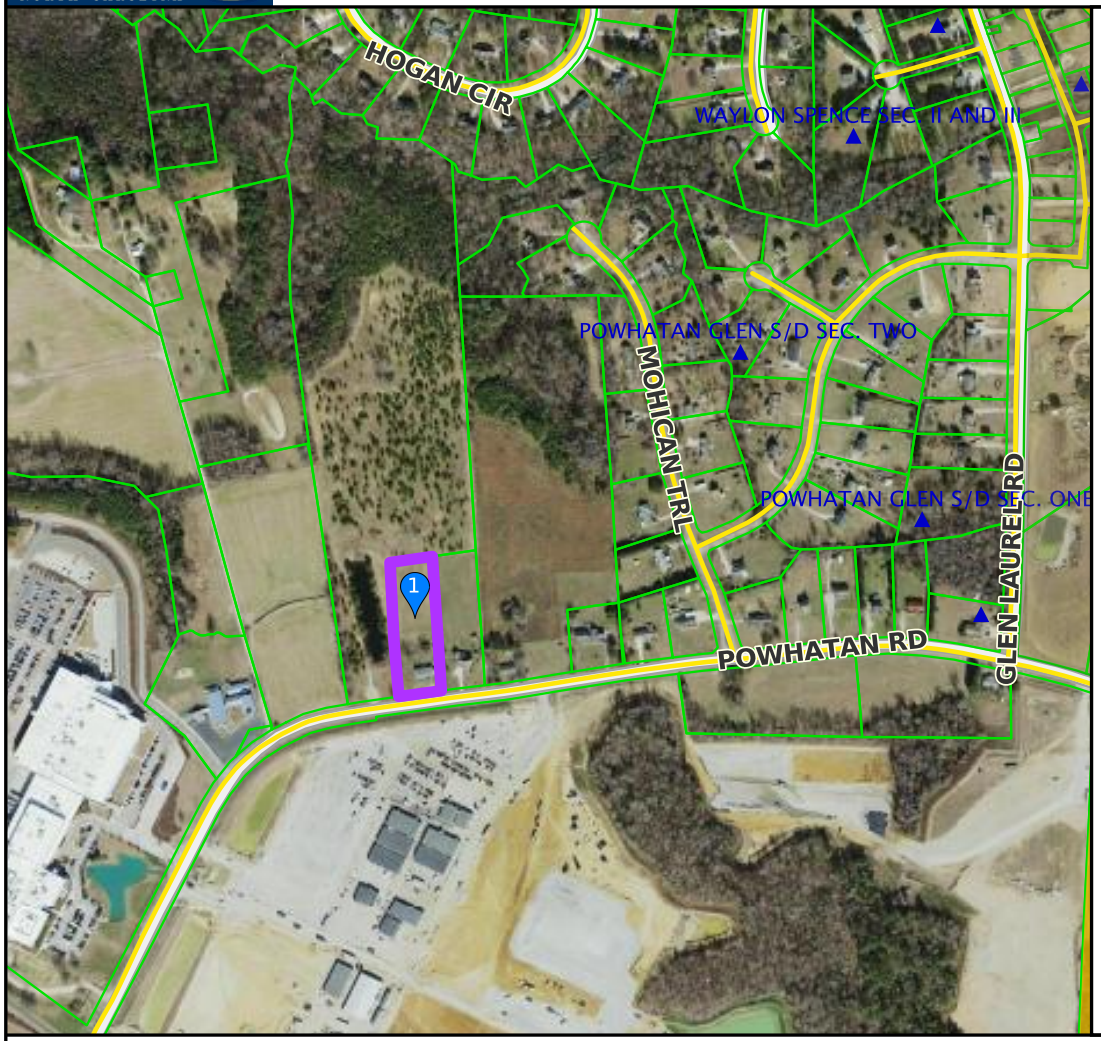
By _____ Deputy/Assistant-Register of Deeds.

N.C. Bar Assoc. Form No. 3 © 1977
Printed by Agreement with the N.C. Bar Assoc.
#003

JOHNSTON COUNTY NORTH CAROLINA

*** * * DISCLAIMER * * ***

Johnston County assumes no legal responsibility for the information represented here.



Result 1

id:	05I05004C
Tag:	05I05004C
NCPin:	167804-61-5488
Mapsheet No:	167804
Owner Name 1:	SCOTT, TERESA SMITH
Owner Name 2:	
Mail Address 1:	3366 POWHATTAN RD
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27527-0000
Site Address 1:	3366 POWHATAN RD
Site Address 2:	CLAYTON, NC 27527-
Book:	03025
Page:	0181
Market Value:	143810
Assessed Acreage:	1.670
Calc. Acreage:	1.670
Sales Price:	0
Sale Date:	2005-11-30

Scale: 1:6976 - 1 in. = 581.37 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
May 19, 2020

Town of Clayton
Town Council
Zoning Ordinance Amendment Motion Sheet
(Rezoning)

After considering the recommendations of the Planning Board and Planning Director, I move to **[approve OR deny]** **Case # 2020-17-RZ – Powhatan Road Tract**

[IF APPROVING]

and to approve the Statement of Consistency and Reasonableness included in the Agenda packet [with the following modifications: STATE MODIFICATIONS, IF ANY]**.**

MOTION FORM
Item 7b
2020-17-RZ
Tract Powhatan Road

Ordinance #2020-08-02

AN ORDINANCE AMENDING THE ZONING ORDINANCE AND ZONING MAP OF THE TOWN OF CLAYTON, NORTH CAROLINA

WHEREAS a petition has been filed with the Town Council of the Town of Clayton requesting an amendment to the Zoning Ordinance and Zoning Map of the Town of Clayton to include in Industrial-Light (I 1) zone the property described below, said property formerly being zoned Residential Estate (RE) and

WHEREAS said property is owned by David Orringer and

WHEREAS the Planning Board of the Town of Clayton has reviewed the proposed change(s) and made a recommendation thereupon; and

WHEREAS notice of a public hearing to consider the proposed change was published in accordance with law in The Johnstonian a local newspaper, as required by Section 155.702(D) of the Clayton Unified Development Code and by Section 160A-364 of the North Carolina General Statutes; and

WHEREAS a notice of the proposed zoning classification action was mailed to the owner(s) of the parcel(s) of land involved, as shown on the County Tax Listings, and to the owners of all parcels of land abutting that (those) parcel(s) of land and within 100 feet of the subject parcel(s) of land, as shown on the County Tax Listings, by depositing a copy of the same in the United States Mail, first class postage paid, as required by Section 155.702(D) of the Zoning Ordinance of the Town of Clayton and by Section 160A-384 of the General Statutes; and

WHEREAS the said public hearing was actually conducted at 6:00 p.m. on July 20, 2020 wherein a reasonable opportunity was given to all those in attendance to speak either in favor or against the said change or to make relevant comments;

THEREFORE, after duly considering the matter, THE TOWN COUNCIL OF THE TOWN OF CLAYTON DOES HEREBY ORDAIN:

SECTION 1. That the Unified Development Code of the Town of Clayton is hereby amended to include in the Industrial-Light (I 1) zone the following described property:

General Description:
Property is located +/- 1200 feet west of Mohican Trail and Powhatan Road

Specific Description:
NC TAG # 05105004

SECTION 2. That the official Town of Clayton Zoning Map is hereby amended to include in the Industrial-Light (I 1) zone the above-described property and will be so marked.

SECTION 3. That if any section, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. That this ordinance shall become effective immediately upon its adoption.

DULY ADOPTED by the Clayton Town Council this 17th day of August, 2020 while in regular session.

_____
Jody McLeod
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

Resolution #2020-11

Town of Clayton
Temporary Changes Related to Town Utility Policy

WHEREAS, COVID-19 (Coronavirus) is a severe respiratory illness that is spread from human to human, is highly contagious, and can cause severe injury or death; and

WHEREAS, COVID-19 has been declared a Public Health Emergency of International Concern by the World Health Organization; and

WHEREAS, the President of the United State has declared the COVID-19 outbreak a National Emergency and the United States Department of Health and Human Services the a public health state of emergency in the United States for COVID-19 under section 319 of the Public Health Services Act; and

WHEREAS, the Governor of North Carolina has declared a State of Emergency in order to coordinate protective actions and prevent the spread of COVID-19; and

WHEREAS, the undersigned has declared a State of Emergency for the Town of Clayton; and

WHEREAS, the Governor of North Carolina has entered a Stay at Home Order; and

WHEREAS, utility services are essential to the continued health and safety of utility customers, to the ability of workers and employers to engage in teleworking; and

WHEREAS, disconnections of utility services would exacerbate public health and safety risks because of dislocated customers.

NOW, THEREFORE, be it resolved by the Town Council of the Town of Clayton that as of March 23, 2020 the following adjustments shall be made to the Town's utility policies:

1. The Town will not disconnect water, sewer or electric utility service to any residential or commercial customers for non-payment.

2. The Town will not charge the non-payment penalty of $50.00 to commercial or residential accounts.

3. These temporary changes will remain in place until modified by the Town Council or the declaration of a State of Emergency for the Town of Clayton made March 16, 2020. is rescinded.

Duly adopted this the 20th day of April, 2020 while in regular session.

Jody L. McLeod
Mayor

ATTEST:

Kimberly A. Moffett, CMC, NCCMC
Town Clerk

TOWN OF CLAYTON
INCORPORATED
APRIL 1869
CLAYTON, N.C.

Resolution #2020-18

Town of Clayton
Amendment to Temporary Changes Related to Town Utility Policy

WHEREAS, COVID-19 (Coronavirus) is a severe respiratory illness that is spread from human to human, is highly contagious, and can cause severe injury or death; and

WHEREAS, COVID-19 has been declared a Public Health Emergency of International Concern by the World Health Organization; and

WHEREAS, the President of the United State has declared the COVID-19 outbreak a National Emergency and the United States Department of Health and Human Services the a public health state of emergency in the United States for COVID-19 under section 319 of the Public Health Services Act; and

WHEREAS, the Governor of North Carolina has declared a State of Emergency in order to coordinate protective actions and prevent the spread of COVID-19; and

WHEREAS, the undersigned has declared a State of Emergency for the Town of Clayton; and

WHEREAS, the Governor of North Carolina has entered a Stay at Home Order; and

WHEREAS, utility services are essential to the continued health and safety of utility customers, to the ability of workers and employers to engage in teleworking;

WHEREAS, disconnections of utility services would exacerbate public health and safety risks because of dislocated customers; and

WHEREAS, the Governor of North Carolina entered Executive Order No. 124 on March 31, 2020, effective immediately and to remain effective for sixty days (June 1, 2020) unless rescinded or replaced, and Executive Order No. 124 impacts certain Town utility policies.

NOW, THEREFORE, be it resolved by the Town Council of the Town of Clayton that as of June 1, 2020:

PPAB 5636537v1

1. The temporary changes made in Resolution #2020-11 will remain in place until the earlier of further modification by the Town Council or the Governor's Executive Order No. 124 expires or is superseded.

Duly adopted this the 1st day of June, 2020 while in regular session.

Jody L. McLeod
Mayor

ATTEST:

Kimberly A. Moffett, CMC, NCCMC
Town Clerk

TOWN OF CLAYTON
INCORPORATED
APRIL 1869
CLAYTON, N.C.

PPAB 5636537v1

Resolution #2020-27

Town of Clayton
Amendment to Temporary Changes Related to Town Utility Policy

WHEREAS, COVID-19 (Coronavirus) is a severe respiratory illness that is spread from human to human, is highly contagious, and can cause severe injury or death; and

WHEREAS, COVID-19 has been declared a Public Health Emergency of International Concern by the World Health Organization; and

WHEREAS, the President of the United State has declared the COVID-19 outbreak a National Emergency and the United States Department of Health and Human Services the a public health state of emergency in the United States for COVID-19 under section 319 of the Public Health Services Act; and

WHEREAS, the Governor of North Carolina has declared a State of Emergency in order to coordinate protective actions and prevent the spread of COVID-19; and

WHEREAS, the undersigned has declared a State of Emergency for the Town of Clayton; and

WHEREAS, the Governor of North Carolina has entered a Stay at Home Order; and

WHEREAS, utility services are essential to the continued health and safety of utility customers, to the ability of workers and employers to engage in teleworking;

WHEREAS, disconnections of utility services would exacerbate public health and safety risks because of dislocated customers; and

WHEREAS, the Governor of North Carolina entered Executive Order No. 124, which in part prohibited the termination of service to a residential utility customer due to nonpayment, on March 31, 2020, effective immediately and to remain effective for sixty days (June 1, 2020), and then entered Executive Order No. 142 extending relevant portions of Executive order No. 124 through July 20, 2020'

WHEREAS, the Town Council of the Town of Clayton enacted temporary changes to the Town Utility Policy through the adoption of Resolution 2020-11 on April 20, 2020, as amended on June 1, 2020.

PPAB 5636537v2

NOW, THEREFORE, be it resolved by the Town Council of the Town of Clayton that as of July 30, 2020:

1. The temporary changes made in Resolution #2020-11 will remain in place until August 31, 2020 when the temporary changes will end and the Town will operate pursuant to the standard Town Utility Policy, except as altered by provisions of Executive Order No. 124, as extended by Executive Order No. 142, which remain in effect.

Duly adopted this the 17th day of August, 2020 while in regular session.

_____
Jody L. McLeod
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

PPAB 5636537v2

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Public Hearings

Item Title
The Quad – 2019-130-SUP

Presenter
Planning Department

Summary/Description
The Quad – Special Use Permit

The applicant is requesting a Special Use Permit to develop the use of townhomes on the subject property, which is zoned Office-Institutional (O-I). Per UDC requirements, the use of townhomes in this district is only permitted via issuance of a Special Use Permit. Running concurrently with this application is a preliminary plat application 2019-129-SD.

Requested Action
Approval with Conditions

Funding Source (If Applicable):
N/A

Cost: **N/A** **Yes** ☐ **No** ☒

Additional Documents to be Included in Agenda Packet
Application w/ Owners Consent Form
Staff Report
Recommended Conditions of Approval
Staff Report Map
Neighborhood Meeting Material
Applicant Site Plan
Adjacent Property Owner Letter- Public Notice
Newspaper Ad - Public Notice

Meeting Timeline
Click or tap here to enter text.

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

SPECIAL USE PERMIT APPLICATION COVER SHEET

Name of Project: The Quad **Date:** 6/28/2019

Applicant Name: Adams & Hodge Engineering, PC

The following checklist to be completed by applicant:

[✓] Pre-Application Meeting on: _____

[✓] Application Review fee

[✓] Advertisement Fee

11 copies of the following:

[✓] Completed Application

[✓] Owner's Consent Form

[✓] Adjacent Property Owner's List

[✓] Neighborhood Meeting Notice Letter (1 copy)

[✓] Wastewater Allocation Request Form (if applicable)

[✓] Set of stamped, addressed, empty envelopes for adjacent property owner notification

[✓] Associated Site Plan (separate application required for major site plans, must be submitted concurrently)

Reviewed by: _____

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

SPECIAL USE PERMIT APPLICATION

Application Fee: $400.00
Advertisement Fee: $200.00

☒ **New Special Use Permit** ☐ **Major Modification to an approved SUP**
Permit Modified: _____

SITE INFORMATION

Name of Project: The Quad

Acreage of Property: 2.029 AC **Zoning District:** O-I

County Tag #: 05G02046K **NC Pin #:** 165806-39-9222

Address/Location: Guy Rd, beside Devlin Orthodontics

Existing Use: Vacant **Proposed Use:** Single Family Townhomes

Is project within a Planned Development? ☐ **Yes** ☒ **No If yes, which:** _____

Is project within an Overlay District? ☐ **Yes** ☒ **No If yes, which:** _____

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

Mailing Address: 314 East Main St., Clayton, NC 27520

Phone Number: 919-763-7278 / 919-812-2654 **Fax:** _____

Contact Person: Donnie Adams / Amy Stancil

Email Address: donnie@adamsandhodge.com / amy@adamsandhodge.com

OFFICE USE ONLY

Date Received: _____ Amount Paid: _____ File Number: _____

PROPERTY OWNER INFORAMTION

Name: CGC Properties, LLC

Mailing Address: PO Box 10766, Wilmington, NC 28404

Phone Number: _____ **Fax:** _____

Email Address: _____

EXPLANATION OF PROJECT

Please provide detailed information concerning all requests. Attach additional sheets if necessary.

See Exhibit A

REQUIRED FINDINGS OF FACT

Section 155.711(I) of the Unified Land Development Code requires applications for a Special Use to address the following findings. The burden of proof is on the applicant and failure to adequately address the findings may result in denial of the application. Please attach additional pages if necessary.

1. That the application will not materially endanger the public health or safety if located where proposed, and developed according to the plans as submitted and approved.

   See Exhibit B

2. That the application meets all required specifications and conforms to the standards and practices of sound land use planning and the Town Code of Ordinances and other applicable regulations.

See Exhibit B

3. That the application will not substantially injure the value of adjoining or abutting property, and will not be detrimental to the use or development of adjacent properties or other neighborhood uses.

See Exhibit B

4. That the application will not adversely affect the adopted plans and policies of the Town, or violate the character of existing standards for development of the adjacent properties.

See Exhibit B

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town Council of the Town of Clayton to approve the subject Special Use Permit. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

Amy D. Stancil		6/28/2019
Print Name	***Signature of Applicant***	***Date***

Received By:
Town of Clayton
7/25/19

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: CGC Properties, LLC **Address or PIN #:** 165806-39-9222

AGENT/APPLICANT INFORMATION:

Adams & Hodge Engineering, PC
(Name - type, print clearly)

314 East Main St.
(Address)
Clayton, NC 27520
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (*list applicable requests*):

Major Site Plan **& Special Use Permit**
Final Plats
Construction Plans
Administrative Amendments

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

CGC Properties, LLC
(Name - type, print clearly)

PO Box 107166
(Address)

(Owner's Signature)

Wilmington, NC 28404
(City, State, Zip)

STATE OF North Carolina
COUNTY OF New Hanover

Sworn and subscribed before me Nidhi Shah, a Notary Public for the above State and County, this the 20th day of June, 2019.

SEAL

Nidhi Shah
NOTARY PUBLIC
Pender County, NC
My Commission Expires
August 7, 2022

Nidhi Shah
Notary Public

My Commission Expires: 08-07-22

Exhibit A

Explanation of Project
Findings of Fact
Property Owners List

RECEIVED
JUN 28 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

ADAMS & HODGE
ENGINEERING, PC

Explanation of Project

The Quad Townhomes are proposed to be constructed on 2.029 ac of land located in the northwest quadrant of the intersection of Guy Road and the unopened section of Brandon Drive. The development is comprised of four buildings housing 20 units of two-story townhomes located on private streets that will be constructed to Town of Clayton standards. In order to develop the townhomes, this will require a special use permit that request a maximum density of 10 units per acre (9.857 units/as actual).

Access to the property will be from Guy Road. Water and sewer will be provided by the Town of Clayton with Duke Energy providing the electrical. Stormwater management facilities are located on-site and will be designed and constructed to the Town of Clayton standards.

There are no active or passive recreational facilities proposed on-site. Due to the close proximity of the Clayton Recreation Center and Clayton Community Park, the project is proposed that a fee in lieu of on-site recreational facilities will be paid to the Town of Clayton.

Exhibit B

Findings of Fact

Item No. 1 **That the application will not materially endanger the public health or safety if located where proposed, and developed according to the plans as submitted and approval.**

The distribution of traffic has been given much consideration by providing primary access to Guy Road with the secondary access point to Brandon Drive once the street is constructed. Since Guy Road is an NCDOT road, the access will be designed to NCDOT standards. Care has been exercised in the townhome subdivision to protect the environment by prudent use of buffers and landscaping. The public's safety and health have been addressed by providing public water and sewer that meet the Town and State requirements. Storm water quality has been addressed during construction with erosion control measures and in the long term with storm water management facilities that address not only the quality of water but also the quantity of water. Street are so designed as to be safe for pedestrians and vehicles alike by providing adequate separation, traffic control and lighting. The public's health and welfare are further addressed by the townhome subdivision providing passive and active recreation opportunities offsite utilizing municipal recreation facilities via recreation assessment fees.

Item No. 2 **The That the application meets all required specifications and conforms to the standards and practices of sound land use planning and the Town Code of Ordinances and other applicable regulations.**

The subdivision meets or exceeds all applicable development standards that are established in the Subdivision Regulations and the Unified Development Code. Private streets are designed in accordance with the Town standards so as to provide a development with safe streets for both vehicles and pedestrians. Public utilities are designed so as to provide adequate water for consumption as well as fire protection while the sewer collection system is designed to protect the health and welfare of the public. Area lighting is provided so as to provide a safe environment for the residents. Storm water management facilities have been incorporated into the design as to manage the volume of storm water as well as the quality of physical improvements during construction so as to minimize off site discharge of sediments. Passive and active recreation opportunities have been provided through open space, and indirectly through recreational assessment fees. By incorporating buffers, open space and landscaping the aesthetic quality of the development and as well as adjacent properties is maintained.

Item No. 3 **That the application will not substantially injure the value of adjoining or abutting property and will not be detrimental to the use or development of adjacent properties or other neighborhood uses.**

The Quad townhome development will be a continuation of the development pattern established by the Moss Creek Parkside and Garrison Place, which is a blending of single family with a mix of townhomes and apartments. Even though the Quad townhomes will continue the existing development pattern, the townhomes will offer a refreshing change of architectural style that is modern and in more keeping with contemporary trends.
In the past to the west of the Quad, the Town of Clayton has approved multifamily housing in the form of duplexes, triplexes and traditional garden apartments. To the west and a little north of the proposed development, lies in the Clayton Recreation Center and Clayton Community Park within easy walking distance. The recreation center and community park facilities will obviously be very important to the residents of the townhomes who will have at their disposal the Town's premier recreation facilities by a short walk. Also to the west along Guy Road is Clayton Middle School. To the east there are also many commercial businesses that will support the residents of the Quad.

Item No. 4 **That the application will not adversely affect the adopted plans and policies of the Town, or violate the character of existing standards for development of the adjacent properties.**

The proposed development is in compliance with the Town of Clayton Comprehensive Plan 2040. In the Plan, the area of the townhome subdivision is designated as High Density Residential (HDR) land use. The HDR land use encourages higher density residential development by using multifamily developments (apartments and townhomes) that have high density ratios (up to 12 units/ac). The proposed development has a total acreage of 2.029 acres. When the density is calculated at build out using 20 units the density ration is 9.857 units per acre of developable land. The proposed townhome development will continue to address the high density residential component envisioned in the Comprehensive Plan 2040.

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

Town Council
August 17, 2020

STAFF REPORT

Application Number: 2019-130-SUP
Project Name: The Quad Special Use Permit

Tag #:	05G02046K
Town Limits/ETJ:	ETJ (annexation request to follow)
Applicant:	Adams & Hodge Engineering
Owner:	CGC Properties LLC
Location:	Located off Guy Road
Project Manager:	Jeff Caines, Planner

Public Noticing:

- Neighborhood meeting held on August 19, 2019
- Signs Posted August 7, 2020
- Letters mailed August 7, 2020
- Newspaper ad published August 5, 2020 and August 12, 2020

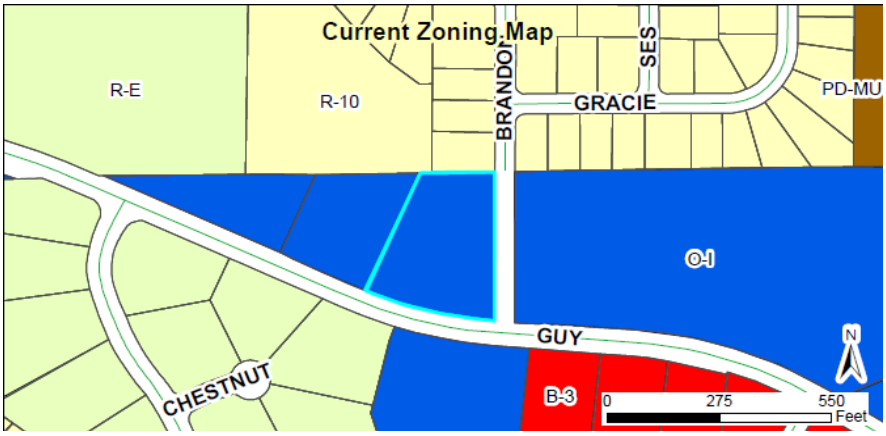
REQUEST: Special Use Permit request to develop the use of townhomes on the subject parcel.

SITE DATA:

Acreage: 2.03 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-10 (R-10)	Single Family Residential (Garrison Subdivision)
South	Office-Institutional (O-I) & Residential-Estate (R-E)	Office/Single-Family Residential
East	Office-Institutional (O-I)	Vacant
West	Office-Institutional (O-I)	Medical (Devlin Orthodontics)



DEVELOPMENT DATA:

Proposed Uses: Townhomes (20 units)

Density/Intensity: 9.86 units/acre

Impervious Surface: maximum 80% per lot

Required Parking: 2 spaces/unit required= 40 spaces

Proposed Parking: 40 spaces plus 2 mail kiosk spaces

Access/Streets: The development will have an entrance off Guy Road at this time. When Brandon Drive is developed in the future, the access to Guy Road will be closed, and the property will connect to Brandon Drive. See analysis and recommended condition of approval, outlined in staff report for associated preliminary plat 2019-129-SD.

STAFF ANALYSIS:

Overview
The applicant is requesting a Special Use Permit to develop the use of townhomes on the subject property, which is zoned Office-Institutional (O-I). Per UDC requirements, the use of townhomes in this district is only permitted via issuance of a Special Use Permit. Running concurrently with this application is a preliminary plat application 2019-129-SD.

Dimensional standards for townhome are set via the Special Use Permit process. The applicant is proposing the below dimensional standards for each lot.

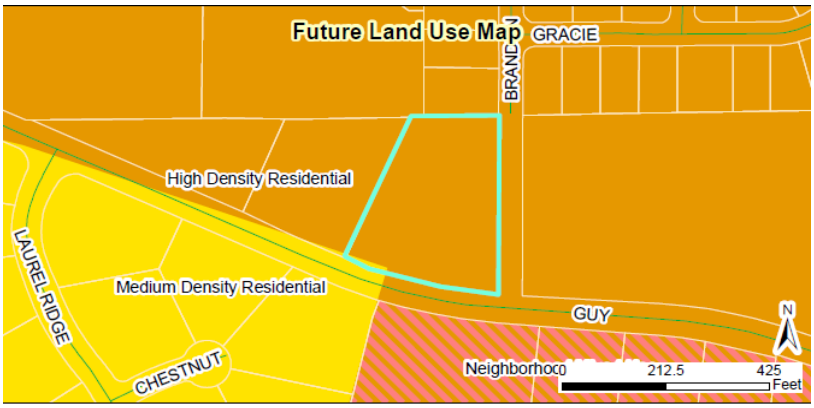
Dimensional Standards	
Minimum Lot Area	1,650 FS
Minimum Lot Width	22 feet
Max. Lot Coverage (%)	60 %
Max. Impervious Coverage (%)	90 %
Density	9.86 units/acre

Proposed Setbacks	
Front	20 feet
Side	0 feet
Side Street	0 feet
Side Interior	0 feet
Rear	0 feet

Associated Site Plan
Pursuant to §155.711(D)(1), concurrent with a request for a special use permit, an applicant is required to submit a site/subdivision plan for review and approval. This plan is processed as any other site/subdivision plan (in this case as a Preliminary Plat application: 2018-129-SD), with a final decision made by the applicable reviewing body. The details of the site/subdivision plan are outlined partially herein, and in their entirety in the staff report for the associated Preliminary Plat application 2018-129-SD.

Consistency with Adopted Plans

- **Comprehensive Plan 2040**
  The future land use map designates this property as "High Density Residential", which allows all residential housing types and densities up to 10 units per acre for standard developments, and up to 12 units per acre through a Planned Development. The proposed development is consistent with this designation.



- **Unified Development Code**
  The proposed development is consistent with and meets the applicable requirements of the Unified Development Code (UDC).

Findings of Fact
The applicant has addressed the Findings of Fact associated with a Special Use Permit as outlined in the Unified Development Code. The applicant's responses are incorporated into the record as an attachment to the Staff Report. These Findings are included below.

1. ***That the application will not materially endanger the public health or safety if located where proposed, and developed according to the plans as submitted and approved.***

   - **Applicant Response:**
     The distribution of traffic has been given much consideration by providing primary access to Guy Road with the secondary access point to Brandon Drive once the street is constructed. Since Guy Road is an NCDOT road, the access will be designed to NCDOT standards. Care has been exercised in the townhome subdivision to protect the environment by prudent use of buffers and landscaping. The public's safety and health have been addressed by providing public water and sewer that meet the Town and State requirements. Storm water quality has been addressed during construction with erosion control measures and in the long term with storm water management facilities that address not only the quality of water but also the quantity of water. Street are so designed as to be safe for pedestrians and vehicles alike by providing adequate separation, traffic control and lighting. The public's health and welfare are further addressed by the townhome subdivision providing passive and active recreation opportunities offsite utilizing municipal recreation facilities via recreation assessment fees.

   - **Staff Commentary:** The applicant will not be providing access to Brandon Drive at this time, as Brandon Drive has not been developed. Once Brandon Drive is developed, the developer will permanently close the Guy Road access and connect on to Brandon Drive instead. This is recommended as a condition of approval, in accordance with NCDOT requirements, due to the proximity of the two access points on Guy Road.

2. ***That the application meets all required specifications and conforms to the standards and practices of sound land use planning and the Town Code of Ordinances and other applicable regulations.***

- **Applicant Response:**
  The subdivision meets or exceeds all applicable development standards that are established in the Subdivision Regulations and the Unified Development Code. Private streets are designed in accordance with the Town standards so as to provide a development with safe streets for both vehicles and pedestrians. Public utilities are designed so as to provide adequate water for consumption as well as fire protection while the sewer collection system is designed to protect the health and welfare of the public. Area lighting is provided so as to provide a safe environment for the residents. Storm water management facilities have been incorporated into the design as to manage the volume of storm water as well as the quality of physical improvements during construction so as to minimize off site discharge of sediments. Passive and active recreation opportunities have been provided through open space, and indirectly through recreational assessment fees. By incorporating buffers, open space and landscaping the aesthetic quality of the development and as well as adjacent properties is maintained.

- **Staff Commentary:** The proposed subdivision has been reviewed by Town staff during the TRC process and has received TRC certification. The plan meets the requirements of the Unified Development Code, and has been reviewed at a preliminary level by Engineering and Public Works as well.

3. ***That the application will not substantially injure the value of adjoining or abutting property, and will not be detrimental to the use or development of adjacent properties or other neighborhood uses.***

- **Applicant Response:**
  The Quad townhome development will be a continuation of the development pattern established by the Moss Creek Parkside and Garrison Place, which is a blending of single family with a mix of townhomes and apartments. Even though the Quad townhomes will continue the existing development pattern, the townhomes will offer a refreshing change of architectural style that is modern and in more keeping with contemporary trends.
  In the past to the west of the Quad, the Town of Clayton has approved multifamily housing in the form of duplexes, triplexes and traditional garden apartments. To the west and a little north of the proposed development, lies in the Clayton Recreation Center and Clayton Community Park within easy walking distance. The recreation center and community park facilities will obviously be very important to the residents of the townhomes who will have at their disposal the Town's premier recreation facilities by a short walk. Also to the west along Guy Road is Clayton Middle School. To the east there are also many commercial businesses that will support the residents of the Quad.

- **Staff Commentary:** Townhomes and Apartment development are located further west along Guy Road. Single-family dwellings are located to the north in Garrison Subdivision. The proposed use is consistent with the Future Land Use Map and Comprehensive Plan 2040.

4. ***That the application will not adversely affect the adopted plans and policies of the Town, or violate the character of existing standards for development of the adjacent properties.***

- **Applicant Response:**

The proposed development is in compliance with the Town of Clayton Comprehensive Plan 2040. In the Plan, the area of the townhome subdivision is designated as High Density Residential (HDR) land use. The HDR land use encourages higher density residential development by using multifamily developments (apartments and townhomes) that have high density ratios (up to 12 units/ac). The proposed development has a total acreage of 2.029 acres. When the density is calculated at build out using 20 units the density ration is 9.857 units per acre of developable land. The proposed townhome development will continue to address the high density residential component envisioned in the Comprehensive Plan 2040.

- **Staff Commentary:** The proposed development is designed in accordance with the Town's Comprehensive Plan 2040 and Future Land Use Map. It also meets the requirements of the Unified Development Code, and has been certified by the Technical Review Committee.

RECOMMENDED CONDITIONS OF APPROVAL:

If approved, staff is recommending conditions of approval be laced upon the application. These conditions are outlined in an attachment to the staff report. The applicant has reviewed the attachment and is in agreement with the conditions proposed by staff.

ATTACHMENTS:

1.) Application
2.) Recommended Conditions of Approval
3.) Staff Report Maps
4.) Neighborhood Meeting Materials
5.) Adjacent Property Letters
6.) Newspaper Ad

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

July 28, 2020

Donnie Adams
Adams & Hodge Engineering, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com

Re: 2020-130-SUP The Quad Special Use Permit

To Whom It May Concern,

The Town of Clayton Planning staff is recommending to the Town Council that conditions of approval be placed upon the above referenced application, which proceeds to Town Council on Monday, August 17, 2020. These recommended conditions of approval are outlined on the back of this letter.

Please read through these potential conditions of approval, and sign below if you are in agreement with the conditions as proposed. If you are not in agreement please respond accordingly in writing. This will be included within the agenda packet for Council review.

Thank you.

Sincerely,

Jeff Caines, AICP
Planner

Recommend Conditions of Approval (2020-130-SUP) The Quad:

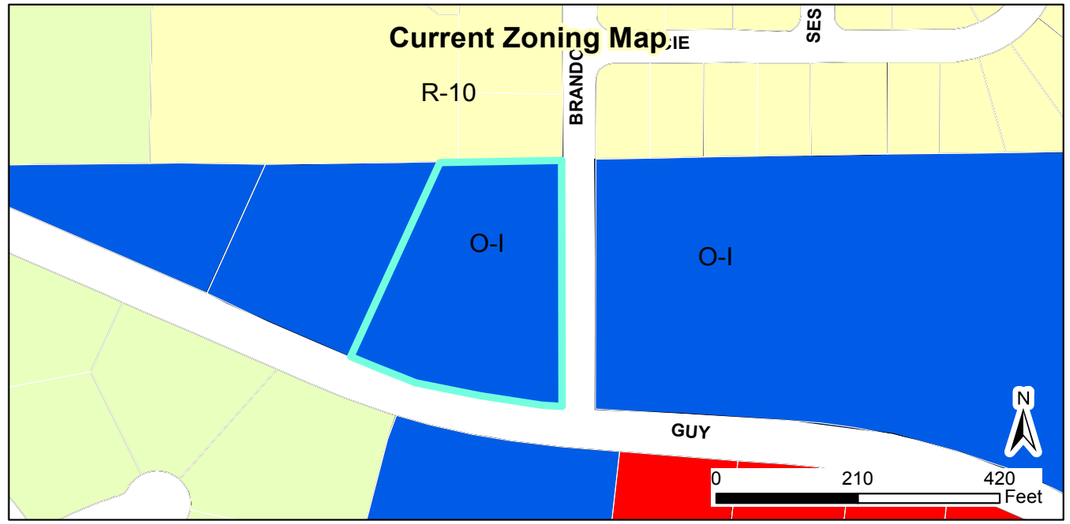
CONDITIONS:

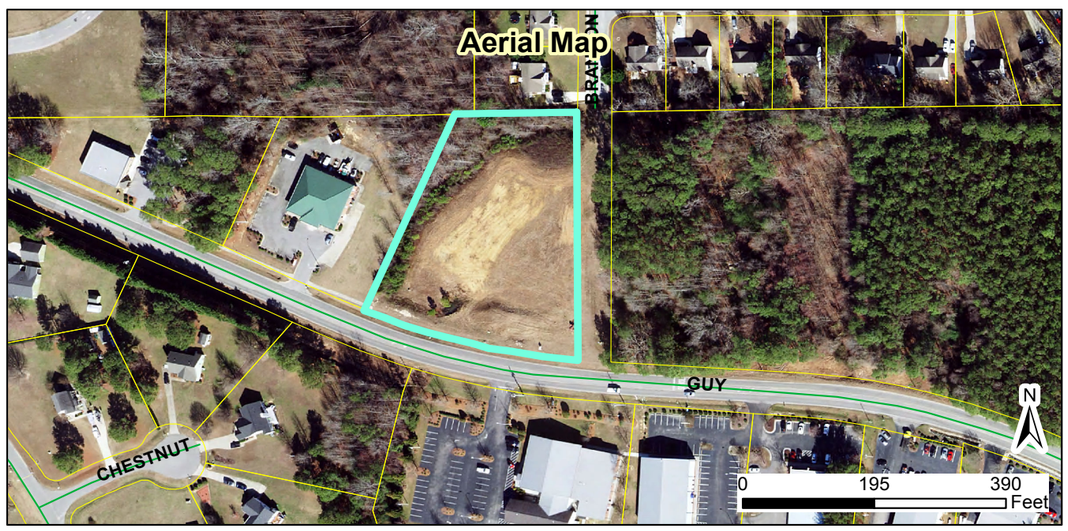
1. These Conditions of Approval, and any others included with the associated Preliminary Plat (2019-129-SD) shall be recorded upon the final plan set, which must be delivered to the Planning Department for review and final approval.
2. Dimensional standards shall be set by those indicated on the associated preliminary plat (2019-129-SD). Any deviations from these standards are pursuant to modifications as outlined in Section 155.711 of the Unified Development Code.

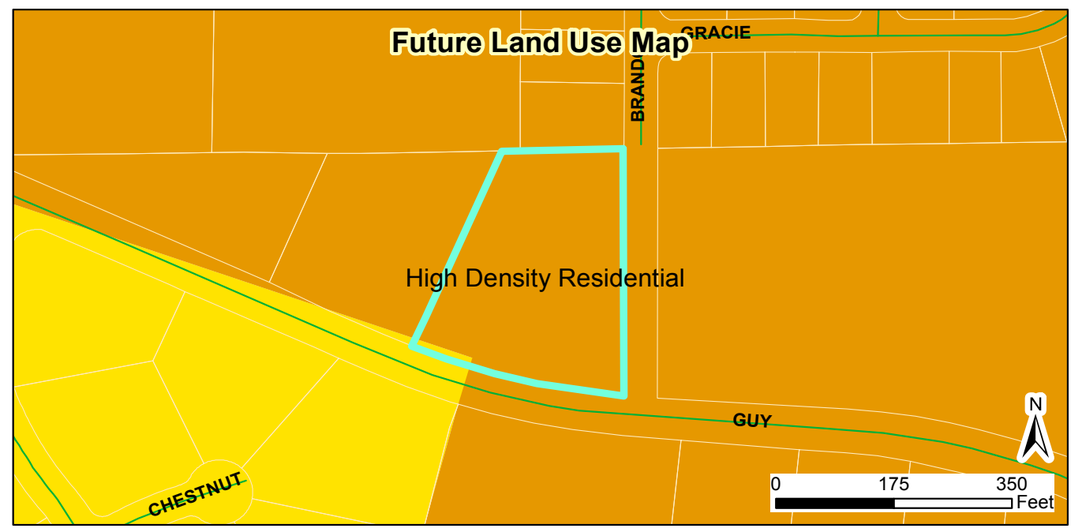
APPLICANT AFFIDAVIT

I/We, the undersigned, do herby certify that I have reviewed the recommended conditions of approval and am in agreement with the conditions as they are outlined within this letter.

AMY D. STANCIL		7/31/20
Print Name	*Signature of Applicant*	*Date*







2019-130-SUP / 2019-129-SD
The Quad Special Use Permit / Subdivision
Request to develop 20 townhom units

Applicant: Adams & Hodge Engineering
Property Owners: CGC Properties, LLC
Tag #: 05G02046K

Staff Report Map

07/31/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\SPECIAL USE\2019\2019-130-SUP-The Quad\Staff Report Maps\Staff Report Map - 2019-130-SUP - The Quad.mxd

Legend
TOC_SDE.GISMGR.Parcels
TOC_SDE.GISMGR.Roads

ADAMS & HODGE ENGINEERING, PC

August 6, 2019

Dear Clayton Area Property Owner:

The purpose of this letter is to notify you of an application filed with the Town of Clayton for a land use change or development proposal involving property adjacent to, or in close proximity to, property shown in your ownership by Johnston County tax records. Per Town of Clayton regulations, a Neighborhood Meeting will be held to provide information to area residents about the nature of the proposal. A representative of the applicant will be present to explain their application, answer questions, and solicit comments.

Meeting Date: **Monday August 19, 2019**

Meeting Time: **7:00 p.m.**

Meeting Location: **314 E. Main St. (Adams & Hodge Engineering – Entrance and Parking in the back of building)**

Type of Application: **Major Subdivision Plan and Special Use Permit**

Project/proposal property location: **Guy Road beside Devlin Orthodontics (See attached Map)**

Description of project/proposal**:** This project proposal is for 20 units of Modern Townhomes (2 story, 2 bedroom, and single car garages.)

Upcoming Public Meetings for this application: Town Council Meeting September 3, 2019

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A schedule of all upcoming public meetings for application.
3. A map at scale that is appropriate to the project and shows neighboring properties and roads.
4. A map, drawing, or other depiction of the proposed land use change or development proposal.

A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and/or development proposal.

If you have any questions prior to or after this meeting, you may contact us at ***(919)763-7278***.

You may also contact the Planning Department at 919-553-5002.

Sincerely,

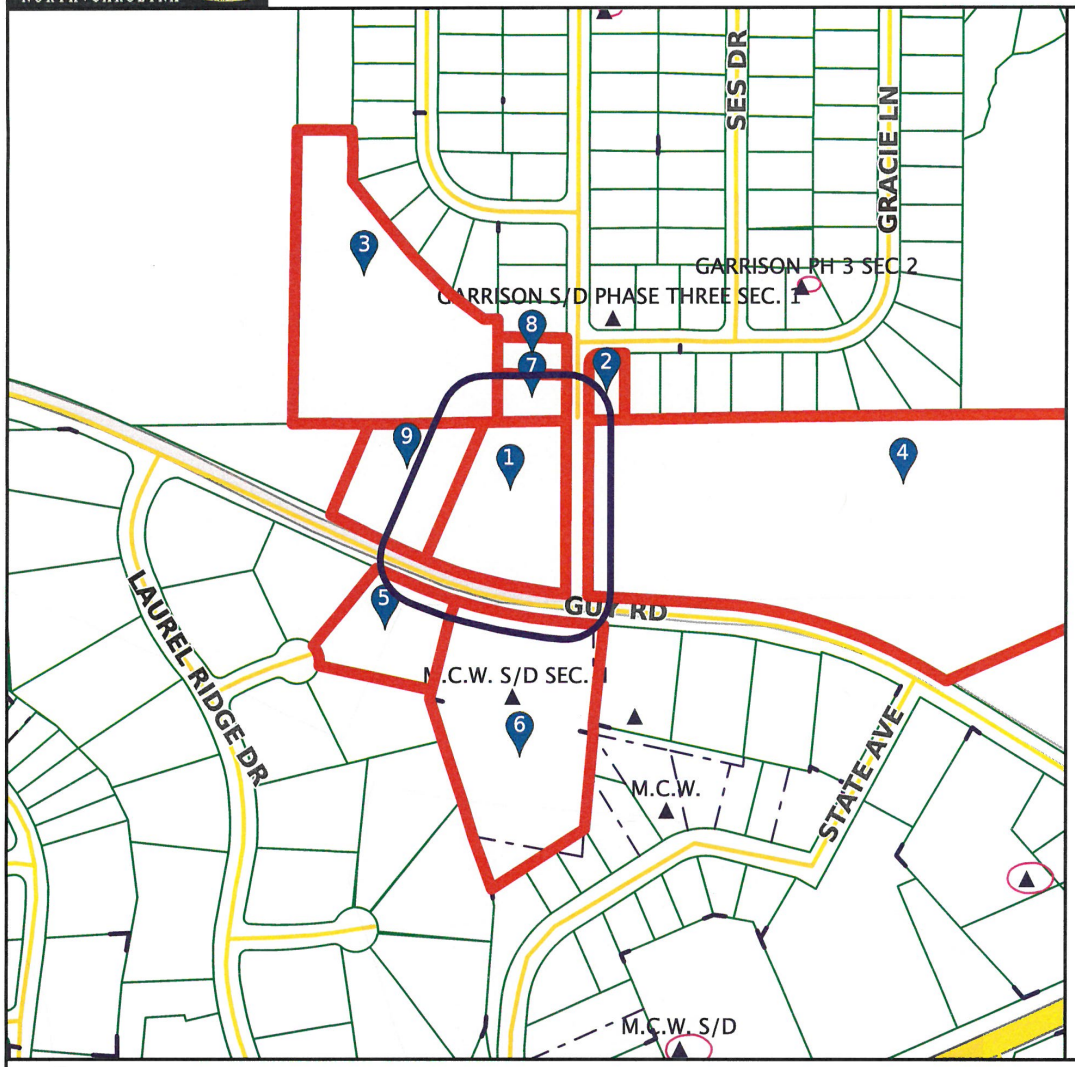
Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

JOHNSTON COUNTY
NORTH • CAROLINA

*** DISCLAIMER ***

Johnston County assumes no legal responsibility for the information represented here.



Result 1

id: 05G02046K
Tag: 05G02046K
Owner Name 1: CGC PROPERTIES LLC
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 10766
Mail Address 3: WILMINGTON, NC 28404-0766
Book: 03119
Page: 0723

Result 2

id: 05G02050
Tag: 05G02050
Owner Name 1: ALLEN, GREGORY M.
Owner Name 2: ALLEN, JANET H.
Mail Address 1: 207 GRACIE LN
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7947
Book: 05137
Page: 0346

Scale: 1:4368 - 1 in. = 363.97 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
June 25, 2019

JOHNSTON COUNTY NORTH CAROLINA

* * * DISCLAIMER * * *

Johnston County assumes no legal responsibility for the information represented here.

Result 3

id: 05G02034Q
Tag: 05G02034Q
Owner Name 1: GARRISON HOMEOWNERS ASSOCI INC
Owner Name 2:
Mail Address 1: 207 W MILLBROOK SUITE 110
Mail Address 2:
Mail Address 3: RALEIGH, NC 27609-0000
Book: 01700
Page: 0827

Result 4

id: 05G02046L
Tag: 05G02046L
Owner Name 1: N E M E, L L C
Owner Name 2:
Mail Address 1: 3705 WILLIAM J COWAN WYND
Mail Address 2:
Mail Address 3: RALEIGH, NC 27612-5399
Book: 01416
Page: 0631

Result 5

id: 05G02019C
Tag: 05G02019C
Owner Name 1: MOTZ, KATHLEEN
Owner Name 2: MOTZ, KATHARINA H
Mail Address 1: 5 CHESTNUT DRIVE
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02858
Page: 0314

Result 6

id: 05G02014Q
Tag: 05G02014Q
Owner Name 1: CROSSROADS CHURCH OF CLAYTON
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 1677
Mail Address 3: CLAYTON, NC 27520-1677
Book: 04068
Page: 0460

Result 7

id: 05G02049
Tag: 05G02049
Owner Name 1: SIKANETA, PUMULO H.
Owner Name 2:
Mail Address 1: 302 BRANDON DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7945
Book: 04846
Page: 0717

Result 8

id: 05G02100
Tag: 05G02100
Owner Name 1: LATTA, HOLLY
Owner Name 2: LATTA, ASHLEY
Mail Address 1: 300 BRANDON DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7945
Book: 05177
Page: 0101

*** DISCLAIMER ***

Johnston County assumes no legal responsibility for the information represented here.

Result 9

id: 05G02011A
Tag: 05G02011A
Owner Name 1: DEVLIN PROPERTIES LLC
Owner Name 2:
Mail Address 1: 7016 HARPS MILL RD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27615-0000
Book: 02784
Page: 0379

ADAMS & HODGE
ENGINEERING, PC

The Quad Meeting Minutes
Date: August 19, 2019
Time: 7:00pm
Location: 312 E. Main Street (Adams & Hodge Engineering)

The meeting was ready to begin at 7:00pm for The Quad, however, as of 7:20pm there were no adjacent property owners that showed up. Therefore, there were not any minutes to report.

RECEIVED
AUG 20 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: The Quad

Application: Major Subdivision, Special Use, Permit, Wastewater Allocation

Location/Date: Adams & Hodge Engineering 314 E. Main St. Clayton 8-19-19

	NAME	ADDRESS
1	Donnie Adams	404 Swann Trail, Clayton, NC 27527
2	Holland Adams	404 Swann Trail, Clayton, NC 27527
3	Andrew Hodge	25 Jasper Dr. Clayton
4	[illegible]	215 W. Barners St, Clayton, NC. 27520
5		
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RECEIVED
AUG 20 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

August 7, 2020

NOTICE

SUBJECT:	**Project:**	2019-130-SUP The Quad Special Use Permit
		2019-129-SD The Quad Preliminary Plat
	Address:	Located off Guy Road
	TAG #:	05G02046K
	Applicant:	Adams & Hodge Engineering, PC

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Town Council will hold a public meeting on ***Monday, August 17, 2020 at 6:00 PM*** at Town Hall, 111 E Second Street, to consider two land use applications: 2019-130-SUP The Quad Special Use Permit and 2019-129-SD The Quad Preliminary Plat.

The Special Use Permit (2019-130-SUP) is to request the ability to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K). Per UDC requirements, townhomes are permitted via issuance of a Special Use Permit in the O-I zoning district.

The Preliminary Plat (2019-129-SD) is to request the ability to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K).

Please see the map on the back of this letter.

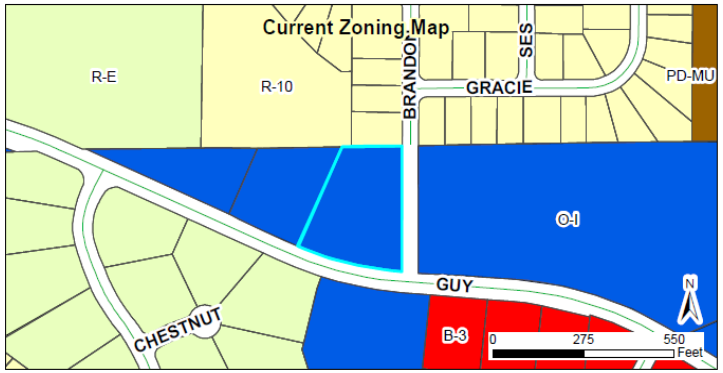
During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

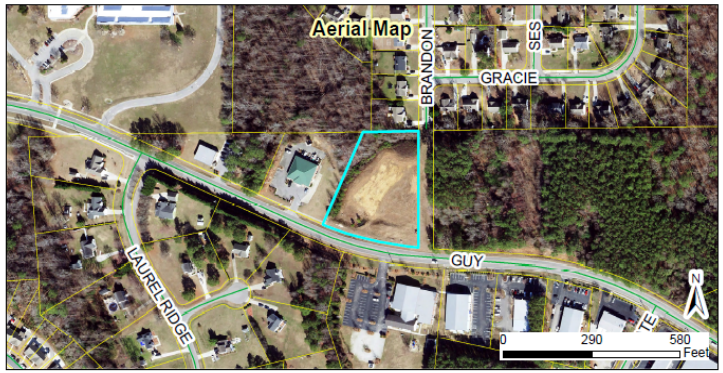
Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this proposed rezoning request. You are invited to join this meeting and express your opinions on this request to the Town Council.

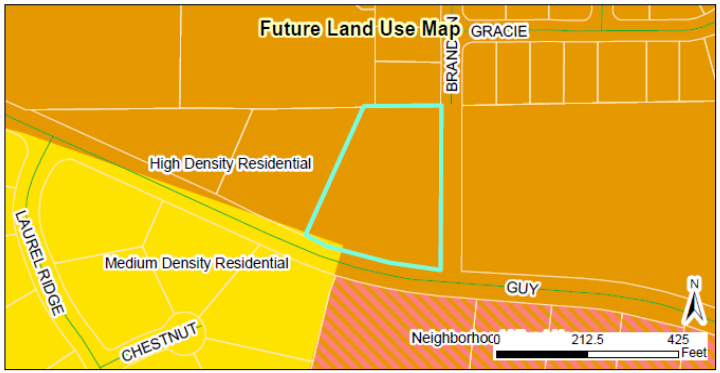
If you should need additional assistance or information, please contact the Planning Department at (919) 553-5002 or email at jcaines@townofclaytonnc.org.

Sincerely,

Jeff Caines, AICP
Planner







2019-129-SD
The Quad Preliminary Plat
Request to develop 20 townhome units

Applicant: Adams & Hodge Engineering
Property Owners: CGC Properties LLC
Tag #: 05G02046K

Staff Report Map

07/11/19
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Watershed Protection Overlay

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2019\2019-129-SD - The Quad\Maps\Staff Report Map - 2019-129-SD - The Quad Preliminary Plat.mxd

PUBLIC NOTICE

In accordance with NC GS 160A-364, the Clayton Town Council will hold a public hearing on Monday, August 17, 2020, at 6:00 PM , to consider the following requests:

- **2019-130-SUP The Quad; Special Use Permit; request to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K). Per UDC requirements, townhomes are permitted via issuance of a Special Use Permit in the O-I zoning district.**

- **2019-129-SD The Quad; Preliminary Plat; request to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K).**

For the Special Use Permit and Preliminary Plat, the Town Council will hold an evidentiary hearing and must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

Samantha Wullenwaber, Planning Director
919-553-5002

_____

The Johnstonian Newspaper

Please advertise on the following dates:
August 5, 2020
August 12, 2020

Affidavit of publication required.

Town of Clayton
Town Council
SUP Motion Sheet

After considering the competent, material, and substantial evidence presented, including the application and materials of record, I move to (PICK ONE):

- ■ Approve
- ■ Deny
- ■ Approve with Conditions

SUP Application **2019-130-SUP – The Quad**

This motion is based on the following findings:

1. The application **WILL NOT** materially endanger the public health or safety if located where proposed, and developed according to the plans as submitted and approved.

OR

The application **WILL** materially endanger the public health or safety if located where proposed, and developed according to the plans as submitted and approved. (State evidence supporting finding.)

****

2. The application **MEETS** all required specifications and **CONFORMS** to the standards and practices of sound land use planning and the Town Code of Ordinances, or other applicable regulations.

OR

The application **DOES NOT MEET** all required specifications and **DOES NOT CONFORM** to the standards and practices of sound land use planning and the Town Code of Ordinances, or other applicable regulations. (State evidence supporting finding.)

****

Motion Form
Item #7a
2019-130-SUP
The Quad

3. The application **WILL NOT** substantially injure the value of adjoining or abutting property, and **WILL NOT** be detrimental to the use or development of adjacent properties or other neighborhood uses.

OR

The application **WILL** substantially injure the value of adjoining or abutting property, and **WILL** be detrimental to the use or development of adjacent properties or other neighborhood uses. (State evidence supporting finding).

****

4. The application **WILL NOT** adversely affect the adopted plans and polices of the Town, or violate the character of existing standards for development of the adjacent properties.

OR

The application **WILL** adversely affect the adopted plans and polices of the Town, or violate the character of existing standards for development of the adjacent properties. (State evidence supporting finding.)

****

[If approved with conditions] The applicant meets the above findings subject to the following conditions:

Motion Form
Item #7a
2019-130-SUP
The Quad

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Public Hearings

Item Title
The Quad – 2019-129-SD

Presenter
Planning Department

Summary/Description
The Quad – Subdivision

The applicant is requesting preliminary plat approval to develop 20 townhome units on the subject property. The property is zoned Office-Institutional (O-I) and is located off Guy Road. The use of townhomes is permitted in this district via issuance of a Special Use Permit, which is running concurrently with this request. The proposed development would allow for 9.86 units/acre. This zoning district does not specify a maximum density permitted, and instead permits the density through the special use permit process. Additionally, the dimensional standards are also set through the special use permit process.

Requested Action
Approval with Conditions

Funding Source (If Applicable):
N/A

Cost: **N/A** **Yes** ☐ **No** ☒

Additional Documents to be Included in Agenda Packet
Application w/ Owners Consent Form
Staff Report
Recommended Conditions of Approval
Staff Report Map
Applicant Site Plan
Neighborhood Meeting Material
Newspaper Ad - Public Notice
Adjacent Property Owner Letter- Public Notice
NEME – Letter of Understanding (March 27, 2003)
NEME – Letter of Understanding (May 20, 2019)
Wastewater Allocation Request

Meeting Timeline

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

MAJOR SUBDIVISION (PRELIMINARY PLAT) APPLICATION

☒ **New Major Subdivision: $400.00 + $5.00 per lot**
- ☐ **Conventional**
- ☐ **Open Space**
- ☐ **Master Plan**

☐ **Modification to approved plan**
- ☐ **Major: $400.00 + $5.00 per lot modified**
- ☐ **Minor: $200.00 + $5.00 per lot modified**

Modified Plan: _____

Advertising Fee: $200.00

SITE INFORMATION

Name of Project: The Quad **Acreage of Property:** 2.029

Tag #: 05G02046K **NC Pin #:** 165806-39-9222

Location: Guy Rd. beside Devlin Orthodontics

Number of lots (Existing): 0 **(Proposed):** 20 Lots **Min. Lot Size:** 1,850sf

Zoning District: O-I **Electric Provider:** Duke Progress Energy

Wastewater: ☐ *Septic* ☒ *Sewer* **Water:** ☐ *Well* ☒ *Public/Private Water*

Recreation/Open Space Requirement: ☒ *Fee in lieu* ☐ *Land Dedication – acreage:* _____

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

Mailing Address: 314 E. Main St., Clayton, NC 27520

Phone Number: 919-763-7278 / 919-812-2654 **Fax:** _____

Contact Person: Donnie Adams / Amy Stancil

Email Address: donnie@adamsandhodge.com / amy@adamsandhodge.com

OFFICE USE ONLY

Date Received: _____ Amount Paid: $700.00 File Number: _____

RECEIVED
JUN 28 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

PROPERTY OWNER INFORAMTION

Name: CGC Properties, LLC

Mailing Address: PO Box 10766, Wilmington, NC 28404

Phone Number: _____ **Fax:** _____

Email Address: _____

EXPLANATION OF PROJECT

Please provide detailed information concerning all requests. Attach additional sheets if necessary.

See attached

FINDINGS OF FACT

Section 155.706(I)(10) of the Unified Development Code requires that certain findings must be made by the Town Council before a Major Subdivision may be approved. Outline below (you may attach additional sheets) how the application addresses each of the following findings:

(1) Consistency with the adopted plans and policies of the Town..

See Exhibit A

(2) The subdivision meets all required specifications of this chapter.

See Exhibit A

(3) The subdivision will not be detrimental to the use or orderly development of other properties in the surrounding area and will not violate the character of existing standards for development of properties in the surrounding area.

See Exhibit A

(4) The subdivision design will provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, will provide for the unified and orderly use of or extension of public infrastructure, and will not materially endanger the environment, public health, safety, or the general welfare.

See Exhibit A

Planned developments must also meet the Master Plan Approval Criteria in Section 155.705(J)

MAJOR SUBDIVISION PLAN CHECKLIST

Pursuant to Article 7, Section 155.706 of the Unified Development Code, applications requesting a public hearing or administrative approval process shall submit a plan set to the Planning Department. These plans may include Master Plan, Site Plan, Subdivision Plan, Regulating Plan, Architectural Elevations, Landscape Plan, Photometric/Lighting Plan, Engineering Plans, and Survey. The plan requirements shall be based on the type of development application or approval process.

PLAN FORMAT

These standards are established to provide information pertaining to the graphic and format presentation of plans. The following is required for all types of plans, except where otherwise noted:

- All plans and architectural elevations shall be limited to 24" x 36" in size, and **folded to an 8.5" x 11" format.**

- Plans are to be drawn at the same engineering scale of 1" = 20'; 30'; 40'; 50'; 60' (architectural elevations and details are exempt from this requirement) with north oriented in the same direction.
- Plans may be drawn at an engineering scale of 1" = 100', if approved by the Planning Department or the Technical Review Committee (TRC).
- Architectural plans and elevations shall be drawn at an architectural scale of 1" = 3/32', 3/16', 1/8', 1/4', or 3/8'.
- All drawings, except elevations, isometric drawings, and renderings, shall be in two dimensional plan views.
- All text shall be clear and legible.
- Line weight hierarchy on all plans shall be consistent with common drafting standards.
- Multiple sheets shall be consecutively numbered (e.g. Sheet 1 of 4).
- All numerical references shall be rounded up to a maximum of two decimal points.

PLAN ELEMENTS AND GRAPHIC DATA (TO BE ON ALL SHEETS)

The following items include general and project information. This information is required to be present on all plan sheets, except where otherwise noted.

Provided		
Yes	**N/A**	
☑		Consultant Logo Box (name, address, phone number, fax, and e-mail, firm and license number)
☑		Project/Application Name
☑		Type of Plan
☑		Signature and Professional Seal with date (landscape plans, architectural elevations, engineering plans, surveys)
☑		Original/Submittal Date and Revision Date
☑		Sheet Number
☑		Vicinity Map
☑		North Arrow with NC Grid System
☑		Graphic Scale (engineering or architectural graphic and written scale)

The following elements are specific to each property and application request, and shall be shown graphically on the specific plan types listed below. These graphics shall be supported by text, labeling, and dimensional information (width, length, and depth).

SURVEY

Provided		
Yes	N/A	
☑		A signed and sealed boundary survey **(not more than a year old unless otherwise approved by the Planning Department)** with the bearings and distances of every property line shown. Distances shall be in feet or meters and decimals thereof. The number of decimal places shall be appropriate to the class of survey required. The survey must include any and all easements of record (referenced by Deed Book and Page) and must be prepared by a surveyor registered in the State of North Carolina.

EXISTING CONDITIONS SHEET

Provided		
Yes	N/A	
☑		The existing topographical conditions of the property with a two foot contour interval showing the location of any natural features such as water courses, wooded areas, steep slopes (above 25%), or other geological features.
☑		The existing streets and roadway improvements (medians, landscaping, signage, driveways, etc.) within 100 feet of project boundary.
☑		The existing structures located on the subject property.
☑		The existing structures within 100 feet of project boundary.
☑		The existing utilities (including inverts of pipes, rim elevations, wells and septic tanks, etc.) within 100 feet of project site.
☑		Label subject parcel and adjacent property acreage, owners, and zoning districts.

PRELIMINARY SITE PLAN

The items listed below are required to be delineated (in a tabular format) on the site plan:

Provided		
Yes	N/A	
☑		Site data table in tabular form
☑		Name of project (AKA names if applicable)
☑		Parcel identification number (and/or Tag number)
☑		Property size (acres and square feet)
☑		Property location (Town limits or ETJ)
☑		Existing zoning district
☑	☐	Proposed zoning district (if applicable)
☐	☑	Overlay (if applicable)

Provided		
Yes	**N/A**	
☑		Existing use
☑		Proposed use
☐	☑	Number of seats/students/fueling positions (as applicable).
☑	☐	Number of housing units proposed, per housing unit type.
☑	☐	Proposed density (number of units per acre)
☑	☐	Proposed intensity (gross floor area)
☑		Building coverage (as percentage of total site)
☑	☐	Impervious surface area (square feet and as percentage of total site)
☑	☐	Building height (number of stories and in feet)
☑	☐	Required parking (list requirement i.e. 1 space per 300 SF)
☑	☐	Proposed parking
☑	☐	Required/proposed handicap accessible parking
☑	☐	Provide name of Electric Provider.
☑	☐	Provide name of Water Provider.
☑	☐	Provide name of Sewer Provider.
☑	☐	Max building height.

Other site plan elements:

Provided		
Yes	**N/A**	
☑		Identify adjacent property owners, their parcel ID number, current zoning and present use.
☐	☑	Put a bubble around the affected area for amendments to previously approved projects.
☑		Identify the location of lots, buildings and structures with finished floor elevations and applicable setbacks.
☑		Identify existing and future right of ways.
☐	☑	Identify Watershed Protection Areas.
☑	☐	Identify existing easements by type, and distinguish if public or private.
☑	☐	Identify proposed easements by type, and distinguish if public or private.
☑	☐	Identify Open Space/Common Areas, amenities.
☑		Identify clear sight triangle at project ingress/egress points with dimensions.
☑		Identify main entrance/access driveways, curb and gutter, cross section with ROW. Proposed driveway and setbacks must be shown.

Provided		
Yes	**N/A**	
☐	☑	Provide boundaries of Resource Conservation Areas (see UDC Section 155.500).
☑		Provide an off-street parking and loading layout (with details, dimensions and access location). Accessible parking requirements are listed in NCSBC Volume 1C, 1999 edition. Show traffic circulation arrows.
☐	☑	Provide queuing details for drive-up/drive-thru facilities (if applicable).
☑		Provide the locations and dimensions of existing and proposed sidewalks and accessible routes.
☐	✓	Provide the location and details of refuse collection areas.
☐	☑	Provide the location, size and orientation of freestanding signs.
☐	☑	Identify proposed phasing (phasing lines) of construction on Phasing Plan sheet.
☐	☑	Cul-de-sacs must be dimensioned and meet Town of Clayton minimum design criteria.
☑	☐	Identify cluster mailbox unit (CBU) locations and details, including parking layout.

CONCEPTUAL ENGINEERING PLANS

Note: Conceptual engineering plans are deemed preliminary in nature. Review and approval of public infrastructure construction plans is a separate process performed by the Engineering Division.

Provided		
Yes	**N/A**	
☑	☐	Identify proposed streets and roadways (public and private) with dimensions and cross sections.
☑	☐	Identify the curve radii for all internal and external vehicular use areas.
☑	☐	Identify all access points to the project.
☑	☐	Identify existing conditions and proposed grading plans.
☐	☑	Identify Tree Conservation Areas shown on grading plan.
☐	☑	Show proposed flow of traffic.
☐	☑	Identify proposed traffic control signs and striping.
☑	☐	Identify the proposed water distribution system (including size) with location of fire hydrants and point of connection(s).
☑	☐	Identify the proposed sanitary sewer collection system (including size) and point of connection(s). If a municipal sewer connection is not available, please provide documentation from Johnston County Department of Environmental health that the location of septic tank and drain field is acceptable.
☑	☐	Provide preliminary wastewater allocation calculation.

Provided		
Yes	N/A	
☐	☑	Identify proposed grease traps.
☐	☑	Identify backflow prevention devices.
☐	☑	Identify slopes steeper than 2.5:1.
☑	☐	Identify the proposed storm water management system with location of inlets, piping and positive outfall along with typical section and top surface area of storm water retention/detention pond, including soil types, slope, bottom and top elevations, and finish floor elevations.
☑	☐	Provide a Stormwater Management Statement.
☐	☑	Floodplain development permit required for this parcel – see Engineering Dept.

FIRE PLAN

Fire Rescue (information to be shown on conceptual engineering plans)

Provided		
Yes	N/A	
☑	☐	Identify fire hydrant distribution (distance of hose lay).
☐	☑	Identify the sprinkler connection locations and size.
☑	☐	Identify fire lane designations and circulation around buildings (stripe fire lanes and show minimum stabilized access around all structures).
☑	☐	Identify the emergency evacuation route (access in and out of the property).
☑	☐	Identify fire apparatus turning radius.
☑	☐	Verify the location of fire hydrants is not interfering with required landscaping (must be 24" clearance of landscaping from bottom of steam fitting).
☐	☑	Identify the Lock Box/Knox Box locations.
☐	☑	Identify placard locations for hazardous materials.

PHASING PLAN

Provided		
Yes	N/A	
☐	✓	Provide a Phasing plan showing all proposed phases and phase titles, in different colors.

LANDSCAPE PLAN

Provided		
Yes	**N/A**	
☑		Provide a landscape plan identifying the location of all proposed landscaping (must be prepared by a landscape architect registered in North Carolina).
☑		Indicate the location, width and type of all required buffers.
☑		Indicate the location, width and type of landscaping within vehicular use areas.
☑		Indicate the location, width and type of landscaping used to screen drive-thru areas, service areas, loading areas, mechanical equipment and above ground utilities.
☑		Provide a plant list summary table which includes: 1. A planting key identifying the various planting elements 2. The quantity of each type of plant material proposed 3. The size, height, caliper and spacing of plant material proposed 4. The Botanical and common names of plant material proposed
☑		Verify/identify clear sight distances and safe-sight-triangles at project ingress/egress points.
☑		Provide an irrigation note to read as follows: "All landscaped areas shall be provided with an automatically operated irrigation system that will adequately cover all living plant material, such system shall include a rain sensor." (If irrigation will not be utilized, drought-tolerant species must be used).
☑		Provide a landscape maintenance note which states: "All landscaped areas shall be maintained in an attractive and healthy condition. Dead or diseased plantings shall be removed and replaced in a timely fashion".
☑		Identify and list any existing plant material which will be used to satisfy landscape requirements.

LIGHTING PLAN

Provided		
Yes	**N/A**	
☐	☑	Conceptual Lighting Plan - any common lighting should not spill over to other properties.
☐	☑	Identify the light source and provide a detail of the fixture.
☐		Identify the proposed height of fixtures.

ARCHITECTURAL ELEVATIONS AND FLOORPLAN

Provided		
Yes	**N/A**	
☑		Provide floor plans, elevations, construction materials, finishes and colors, along with type of construction of all buildings per North Carolina Building Code prepared by a professional architect registered in North Carolina. This should be provided in color.
☑		Indicate the height and number of stories for each structure.
☑		Indicate the location and screening method for all roof mounted structures or equipment.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town Council of the Town of Clayton to approve the subject Major Subdivision. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

Amy D. Stancil		6/28/2019
Print Name	***Signature of Applicant***	***Date***

Received By:
Town of Clayton
7/25/19

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: CGC Properties, LLC **Address or PIN #:** 165806-39-9222

AGENT/APPLICANT INFORMATION:

Adams & Hodge Engineering, PC
(Name - type, print clearly)

314 East Main St.
(Address)
Clayton, NC 27520
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (*list applicable requests*):

Major Site Plan **& Special Use Permit**
Final Plats
Construction Plans
Administrative Amendments

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

CGC Properties, LLC
(Name - type, print clearly)

PO Box 107166
(Address)

(Owner's Signature)

Wilmington, NC 28404
(City, State, Zip)

STATE OF North Carolina
COUNTY OF New Hanover

Sworn and subscribed before me Nidhi Shah, a Notary Public for the above State and County, this the 20th day of June, 2019.

SEAL

Nidhi Shah
NOTARY PUBLIC
Pender County, NC
My Commission Expires
August 7, 2022

Nidhi Shah
Notary Public

My Commission Expires: 08-07-22

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

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OWNER AUTHORIZATION:

CGC Properties, LLC
(Name - type, print clearly)

(Owner's Signature)

PO Box 107166
(Address)
Wilmington, NC 28404
(City, State, Zip)

CHRISTOPHER TREY WEBB
My Commission Expires
NOTARY PUBLIC
05-28-2024
NEW HANOVER COUNTY, NC

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

Sworn and subscribed before me CHRISTOPHER TREY WEBB, a Notary Public for the above State and County, this the 10 day of JUNE, 20 20.

SEAL

Notary Public

My Commission Expires: 5/28/2024

NORTH CAROLINA
JOHNSTON COUNTY

TERMINATION AND RELEASE AGREEMENT

This Termination and Release Agreement ("Agreement")is entered into by and between, Cloudbreak Investments, LLC, hereinafter "Buyer", and CGC Properties, LLC, hereinafter "Seller", on this _____ day of April, 2020.

THAT WHEREAS, the intent of this Agreement is to settle outstanding issues arising from the Offer to Purchase and Contracts, referenced below (collectively, "Contract) and development of the real property described in Exhibit A (hereinafter "Property").

WHEREAS, Buyer and Seller agree to terminate the Contract subject to the conditions below.

FOR VALUABLE CONSIDERATION, the receipt of which is hereby acknowledged, parties agree as follows

1. The Contract for the above described property dated February 11, 2019 and the subsequent contract dated November __, 2019 are hereby terminated and all rights conveyed under said contracts are surrendered and Buyer and Seller are released from all claims and obligations arising from or created by said Contract. Said termination is effective as of the date of this agreement.
2. Seller agrees that the Earnest Money Deposit described in said contracts shall be released to Buyer. Seller further agrees to reimburse Buyer for expenses incurred during the development phase in the amount of $23,997.19.
3. Buyer agrees to release all third parties that worked towards municipal and governmental approvals, included but not limited to, surveyors and engineers, and allows said third parties to discuss the project with Seller.
4. In the event either party files suit in a court of law to interpret or to enforce the terms of this Agreement, the party prevailing in such action shall be entitled to its reasonable legal fees and costs incurred in such action to interpret or to enforce the terms of this agreement.
5. This agreement shall be interpreted under the laws of the State of North Carolina.

IN WHITNESS WHEREOF, the parties hereto set their signatures below acknowledging their mutual agreement with the terms and conditions set forth above.

BUYER:

BY: _____ 5/5/2020
Nathan Evans, Member — Date

SELLER :

BY: _____ 4-30-20
Charles B. Gordon, Member — Date

EXHIBIT A

BEING all of Lot 5, containing 2.029 acres, more or less, as shown on a map recorded in Plat Book 62, Page 261, Johnston County Registry, to which plat reference is hereby made for a full and complete description of said lot.

Exhibit A

Explanation of Project
Findings of Fact
Property Owners List

RECEIVED
JUN 28 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

ADAMS & HODGE
ENGINEERING, PC

Explanation of Project

The Quad Townhomes are proposed to be constructed on 2.029 ac of land located in the northwest quadrant of the intersection of Guy Road and the unopened section of Brandon Drive. The development is comprised of four buildings housing 20 units of two-story townhomes located on private streets that will be constructed to Town of Clayton standards. In order to develop the townhomes, this will require a special use permit that request a maximum density of 10 units per acre (9.857 units/as actual).

Access to the property will be from Guy Road. Water and sewer will be provided by the Town of Clayton with Duke Energy providing the electrical. Stormwater management facilities are located on-site and will be designed and constructed to the Town of Clayton standards.

There are no active or passive recreational facilities proposed on-site. Due to the close proximity of the Clayton Recreation Center and Clayton Community Park, the project is proposed that a fee in lieu of on-site recreational facilities will be paid to the Town of Clayton.

Item No. 1 **Consistency with the adopted plans and policies of the Town.**

The proposed development is in compliance with the Town of Clayton Comprehensive Plan 2040. In the Plan, the area of the townhome subdivision is designated as High Density Residential (HDR) land use. The HDR land use encourages higher density residential development by using multifamily developments (apartments and townhomes) that have high density ratios (up to 12 units/ac). The proposed development has a total acreage of 2.029 acres. When the density is calculated at build out using 20 units the density ration is 9.857 units per acre of developable land. The proposed townhome development will continue to address the high density residential component envisioned in the Comprehensive Plan 2040.

Item No. 2 **The subdivision meets all required specifications of this chapter.**

The subdivision meets or exceeds all applicable development standards that are established in the Subdivision Regulations and the Unified Development Code. Private streets are designed in accordance with the Town standards so as to provide a development with safe streets for both vehicles and pedestrians. Public utilities are designed so as to provide adequate water for consumption as well as fire protection while the sewer collection system is designed to protect the health and welfare of the public. Area lighting is provided so as to provide a safe environment for the residents. Storm water management facilities have been incorporated into the design as to manage the volume of storm water as well as the quality of physical improvements during construction so as to minimize off site discharge of sediments. Passive and active recreation opportunities have been provided through open space, and indirectly through recreational assessment fees. By incorporating buffers, open space and landscaping the aesthetic quality of the development and as well as adjacent properties is maintained.

Item No. 3 **The subdivision will not be detrimental to the use of orderly development of other properties in the surrounding area and will not violate the character of existing standards for development of properties in the surrounding area.**

The Quad townhome development will be a continuation of the development pattern established by the Moss Creek Parkside and Garrison Place, which is a blending of single family with a mix of townhomes and apartments. Even though the Quad townhomes will continue the existing development pattern, the townhomes will offer a refreshing change of architectural style that is modern and in more keeping with contemporary trends.
In the past to the west of the Quad, the Town of Clayton has approved multifamily housing in the form of duplexes, triplexes and traditional garden apartments. To the west and a little north of the proposed development, lies in the Clayton Recreation Center and Clayton Community Park within easy walking distance. The recreation center and community park facilities will obviously be very important to the residents of the townhomes who will have at their disposal the Town's premier recreation facilities by a short walk. Also to the west along Guy Road is Clayton Middle School. To the east there are also many commercial businesses that will support the residents of the Quad.

Item No. 4 **That the subdivision design will provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate are, will provide for the unifies and orderly use of or extension of public infrastructure, and will not materially endanger the environment, public health, safety, or the general welfare.**

The distribution of traffic has been given much consideration by providing primary access to Guy Road with the secondary access point to Brandon Drive once the street is constructed. Since Guy Road is an NCDOT road, the access will be designed to NCDOT standards. Care has been exercised in the townhome subdivision to protect the environment by prudent use of buffers and landscaping. The public's safety and health have been addressed by providing public water and sewer that meet the Town and State requirements. Storm water quality has been addressed during construction with erosion control measures and in the long term with storm water management facilities that address not only the quality of water but also the quantity of water. Street are so designed as to be safe for pedestrians and vehicles alike by providing adequate separation, traffic control and lighting. The public's health and welfare are further addressed by the townhome subdivision providing passive and active recreation opportunities offsite utilizing municipal recreation facilities via recreation assessment fees

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

Town Council
August 17, 2020

STAFF REPORT

Application Number: 2019-129-SD
Project Name: The Quad Preliminary Plat

Tag #:	05G02046K
Town Limits/ETJ:	ETJ (annexation request to follow)
Applicant:	Adams & Hodge Engineering
Owner:	CGC Properties LLC
Location:	Located off Guy Road
Project Manager:	Jeff Caines, Planner

Public Noticing:

- Neighborhood meeting held on August 19, 2019
- Signs Posted August 7, 2020
- Letters mailed August 7, 2020
- Newspaper ad published August 5, 2020 and August 12, 2020

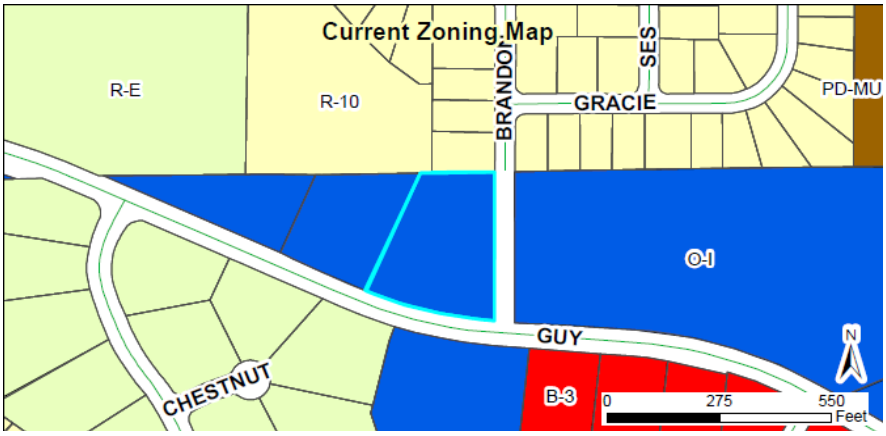
REQUEST: Preliminary Plat request to develop 20 townhome units.

SITE DATA:

Acreage: 2.03 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-10 (R-10)	Single Family Residential (Garrison Subdivision)
South	Office-Institutional (O-I) & Residential-Estate (R-E)	Office/Single-Family Residential
East	Office-Institutional (O-I)	Vacant
West	Office-Institutional (O-I)	Medical (Devlin Orthodontics)



DEVELOPMENT DATA:

Proposed Uses: Townhomes (20 units)

Density/Intensity: 9.86 units/acre

Impervious Surface: maximum 80% per lot

Required Parking: 2 spaces/unit required= 40 spaces

Proposed Parking: 40 spaces plus 2 mail kiosk spaces

Access/Streets: The development will have an entrance off Guy Road at this time. When Brandon Drive is developed in the future, the access to Guy Road will be closed, and the property will connect to Brandon Drive. See analysis below and conditions of approval.

STAFF ANALYSIS:

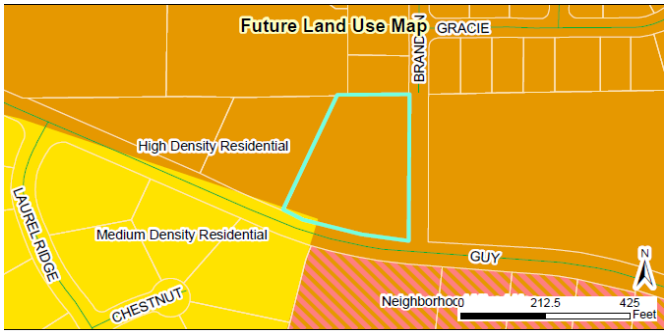
Overview
The applicant is requesting preliminary plat approval to develop 20 townhome units on the subject property. The property is zoned Office-Institutional (O-I) and is located off Guy Road. The use of townhomes is permitted in this district via issuance of a Special Use Permit, which is running concurrently with this request. The proposed development would allow for 9.86 units/acre. This zoning district does not specify a maximum density permitted, and instead permits the density through the special use permit process. Additionally, the dimensional standards are also set through the special use permit process.

Access
The site will have a driveway off Guy Road. An existing left-turn lane into the site will be utilized. To the East of this property is undeveloped ROW (Brandon Drive) which would ultimately connect Garrison Subdivision to Guy Road. In 2003, a subdivision (NEME SD) occurred at this location for lots 3-7. This property is considered Lot 5 of the Neme Subdivision. On March 17, 2003 a Letter of Understanding was approved by Town Council and sent by the Town Manager to the owner at that time notifying them that the development of Brandon Drive would be deferred and attached to the future site plan of Lot 6. Lot 6 abuts Brandon Drive to the east.

Staff originally requested the development of Brandon Drive during the Technical Review Committee meetings but confirmed that this development would not be financially responsible if it did not connect to Brandon Drive, based upon the Letter of Understanding from 2003. If a stub-out were provided to Brandon Drive, the developer would be responsible for the construction of Brandon Drive per 155.706(K)(1) of the UDC. As a result, the developer will not stub-out or connect to Brandon Drive at this time and will instead only provide access off Guy Road. Additionally, NCDOT has reviewed this application and has stated that the driveway for this development off Guy Road will not be permitted when Brandon Drive is constructed in the future, due to the lack of separation. Based on this requirement, Town staff and NCDOT have agreed that when Brandon Drive is developed in the future the driveway off Guy Road will be required to permanently close and the development would then connect to Brandon Drive This is outlined in the Conditions of Approval below, and has been agreed upon by the applicant during the TRC process.

Consistency with Adopted Plans

- **Comprehensive Plan 2040**
  The future land use map designates this property as "High Density Residential", which allows all residential housing types and densities up to 10 units per acre for standard developments, and up to 12 units per acre through a Planned Development. The proposed development is consistent with this designation.



- **Unified Development Code**
  The proposed development is consistent with and meets the applicable requirements of the Unified Development Code (UDC).

Compatibility with Surrounding Land Uses
The proposed use is a residential subdivision. There are existing single-family residences to the North, and the development will provide a Class "C" landscape buffer along the single-family residential lots to meet the UDC requirements for compatibility.

Landscaping and Buffering
Street trees will be provided per lot throughout the development. A Class "A" buffer will also be provided along Guy Road as required by the UDC. A Class "C" landscape buffer will be provided along the northern boundary, abutting residentially zoned properties. This buffer will include a 6' tall opaque fence.

Traffic
A TIA was not required for this development. No roadway improvements are required by NCDOT, as an existing turn lane already exists on Guy Road. However, NCDOT will require the closure of the access on to Guy Road when Brandon Drive is developed in the future.

Multi-Modal Access
Sidewalk is provided along Guy Road. The applicant will also be required to extend sidewalk alongside connection to Brandon Drive, when it is developed in the future (see conditions of approval). Staff recommends curb and gutter be extended along the frontage of the development as well, in order to better comply with the Town's future sidewalk plan for this area (see conditions of approval).

Garbage / Recycling
Roll outs will be utilized for trash collection within the development.

Architecture/Design
The townhomes will consist of a modern design, utilizing fiber cement siding.

Findings of Fact
The applicant has addressed the Major Subdivision Approval Criteria outlined in UDC Section 155.706. The applicant's Findings of Fact are incorporated into the record as an attachment to the Staff Report. The Findings of Fact for a Preliminary Plat (Major Subdivision) are outlined below, along with comments from staff.

1. ***Consistency with the adopted plans and policies of the Town.***

   - **Applicant Response*:***
     The proposed development is in compliance with the Town of Clayton Comprehensive Plan 2040. In the Plan, the area of the townhome subdivision is designated as High Density Residential (HDR) land use. The HDR land use encourages higher density residential development by using multifamily developments (apartments and townhomes) that have high density ratios (up to 12 units/ac). The proposed development has a total acreage of 2.029 acres. When the density is calculated at build out using 20 units the density ration is 9.857 units per acre of developable land. The proposed townhome development will continue to address the high density residential component envisioned in the Comprehensive Plan 2040.

   - **Staff Commentary:** The proposed development does comply with the Town's Comprehensive Plan 2040, which designates the land as "High density residential". This allows up to 10 units per acre. The development is proposing 9.85 units per acre.

2. ***The subdivision meets all required specifications of this chapter.***

   - **Applicant Response:**
     The subdivision meets or exceeds all applicable development standards that are established in the Subdivision Regulations and the Unified Development Code. Private streets are designed in accordance with the Town standards so as to provide a development with safe streets for both vehicles and pedestrians. Public utilities are designed so as to provide adequate water for consumption as well as fire protection while the sewer collection system is designed to protect the health and welfare of the public. Area lighting is provided so as to provide a safe environment for the residents. Storm water management facilities have been incorporated into the design as to manage the volume of storm water as well as the quality of physical improvements during construction so as to minimize off site discharge of sediments. Passive and active recreation opportunities have been provided through open space, and indirectly through recreational assessment fees. By incorporating buffers, open space and landscaping the aesthetic quality of the development and as well as adjacent properties is maintained.

   - **Staff Commentary:** The proposed development adheres to the requirements of the Unified Development Code. The application has also received TRC certification from all departments.

3. ***The subdivision will not be detrimental to the use or orderly development of other properties in the surrounding area and will not violate the character of existing standards for development of properties in the surrounding area.***

   - **Applicant Response:**

The Quad townhome development will be a continuation of the development pattern established by the Moss Creek Parkside and Garrison Place, which is a blending of single family with a mix of townhomes and apartments. Even though the Quad townhomes will continue the existing development pattern, the townhomes will offer a refreshing change of architectural style that is modern and in more keeping with contemporary trends.
In the past to the west of the Quad, the Town of Clayton has approved multifamily housing in the form of duplexes, triplexes and traditional garden apartments. To the west and a little north of the proposed development, lies in the Clayton Recreation Center and Clayton Community Park within easy walking distance. The recreation center and community park facilities will obviously be very important to the residents of the townhomes who will have at their disposal the Town's premier recreation facilities by a short walk. Also to the west along Guy Road is Clayton Middle School. To the east there are also many commercial businesses that will support the residents of the Quad.

- **Staff Commentary:** The proposed development does include higher density development than what is located to the North. Garrison subdivision consists of Single-Family residences. Further west on Guy Road, apartments have been developed (Parkside Apartments). The proposed use and density are both compatible with the Future Land Use Map and Comprehensive Plan 2040. Additional landscaping is provided to the north to assist in mitigating impacts on adjacent single-family residences.

4. ***The subdivision design will provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, will provide for unified and orderly use of or extension of public infrastructure, and will not materially endanger the environment, public health, safety, or general welfare.***

- **Applicant Response:**
The distribution of traffic has been given much consideration by providing primary access to Guy Road with the secondary access point to Brandon Drive once the street is constructed. Since Guy Road is an NCDOT road, the access will be designed to NCDOT standards. Care has been exercised in the townhome subdivision to protect the environment by prudent use of buffers and landscaping. The public's safety and health have been addressed by providing public water and sewer that meet the Town and State requirements. Storm water quality has been addressed during construction with erosion control measures and in the long term with storm water management facilities that address not only the quality of water but also the quantity of water. Street are so designed as to be safe for pedestrians and vehicles alike by providing adequate separation, traffic control and lighting. The public's health and welfare are further addressed by the townhome subdivision providing passive and active recreation opportunities offsite utilizing municipal recreation facilities via recreation assessment fees

- **Staff Commentary:** Access to Brandon Drive will be made, per recommended conditions of approval and requirements of NCDOT, once the road is constructed. At that time, the access to Guy Road will be closed permanently. This will mitigate safety issues regarding the proximity of the development's Guy Road entrance and the location of Brandon Drive in the future.

RECOMMENDED CONDITIONS OF APPROVAL:

If approved, staff is recommending conditions of approval be laced upon the application. These conditions are outlined in an attachment to the staff report. The applicant has reviewed the attachment and is in agreement with the conditions proposed by staff.

ATTACHMENTS:

1.) Application
2.) Recommended Conditions of Approval
3.) Staff Report Maps
4.) Site Plan
5.) Neighborhood Meeting Materials
6.) Adjacent Property Letters
7.) Newspaper Ad
8.) TRC Certification Letter
9.) Stormwater Statement
10.) Letter of Understanding- NEME Subdivision, 2003
11.) Letter of Understanding- NEME Subdivision, 2019
12.) Wastewater Allocation

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

July 28, 2020

Donnie Adams
Adams & Hodge Engineering, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com

Re: 2020-129-SD The Quad – Preliminary Plat

To Whom It May Concern,

The Town of Clayton Planning staff is recommending to the Town Council that conditions of approval be placed upon the above referenced application, which proceeds to Town Council on Monday, August 17, 2020. These recommended conditions of approval are outlined on the back of this letter.

Please read through these potential conditions of approval, and sign below if you are in agreement with the conditions as proposed. If you are not in agreement please respond accordingly in writing. This will be included within the agenda packet for Council review.

Thank you.

Sincerely,

Jeff Caines, AICP
Planner

Recommend Conditions of Approval (2020-129-SD) The Quad:

CONDITIONS:

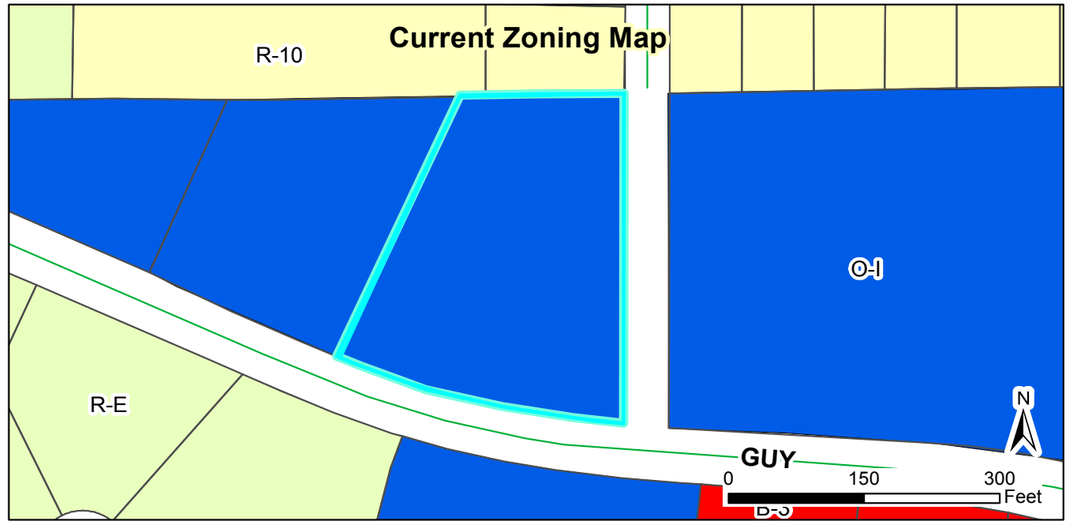
If approved, staff recommends the following conditions be applied to the approval of the preliminary subdivision:

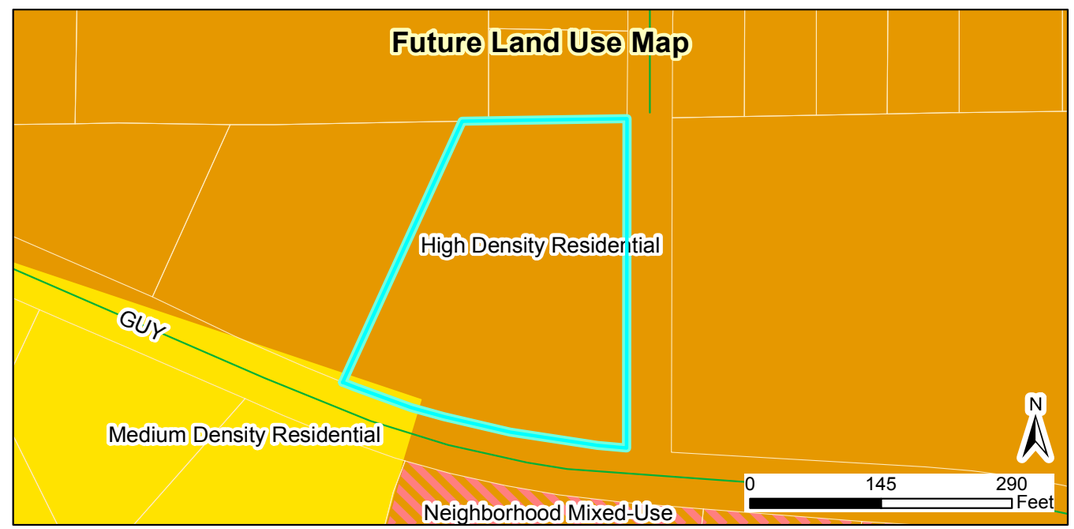
1. Following Board approvals, three copies of the preliminary subdivision plan including conditions of approval for this application and the associated special use permit 2019-130-SUP shall be submitted to the Planning Department for final approval.
2. The development shall immediately provide vehicular and sidewalk connection east to Brandon Drive once Brandon Drive is constructed in the future. When this connection is made, the development's driveway off Guy Road shall be permanently closed and additional sidewalk shall be installed to ensure a continuous pathway along the development's frontage along Guy Road.
3. Curb and Gutter, as well as sidewalk, shall be provided/extended for the development's entire frontage along Guy Road.
4. The final plat and subsequent development of the site shall be consistent with the specifications of the approved Preliminary Subdivision Plan. Modifications shall require additional approvals pursuant to Section 155.706 of the Unified Development Code.
5. All decorative traffic related signage shall be maintained solely by the developer or Homeowner's Association.
6. An annexation petition shall be submitted to the Planning Department prior to final plat recordation.
7. Required landscaping buffers shall be installed or bonded prior to issuance of the first Certificate of Occupancy for the development.
8. Dimensional standards are limited to those outlined in the preliminary plat, as approved through the associated Special Use Permit 2019-130-SUP.

APPLICANT AFFIDAVIT

I/We, the undersigned, do herby certify that I have reviewed the recommended conditions of approval and am in agreement with the conditions as they are outlined within this letter.

AMY D. STANCIL		7/31/20
Print Name	*Signature of Applicant*	*Date*





2019-129-SD
The Quad Preliminary Plat / Special Use Permit
Request to develop 20 townhome units

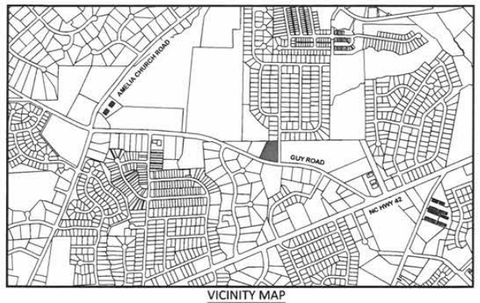
Applicant: Adams & Hodge Engineering
Property Owners: CGC Properties LLC
Tag #: 05G02046K

Staff Report Map

1/17/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Legend
- TOC_SDE.GISMGR.Parcels selection 2
- Site
- 100-yr Flood Zone
- Thoroughfare Overlay
- Watershed Protection Overlay

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2019\2019-129-SD - The Quad\Maps\Staff Report Map - 2019-129-SD - The Quad Preliminary Plat.mxd



VICINITY MAP
NTS

MAJOR SUBDIVISION PLAN

FOR

THE QUAD

IN

TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

Received
December 19th

PRELIMINARY

REVISED
8:31 am, Dec 19, 2019

DEVELOPER/APPLICANT:

CLOUDBREAK INVESTMENTS, LLC
P.O. BOX 189
CLAYTON, NC 27528

CONTACT: (919) 345-6729

SHEET INDEX

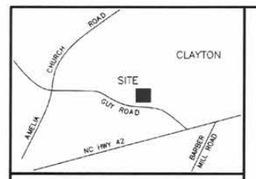
SHEET TITLE	SHEET No.
SEALED BOUNDARY	C1.01
EXISTING CONDITIONS	C1.02
PRELIMINARY SITE PLAN	C2.01
PRELIMINARY UTILITY PLAN	C3.01
PRELIMINARY EROSION CONTROL PLAN	C4.01
PRELIMINARY GRADING & DRAINAGE PLAN	C5.01
PRELIMINARY LANDSCAPE PLAN	L1.01
REGULATORY STANDARDS	DT1.00
ARCHITECTUAL PLANS	A-1 to A-5

ADAMS & HODGE ENGINEERING, PC
314 EAST MAIN STREET
CLAYTON, NC 27520
919-243-1332 info@adamsandhodge.com
FIRM # C-4187

THE QUAD

TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

JULY 1, 2019
AUGUST 5, 2019 PER 1st TRC COMMENTS
NOVEMBER 6, 2019 PER 2nd TRC COMMENTS
DECEMBER 2, 2019 PER 3rd TRC COMMENTS
**DECEMBER 19, 2019 PER 4th TRC COMMENTS*
T.O.C. PROJECT: 2019-129-SD



VICINITY MAP (NOT TO SCALE)

LINE	BEARING	DISTANCE
L1	N84°46'24"W	32.28'
L2	N89°06'54"E	27.51'
L3	N89°11'37"E	50.10'

THIS SURVEY:

☐ A. CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.

☐ B. IS LOCATED IN A PORTION OF A COUNTY OR MUNICIPALITY THAT IS UNREGULATED AS TO AN ORDINANCE THAT REGULATES PARCELS OF LAND

■ **C. IS ONE OF THE FOLLOWING:**

1) IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

2) IS OF AN EXISTING FEATURE, SUCH AS A BUILDING OR OTHER STRUCTURE, OR NATURAL FEATURE, SUCH SUCH AS A WATERCOURSE.

3) IS A CONTROL SURVEY.

4) IS OF A PROPOSED EASEMENT FOR A PUBLIC UTILITY AS DEFINED IN G.S. 62-3.

☐ D. IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

☐ E. THE INFORMATION AVAILABLE TO THE SURVEYOR IS SUCH THAT THE SURVEYOR IS UNABLE TO MAKE A DETERMINATION TO THE BEST OF THE TO THE BEST OF THE SURVEYOR'S PROFESSIONAL ABILITY AS TO PROVISIONS CONTAINED IN (A) THROUGH (D) ABOVE.

DATE SURVEYOR

SURVEYOR'S DISCLAIMER: NO ATTEMPT WAS MADE TO LOCATE ANY CEMETERIES, WETLANDS, HAZARDOUS MATERIAL SITES, UNDERGROUND UTILITIES OR ANY OTHER FEATURES ABOVE OR BELOW GROUND OTHER THAN THOSE SHOWN.

DATE SURVEYOR

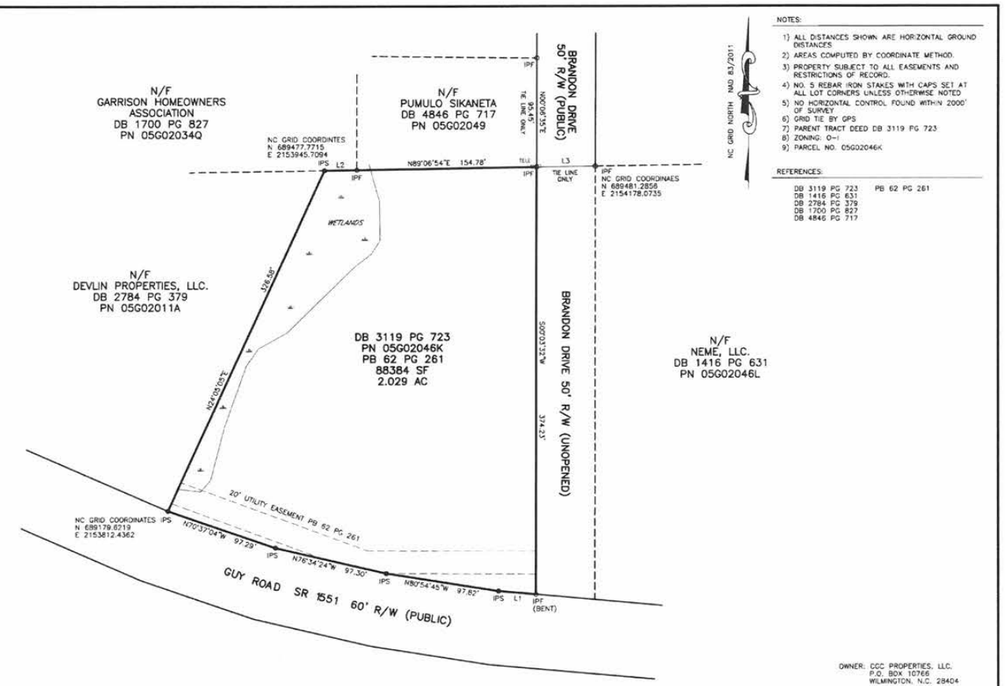
STATE OF NORTH CAROLINA, JOHNSTON COUNTY

I, CURK T. LANE, DO HEREBY CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK 3119, PAGE 723, ETC.); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK 3119, PAGE 723; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 13TH DAY OF JUNE, A.D., 2019

NORTH CAROLINA PROFESSIONAL SEAL L-3990 CURK T. LANE

SURVEYOR

L - 3990
LICENSE NUMBER



NOTES:

1) ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES.
2) AREAS COMPUTED BY COORDINATE METHOD.
3) PROPERTY SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
4) NO. 5 REBAR IRON STAKES WITH CAPS SET AT ALL LOT CORNERS UNLESS OTHERWISE NOTED
5) NO HORIZONTAL CONTROL FOUND WITHIN 2000' OF SURVEY
6) GRID TIE BY GPS
7) PARENT TRACT DEED DB 3119 PG 723
8) ZONING: O-I
9) PARCEL NO. 05G02046K

REFERENCES:

DB 3119 PG 723 PB 62 PG 261
DB 1416 PG 631
DB 2784 PG 379
DB 1700 PG 827
DB 4846 PG 717

OWNER: CGC PROPERTIES, LLC.
P.O. BOX 10766
WILMINGTON, N.C. 28404

0 50 100 150
SCALE: 1" = 50'

PROPERTY SHOWN HEREON IS XXXX IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE. FEMA FLOOD HAZARD PANEL NO. 3720165800 K EFFECTIVE DATE: APRIL 30, 2014

STATE OF NORTH CAROLINA, JOHNSTON COUNTY

THIS INSTRUMENT WAS PRESENTED FOR REGISTRATION AND RECORDING THIS _____ DAY OF _____
20____ AT _____

CRAIG OLIVE BY _____
REGISTER OF DEEDS ASST. REG. OF DEEDS

RECORDED IN PB_____ PG_____

LEGEND

IPF	IRON PIPE FOUND
IPS	IRON PIPE SET
CM	CONCRETE MONUMENT FOUND
PKNF	PARKER-KALON NAIL FOUND
PKNS	PARKER-KALON NAIL SET
RFO	RAILROAD SPIKE
CSF	COTTON SPIKE FOUND
CSS	COTTON SPIKE SET
CP	CONTROL POINT
CP	COMPUTED POINT
P/P	POWER POLE
OHW	OVERHEAD POWER LINE
S/F	SQUARE FEET
S/Y	SQUARE YEET
AC.	ACRES
DB	DEED BOOK
PB	PLAT BOOK
BOM	BOOK OF MAPS
PG	PAGE
LF	LINEAR FEET
135	LOT HAS OFFSITE SEWER
135L	OFFSITE SEWER "LO"
135R	OFFSITE SEWER "RO"
1300	RECOMBINATION
1300	STREET ADDRESS
— — — —	LINES NOT SURVEYED

BOUNDARY SURVEY FOR

CGC PROPERTIES, LLC.

CLAYTON TOWNSHIP, JOHNSTON COUNTY
NORTH CAROLINA
JUNE 13, 2019

SURVEYED BY:	TLS
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	BOUNDARY.DWG
SURVEY DATE:	5-15-19
JOB NO.	1900.018

TRUE LINE SURVEYING, P.C.
205 WEST MAIN STREET
CLAYTON, N.C. 27520
TELEPHONE: (919) 359-0427
FAX: (919) 359-0428
www.truelinesurveying.com
C-1859

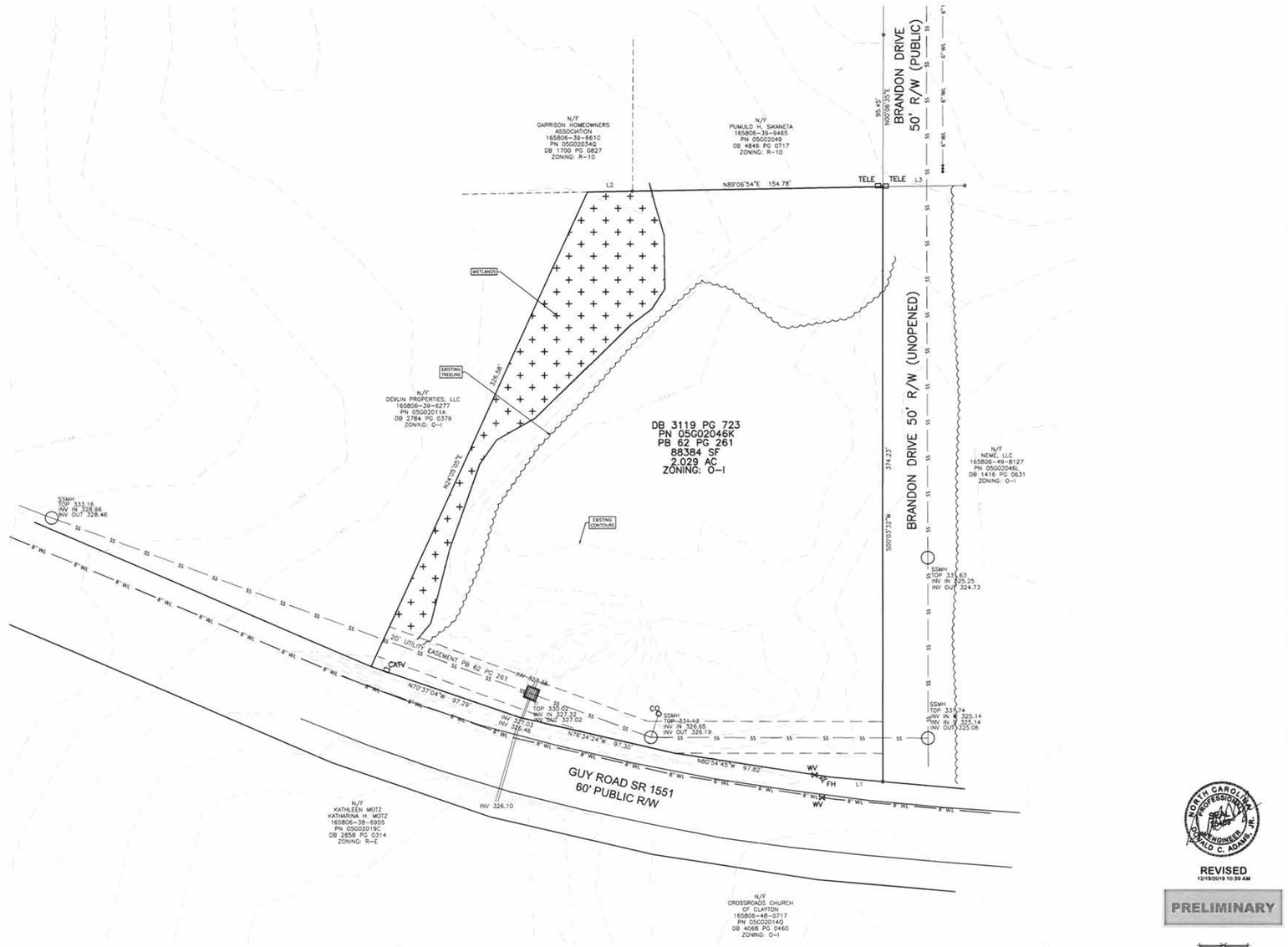
ADAMS & HODGE ENGINEERING, PC
314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodgeengineering.com
919-243-1332
FIRM # C-4187

REVISIONS:

THE QUAD
TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

SEALED BOUNDARY

DESIGN: PCE
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/01/2019
JOB NO.
SHEET: C1.01



SOURCES OF INFORMATION:
1. BOUNDARY AND EXISTING TOPO OF SITE PROVIDED BY TRUE LINE SURVEYING, P.C., 205 W. MAIN STREET, CLAYTON, NC 27520, DATED 5/15/2019.
2. WETLANDS INFORMATION FROM BROWN'S ENVIRONMENTAL GROUP, INC., 242 BATTEN FARM RD SELMA, NC 27576.

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER DONALD C. ADAMS, JR.

REVISED
12/19/2019 10:39 AM

PRELIMINARY

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

REVISIONS
MARCH 2019 1ST TRC COMMENTS
JUNE 2019 2ND TRC COMMENTS
SEPTEMBER 2019 3RD TRC COMMENTS
DECEMBER 2019 4TH TRC COMMENTS

314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodge.com
919-243-1332
FIRM # C-4197

ADAMS & HODGE
ENGINEERING, PC

THE QUAD
TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

EXISTING CONDITIONS PLAN

DESIGN	PCE
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/01/2019
JOB NO.	
SHEET	C1.02

THE QUAD SITE DATA CHART	
PARCEL OWNER	CGC PROPERTIES LLC
PARCEL OWNER ADDRESS	PO BOX 10766, WILMINGTON, NC 28404
PARCEL IDENTIFICATION	165806-39-9222 / 05G02046K
PROPERTY SIZE (SF)	88,384 SF / 2.03 AC
PROPERTY LOCATION	TOWN OF CLAYTON ETJ / CLAYTON TOWNSHIP (TO BE ANNEXED)
EXISTING/PROPOSED ZONING	O-I / O-I
EXISTING USE	VACANT
PROPOSED USE	SINGLE FAMILY TOWNHOMES
NUMBER OF UNITS/LOTS	20 UNITS/LOTS
PROPOSED DENSITY	9.86 UNITS/AC
PROPOSED INTENSITY (GROSS FLOOR AREA IN SF)	956 SF PER UNIT
PROPOSED BUILDING COVER (PERCENTAGE OF TOTAL SITE)	21%
PROPOSED IMPERVIOUS AREA PER LOT	1,475 SF
PROPOSED IMPERVIOUS AREA (% OF TOTAL SITE)	38,662 SF (43.73%)
PROPOSED PERVIOUS AREA (% OF TOTAL SITE)	49, 732 SF (56.27%)
MAX IMPERVIOUS AREA	75%
PROPOSED BUILDING HEIGHT (NUMBER OF STORIES & FEET)	2 STORY & 24'-8"
ELECTRIC PROVIDER	DUKE ENERGY PROGRESS
WATER PROVIDER	TOWN OF CLAYTON
SEWER PROVIDER	TOWN OF CLAYTON
SITE IS NOT IN THE WATERSUPPLY WATERSHED PROTECTION AREA	

NOTE:
PER NCDOT: AT THE TIME IN WHICH BRANDON DRIVE IS CONSTRUCTED AND FULLY DEVELOPED, THE GUY ROAD ENTRANCE INTO THE QUAD SHALL BE CLOSED AND A CONNECTION TO BRANDON DRIVE SHALL BE MADE FROM STREET "A" TO THE EAST". WHEN THE GUY ROAD ENTRANCE IS CLOSED, SIDEWALK AND LANDSCAPING SHALL BE EXTENDED ALONG THE ENTIRE FRONTAGE OF THE DEVELOPMENT ALONG GUY ROAD.

NOTE:
1. DEVELOPER TO ANNEX THE SITE TO TOWN OF CLAYTON.
2. THERE ARE NO AREAS OF 100 YEAR FEMA FLOOD ON PROPERTY
   FLOOD PANEL NO. 3720165900 K eff. DATE 06/20/2018
3. PULL-OUT TRASH BINS TO BE LOCATED IN THE REAR OF EACH UNIT AND SHALL BE SCREENED FROM VIEW FROM ADJACENT PROPERTIES AND/OR PUBLIC RIGHTS-OF-WAY. OR TRASH BINS MAY BE PUT INTO GARAGES OUT OF SIGHT.

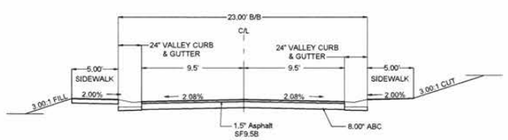
THE QUAD LOT STANDARDS

ZONING	UNIT TYPE	LOT STANDARDS				MINIMUM SETBACKS (FT.)						BUILDING STANDARDS	
		Min. Lot Area (sq.ft.)	Min. Lot Width (LF)	Max. Lot Coverage (%)	Max. Lot Impervious Surface (%)	Garage	Front	Side	Side Interior	Side Street	Rear	BUILDING SEPARATION	Max. Height (ft.)
O-I	TOWNHOMES	1,650	22	60	90	25	20	0	0	0	0	20	30

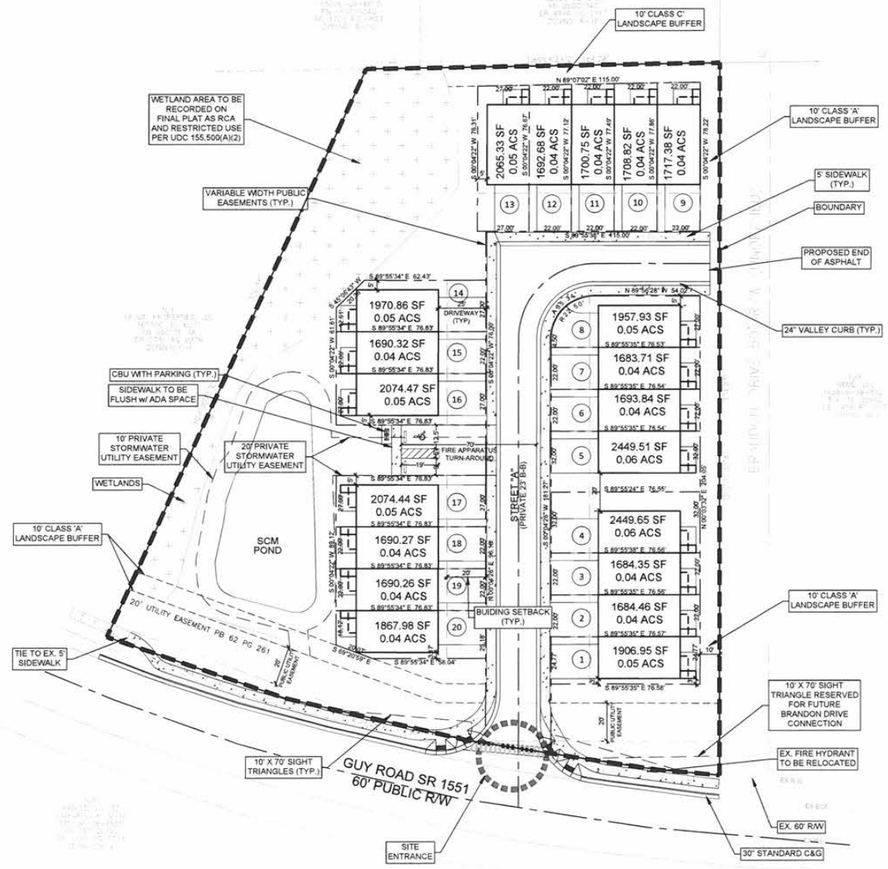
OPEN SPACE TABLE	
	SQUARE FEET
REQUIRED OPEN SPACE 1,245 SF/LOT (20 LOTS)	24,900
OPEN SPACE PROVIDED	30,518.00
*NOTE: ACREAGE SHOWN IS APPROXIMATE AS THIS IS A MAJOR SUBDIVISION PLAN.	

CONDITIONS ALLOWABLE WITH SPECIAL USE
1. DRIVEWAYS ON PROPERTY LINE.
2. DRIVEWAY LARGER THAN GARAGE ENTRANCE DOOR.
3. GARAGE NOT RECESSED DUE TO ARCHITECTUAL STYLE.

PARKING REQUIREMENTS
§ 155.401(C)(2) FOR TOWNHOMES, (2) SPACES REQUIRED PER UNIT. PROVIDED (2) SPACES IN DRIVEWAY, (1) SPACE IN GARAGE; TOTAL OF (3) SPACES PROVIDED PER UNIT.



TYPICAL LOCAL RESIDENTIAL PRIVATE STREET W/ SIDEWALK
NO SCALE



REVISED
12/19/2019 11:00 AM

PRELIMINARY

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

REVISIONS
REVISIONS PER 1ST TRC COMMENTS 11/15/2019
REVISIONS PER 2ND TRC COMMENTS 12/19/2019

314 EAST MAIN STREET
CLAYTON, NC 27520
WWW.ADAMSHODGE.COM
919-243-1332
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

THE QUAD
TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

PRELIMINARY SITE PLAN

DESIGN: PCE
DRAWN: ADS
CHECKED: DOA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/01/2019
JOB NO.
SHEET: C2.01

REVISIONS
01 TRC COMMENTS 12/19/19
02 TRC COMMENTS 12/19/19
03 TRC COMMENTS 12/19/19

314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodge.com
919-243-1332
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

THE QUAD

TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

PRELIMINARY SITE UTILITIES

DESIGN	PCE
DRAWN	AOS /EK
CHECKED	DGA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/01/2019
JOB NO.	
SHEET	C3.01

EROSION LEGEND:

- LIMITS OF DISTURBANCE
- SILT FENCE
- OUTLET PROTECTION
- SILT FENCE OUTLET
- CONSTRUCTION ENTRANCE
- EXISTING CONTOUR
- 220 — PROPOSED CONTOUR

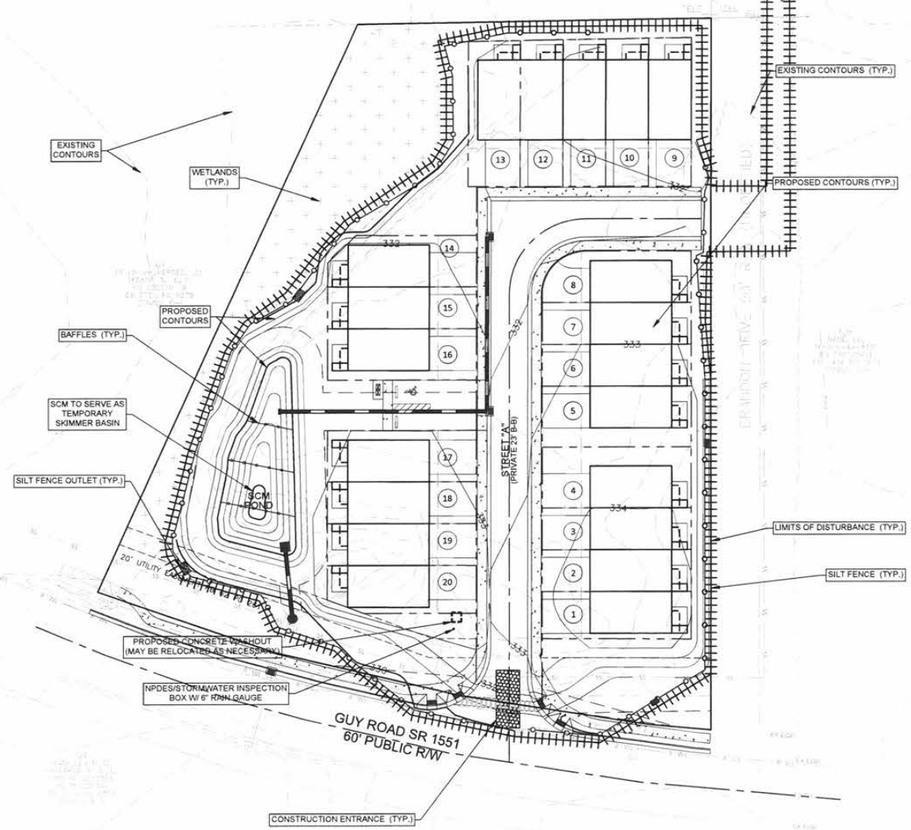
DISTURBED AREA = 1.82 AC

FOR GRAPHIC PURPOSES SILT FENCE AND LIMITS OF DISTURBANCE ARE SHOWN SEPARATED. SILT FENCE IS TO BE INSTALLED AT THE ACTUAL LIMITS OF DISTURBANCE.

THIS SHEET IS FOR GRADING AND EROSION CONTROL PURPOSES ONLY. DO NOT USE THIS SHEET FOR STORM DRAIN INSTALLATION.

JOHNSTON COUNTY RESERVES THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

ALL DITCHES/SWALES ARE TO BE IMMEDIATELY LINED USING NAG S150 OR SOD UNLESS OTHERWISE SPECIFIED.



NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19405 DONALD C. ADAMS, JR.

REVISED
12/18/2019 11:13 AM

PRELIMINARY

NORTH

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodge.com
919-243-5532
FIRM # C-4187

REVISIONS
1 REVISED PER TRC COMMENTS 12/18/2019
2 REVISED PER TRC COMMENTS 12/18/2019
3 REVISED PER TRC COMMENTS 12/18/2019
4 REVISED PER TRC COMMENTS 12/18/2019

ADAMS & HODGE ENGINEERING, PC

THE QUAD

TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

PRELIMINARY EROSION CONTROL PLAN

DESIGN	PCE
DRAWN	KDS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/01/2019
JOB NO.	
SHEET	C4.01

ADAMS & HODGE ENGINEERING, PC

314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamsandhodge.com
919-243-3323
FIRM # C-4187

ISSUANCE
PRELIMINARY NOT FOR CONSTRUCTION
PRELIMINARY NOT FOR CONSTRUCTION
PRELIMINARY NOT FOR CONSTRUCTION

THE QUAD

TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

PRELIMINARY GRADING & DRAINAGE PLAN

DESIGN	PCE
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/01/2019
JOB NO.	
SHEET	C5.01

LANDSCAPE REQUIREMENTS

Interior Landscape (155.402, Part 1.D.1)

Description	Requirement	Provided
Landscape Area (20% of site):	17,676.65 SF	22,461.25 SF
Canopy Trees:	18	18
Understory Trees:	18	18
Shrubs:	36	44

PERIMETER BUFFERS (155.402, Part 2. E)

Description

Street Buffers — All new frontage on a commercial street or designated minor thoroughfare shall provide a Class A buffer as set fourth in division (E)(3) of this section.

10' CLASS 'A' BUFFER Guy Rd +/- 279' / Brandon Rd +/- 223'

	Requirement	Provided
Canopy Trees:	11	11
Understory Trees:	11	11
Shrubs:	61	61

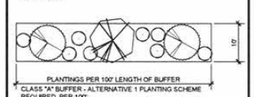
15' CLASS 'A' BUFFER Brandon Rd +/- 89'

	Requirement	Provided
Canopy Trees:	2	2
Understory Trees:	2	2
Shrubs:	11	11

10' CLASS 'C' BUFFER Rear Property Boundary +/- 145'

	Requirement	Provided
Screening:	yes	yes
Canopy Trees:	3	3
Understory Trees:	5	5
Shrubs:	18	18

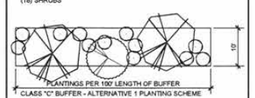
TOTAL LENGTH OF CLASS "A" BUFFER : ±591 L.F.
TREES/SHRUBS REQUIRED FOR LENGTH OF BUFFER:
(13) CANOPY TREES
(13) UNDERSTORY TREE
(72) SHRUBS



CLASS "A" BUFFER - ALTERNATIVE 1 PLANTING SCHEME
REQUIRED PER 100'
(2) CANOPY TREES
(2) UNDERSTORY TREE
(12) SHRUBS

Class "A" Buffer ALTERNATIVE 1

TOTAL LENGTH OF CLASS "C" BUFFER : ±145 L.F.
TREES/SHRUBS REQUIRED FOR LENGTH OF BUFFER:
(3) CANOPY TREES
(5) UNDERSTORY TREE
(18) SHRUBS

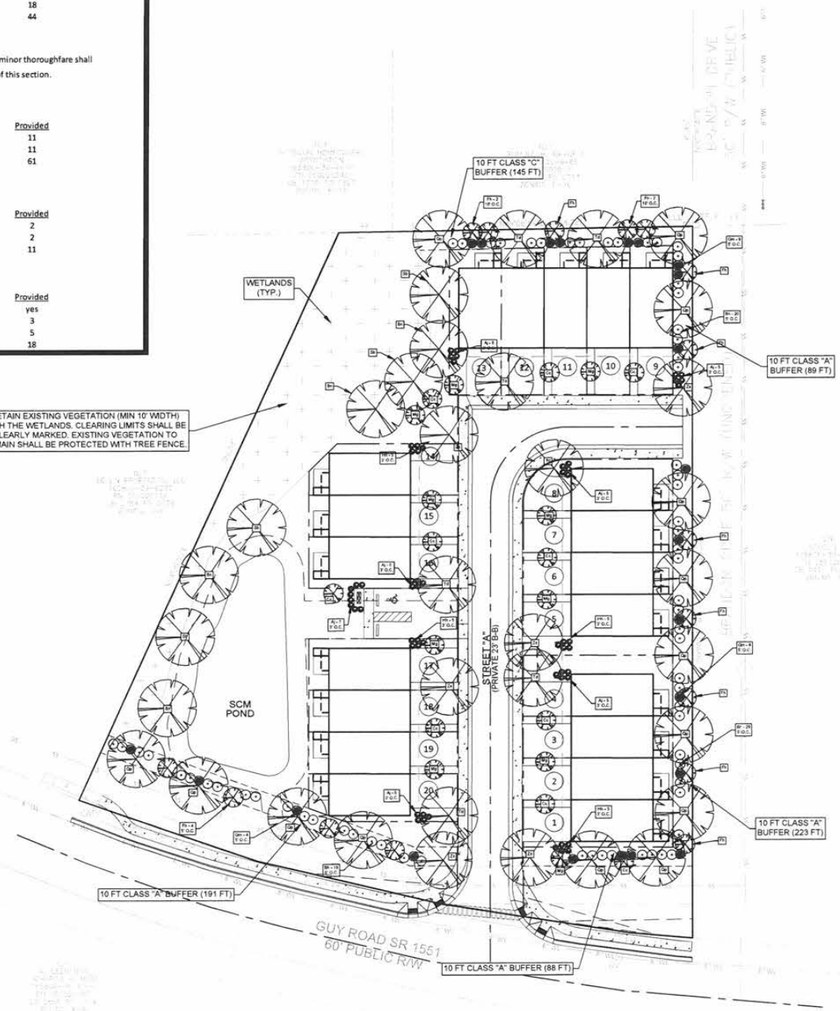


CLASS "C" BUFFER - ALTERNATIVE 1 PLANTING SCHEME
REQUIRED PER 100'
(2) CANOPY TREES
(3) UNDERSTORY TREE
(12) SHRUBS

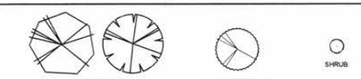
NOTE: CLASS C BUFFER SHALL INCLUDE A BERM WITH EVERGREEN HEDGE WITH A MINIMUM HEIGHT OF 6FT @ INSTALLATION.

NOTE: WHERE APPLICABLE, THE DEVELOPER WILL USE EXISTING VEGETATION TO MEET THE CLASS "C" BUFFER REQUIREMENTS. THIS WILL BE FIELD DETERMINED ALONG WITH TOTALS FOR ANY ADDITIONAL SUPPLEMENTAL BUFFER PLANTINGS THAT MAY BE NEEDED AND PRESENTED TO THE TOWN OF CLAYTON FOR APPROVAL PRIOR TO INSTALLATION OF BUFFER PLANTINGS.

Class "C" Buffer ALTERNATIVE 1



Plant Symbol Key



LANDSCAPE PLANT LIST

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	COMMENTS	HEIGHT	WIDTH	ROOT
LARGE TREES							
Qp	14	QUERCUS PHELLUS	WILLOW OAK	2.5" CAL MIN.	10'-12'	4'-5'	BB–
Zs	4	ZELKOVA SERRATA	GREEN VASE ZELKOA	2.5" CAL MIN.	10'-12'	4'-5'	BB–
Td	7	TAXODIUM DISTICHUM	BALD CYPRESS	2.5" CAL MIN.	10'-12'	4'-5'	BB–
Bn	4	BETULA NIGRA	RIVER BIRCH	2.5" CAL MIN.	10'-12'	4'-5'	BB–
Sb	4	SALIX BABLONICA	WEEPING WILLOW	2.5" CAL MIN.	10'-12'	4'-5'	BB–
SMALL TREES							
Cc	10	CERCIS CANADENSIS	REDBUD	2" CAL MIN.	6'-8'	3'-4'	BB–
Fh	15	ILEX ATTENUATA 'FOSTERII #2'	FOSTER HOLLY #2	2" CAL MIN.	6'-8'	3'-4'	BB–
Mg	10	MAGNOLIA STELLATA	STAR MAGNOLIA	2" CAL MIN.	6'-8'	3'-4'	BB–
SHRUBS							
Gm	22	CHAMAECYPARIS PISIFERA	GOLD MOPS CYPRESS	-	36"	-	7 GAL
Bh	68	ILEX CORNUTA 'BURFORDI NANA'	DWARF BURFORD HOLLY	-	36"	-	7 GAL
Aj	32	JUNIPERUS HORIZONTALIS 'YOUNGSTOWN'	ANDORRA JUNIPER	-	15"-18"	-	3 GAL
Hh	25	ILEX CRENATA HELLERI	HELLER HOLLY	-	15"-18"	-	3 GAL

NOTES

1. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT QUANTITIES AND IS TO NOTIFY THE CONTRACTOR ASAP OF ANY DISCREPANCIES BETWEEN THE PLANT LIST AND THE PLAN
2. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY BUFFER PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS, DRAINAGE FACILITIES, AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS.
3. ALL LANDSCAPED AREAS SHALL BE PROVIDED WITH AN AUTOMATICALLY OPERATED IRRIGATION SYSTEM THAT WILL ADEQUATELY COVER ALL LIVING PLANT MATERIAL. SUCH SYSTEM SHALL INCLUDE A RAIN SENSOR.
4. ALL LANDSCAPED AREAS SHALL BE MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED IN A TIMELY FASHION.
5. ALL MECHANICAL EQUIPMENT SHALL BE LOCATED ON THE ROOF SCREENED ENTIRELY FROM VIEW.
6. THIS PLAN MEETS MINIMUM REQUIREMENTS BY THE TOWN OF CLAYTON. ADDITIONAL BEAUTIFICATION PLANTINGS WILL BE PROVIDED BY THE DEVELOPER.

STREET YARD TREES

1. STREET YARD TREES SHALL BE REQUIRED ALONG ALL ROAD WAYS AT THE RATE OF ONE CANOPY TREE PER LOT OR ONE CANOPY TREE FOR EVERY 40 LINEAR FT. (SPACE A MAXIMUM OF 50 FT. APART).

2. ALL STREET YARD TREES SHALL BE A MINIMUM OF TWO AND ONE-HALF CALIPER INCHES AT TIME OF PLANTING AND SHALL BE PLANTED NO LESS THAN FIVE FT. OR MORE THAN 15 FT. FROM THE BACK OF THE SIDEWALK.

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 279 ENGINEER P. C. EMBLER

REVISED
11:30 am, Dec 19, 2019

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

ADAMS & HODGE ENGINEERING, PC
314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodge.com
919-243-1332
FIRM # C-4197

REVISIONS
1 05/01/19 1ST REV COMMENTS
2 05/29/19 2ND REV COMMENTS
3 06/24/19 3RD REV COMMENTS
4 07/01/19 4TH REV COMMENTS

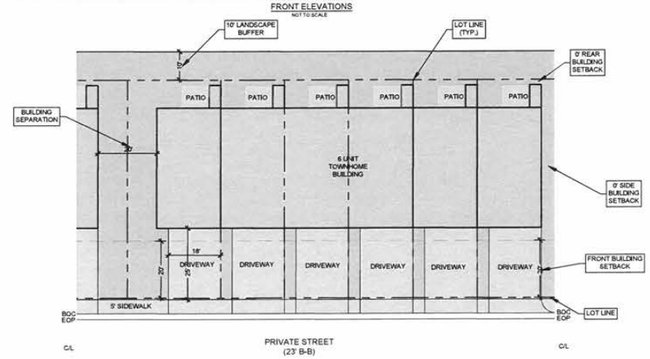
THE QUAD
TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

LANDSCAPE PLAN

DESIGN PCE
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 07/01/2019
JOB NO.
SHEET L1.01

TOWNHOMES
NOT TO SCALE

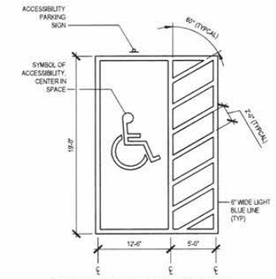
FRONT ELEVATIONS
NOT TO SCALE



MINIMUM BUILDING SETBACKS
FRONT = 20'
SIDE = 0'
REAR = 0'
STREET SIDE 0'
INTERIOR SIDE = ZERO LOT LINE
BUILDING SEPARATION = 20'

NOTE: DRIVEWAY PARKING PAD SHALL BE 2-CAR. GARAGE TO BE 25' FROM THE THE BACK OF SIDEWALK.

CONDITIONS ALLOWABLE WITH SPECIAL USE
1. DRIVEWAYS ON PROPERTY LINE.
2. DRIVEWAY LARGER THAN GARAGE ENTRANCE DOOR.
3. GARAGE NOT RECESSED DUE TO ARCHITECTUAL STYLE.

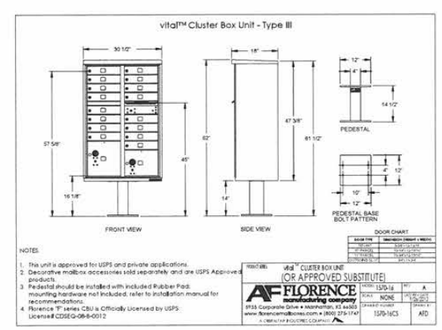


ACCESSIBLE PARKING DETAIL
AS PER 155.401(C)(3)(b) OF THE
TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER DONALD C. ADAMS, JR.

REVISED
8:27 am, Dec 19, 2019



CLUSTER MAILBOX UNIT
NOT TO SCALE

ADAMS & HODGE ENGINEERING, PC
314 EAST MAIN STREET
CLAYTON, NC 27520
info@adamshodgeengineering.com
919-243-1332
FIRM # C-4187

REVISIONS
REVISED PER 1st TRC COMMENTS
REVISED PER 2nd TRC COMMENTS
REVISED PER 3rd TRC COMMENTS
REVISED PER 4th TRC COMMENTS

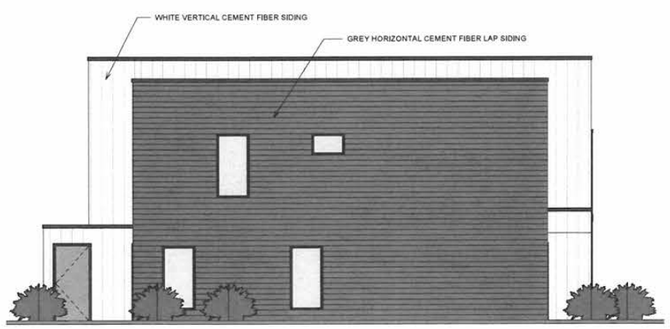
THE QUAD
TOWN OF CLAYTON ETJ, JOHNSTON COUNTY, NORTH CAROLINA

REGULATORY STANDARDS

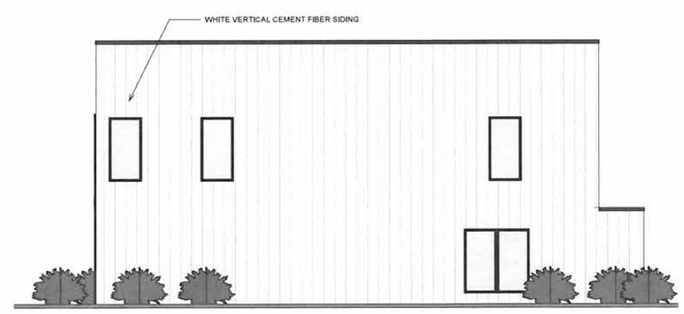
DESIGN: PCE
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/01/2019
JOB NO.
SHEET: DT1.00

1 FRONT ELEVATION
3/16" = 1'-0"

3 REAR ELEVATION
3/16" = 1'-0"



4 LEFT ELEVATION
3/16" = 1'-0"



2 RIGHT ELEVATION
3/16" = 1'-0"

PRELIMINARY-NOT FOR CONSTRUCTION

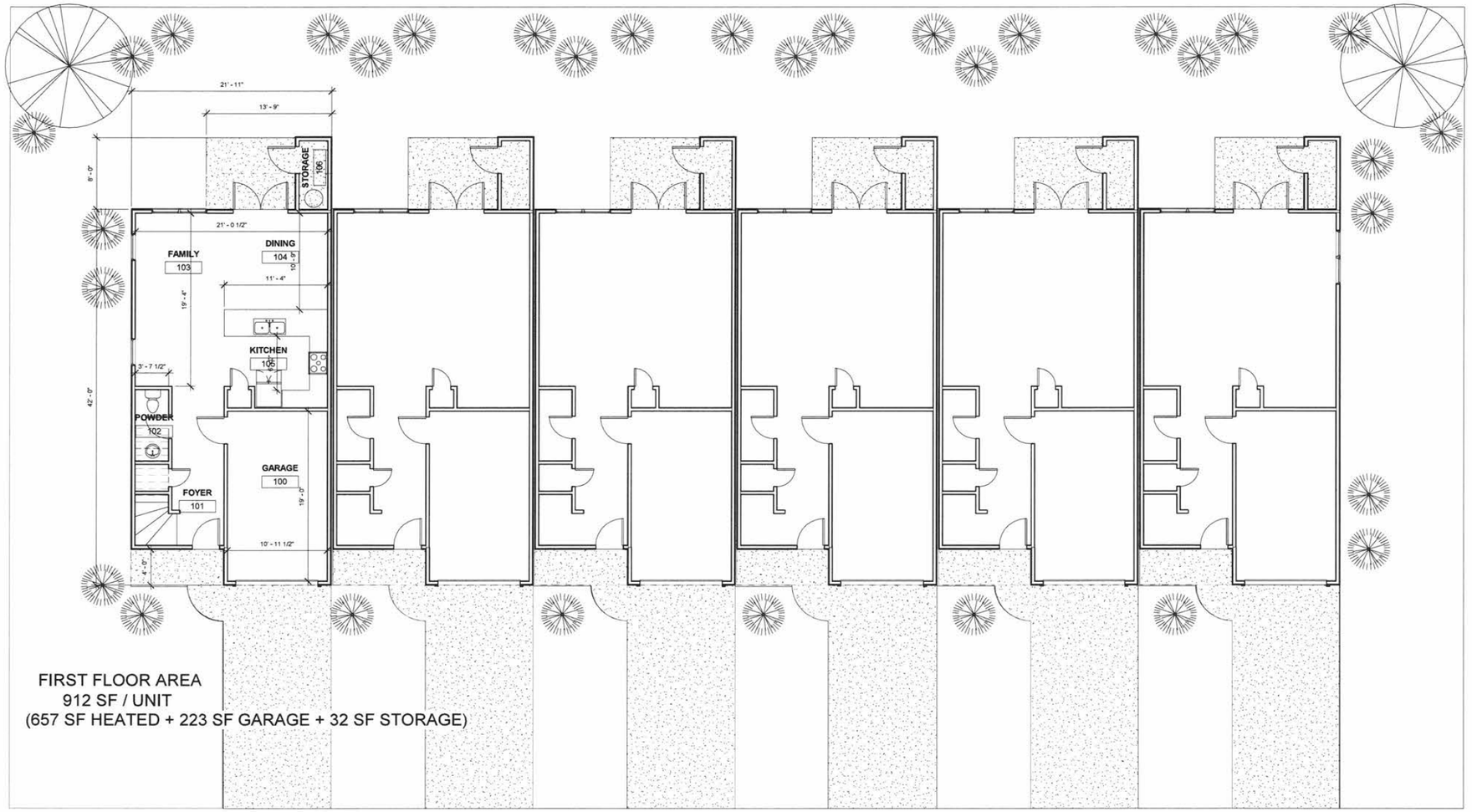
REVISIONS

THE QUAD TOWNHOMES
CLAYTON, NORTH CAROLINA

919.550.7772
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARDY ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

TONY JOHNSON ARCHITECT

DATE 07.31.19
PROJECT # 2019-026
SHEET A-1



FIRST FLOOR AREA
912 SF / UNIT
(657 SF HEATED + 223 SF GARAGE + 32 SF STORAGE)

1 FIRST FLOOR PLAN
3/16" = 1'-0"

PRELIMINARY-NOT FOR CONSTRUCTION

REVISIONS

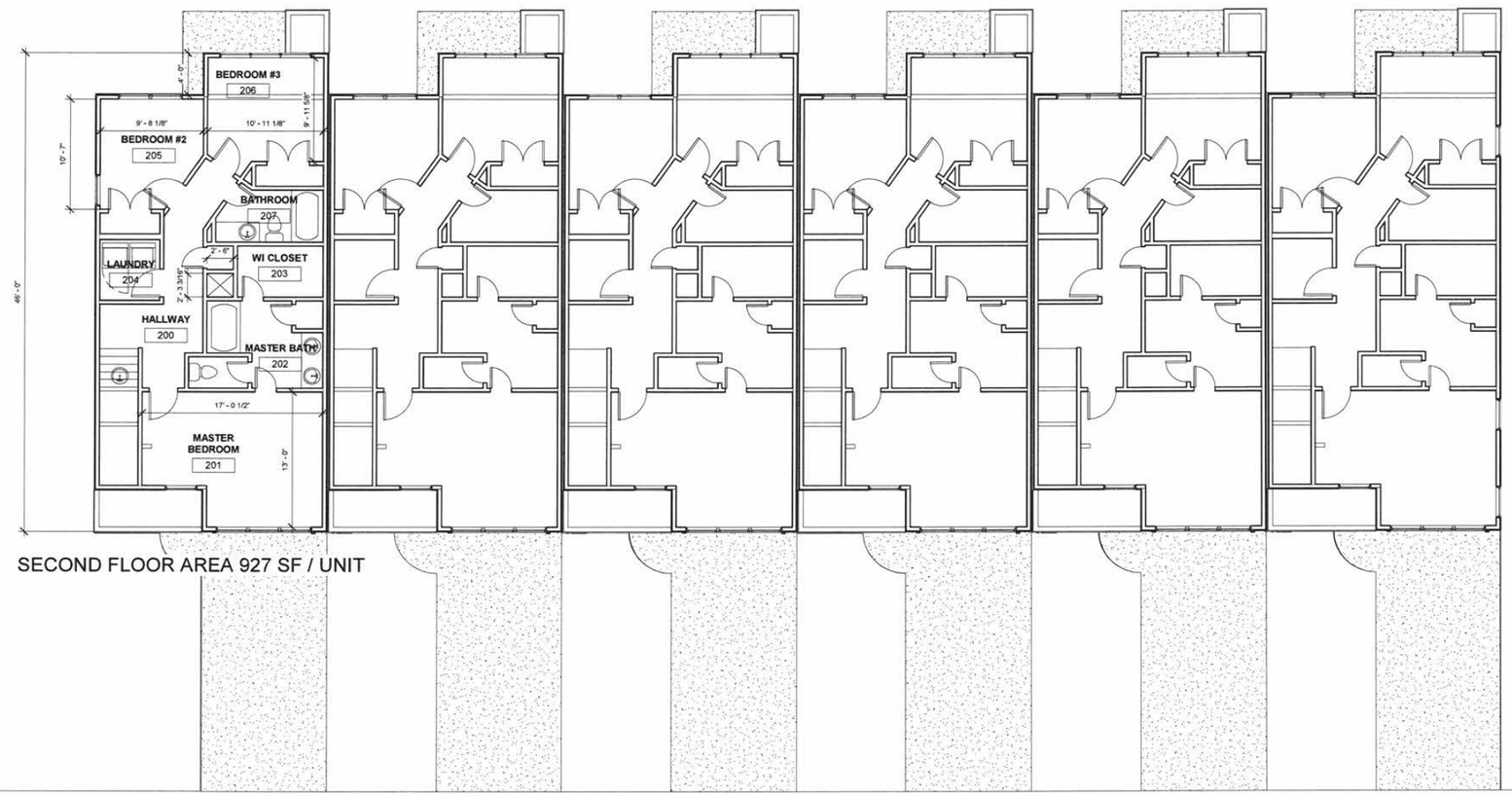
THE QUAD TOWNHOMES
CLAYTON, NORTH CAROLINA

919-550-7777
TONY@TONYJOHNSONARCHITECT.COM
109 N. LOMBARDY ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM
TONY JOHNSON ARCHITECT

DATE 07.31.19

PROJECT # 2019-026

SHEET A-2



SECOND FLOOR AREA 927 SF / UNIT

1 SECOND FLOOR PLAN
3/16" = 1'-0"

PRELIMINARY-NOT FOR CONSTRUCTION

REVISIONS

THE QUAD TOWNHOMES
CLAYTON, NORTH CAROLINA

919-553-7717
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARDY ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

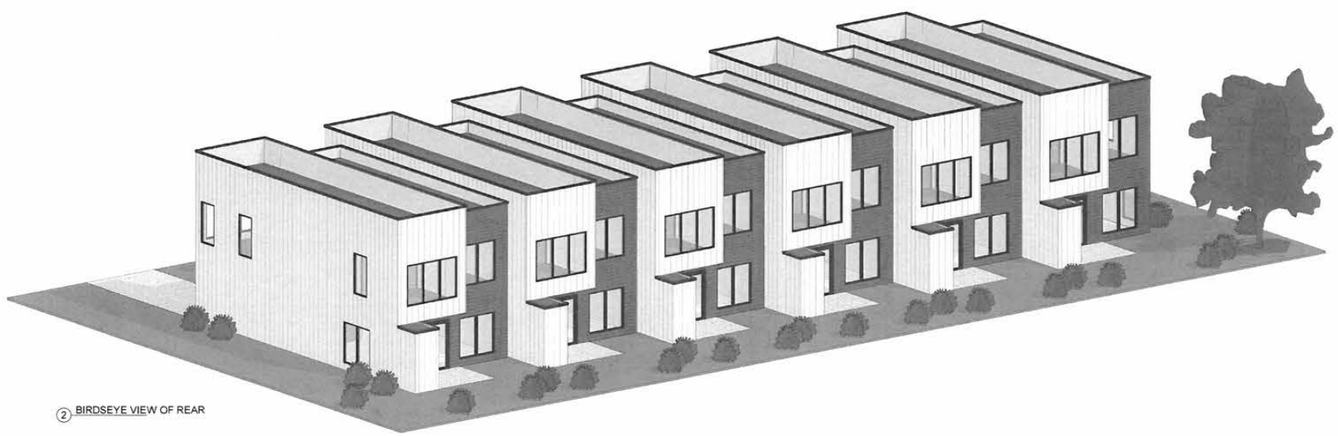
TONY JOHNSON ARCHITECT

DATE 07.31.19

PROJECT # 2019-026

SHEET A-3

1 BIRDSEYE VIEW OF FRONT



2 BIRDSEYE VIEW OF REAR

PRELIMINARY-NOT FOR CONSTRUCTION

REVISIONS

THE QUAD TOWNHOMES
CLAYTON, NORTH CAROLINA

TONY JOHNSON ARCHITECT

919-930-7777
919-930-7000 TONYJOHNSONARCHITECT.COM

101 N. LOMBARD ST
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

DATE 07.31.19

PROJECT # 2019-026

SHEET A-4

1 FRONT STREETVIEW

2 REAR STREETVIEW

PRELIMINARY-NOT FOR CONSTRUCTION

REVISIONS

THE QUAD TOWNHOMES
CLAYTON, NORTH CAROLINA

919-550-7717
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARDY ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

TONY JOHNSON ARCHITECT

DATE 07.31.19

PROJECT # 2019-026

SHEET A-5

ADAMS & HODGE ENGINEERING, PC

August 6, 2019

Dear Clayton Area Property Owner:

The purpose of this letter is to notify you of an application filed with the Town of Clayton for a land use change or development proposal involving property adjacent to, or in close proximity to, property shown in your ownership by Johnston County tax records. Per Town of Clayton regulations, a Neighborhood Meeting will be held to provide information to area residents about the nature of the proposal. A representative of the applicant will be present to explain their application, answer questions, and solicit comments.

Meeting Date: **Monday August 19, 2019**

Meeting Time: **7:00 p.m.**

Meeting Location: **314 E. Main St. (Adams & Hodge Engineering – Entrance and Parking in the back of building)**

Type of Application: **Major Subdivision Plan and Special Use Permit**

Project/proposal property location: **Guy Road beside Devlin Orthodontics (See attached Map)**

Description of project/proposal**:** This project proposal is for 20 units of Modern Townhomes (2 story, 2 bedroom, and single car garages.)

Upcoming Public Meetings for this application: Town Council Meeting September 3, 2019

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A schedule of all upcoming public meetings for application.
3. A map at scale that is appropriate to the project and shows neighboring properties and roads.
4. A map, drawing, or other depiction of the proposed land use change or development proposal.

A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and/or development proposal.

If you have any questions prior to or after this meeting, you may contact us at ***(919)763-7278***.

You may also contact the Planning Department at 919-553-5002.

Sincerely,

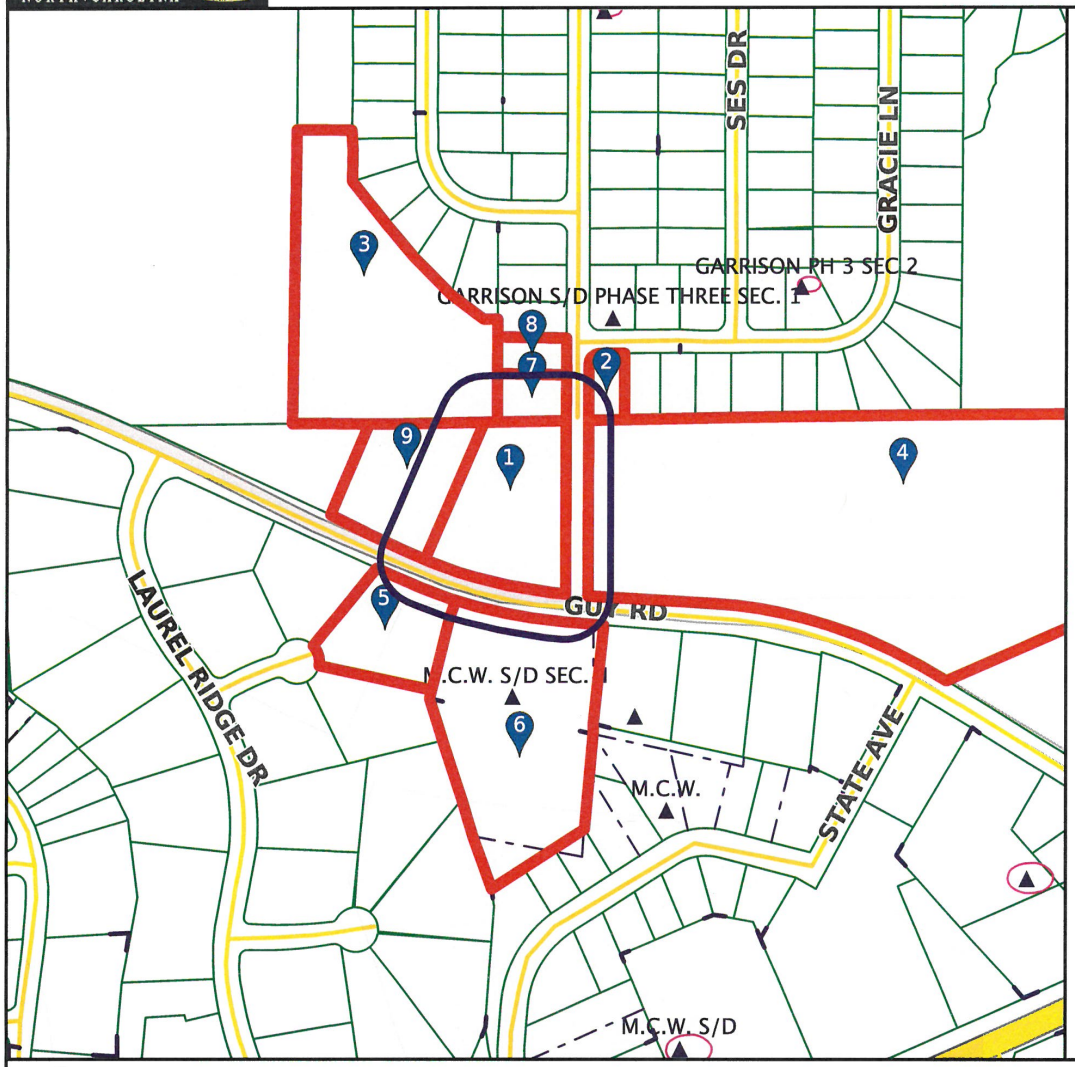
Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

JOHNSTON COUNTY
NORTH • CAROLINA

*** DISCLAIMER ***

Johnston County assumes no legal responsibility for the information represented here.



Result 1

id: 05G02046K
Tag: 05G02046K
Owner Name 1: CGC PROPERTIES LLC
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 10766
Mail Address 3: WILMINGTON, NC 28404-0766
Book: 03119
Page: 0723

Result 2

id: 05G02050
Tag: 05G02050
Owner Name 1: ALLEN, GREGORY M.
Owner Name 2: ALLEN, JANET H.
Mail Address 1: 207 GRACIE LN
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7947
Book: 05137
Page: 0346

Scale: 1:4368 - 1 in. = 363.97 feet

(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
June 25, 2019

JOHNSTON COUNTY NORTH CAROLINA

* * * DISCLAIMER * * *

Johnston County assumes no legal responsibility for the information represented here.

Result 3

id: 05G02034Q
Tag: 05G02034Q
Owner Name 1: GARRISON HOMEOWNERS ASSOCI INC
Owner Name 2:
Mail Address 1: 207 W MILLBROOK SUITE 110
Mail Address 2:
Mail Address 3: RALEIGH, NC 27609-0000
Book: 01700
Page: 0827

Result 4

id: 05G02046L
Tag: 05G02046L
Owner Name 1: N E M E, L L C
Owner Name 2:
Mail Address 1: 3705 WILLIAM J COWAN WYND
Mail Address 2:
Mail Address 3: RALEIGH, NC 27612-5399
Book: 01416
Page: 0631

Result 5

id: 05G02019C
Tag: 05G02019C
Owner Name 1: MOTZ, KATHLEEN
Owner Name 2: MOTZ, KATHARINA H
Mail Address 1: 5 CHESTNUT DRIVE
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02858
Page: 0314

Result 6

id: 05G02014Q
Tag: 05G02014Q
Owner Name 1: CROSSROADS CHURCH OF CLAYTON
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 1677
Mail Address 3: CLAYTON, NC 27520-1677
Book: 04068
Page: 0460

Result 7

id: 05G02049
Tag: 05G02049
Owner Name 1: SIKANETA, PUMULO H.
Owner Name 2:
Mail Address 1: 302 BRANDON DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7945
Book: 04846
Page: 0717

Result 8

id: 05G02100
Tag: 05G02100
Owner Name 1: LATTA, HOLLY
Owner Name 2: LATTA, ASHLEY
Mail Address 1: 300 BRANDON DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-7945
Book: 05177
Page: 0101

*** DISCLAIMER ***

Johnston County assumes no legal responsibility for the information represented here.

Result 9

id: 05G02011A
Tag: 05G02011A
Owner Name 1: DEVLIN PROPERTIES LLC
Owner Name 2:
Mail Address 1: 7016 HARPS MILL RD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27615-0000
Book: 02784
Page: 0379

ADAMS & HODGE
ENGINEERING, PC

The Quad Meeting Minutes
Date: August 19, 2019
Time: 7:00pm
Location: 312 E. Main Street (Adams & Hodge Engineering)

The meeting was ready to begin at 7:00pm for The Quad, however, as of 7:20pm there were no adjacent property owners that showed up. Therefore, there were not any minutes to report.

RECEIVED
AUG 20 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: The Quad

Application: Major Subdivision, Special Use, Permit, Wastewater Allocation

Location/Date: Adams & Hodge Engineering 314 E. Main St. Clayton 8-19-19

	NAME	ADDRESS
1	Donnie Adams	404 Swann Trail, Clayton, NC 27527
2	Holland Adams	404 Swann Trail, Clayton, NC 27527
3	Andrew Hodge	25 Jasper Dr. Clayton
4	[illegible]	215 W. Barners St, Clayton, NC. 27520
5		
6		
7		
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12		
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17		
18		
19		
20		

RECEIVED
AUG 20 2019
TOWN OF CLAYTON
PLANNING DEPARTMENT

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

August 7, 2020

NOTICE

SUBJECT:	**Project:**	2019-130-SUP The Quad Special Use Permit
		2019-129-SD The Quad Preliminary Plat
	Address:	Located off Guy Road
	TAG #:	05G02046K
	Applicant:	Adams & Hodge Engineering, PC

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Town Council will hold a public meeting on ***Monday, August 17, 2020 at 6:00 PM*** at Town Hall, 111 E Second Street, to consider two land use applications: 2019-130-SUP The Quad Special Use Permit and 2019-129-SD The Quad Preliminary Plat.

The Special Use Permit (2019-130-SUP) is to request the ability to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K). Per UDC requirements, townhomes are permitted via issuance of a Special Use Permit in the O-I zoning district.

The Preliminary Plat (2019-129-SD) is to request the ability to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K).

Please see the map on the back of this letter.

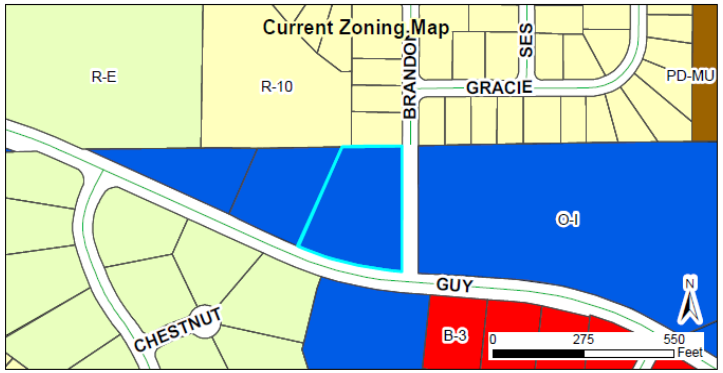
During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

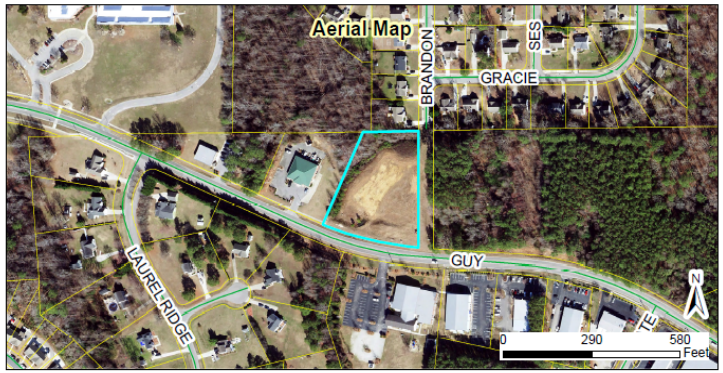
Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this proposed rezoning request. You are invited to join this meeting and express your opinions on this request to the Town Council.

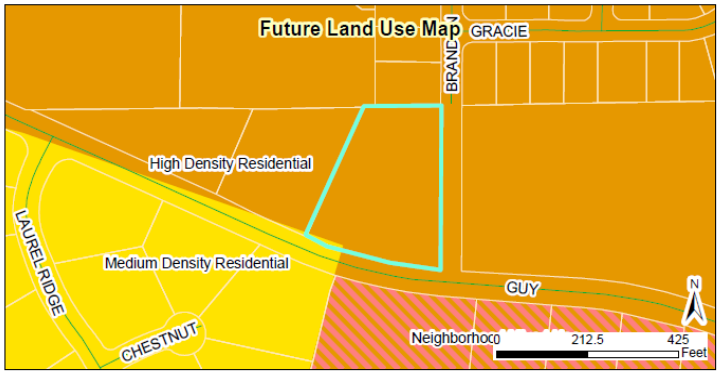
If you should need additional assistance or information, please contact the Planning Department at (919) 553-5002 or email at jcaines@townofclaytonnc.org.

Sincerely,

Jeff Caines, AICP
Planner







2019-129-SD
The Quad Preliminary Plat
Request to develop 20 townhome units

Applicant: Adams & Hodge Engineering
Property Owners: CGC Properties LLC
Tag #: 05G02046K

Staff Report Map

07/11/19
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Watershed Protection Overlay

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2019\2019-129-SD - The Quad\Maps\Staff Report Map - 2019-129-SD - The Quad Preliminary Plat.mxd

PUBLIC NOTICE

In accordance with NC GS 160A-364, the Clayton Town Council will hold a public hearing on Monday, August 17, 2020, at 6:00 PM , to consider the following requests:

- **2019-130-SUP The Quad; Special Use Permit; request to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K). Per UDC requirements, townhomes are permitted via issuance of a Special Use Permit in the O-I zoning district.**

- **2019-129-SD The Quad; Preliminary Plat; request to develop 20 townhomes on a property 2.03 acres in size and zoned Office-Institutional (O-I). The subject property is located off Guy Road, south of Brandon Drive (TAG #: 05G02046K).**

For the Special Use Permit and Preliminary Plat, the Town Council will hold an evidentiary hearing and must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

Samantha Wullenwaber, Planning Director
919-553-5002

_____

The Johnstonian Newspaper

Please advertise on the following dates:
August 5, 2020
August 12, 2020

Affidavit of publication required.

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

TRC CERTIFICATION

January 6, 2020

Donnie Adams/Amy Stancil
314 E. Main St.
Clayton, NC 27520
Donnie@adamsandhodge.com / Amy@adamsandhodge.com

Re: 2019-129-SD The Quad

Mr. Adams / Ms. Stancil,

The project listed above has received certification from the Technical Review Committee on January 6, 2020. In order to prepare for your upcoming Town Council meeting, please submit **ONE** 11x17 hardcopy of your latest site plan. Your project has a tentative Town Council hearing of:

- **Monday February 3, 2020**

Please let me know if you have any questions or need further assistance.

Thank you,

Lori Bryant
Development Services Coordinator
Lbryant@townofclaytonnc.org
(919) 359-9337

Staff Approval:

Project Manger's Approval	1/2/20 Date
Department of Engineering Approval	1/3/20 Date
Fire Inspector's Approval	01-06-2020 Date

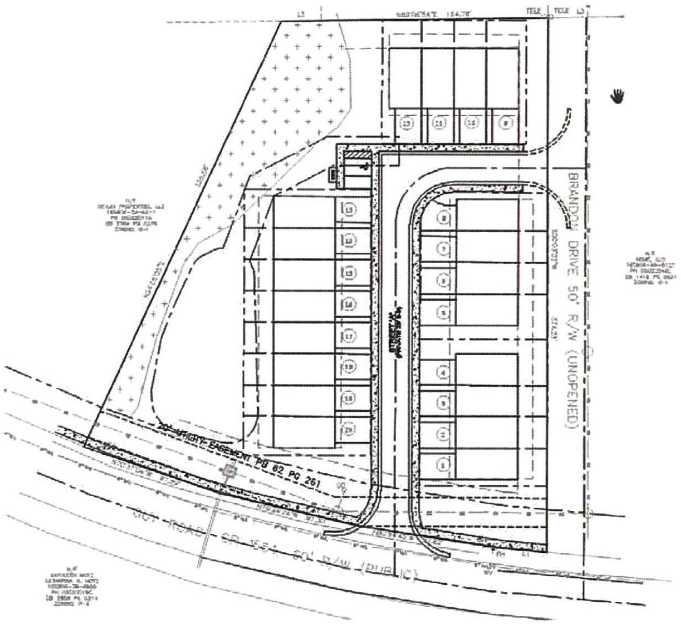
Updated February 2019

ADAMS & HODGE ENGINEERING, PC

STORMWATER MANAGEMENT STATEMENT

THE QUAD

TOWN OF CLAYTON
JOHNSTON COUNTY, NORTH CAROLINA



PREPARED BY
EVA KING, PE
ADAMS & HODGE ENGINEERING P.C.

JUNE 24, 2019

NORTH CAROLINA PROFESSIONAL SEAL 039159 ENGINEER EVA KING

STORMWATER NARRATIVE

ADAMS & HODGE ENGINEERING, PC

The Quad
Town of Clayton
Johnston County, North Carolina
Stormwater Management Statement Narrative
June 2019

The site for The Quad project is located off Guy Road, west of Highway 42 in the Town of Clayton in Johnston County, North Carolina.
The project consists of a +/- 2.03 acres parcel, Tax ID 05G02046K, PIN 165806-39-9222. The proposed use for this site is a 20 townhom community with 5 buildings consisting of 4 connected townhomes.

The existing site is a mix of partially wooded areas and cleared grassed areas with potential wetlands located along the western property line.

According to Firm Map 3720165800 dated 6/20/2018, the site is located in Zone X, area of minimal Flood Hazard.

According to Johnston County GIS, the property is not located in an ESA .

The proposed townhome community consists of one road with curb and gutter.

Preliminary Nitrogen Calculations included show a final nitrogen offset of 9.88 lb/ac/yr, so an off-set payment is anticipated while treatment to reduce Nitrogen is not required.

However, attenuation will be required so an additional Nitrogen reduction is expected by the proposed SCM once fully designed.

NITROGEN EXPORT

ADAMS & HODGE ENGINEERING, PC

Preliminary TN Calculations - The Quad - Town of Clayton

This project is fully located outside of the ESOD area

The impervious area limit (without Attenuation & Land Dedication) for Townhomes Development for this project is 70 %

Impervious Calculations:	sqft	ac	%
Roadways:	8,022	0.18	9.08%
Homes	18,480	0.42	20.91%
Driveways and Sidewalk	12,150	0.28	13.75%
Total:	**38,652**	**0.89**	**43.73%**

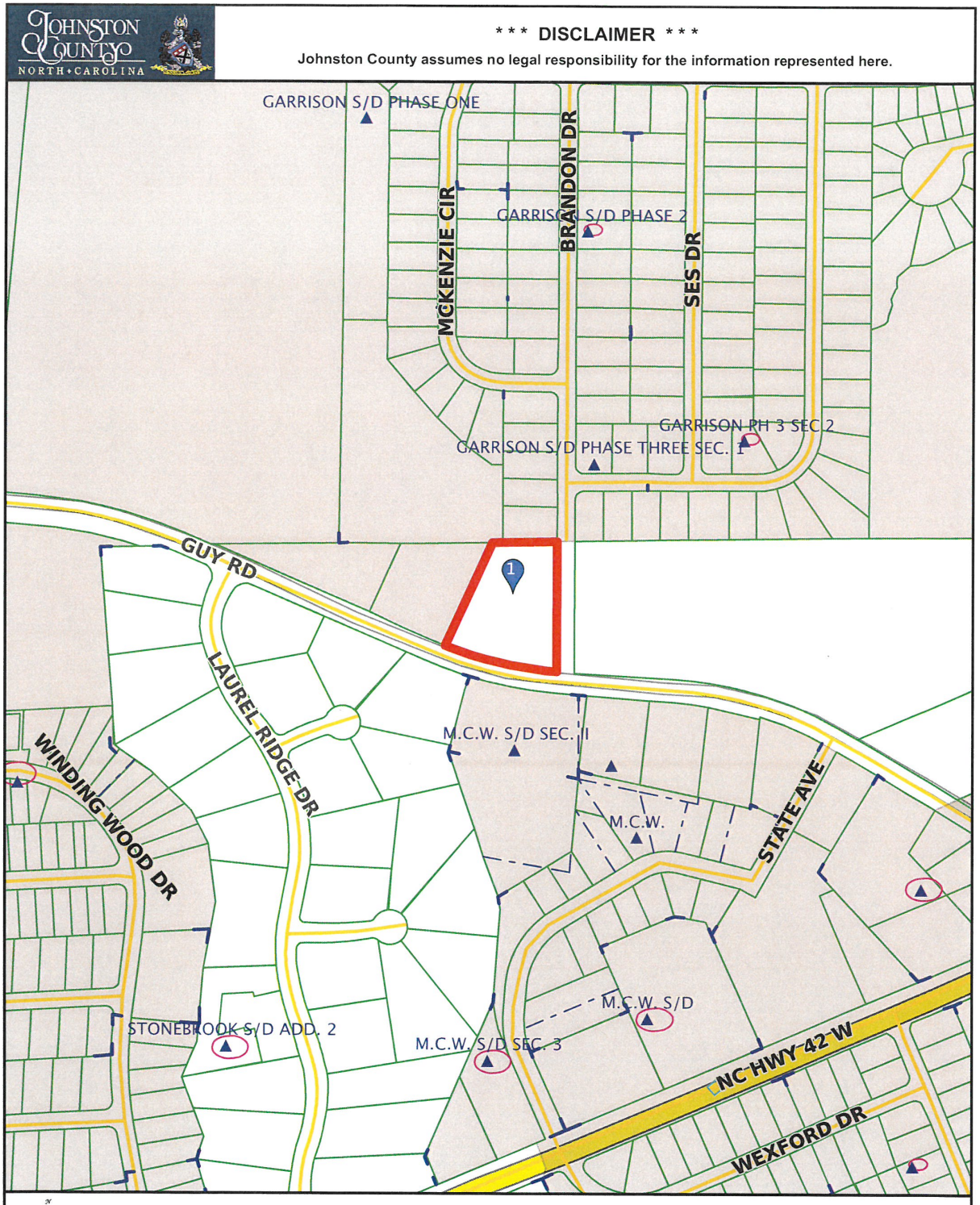
(1)	(2)	(3)	(4)	(5)
Type of Land Cover	**Site Area (Acres)**	**TN Export Coeff. (lbs/ac/yr)**	**TN Export by Land Use (lbs/yr)**	**TN Export From Site (lbs/ac/yr)**
Perm. preserved undisturbed open space (forest, unmown meadow)	0.24	0.6	0.14	
Perm. preserved managed open space (grass, landscaping, etc.)	0.91	1.2	1.09	
Impervious surfaces (roads, parking lots, driveways, roofs, paved storage areas, etc.)	0.89	21.2	18.81	
TOTAL	2.03		20.04	
Average for Site				9.88

ALLOWABLE NITROGEN EXPORT:	10.00	lb/ac/yr	
ACTUAL NITROGEN EXPORT IS:	9.88	lb/ac/yr	**No buydown required**

6/24/2019

APPENDIX

SITE PLAN
VICINITY MAP
FIRMETTE
SOILS MAP
USGS MAP



Scale: 1:4358 - 1 in. = 363.17 feet

(The scale is only accurate when printed portrait on a 8 1/2 x 11 size sheet with no page scaling.)

Johnston County GIS
June 24, 2019

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/24/2019 at 6:10:14 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Custom Soil Resource Report
Soil Map (The Quadd)

Map Scale: 1:771 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Johnston County, North Carolina
Survey Area Data: Version 22, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 29, 2014—Dec 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (The Quadd)

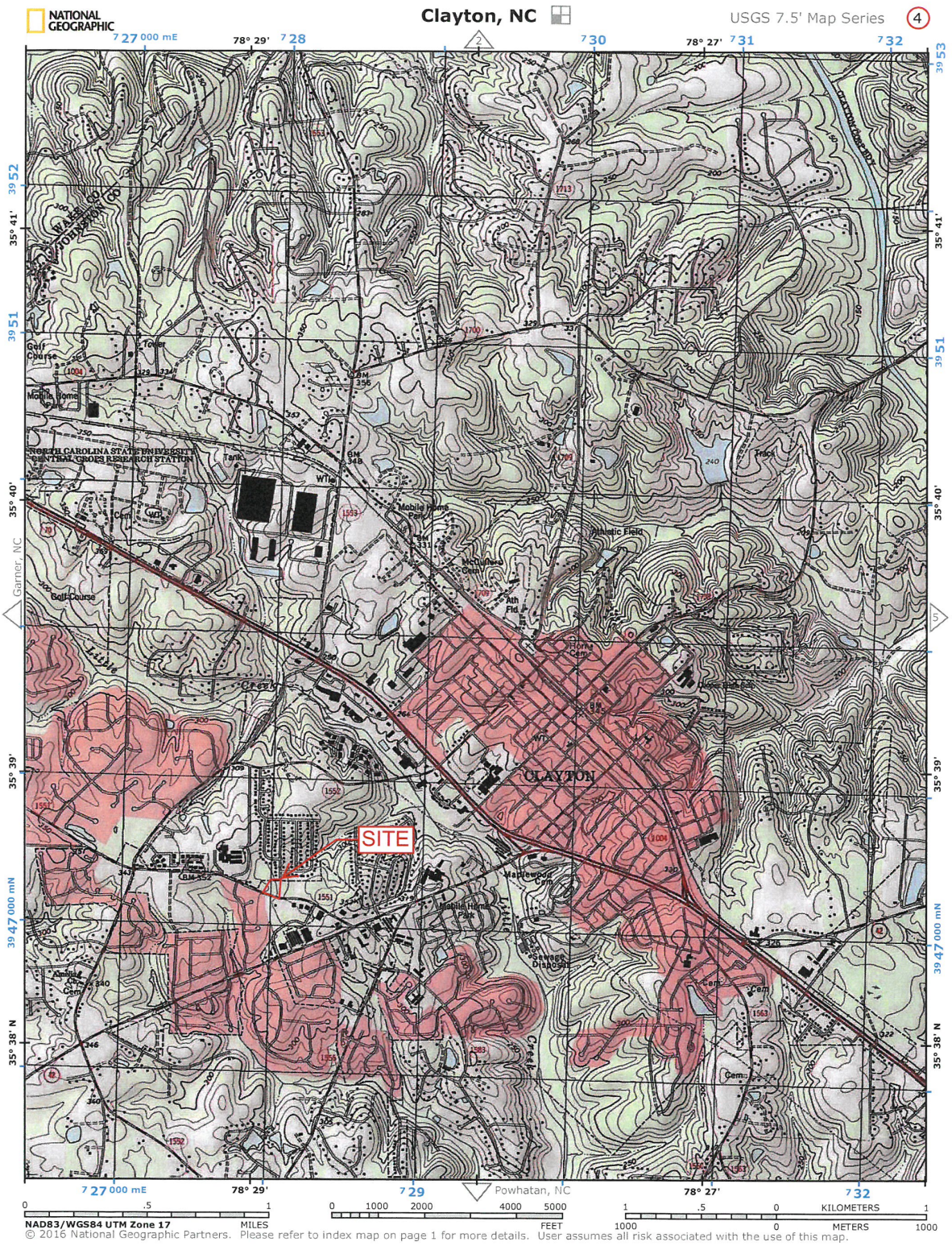
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CoB	Cowarts loamy sand, 2 to 6 percent slopes	0.3	14.7%
GoA	Goldsboro sandy loam, 0 to 2 percent slopes	0.2	7.1%
MaA	Marlboro sandy loam, 0 to 2 percent slopes	0.1	2.5%
Ra	Rains sandy loam, 0 to 2 percent slopes	1.8	75.6%
Totals for Area of Interest		**2.4**	**100.0%**

Map Unit Descriptions (The Quadd)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.


NATIONAL GEOGRAPHIC
Clayton, NC
USGS 7.5' Map Series
4
SITE
CLAYTON
Garner, NC
Powhatan, NC
NAD83/WGS84 UTM Zone 17
© 2016 National Geographic Partners. Please refer to index map on page 1 for more details. User assumes all risk associated with the use of this map.

Town of Clayton

March 17, 2003

LETTER OF UNDERSTANDING

Mr. Al Nemy
11221 Paddy Hallow Lane
Raleigh, North Carolina 27614

Re: Neme Subdivision lots 3-7, Guy Road

Dear Mr. Nemy,

The purpose of this letter is to memorialize our mutual understanding of approvals and conditions attached to the above referenced subdivision.

By various actions taken in open session by the Town Council for the Town of Clayton the following is established:

1. Subdivision of the above parcels is approved.
2. You will be responsible for installing sewer collection facilities to serve the property to include a connection with existing Town facilities located at the terminus of Brandon Drive and an extension of said line in a fashion suitable to serve lot 3, now occupied by Orthos Physical Therapy.
3. Installation of the extension of Brandon Drive shall be deferred and attached to the future site plan approval and development of lot 6.
4. Fees associated with provision of utility service shall be paid in pro-rata shares attributable to builders of currently undeveloped lots or the occupants of the existing, developed lot 3.
5. As owner of the property, you accept responsibility for communication of these conditions to perspective buyers.

P.O. Box 879 • Clayton, North Carolina 27520 • (919) 553-5002 • Fax (919) 553-8919

If the above information indicates an accurate and complete statement of your understanding on the matter please note with your signature of concurrence in the space provided.

Sincerely,

Steve Biggs
Town Manager

Mr. Alfred S. Nemy for
NEME, LLC

3/18/03
Date

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

May 20, 2019

Paul Flaherty
HTR Commercial
328 E Main Street
Clayton, NC 27520
Peflaherty1@yahoo.com

Re: NEME Subdivision Lot 5 / Brandon Drive- Letter of Understanding
TAG #: 05G02046K
PIN #: 165806-39-9222

Mr. Flaherty,

This letter is to provide clarification as to what improvements Lot 5 of NEME subdivision, located at the above referenced TAG/PIN #s, will be responsible for in regards to the extension of Brandon Drive. Lot 5 shall not be financially responsible for Brandon Drive, per the letter of understanding dated March 17, 2003. Instead, as outlined in item #3 of that letter, the installation and extension of Brandon Drive shall be deferred to the future site plan approval and development of Lot 6. A copy of this letter is attached for your records.

However, please note that Lot 5 shall be required to pay fee-in-lieu for sidewalk along the property's frontage on Guy Road.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Planner
hhogg@townofclaytonnc.org

Town of Clayton

March 17, 2003

LETTER OF UNDERSTANDING

Mr. Al Nemy
11221 Paddy Hallow Lane
Raleigh, North Carolina 27614

Re: Neme Subdivision lots 3-7, Guy Road

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1. Subdivision of the above parcels is approved.
2. You will be responsible for installing sewer collection facilities to serve the property to include a connection with existing Town facilities located at the terminus of Brandon Drive and an extension of said line in a fashion suitable to serve lot 3, now occupied by Orthos Physical Therapy.
3. Installation of the extension of Brandon Drive shall be deferred and attached to the future site plan approval and development of lot 6.
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P.O. Box 879 • Clayton, North Carolina 27520 • (919) 553-5002 • Fax (919) 553-8919

If the above information indicates an accurate and complete statement of your understanding on the matter please note with your signature of concurrence in the space provided.

Sincerely,

Steve Biggs
Town Manager

Mr. Alfred S. Nemy for
NEME, LLC

3/18/03
Date

TOWN OF CLAYTON
Engineering & Inspections Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

WASTEWATER ALLOCATION REQUEST

The Town of Clayton, in an effort to manage and maintain the sewer and water capacity for the Town, requires that this application be completed and submitted to the Town for consideration of a utility allocation. Review fee is due upon submittal of request.

Wastewater Allocation Request Review Fee: $50

Application MUST be completed and sealed by a registered engineer unless otherwise approved by staff.

SITE INFORMATION

Name of Project: The Quad **Acreage of Property:** 2.029 Ac

County Tag Number: 05G02046K **NC PIN:** 165918-39-9222

Address/Location: Guy Rd, beside Devlin Orthodontics

Zoning District: O-1

Town Limits / ETJ: ☐ Town Limits ☒ ETJ (Extra-Territorial Jurisdiction)

APPLICANT INFORMATION – Applicant must be a registered engineer unless otherwise approved by Town Engineer

Applicant: Adams & hodge Engineering, PC

Mailing Address: 314 East Main St., Clayton, NC 27520

Phone Number: 919-763-7278 / 919-812-2654 **Fax:**

Contact Person: Donnie Adams / Amy Stancil

Email Address: donnie@adamsandhodge.com / amy@adamsandhodge.com

PROPERTY OWNER INFORMATION

Name: CGC Properties, LLC

Mailing Address: PO Box 10766, Wilmington, NC 28404

Phone Number: **Fax:**

Email Address:

FOR OFFICE USE ONLY

Date Received: RECEIVED JUN 28 2019 TOWN OF CLAYTON PLANNING DEPARTMENT File Number: Associated Project Number:

PROJECT INFORMATION

Use: ☒ **New** ☐ **Expanded** ☐ **Change** **Use Type:** ☒ **Residential** ☐ **Non-Residential**

Proposed Use(s): Single Family Townhomes **Existing Use(s):** Vacant O-I Zoning

Invoice shall be mailed to the following:

Developer Name: Cloudbreak Investments, LLC

Mailing Address: PO Box 189, Clayton, NC 27528

Phone Number: 919-345-6729 **Fax Number:** _____

Email Address: _____

ALLOCATION REQUEST

The following is required:

- **For non-residential construction, submit a floor plan of proposed building.**
- **Use additional sheets if necessary.**
- **Provide any documentation supporting/justifying the request as an attachment (using a comparable use is recommended).**
- **If a phasing / take-down schedule is proposed, include as an attachment.**

Residential:

Gross Acreage: _____

Single Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units			
3 Bedroom Units	20	250	5000
>3 Bedroom Units			
Total	20	------	5000

Multi-Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units			
3 Bedroom Units			
>3 Bedroom Units			
Total		------	

Non-Residential: ***(Design Flow Guideline provided as Appendix A)****

**If design flow deviates from the flow rates presented in Appendix A, provide supporting documentation/justification as an attachment in the form of 12 months of water bills demonstrating gallons per day utilized.*

Gross Acreage: _____

Use	Measurement Unit	# of Units	GPD per Unit	Total Requested GPD
Total			------	

TOTAL REQUESTED GALLONS PER DAY: 5000

NOTE TO APPLICANT:

Invoicing:
Invoices are generated on the following schedule:

Non-Residential:
Generated with the application for a Zoning Compliance Permit.

Residential:
Multi-Family / Apartments:
Generated with the application for a Zoning Compliance Permit.

Subdivision / Subdivided Lots:
Generated at Final Plat submittal.

Fee Development:
Development Fees are calculated and invoiced based on the Town of Clayton adopted Comprehensive List of Fees and Charges. Invoiced fees include acreage fees, capacity fees, nutrient offset fees, recreation fees, fees-in-lieu, and electric department lot deposit. Please speak with Town staff with questions.

Approval:
Requests over 10,000 GPD are approved by the Town Council, by resolution. All other requests are approved by the Town Manager.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town of Clayton to approve the subject Wastewater Allocation. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

Donnie Adams		6/27/2019
Print Name	*Signature of Applicant*	*Date*

Engineer Seal:

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

TOWN OF CLAYTON OFFICE USE ONLY:

Approved by: ☐ Town Manager

☐ Town Council (*requests of 10,000 GPD or more require Council approval by resolution)*

The **Town Manager / Town Council (circle one)** has authorized the allocation of _____

gallons per day for project # _____.

Date of Approval: _____

Signed:

_____
Town Manager

If approved by Town Council:
Attach a copy of the resolution and any associated documentation.

APPENDIX A: DESIGN FLOW RATES

The following table from the North Carolina Administrative Code 02T.0114 shall be used to determine the minimum allowable design daily flow of wastewater facilities. Alternatively, the Town in its sole and absolute discretion may calculate the customer's initial average daily wastewater flow based on data from the customer's operations (or from similarly situated customers) with a comparable sanitary sewer system, where such data are available and reasonably current.

Establishment Type	Daily Flow Rate
Barber and Beauty Shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, Offices and Factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse – self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, Rescue and Emergency Response	
Fire or rescue stations without on-site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and Drink Facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq. ft. floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq. ft. floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq. ft. floor space
Bakery	10 gal/100 sq. ft. floor space
Meat department, butcher shop or fish market	75 gal/100 sq. ft. floor space
Specialty food stand or kiosk	50 gal/100 sq. ft. floor space
Hotels and Motels	
Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
Hotels and motels, with in-room cooking facilities	175 gal/room
Resort hotels	200 gal/room
Cottages, cabins	200 gal/unit
Self-service laundry facilities	500 gal/machine
Medical, Dental and Veterinary Facilities	
Medical or dental offices	250 gal/practitioner/shift
Veterinary offices (not including boarding)	250 gal/practitioner/shift
Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall
Hospitals, medical	300 gal/bed
Hospitals, mental	150 gal/bed
Convalescent, nursing, rest homes without laundry facilities	60 gal/bed
Convalescent, nursing, rest homes with laundry facilities	120 gal/bed
Residential care facilities	60 gal/person
Parks, Recreation, Camp Grounds, R-V Parks and other Outdoor Activity Facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite

Establishment Type	Daily Flow Rate
Campgrounds with water and sewer hookups	100 gal/campsite
Campground dump station facility	50 gal/space
Construction, hunting or work camps with flush toilets	60 gal/person
Construction, hunting or work camps with chemical or portable toilets	40 gal/person
Parks with restroom facilities	250 gal/plumbing fixture
Summer camps without food preparation or laundry facilities	30 gal/person
Summer camps with food preparation and laundry facilities	60 gal/person
Swimming pools, bathhouses and spas	10 gal/person
Public access restrooms	325 gal/plumbing fixture
Schools, Pre-school and Day Care	
Day care and preschool facilities	25 gal/person (child & employee)
Schools with cafeteria, gym and showers	15 gal/student
Schools with cafeteria	12 gal/student
Schools without cafeteria, gym or showers	10 gal/student
Boarding schools	60 gal/person (student & employee)
Service Stations and Car Wash Facilities	
Service stations, gas stations	250 gal/plumbing fixture
Car wash facilities	1200 gal/bay
Sports Centers	
Bowling center	50 gal/lane
Fitness, exercise, karate or dance center	50 gal/100 sq. ft.
Tennis, racquet ball	50 gal/court
Gymnasium	50 gal/100 sq. ft.
Golf course with only minimal food service	250 gal/plumbing fixture
Country clubs	60 gal/member or patron
Mini golf, putt-putt	250 gal/plumbing fixture
Go-kart, motocross	250 gal/plumbing fixture
Batting cages, driving ranges	250 gal/plumbing fixture
Marinas without bathhouse	10 gal/slip
Marinas with bathhouse	30 gal/slip
Video game arcades, pool halls	250 gal/plumbing fixture
Stadiums, auditoriums, theaters, community centers	5 gal/seat
Stores, Shopping Centers, Malls and Flea Markets	
Auto, boat, recreational vehicle dealerships/showrooms with restrooms	125 gal/plumbing fixture
Convenience stores, with food preparation	60 gal/100 sq. ft.
Convenience stores, without food preparation	250 gal/plumbing fixture
Flea markets	30 gal/stall
Shopping centers and malls with food service	130 gal/1000 sq. ft.
Stores and shopping centers without food service	100 gal/1000 sq. ft.
Transportation Terminals	
Air, bus, train, ferry, port and dock	5 gal/passenger

Source: North Carolina Administrative Code 02T.0114, January 1, 2007

Town of Clayton
Town Council
Preliminary Subdivision Plat Motion Sheet

After considering the competent, material, and substantial evidence presented, including the application and materials of record, I move to **(PICK ONE)**:

- ☐ Approve
- ☐ Deny
- ☐ Approve with Conditions

Preliminary Subdivision Plat Application Number_**2019-129-SD – The Quad**

This motion is based on the following findings:

1. The preliminary subdivision plat **IS** consistent with the adopted plans and policies of the town.

OR

The preliminary subdivision plat **IS NOT** consistent with the adopted plans and policies of the town. (State evidence supporting finding.)

****

2. The subdivision **MEETS** all required specifications of the Town of Clayton Unified Development Code.

OR

The subdivision **DOES NOT MEET** all required specifications of the Town of Clayton Unified Development Code. (State evidence supporting finding.)

****

3. The subdivision **WILL NOT** be detrimental to the use or orderly development of other properties in the surrounding area and **WILL NOT** violate the character of existing standards for development of properties in the surrounding area.

OR

MOTION FORM
Item 7b
2019-129-SD
The Quad – Preliminary Plat

The subdivision **WILL** be detrimental to the use or orderly development of other properties in the surrounding area and **WILL** violate the character of existing standards for development of properties in the surrounding area. (State evidence supporting finding).

****

4. The subdivision design **WILL** provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, **WILL** provide for the unified and orderly use of or extension of public infrastructure, and **WILL NOT** materially endanger the environment, public health, safety, or the general welfare.

OR

The subdivision design **WILL NOT** provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, **WILL NOT** provide for the unified and orderly use of or extension of public infrastructure, and **WILL** materially endanger the environment, public health, safety, or the general welfare. (State evidence supporting finding).

****

[If approved with conditions] The applicant meets this finding subject to the following conditions:

MOTION FORM
Item 7b
2019-129-SD
The Quad – Preliminary Plat

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Public Hearings

Item Title
2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning

Presenter
Haley Hogg, Senior Planner

Summary/Description
The applicant is requesting to rezoned 10.5 acres of land from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). The property is currently located in the Town's ETJ and is located off Glen Laurel Road, just south of NC HWY 42 E. This rezoning request is running concurrently with a preliminary plat application to add this property into an existing Planned Development master plan for the properties located directly North (2020-39-SD). The applicant has also submitted an associated annexation petition to the Town.

Requested Action
Approval/Denial

Funding Source (If Applicable):
N/A

Cost: **N/A** **Yes** ☐ **No** ☒

Additional Documents to be Included in Agenda Packet

Application
Owner's Consent Form
Staff Report
Staff Report Maps
Neighborhood Meeting Materials
Boundary Survey
TC Adjacent Property Letter
Newspaper Ad
Consistency & Reasonableness Statement
Public Comment- Received for PB meeting in May & June 2020
PB Recommendation

Meeting Timeline
May 26, 2020- Planning Board (Virtual- Public Hearing)
June 22, 2020- Planning Board (Virtual- Decision)
August 17, 2020- Town Council (Decision)

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

REZONING APPLICATION COVER SHEET

Name of Project: Shoppes at Glen Laurel Phase 2 **Date:** 2/3/2020

Applicant Name: Commercial Properties, Inc.

The following checklist to be completed by applicant:

[✓] Pre-Application Meeting on: 6/15/19
[✓] Review Fee
[✓] Advertisement Fee
[✓] Completed Application
[✓] Owner's Consent Form
[✓] Adjacent Property Owner's List
[✓] Neighborhood Meeting Notice Letter (1 copy)
[✓] 2 Sets of stamped, addressed, empty envelopes for adjacent property owner notification
[✓] Signed & Sealed Boundary Survey
[✓] Copy of signed & sealed boundary survey in PDF on USB

Reviewed by: _____

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

REZONING APPLICATION

☐ **Standard Rezoning Fee: $500.00**
☒ **Planned Development Rezoning Fee: $1,000 + $5.00 per acre**
☒ **Advertisement Fee: $200.00**

SITE INFORMATION

Name of Project: Shoppes at Glen Laurel Phase 2

Acreage of Property: 10.455 AC **Zoning District:** Residential Estate

County Tag #: 05 I 04016E **NC Pin #:** 167800-29-5295

Address/Location: Glen Laurel Road, 1150 LF south of HC42

Existing Zoning District: Residential Estate **Proposed Zoning District:** Planned Development ~~Mixed Use~~

APPLICANT INFORMATION

Applicant: Commercial Properties, Inc

Mailing Address: 1004 Wake Forest Road, Raleigh, NC 27604

Phone Number: 919 872-5702 **Fax:**

Contact Person: Kate Brown or Brantley Tillman

Email Address: kate@commprop.net

PROPERTY OWNER INFORAMTION

Name: Clayton Partners LLC

Mailing Address: 1004 Wake Forest Road

Phone Number: 919 872-5702 **Fax:**

Email Address:

OFFICE USE ONLY

Date Received: _____ Amount Paid: _____ File Number: _____

EXPLANATION OF PROJECT

Please provide detailed information concerning all requests. Attach additional sheets if necessary.

Rezoning allows for the expansion of The Pines at Glen Laurel. Additional residential, commercial, and retail uses to meet needs of surrounding area

APPROVAL CRITERIA

All applications for a Rezoning must address the following findings:

1. Consistency with the adopted plans of the Town.

   This Parcel is identified as "High Density Residential / Neighborhood Center" in the 2040 Comp Plan. The proposed rezoning is consistent with 2040 Plan

2. Suitability of the subject property for uses permitted by the current vs. the proposed district.

   The current zoning "Residential Estates" does not provide for growth and non-residential development. The 2040 Plan recognizes this deficiency

3. Whether the proposed change tends to improve the balance of uses, or meets specific demand in the Town.

   This rezoning meets the intent of the 2040 Plan. The uses allowed in PB-mixed use will assist with meeting growing service demands within the Town

4. The capacity of adequate public facilities and services including schools, roads, recreation facilities, wastewater treatment, potable water supply and stormwater drainage facilities is available for the proposed use.

   Adequate public facilities exist to accomodate this rezoning. Roadway improvements have been recently made based upon expected growth

5. It has been determined that the legal purposes for which zoning exists are not violated.

   The property and proposed zoning are consistent with Town policy and regulations

6. It has been determined that there will be no adverse effect upon adjoining property owners unless such effect can be justified by the overwhelming public good or welfare.

   With Caterpiller to the West, Existing PB-mixed use to north, Town Park to east, and scattered residential to south; the proposed rezoning will not negatively impact surrounding uses. The proposed services created as a result of this rezoning will benefit the general area by meeting the growing demand for services.

7. It has been determined that no one property owner or small group of property owners will benefit materially from the change to the detriment of the general public.

The proposed rezoning will provide additional opportunity for business and residential growth that will benefit the surrounding area

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town Council of the Town of Clayton to amend the Zoning Ordinance and change the Official Zoning Map of the Town of Clayton as requested.. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

C Brantley Tillman	C Brantley Tillman	2-3-2020
Print Name	*Signature of Applicant*	*Date*

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: The Pines at Glen ~~Walkel~~ Phase 2 **Address or PIN #:** 167800-29-5295

AGENT/APPLICANT INFORMATION:

(Name - type, print clearly) Clayton Partners LLC

(Address) 1004 Wake Forest Road

(City, State, Zip) Raleigh, NC, 27604-1358

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***): Commercial Properties Inc.

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

(Name - type, print clearly) Frank Klopf Clayton Partners LLC

(Owner's Signature)

(Address) 1004 Wake Forest Rd.

(City, State, Zip) Raleigh, NC 27604-1358

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Jaimie L. Cope, a Notary Public for the above State and County, this the 31 day of January, 2020.

SEAL

JAIMIE L. COPE
Notary Public
Wake County
My Commission Expires
6/16/2023
NORTH CAROLINA

Notary Public Jaimie L. Cope

My Commission Expires: 6/16/2023

July 2018

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-1545

Planning Board
May 26, 2020

STAFF REPORT

Application Number: 2020-22- PDD
Project Name: Shoppes at Glen Laurel Planned Development Rezoning

Tag #: 05104016E
Location: Located off Glen Laurel Road, south of existing Shoppes at Glen Laurel Mixed Use development
Overlay: Watershed Protection Overlay
Applicant: Commercial Properties Inc.
Owner: Clayton Partners LLC
Project Planner: Haley Hogg, Planner II

Public Noticing Dates:

- **Neighborhood Meeting:** February 13, 2020
- **Sign Posted:** May 15, 2020
- **PB Letters Mailed:** May 12, 2020

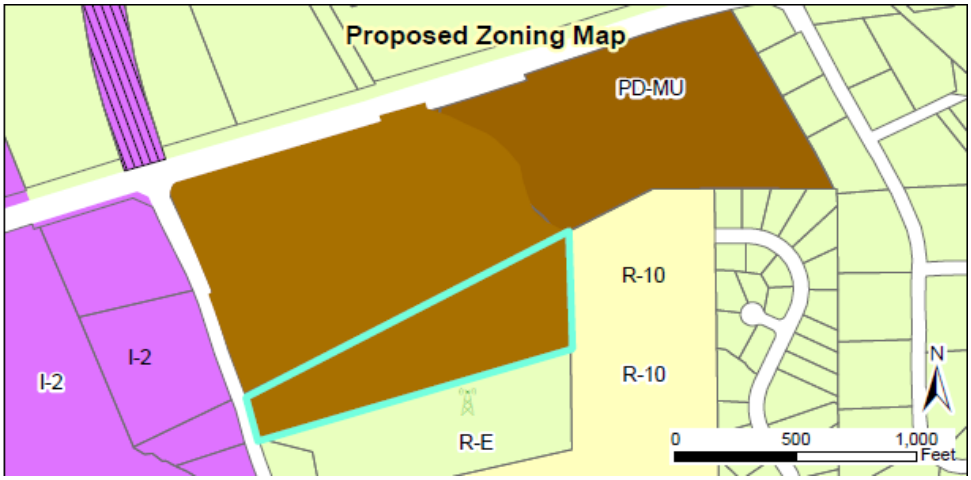
REQUEST: Request to rezone 10.5 acres from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). This application is running concurrently with a preliminary plat (master plan) to add the land to the Shoppes at Glen Laurel Mixed Use Planned Development to the north.

SITE DATA:

Acreage: 10.5 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Planned Development Mixed Use (PD-MU)	Commercial & Vacant
South	Residential-Estate (R-E)	Single-family residential
East	Residential-10 (R-10)	Park
West	Industrial-Heavy (I-2)	Industrial (Caterpillar)



STAFF ANALYSIS AND COMMENTARY:

Overview
The applicant is requesting to rezone the subject property from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). This application is running concurrently with a preliminary plat application which is acting as a master plan modification to incorporate this land into the existing master plan for the properties to the north (Shoppes at Glen Laurel; formerly known as "NC HWY 42 Mixed Use").

The property proposed to be rezoned is located off Glen Laurel Road. Permitted uses and dimensional standards for this district will be set via its associated master plan. Per UDC requirements, the Planning Board shall make a recommendation to Town Council regarding all rezoning requests, including Planned Development districts. However, the Planning Board does not review or make recommendations on preliminary plats, even those acting as a master plan associated with a Planned Development designation. An overall master plan layout has been attached to this staff report to provide the board an overview of how this property will be incorporated into the existing Planned Development pending Town Council approval of the rezoning and associated master plan. This

master plan is still under review by the Technical Review Committee and is subject to change prior to proceeding to Town Council. The Planning Board will not review the proposed uses or layout of this master plan. The plan is only included as an attachment to this staff report for informational purposes.

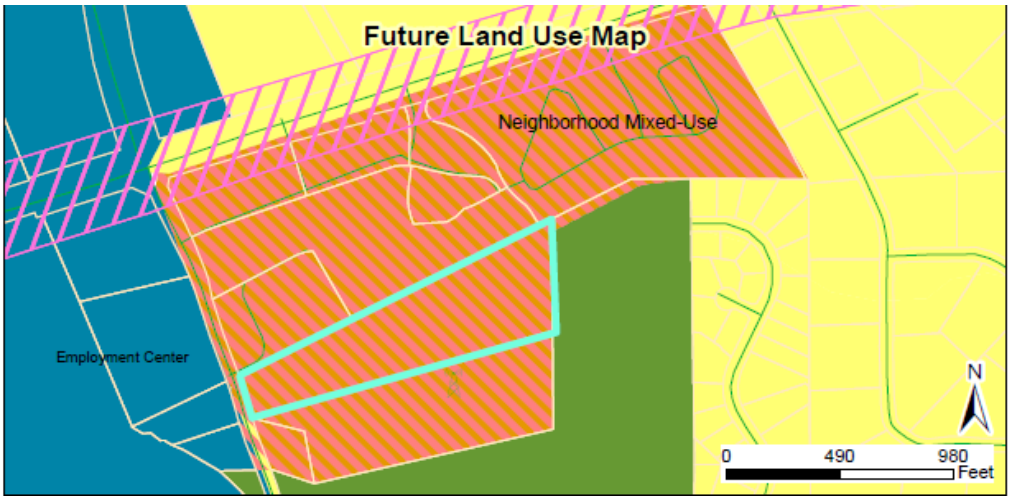
Consistency with the Comprehensive Plan 2040
The Comprehensive Plan's Future Land Use Map designates these properties as a Medium Density Residential/Neighborhood Center ("Neighborhood Mixed Use") and Low Density Residential. The proposed zoning district is consistent with this plan as it allows for mixed use development including commercial and residential.

Comprehensive Plan Goals supporting the rezoning request include:

- **Goal LU1:** Preserve Clayton's small-town character while allowing for growth and development in appropriate areas.

Comprehensive Plan Goals not supporting the rezoning request include:

- None.



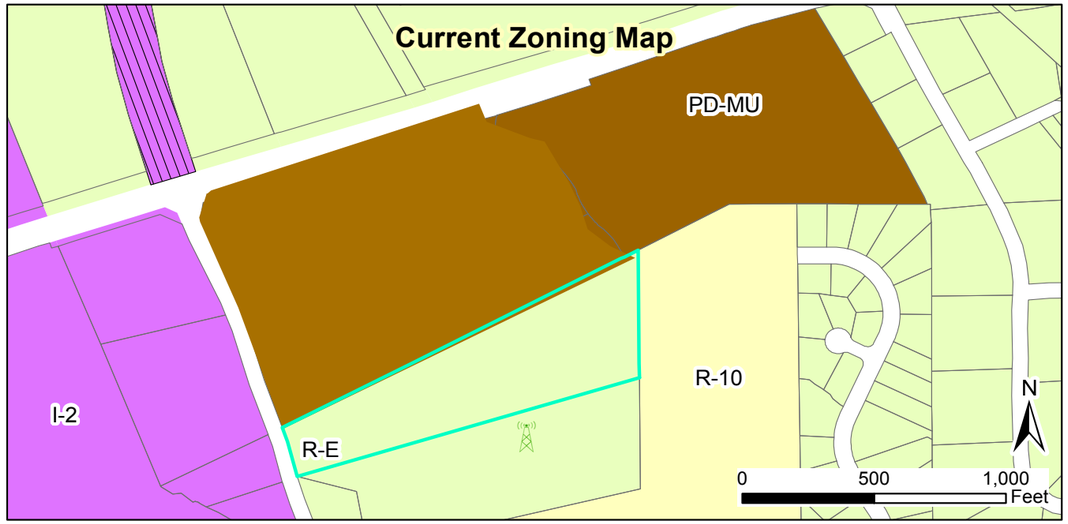
CONSIDERATIONS:

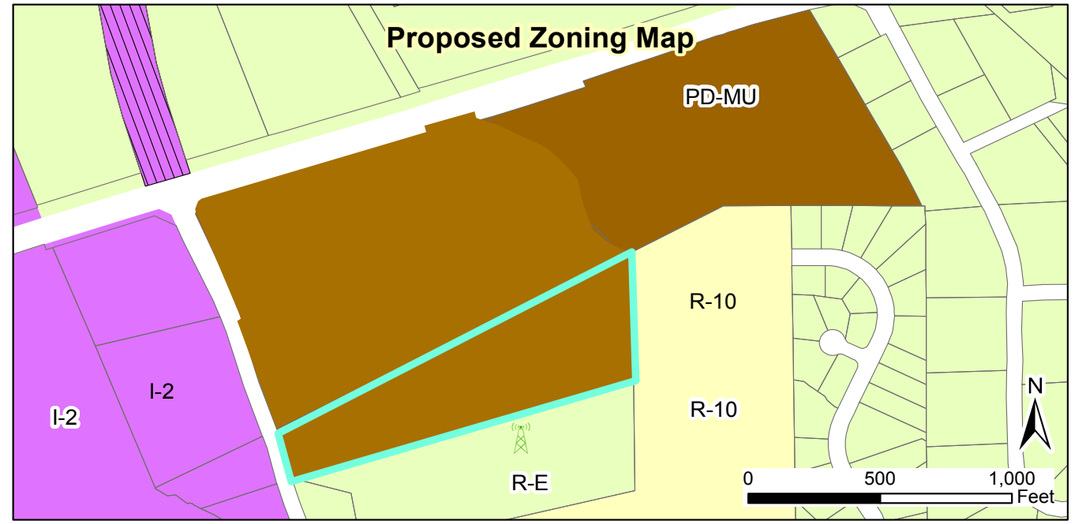
- Rezonings are decided by the Town Council. The Planning Board shall make a recommendation to the Town Council.
- The Planning Board shall only make a recommendation on this rezoning; the associated master plan (preliminary plat) is quasi-judicial and does not receive a Planning Board review or recommendation.
- When adopting or rejecting the rezoning, the Town Council shall approve a statement describing whether its action is consistent with adopted plans and/or policies of the Town and explaining why the Council considers the action taken to be reasonable and in the public interest.

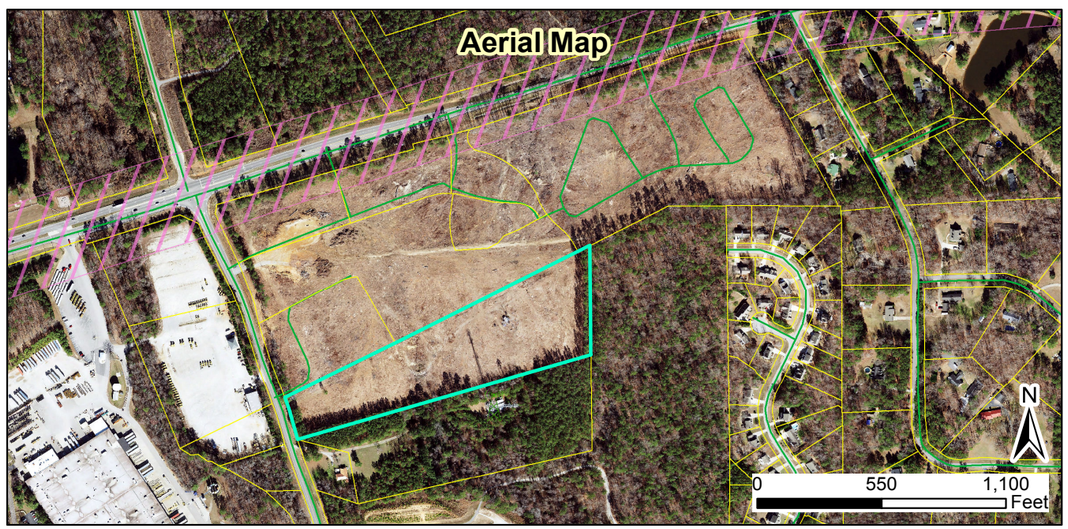
ATTACHMENTS:

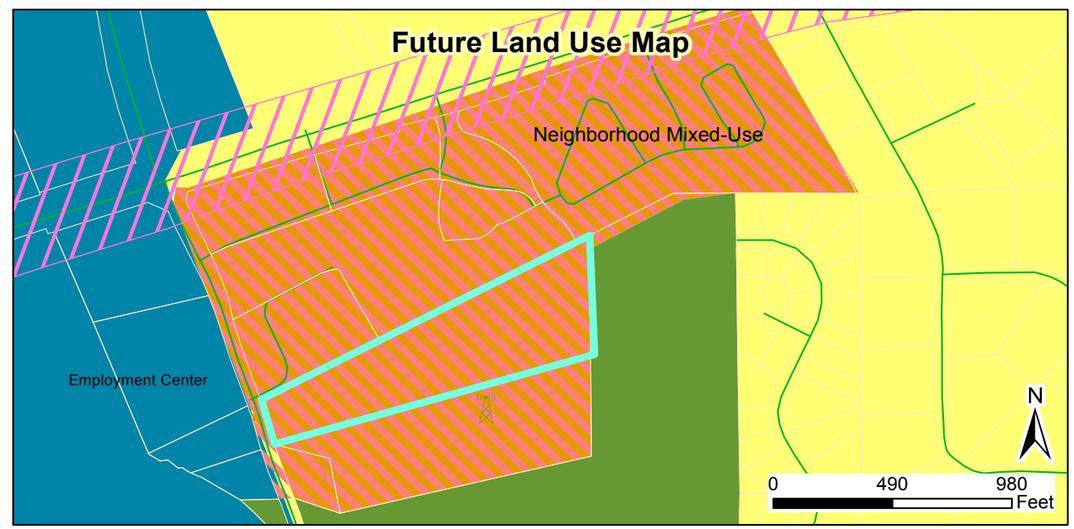
1) Application

2) Staff Report Maps
3) Neighborhood Meeting Materials
4) Survey
5) Associated Proposed Master Plan (informational only)
6) PB Adjacent Property Letter









2020-22-PDD
Shoppes at Glen Laurel Planned Development Rezoning
Request to rezone 10.45 acres from R-E to PD-MU

Applicant: Commercial Properties
Property Owners: Clayton Partners
Tag #: 05I04016E

Staff Report Map

03/26/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\REZONING\Planned Developments\2020\2020-22-PDD- Shoppes at Glen Laurel Ph. 2\Maps\Staff Report Map 2020-22-PDD.mxd

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Site

+/- 10 AC ADDITION

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Rezoning COUNTY TAX 05I040166 Date of Mailing: Jan 30, 2020

Date of Meeting: February 13, 2020 Time of Meeting: 6:30 PM

Location of Meeting: Clayton Center

I hereby attest that letters were mailed to the addresses listed on the Adjacent Property Owners List (attached) ten days prior to the Neighborhood Meeting, and that all required information was presented at the Meeting:

Printed Name: Mark P. Ashness Signature: Mark P. Ashness

Meeting Summary/Minutes: *provide a summary of the discussion held at the meeting, including issues raised and any resolution discussed, and any changes made to the application as a result of the meeting.*

No attendees, No Changes

Please write clearly (or submit a typed summary). Use additional sheets if necessary.

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Shoppes at Glen Laurel

Application: Rezoning to PD-MU

Location/Date: February 13th, 6:30 PM, Clayton Center

	NAME	ADDRESS
1	No attendees	
2		
3		
4		
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20		

CE GROUP
301 GLENWOOD AVENUE, SUITE 220
RALEIGH, NC 27603
Phone: (919) 367-8790
E-Mail: mark@cegroupinc.com

January 30, 2020

Dear Clayton Area Property Owner:

The purpose of this letter is to notify you of an application filed with the Town of Clayton for a land use change or development proposal involving property adjacent to, or in close proximity to, property shown in your ownership by Johnston County tax records. Per Town of Clayton regulations, a Neighborhood Meeting will be held to provide information to area residents about the proposal. A representative of the applicant will be preset to explain their application, answer questions, and solicit comments.

Meeting Date: **February 13, 2020** Meeting Time: **6:30 PM**

Meeting Location: **Clayton Center (Poole Meeting Room) 111 E. 2nd Street, Clayton NC**

Type of Application: **Rezoning**

Project / Proposal property address: **Parcel 05I04016E, Glen Laurel Rd**

Description of project / proposal: **Proposed rezoning from Residential Estate to Planned Development – Mixed Use**

Upcoming public meetings for this Application (Planning Board And / Town Council): **Planning Board February 24, 2020**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A schedule of all upcoming public meeting for the application.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.
4. A map, drawing, or other depiction of the proposed land use change or development proposal.

A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and / or development proposal.

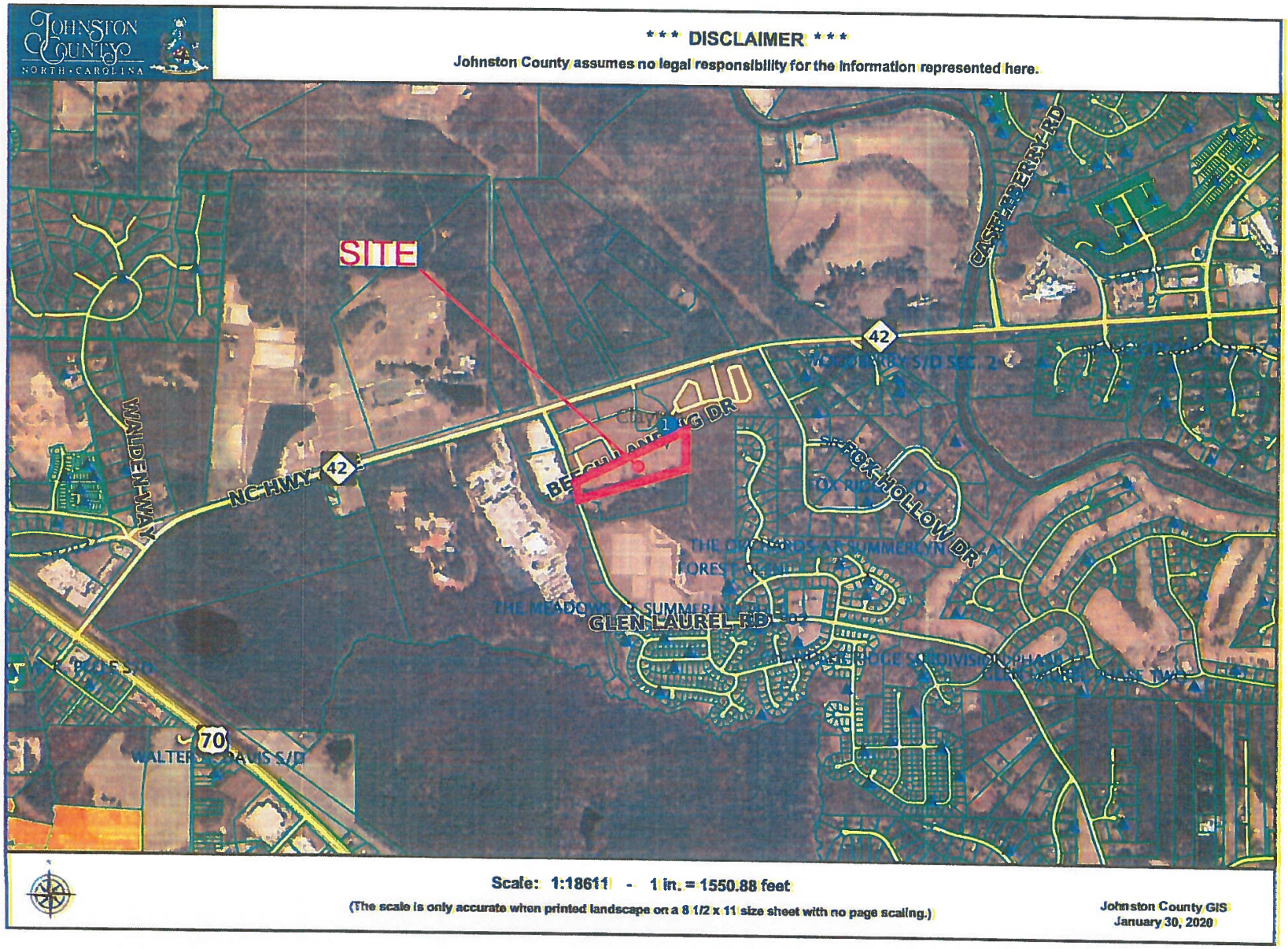
If you have any questions prior to or after this meeting, you may contact us at **919-367-8790 Ex. 101**. You may also contact the Planning Department at **919-553-5002**.

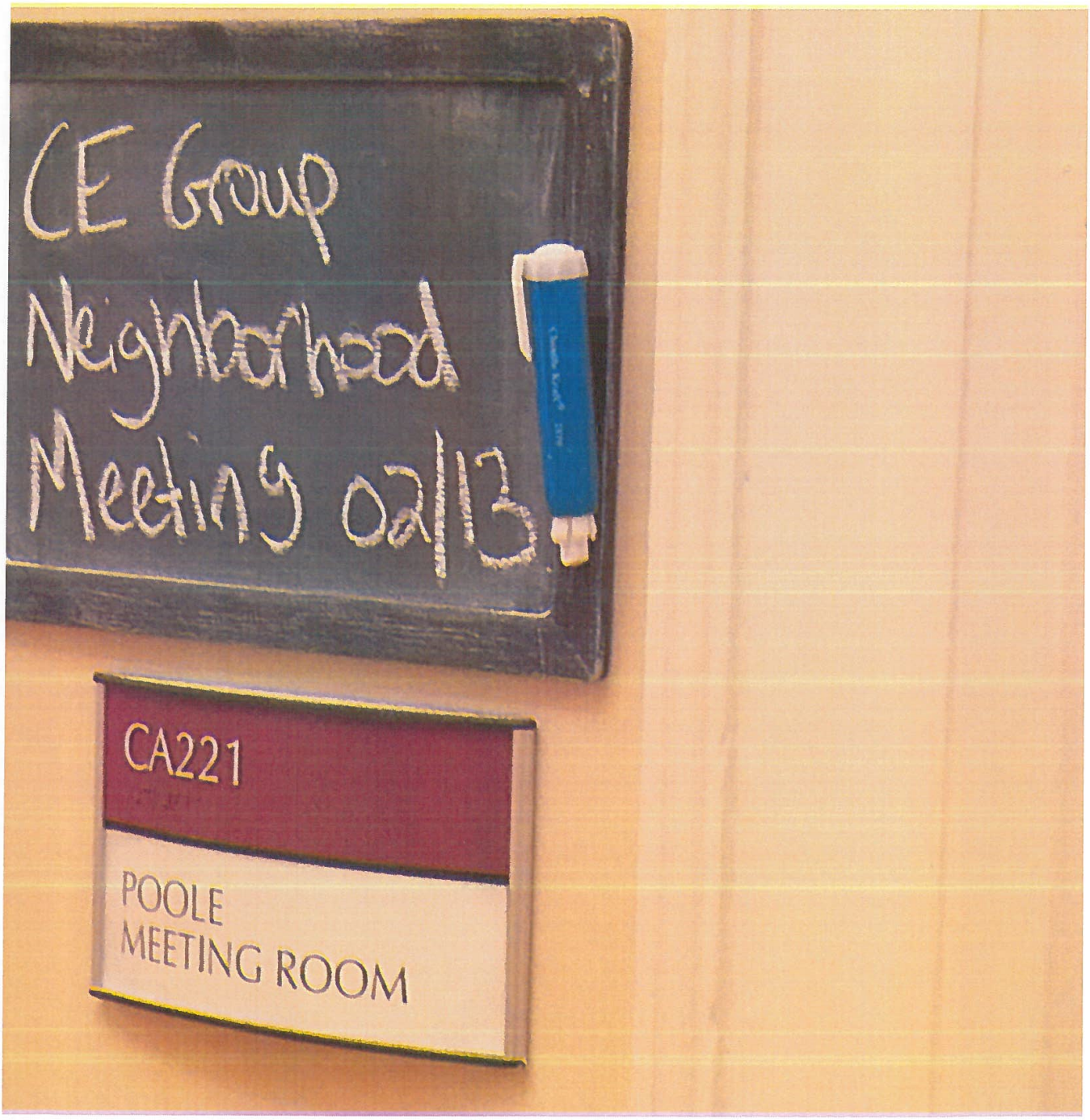
Sincerely,

Mark P. Ashness, PE
CE Group, Inc.

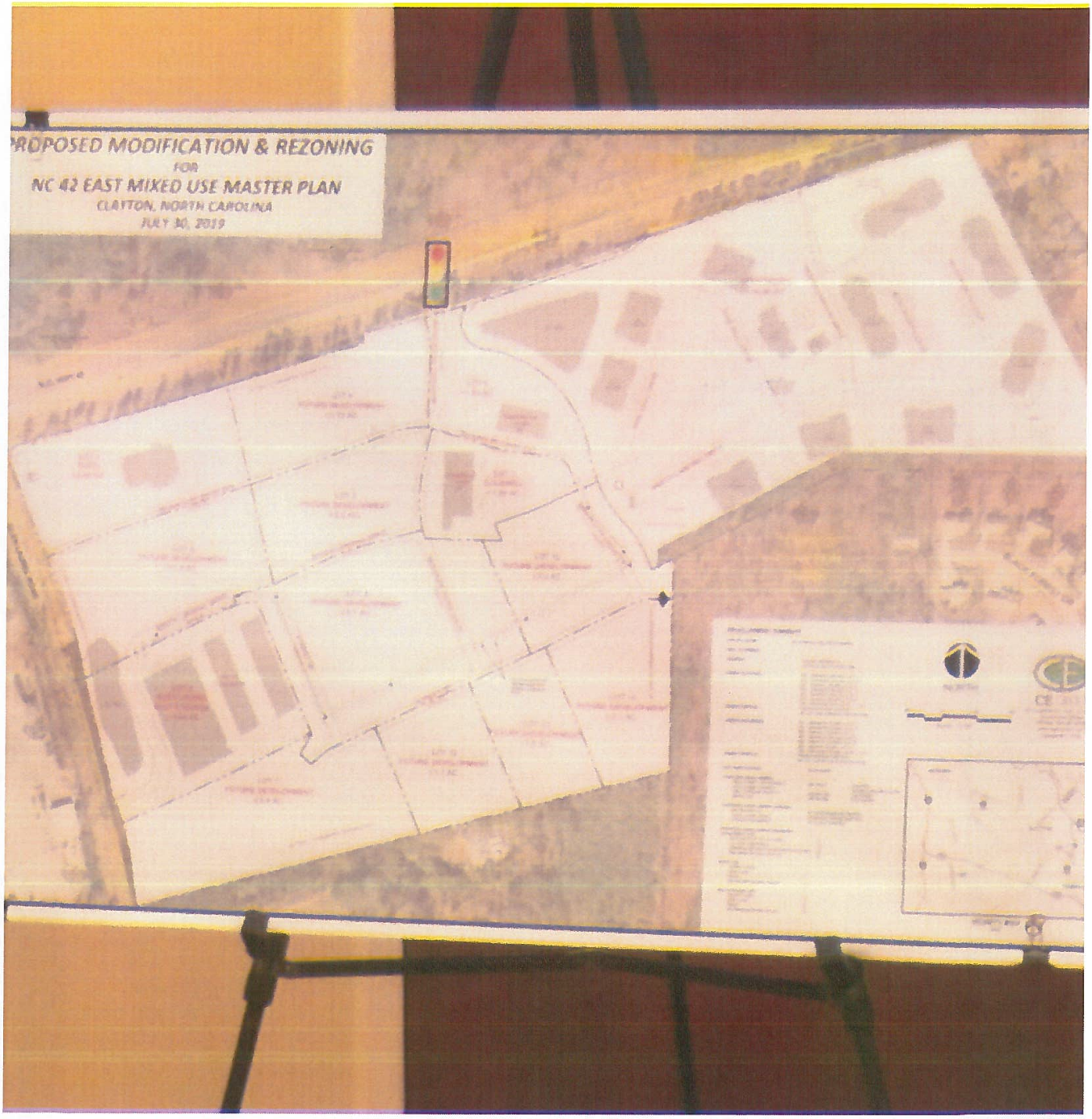
cc: Town of Clayton Planning Department

PROVIDING CIVIL / SITE & INFRASTRUCTURE CONSULTING SERVICES SINCE 1998


JOHNSTON COUNTY
NORTH CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
SITE
NC HWY 42
42
WALDEN WAY
GLEN LAUREL RD
FOX HOLLOW DR
CASTLEBERRY RD
70
Scale: 1:18611 - 1 in. = 1550.88 feet
(The scale is only accurate when printed landscape on a 8 1/2 x 11 size sheet with no page scaling.)
Johnston County GIS
January 30, 2020


CE Group
Neighborhood
Meeting 02/13
CA221
POOLE
MEETING ROOM

GLEN LAUREL
MIXED USE
ADJACENT PROPERTY OWNER EXHIBIT
CLAYTON, NORTH CAROLINA
FEBRUARY 1, 2020


PROPOSED MODIFICATION & REZONING
FOR
NC 42 EAST MIXED USE MASTER PLAN
CLAYTON, NORTH CAROLINA
JULY 30, 2019

NC KEEN LAND LLC COORPORATE
TRUST CENTER
871 CRANES GAP RD
CARLISLE, PA 17013

SANDRA SMITH PROVENZANO
2276 GLEN LAUREL RD
CLAYTON, NC 27527

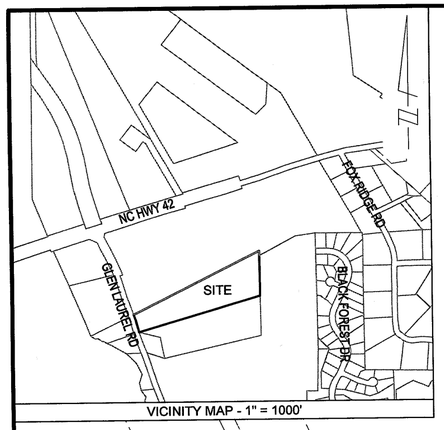
TOWN OF CLAYTON
PO BOX 879
CLAYTON, NC 27528

LWB CLAYTON APARTMENTS LLC
PO BOX 1328
CARY, NC 27512

SHOPPES AT GLEN LAUREL LLC
1004 WAKE FOREST RD
RALEIGH, NC 27604

GLEN LAUREL SELF STORAGE LLC
1004 WAKE FOREST RD
RALEIGH, NC 27604

CLAYTON PARTNERS LLC
1004 WAKE FOREST RD
RALEIGH, NC 27604



LEGEND

EIP = EXISTING IRON PIPE
ECM = EXISTING CONCRETE MONUMENT
R/W = RIGHT-OF-WAY
IPS = IRON PIPE SET
EOP = EDGE OF PAVEMENT
RCP = REINFORCED CONCRETE PIPE
= UTILITY POLE
= FIBER OPTIC MARKER
= GUY WIRE
FO = UNDERGROUND FIBER OPTIC LINE
OHE = OVERHEAD ELECTRICAL
G = UNDERGROUND GAS

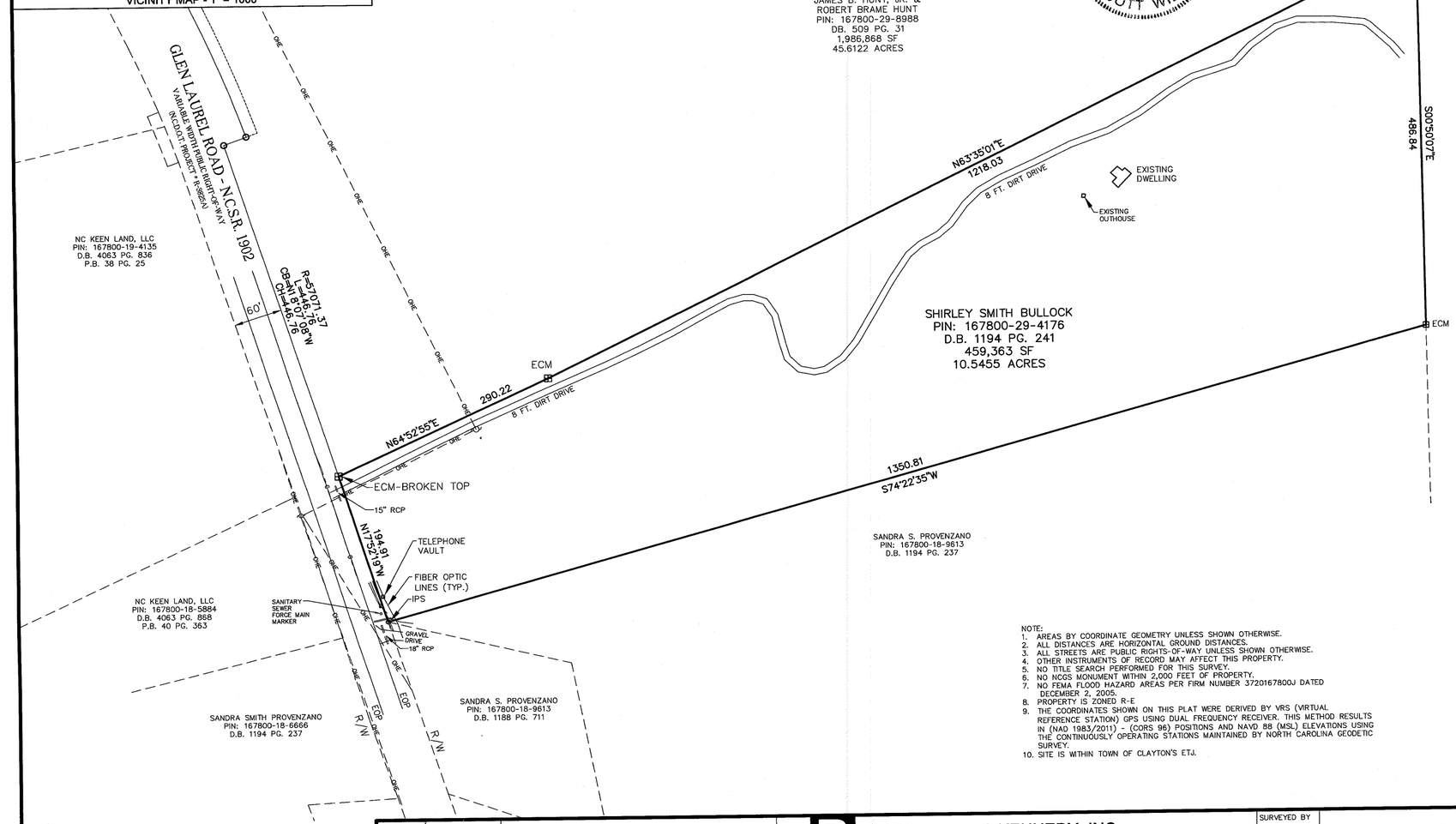
NC GRID (NAD '83/2011)

"I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION USING REFERENCES SHOWN HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK 1194, PAGE 241 OR OTHER REFERENCE SOURCE P.B. 25 PG. 33; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY IS 10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600)."

THIS 18 DAY OF APRIL, 2016.

SEAL _____
PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-2601 LAND SURVEYOR G. SCOTT WILSON



NOTE:
1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBER 3720167800J DATED DECEMBER 2, 2005.
8. PROPERTY IS ZONED R-E
9. THE COORDINATES SHOWN ON THIS PLAT WERE DERIVED BY VRS (VIRTUAL REFERENCE STATION) GPS USING DUAL FREQUENCY RECEIVER. THIS METHOD RESULTS IN (NAO 1983/2011) - (COORS 96) POSITIONS AND NAVD 88 (MSL) ELEVATIONS USING THE CONTINUOUSLY OPERATING STATIONS MAINTAINED BY NORTH CAROLINA GEODETIC SURVEY.
10. SITE IS WITHIN TOWN OF CLAYTON'S ETJ.

REFERENCES:
DB. 509 PG. 31
DB. 1194 PG. 241

OWNER:
SHIRLEY SMITH BULLOCK
5101 RAYNOR ROAD
GARNER, NC 27529

REV.	DATE	DESCRIPTION	BY

BNK

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
- 6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
- TELEPHONE: (919)851-4422 OR (800)354-1879
FAX: (919)851-8968
- CERTIFICATION NUMBERS: NCBELS (C-0110); NCBLA (C-0267)

SURVEYED BY	JM
DRAWN BY	PM
CHECKED BY	SW
DATE	04-14-16

BOUNDARY SURVEY
PROPERTY OF
SHIRLEY SMITH BULLOCK
CLAYTON TWSP JOHNSTON COUNTY NORTH CAROLINA

SHEET 1 OF 1

R:\2014\14262 - 1430 NC Hwy 42\SURVEY\14262LDD\dwg\14262 BULLOCK BOUNDARY PLAT.dwg, 4/18/2016 1:10:17 PM, pat

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

August 5, 2020

NOTICE

SUBJECT:	**Project:**	2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning
		2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan
	Address:	Located off Glen Laurel Road
	TAG #:	05I04016E
	Applicant:	Commercial Properties, Inc.

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Town Council will hold a public hearing and evidentiary hearing on ***Monday, August 17, 2020 at 6:00 PM***, to make a decision on the above referenced Rezoning and Preliminary Plat applications.

The Town Council will hold a Public Hearing to consider the above referenced rezoning request. The applicant is requesting to rezone 10.5 acres of land from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). This property is located off Glen Laurel Road. TAG # 05I04016E. Please see the map on the back of this letter. The Clayton Town Council reserves the right to approve the request as presented or any portion of the request without necessity of withdrawal or modification of the application or additional public hearing on the matter. Likewise, the Town Council may designate approval to the district requested or another district or districts without modification of the request or additional public hearing.

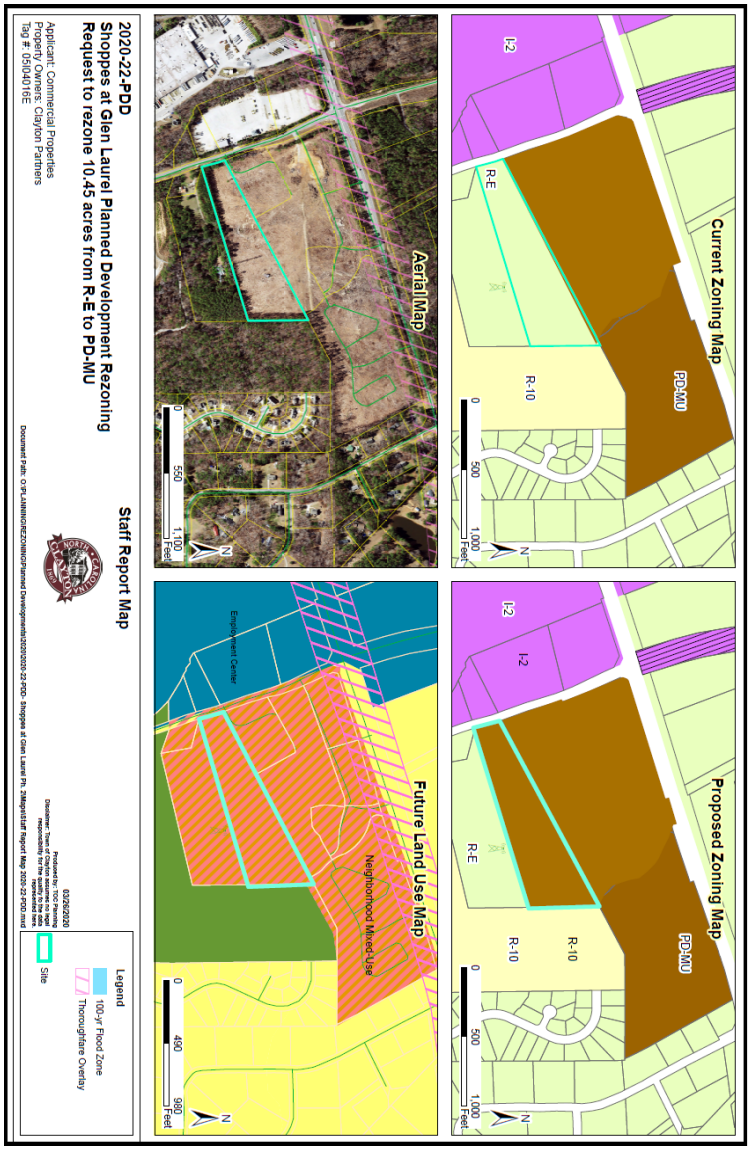
The Town Council will hold an Evidentiary Hearing to consider the above referenced Preliminary Plat (Master Plan) request. The applicant is requesting a major modification to a previously approved master plan for the Shoppes at Glen Laurel Planned Development to add 10.5 acres of land to the master plan, update the mixture of uses proposed, and modify the permitted dimensional standards for each lot within the development. The properties are located off NC HWY 42 E and Glen Laurel Road. TAG #s: 05I04003V, 05I04003W, 05I04003, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E. Please see the map on the back of this letter. During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

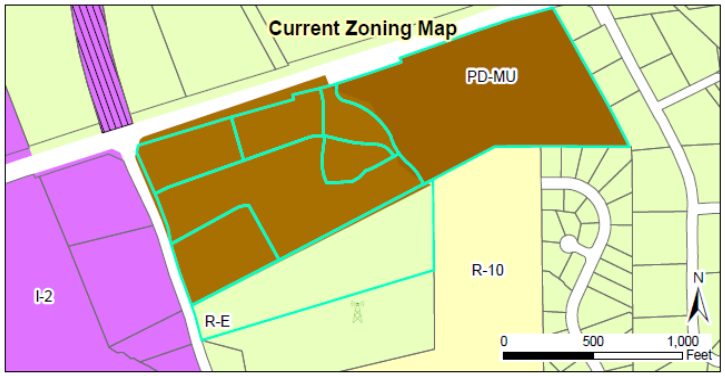
Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this proposed rezoning request. You are invited to join this meeting and express your opinions on this request to the Planning Board.

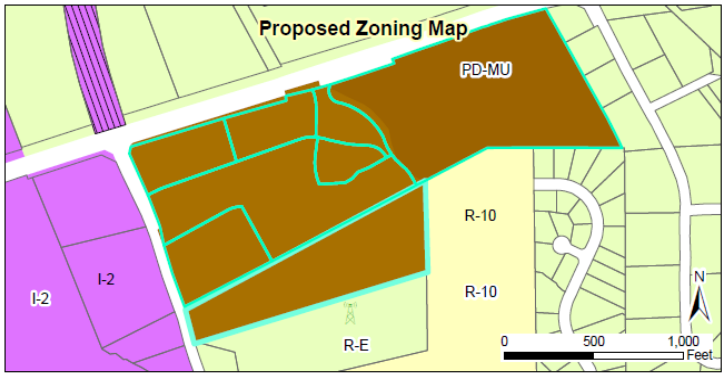
If you should need additional assistance or information, please contact the Planning Department at (919) 553-5002 or email at hhogg@townofclaytonnc.org.

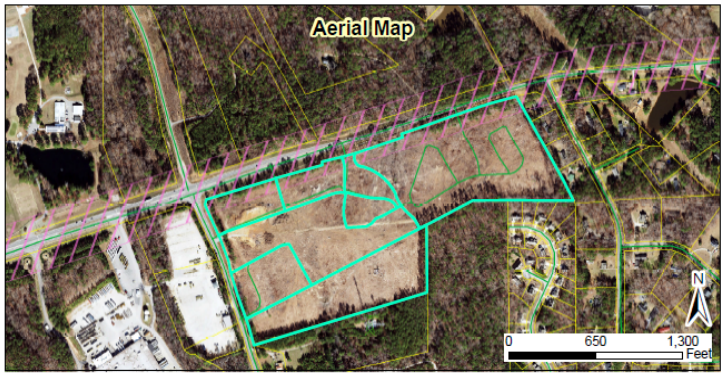
Sincerely,

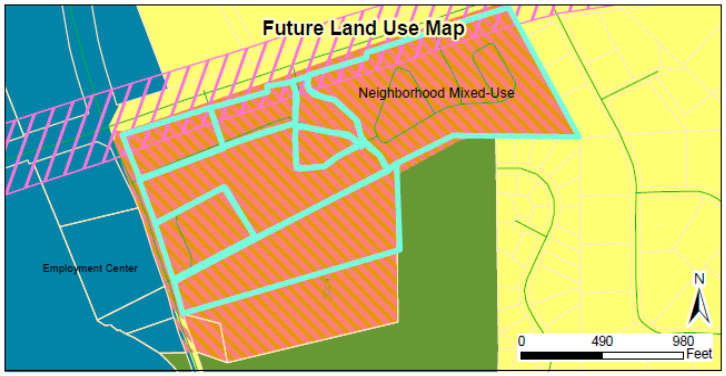
Haley Hogg, ACIP, CZO
Senior Planner











2020-39-SD
Shoppes at Glen Laurel Master Plan Modifiation (acting as a Preliminary Plat)
Request to add10.45 acres to an existing Planned Development Master Plan

Applicant: CE Group
Property Owners: Various owners (see application)
Tag #: 05I04003, 05I04003V, 05I04003W, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E

Staff Report Map

03/26/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2020\2020-39-SD - The Shoppes at Glen Laurel Master Plan Modification\Maps\Staff Report Map 2020-39-SD_.mxd

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Site

PUBLIC NOTICE

In accordance with NC GS 160A-364 the Clayton Town Council will hold a public hearing and evidentiary hearing on Monday, August 17, 2020, at 6 PM at Town Hall, 111 East Second Street, to consider the following requests:

- **2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning; request to rezone 10.5 acres of land from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). The property is located off Glen Laurel Road. TAG #: 05I04016E**
- **2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan Major Modification; request for a major modification to a previously approved master plan to add 10.5 acres of land to an existing Planned Development and modify the uses and standards of the lots within the master plan. The properties are located off Glen Laurel Road and NC HWY 42 E. TAG #: 05I04003V, 05I04003W, 05I04003, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E.**

For the Rezoning the Town Council will hold a public hearing. The Clayton Town Council reserves the right to approve the request as presented or any portion of the request without necessity of withdrawal or modification of the application or additional public hearing on the matter. Likewise, the Town Council may designate approval to the district requested or another district or districts without modification of the request or additional public hearing.

For the Preliminary Plat (Master Plan) the Council will hold an evidentiary hearing. During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

This is an open meeting and the public is invited to attend.

Haley Hogg, Senior Planner
919-553-5002

_____

The Johnstonian Newspaper

Please advertise on the following dates:
Wednesday, August 5, 2020
Wednesday, August 12, 2020

Affidavit of publication required.

TOWN OF CLAYTON

ZONING AMENDMENT

CONSISTENCY AND REASONABLENESS STATEMENT

2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning

The Town Council of the Town of Clayton hereby states:

Section 1: The above referenced zoning amendment IS APPROVED.

Section 2: The above referenced zoning amendment IS CONSISTENT with:

The Town of Clayton's Comprehensive Plan 2040, specifically:

- **Goal LU1:** Preserve Clayton's small-town character while allowing for growth and development in appropriate areas.

The requested rezoning is consistent with the above referenced objectives within the Comprehensive Plan 2040. The Future Land Use Map designates this property as Medium Density Residential/Neighborhood Center. The proposed rezoning would be consistent with this designation as PD-MU designation will allow for a mixture of residential and non-residential development.

Section 3: Based upon information presented at the public hearings and by the applicant, and based upon the recommendations and detailed information developed by staff and the Planning Board contained in the staff report, and considering the criteria applicable sections of the Unified Development Code of the Town of Clayton.

The property is located just south of existing PD-MU zoning that is currently being constructed for mixed use development. Rezoning this property from R-E to PD-MU is consistent with the current development pattern in this location as well as consistent with the Future Land Use Map in the Comprehensive Plan 2040. The above referenced zoning amendment is reasonable and in the public interest.

PPAB 2574608v3

Shoppes at Glen Laurel Planned Development Rezoning
Public Comment Received within 24 hours of May 26th Planning Board Meeting

Kathleen Stefanich

From: Kathleen Stefanich <kathleen.stefanich@gmail.com>
Sent: Wednesday, May 27, 2020 1:38 PM
To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Subject: Shops at glen laurel rezoning proposal

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

I'm contacting you about the proposed rezoning of the shops of glen laurel to reduce shops and add or increase assisted living and apartments. I really hope this doesn't happen! I live in Summerlyn off Glen laurel and have been really looking forward to shops nearby. Right now I have to travel about 25min to Garner or Smithfield for shopping, and with 2 children under 2, that means I just don't go or shop online. Those are long trips for little guys and if they fall asleep in the car, the nap (and my ability to accomplish anything) for the day is ruined. We chose this neighborhood to be able to be near Seymour Johnson while still allowing my husband to maintain split custody of his older boys in Holly Springs. Unfortunately we gave up the conveniences or shops we were near in Cary. Surprisingly the taxes here are comparable to Cary, without near the amenities. However, with the planned growth in the area, we were confident this would make a great place to live, to include the modern conveniences of more shops and restaurants. I love our neighborhood as it reminds me of midwestern friendliness where we all know each other, but the lack of much nearby is a bit isolating. I was secretly hoping an Aldi would go in nearby, and also possibly an ice cream shop so we could send the boys on bikes to get groceries with some money to get a treat for their efforts.

I refused to live in Fuquay-Varina when my husband and I married because all of the growth there is housing without infrastructure and amenities. Lots of traffic just to go to another town to work or shop...

Thank you for taking the time to read my letter.

Kathleen Stefanich
303 Cherry Bark Loop.

Kelly Daugherty

From: Kelly Daugherty <keldaugherty@gmail.com>
Sent: Wednesday, May 27, 2020 1:21 PM
To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Subject: Rezoning Glen Laurel and 42

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please vote to welcome businesses to this area! I understand That there are taxes/fees involved in having businesses there, however, there are schools that are going to need to be built too if there is more housing built there. This is an area that would greatly benefit from having some commercial real estate. Please consider voting to help improve the commercial growth of Clayton!!!--
Kelly
[redacted]

Shannon Peterson

From: spetersen001@nc.rr.com <spetersen001@nc.rr.com>
Sent: Wednesday, May 27, 2020 9:12 AM
To: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Subject: Planning Board Comment

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms Freeman, I am writing to try and understand what is being done on Glenn Lauarel Rd and 42. In asking for a zoning change their is no comment or understanding on what will be on the property if the rezoning is aproved. What is the plan for the site? why do they want to change the plan now? I have a feeling that they want more apartments instead of going with the original plan. IAM TOTALLY AGAINST THAT. We have enough traffic problems now since the Town is allowing people to build anywhere they want. It uses resources (power, water, sewer, etc) The town has allowed sprawling development with out addressing the need of the town - Infrastructure, public safety, green space, school over crowding, etc. Having a planning commission that looks inward versue outward. The Town has destroyed our quiet beautiful town and filled it with nothing but housing sprawl. I don't believe that people are looking 20 years down the road. That property should have never been allowed to put apartments on it in the first place. Apartments do not get you anything except a small payroll tax collection. But it gives is a consumption of resources, more traffic, and crime. The town needs to stop putting the interest of builders in front of the its citizens and start putting the current citizens first. Start working for the people! STOP BUILDING on every piece of land. You have destroyed our town.

R/

Shannon C Petersen

Lieutenant Commander

U.S Navy (Ret.)

USNA Blue & Gold Officer

Area 208

-------- Original message --------
From: "S.C.Petersen" <SPetersen001@nc.rr.com>
Date: 5/27/20 18:10 (GMT-05:00)
To: Haley Hogg <hhogg@townofclaytonnc.org>
Cc: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Subject: RE: Planning Board Comment

So an additional 120 apartments has no impact? Doesn't take a traffic engineer with a civil engineering degree to figure out it is out to lunch. Clayton and Johnston county are ranked around 7th for accidents. Wonder why? It's not rocket science. You keep adding apartments like like it is needed. Again you are not planning because if you were you w6be looking 20years out and see nothing but a train wreck about to happen. Youfolks are very closed minded and do nit look to the future. You are only concerned about the developers and not the citizens.

You will approve the request no matter what anyone says because you don't care about the citizens of clayton. The county commissioners know that the county is 10 years behind in infrastructure and yet you push on. If you caredfor the citizens you would listen. Why bother making comments because this town has because traffic nightmare because of your lack of planning. Just stand out on 70 or see the cars pushing through downtown to try and avoid the traffic. This is nothing more than ramming a project down the citizens throat. And we, the citizens, have to live with it because of your lack of futuristic planning.

R/
Shannon C Petersen
Lieutenant Commander
U.S Navy (Ret.)
USNA Blue & Gold Officer
Area 208

From: S.C.Petersen <SPetersen001@nc.rr.com>
Sent: Wednesday, May 27, 2020 6:12 PM
To: Haley Hogg <hhogg@townofclaytonnc.org>
Cc: Chrissy Freeman <cfreeman@townofclaytonnc.org>
Subject: RE: Planning Board Comment

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

And yes I have planning experience. I am just glad we never developed our war plans like this because we would be in rough shape.

R/
Shannon C Petersen
Lieutenant Commander
U.S Navy (Ret.)
USNA Blue & Gold Officer
Area 208

Public Comment Received June 16, 2020

Robert Hunt

Tue 6/16/2020 1:39 PM

Robert Hunt <rbramehunt@gmail.com>

I am writing in support of the proposed Assisted Living and Skilled Nursing facility proposed on Glen Laurel Road

To Haley Hogg

We removed extra line breaks from this message.

Bing Maps + Get more apps

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

My name is Robert B Hunt, I have lived at 1441 NC 42 E, Clayton 27527 since June, 1980. I just turned 80 years old. While I am very healthy and swim or bike daily, the day may come when I may need a care facility. It would be assuring to me and my family to know there is a quality facility nearby. I have two adult children who live within walking distance of my home (who are also within walking distance of the proposed facility). All our family would like to have such a facility close to us.

We have been pleased with apartments, storage facility and Credit Union which have been built by the Tillman/Brown business so far. We feel they care about our community.

Thank you for the opportunity to voice my feeling to the Town of Clayton.

Sincerely,
Robert B. Hunt

Sent from my iPhone

Sarah Foster

Tue 6/16/2020 1:47 PM

Sarah Foster <sarahhuntfoster@hotmail.com>

In Support of the Rezoning Application made by Tillman/Brown of Commercial Properties, Inc.

To Chrissy Freeman; Haley Hogg

Be Advised: This email originated from outside of the Town of Clayton's network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Chrissy and Haley,

I am writing in support of the application made by Kate Tillman Brown and Brantley Tillman of Commercial Properties, Inc. for rezoning an additional 10 acres to add Senior Living and Assisted Living to their mixed use development on Glen Laurel and Hwy 42 E.

I grew up across the highway (since 1980) and now have moved back to live on the land with my family. My parents still live on the same land and are in their 80s. I think a Senior Living residence would be a good use of the land.

Thank you for allowing me to voice my opinion.

Please let me know if you have any questions.

Sarah Hunt Foster

TOWN OF CLAYTON
PLANNING BOARD WRITTEN RECOMMENDATION
Planned Development Rezoning

2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning

On June 22, 2020 the Planning Board heard the above-referenced request and made the following vote:

Recommendation to the Town Council to

☒ approve the request

☐ deny the request.

Recommendation(s) made this 22nd day of June 2020 while in regular session.

Signed:

Andria Merritt

Andria Merritt, Planning Board Chair

Town of Clayton
Town Council
Zoning Ordinance Amendment Motion Sheet
(Rezoning)

After considering the recommendations of the Planning Board and Planning Director, I move to **[approve OR deny]** **Case # 2020-22-PDD –Shoppes at Glen Laurel Rezoning**

[IF APPROVING]

and to approve the Statement of Consistency and Reasonableness included in the Agenda packet [with the following modifications: STATE MODIFICATIONS, IF ANY]**.**

MOTION FORM
Item 7c
2020-22-PDD
Shoppes at Glen Laurel Planned Development

Ordinance #2020-08-03

AN ORDINANCE AMENDING THE ZONING ORDINANCE AND ZONING MAP OF THE TOWN OF CLAYTON, NORTH CAROLINA

WHEREAS a petition has been filed with the Town Council of the Town of Clayton requesting an amendment to the Zoning Ordinance and Zoning Map of the Town of Clayton to include in the Planned Development Mixed Use (PDMU) zone the property described below, said property formerly being zoned Residential Estate (R-E), and

WHEREAS said property is owned by Clayton Partners, and

WHEREAS the Planning Board of the Town of Clayton has reviewed the proposed change(s) and made a recommendation thereupon; and

WHEREAS notice of a public hearing to consider the proposed change was published in accordance with law in the Johnstonian, a local newspaper, as required by Section 155.702(D) of the Clayton Unified Development Code and by Section 160A-364 of the North Carolina General Statutes; and

WHEREAS a notice of the proposed zoning classification action was mailed to the owner(s) of the parcel(s) of land involved, as shown on the County Tax Listings, and to the owners of all parcels of land abutting that (those) parcel(s) of land and within 100 feet of the subject parcel(s) of land, as shown on the County Tax Listings, by depositing a copy of the same in the United States Mail, first class postage paid, as required by Section 155.702(D) of the Zoning Ordinance of the Town of Clayton and by Section 160A-384 of the General Statutes; and

WHEREAS the said public hearing was actually conducted at 6:00 p.m. on August 17, 2020 wherein a reasonable opportunity was given to all those in attendance to speak either in favor or against the said change or to make relevant comments;

THEREFORE, after duly considering the matter, THE TOWN COUNCIL OF THE TOWN OF CLAYTON DOES HEREBY ORDAIN:

SECTION 1. That the Unified Development Code of the Town of Clayton is hereby amended to include in the Planned Development Mixed Use (PDMU) zone the following described property:

General Description:
Property is located off of Glen Laurel Road, south of existing Shoppes at Glen Laurel Mixed Used Development.

Specific Description:
NC Parcel Identification Number: 05104016E

SECTION 2. That the official Town of Clayton Zoning Map is hereby amended to include in the Planned Development Mixed Use (PDMU)zone the above-described property and will be so marked.

SECTION 3. That if any section, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. That this ordinance shall become effective immediately upon its adoption.

DULY ADOPTED by the Clayton Town Council this 17th day of August, 2020 while in regular session.

_____
Jody McLeod
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Public Hearings

Item Title
2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan

Presenter
Haley Hogg, Senior Planner

Summary/Description
The applicant is requesting preliminary plat (master plan) approval to modify an existing Planned Development Master Plan (15-48-01-PDD) that was approved by Council in 2015, to add 10.5 acres (running alongside this for rezoning to PD-MU as 2020-22-PDD), update the mixture of uses, and modify the proposed dimensional standards. If approved, this plan would replace the existing approval for 15-48-01-PDD master plan development. The properties are located off NC HWY 42 E and Glen Laurel Road. Several of the properties have already been approved and/or constructed under the original master plan. The updated master plan would allow new uses such as daycare, office, retail, and assisted living.

Requested Action
Approval/Denial

Funding Source (If Applicable):
N/A

Cost: **N/A** **Yes** ☐ **No** ☒

Additional Documents to be Included in Agenda Packet

Application
Owner's Consent Form
Staff Report
Staff Report Maps
Neighborhood Meeting Materials
Site Plan
TC Adjacent Property Letter
Newspaper Ad
Full TIA
Updated TIA Addendum
NCDOT Congestion Management TIA Review
Stormwater Management Statement
TRC Certification

Meeting Timeline
August 17, 2020- Town Council (Decision)

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

MAJOR SUBDIVISION PLAN APPLICATION COVER SHEET

Name of Project: The Shoppes at Glen Laurel (Modification) **Date:** 3/2/2020

Applicant Name: Mark Ashness (CE Group Inc)

The following checklist to be completed by applicant:

[X] Pre-Application Meeting on: June 5, 2019

[X] Review fee

[X] Advertisement Fee

[X] Copy of plan sets in PDF on USB (only one USB needed)

11 copies of the following:

[X] Completed Application

[X] Owner's Consent Form

[X] Adjacent Property Owner's List

[N/A] Road Name Application No additional names needed

[N/A] Wastewater Allocation Request Form or verification of Wastewater

[X] Signed/Sealed Traffic Impact Analysis (if applicable)

[X] Neighborhood Meeting Notice Letter (1 copy)

[X] Set of stamped, addressed, empty envelopes for adjacent property owner notification

[N/A] Stormwater Management Statement

11 copies of the plan set which includes the following:

[X] Cover Sheet

[X] Existing Conditions Sheet

[X] Signed & Sealed Boundary Survey

[X] Site Plan Sheet

[N/A] Phasing Plan Sheet

[N/A] Preliminary Engineering Plan Sheet

[N/A] Preliminary Grading Plan Sheet

[N/A] Landscaping Plan Sheet

[N/A] Architectural Elevations Sheet

[N/A] Lighting Plan Sheet

Reviewed by: _____

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

MAJOR SUBDIVISION (PRELIMINARY PLAT) APPLICATION

☐ **New Major Subdivision: $400.00 + $5.00 per lot**
- ☐ **Conventional**
- ☐ **Open Space**
- ☐ **Master Plan**

☒ **Modification to approved plan**
- ☒ **Major: $400.00 + $5.00 per lot modified**
- ☐ **Minor: $200.00 + $5.00 per lot modified**

Modified Plan: 15-48-01 PDD

Advertising Fee: $200.00

SITE INFORMATION

Name of Project: The Shoppes at Glen Laurel (Modification) **Acreage of Property:** 55.75 ac

Tag #: See Attached **NC Pin #:** See Attached

Location: Hwy 42 and Glen Laurel Road

Number of lots (Existing): 7 **(Proposed):** 12 **Min. Lot Size:** 1.0 ac

Zoning District: PDD-MU, R-E **Electric Provider:** Duke-Progress

Wastewater: ☐ *Septic* ☒ *Sewer* **Water:** ☐ *Well* ☒ *Public/Private Water*

Recreation/Open Space Requirement: ☒ *Fee in lieu* ☐ *Land Dedication – acreage:* _____

APPLICANT INFORMATION

Applicant: Mark Ashness, CE Group Inc.
Mailing Address: 301 Glenwood Ave, Suite 220, Rol., NC, 27603
Phone Number: 919 367-8790 x101 **Fax:** _____
Contact Person: Mark Ashness
Email Address: mark@cegrouping.com

OFFICE USE ONLY

Date Received: _____ Amount Paid: _____ File Number: _____

Within Existing PDD-MU

Lot #	Parcel ID (Tag)	PIN
1	05I04003V	167900-30-4169
2	05I04003W	167800-29-3634
3	05I04003	167800-19-9383
4	05I04003X	167800-19-8807
5	05I04003Y	167900-20-3003
6	05I04004	167900-20-7014
7	05I04004A	167800-29-6894

Proposed Addition to PDD-MU

Lot #	Parcel ID (Tag#)	PIN
N/A	05I04016E	167800-29-5295

Lot #	Name & Address
1	LWB Clayton Apartments LLC, PO Box 1328, Cary, NC 27512
2	Shoppes at Glen Laurel, LLC, attn Brantley Tillman, 1004 Wake Forest Road, Ral., NC 27604
3	Glen Laurel Self Storage LLC, 1004 Wake Forest Road, Ral., NC 27604
4	SECU, PO Box 27665, Raleigh, NC 27520
5	Shoppes at Glen Laurel, LLC, attn Brantley Tillman, 1004 Wake Forest Road, Ral., NC 27604
6	Small Shoppes Developers, LLC, PO Box 1328, Cary, NC 27512
7	Goodwill Community Foundation, Inc, 4808 Chin Page Road, Durham, NC 27703-0000
N/A	Clayton Partners LLC, 1004 Wake Forest Road, Ral., NC 27604

PROPERTY OWNER INFORAMTION

Name: See Attached

Mailing Address:

Phone Number: **Fax:**

Email Address:

EXPLANATION OF PROJECT

Please provide detailed information concerning all requests. Attach additional sheets if necessary.

Modification to approved Mixed Use Master Plan.

A new +/- 10.456 AC parcel is being added to the Mixed Use Master Plan, Rezoning and Annexation has been submitted under separate cover

With the additional acreage; +/- 120 apartments will added to the 240 built apartments.

An Assisted Living Facility with +/- 66 Beds and an Independent Living Facility with +/- 77 Units has been added

The GSF of Retail / Mixed Use shrinks from 120,000 GSF to 116,000 GSF (excludes AL and IL Facilities)

FINDINGS OF FACT

Section 155.706(I)(10) of the Unified Development Code requires that certain findings must be made by the Town Council before a Major Subdivision may be approved. Outline below (you may attach additional sheets) how the application addresses each of the following findings:

(1) Consistency with the adopted plans and policies of the Town..

The existing project and the +/- 10.465 AC Parcel (proposed for addition) are both located in a zone designated as " High Density Residential / Neighborhood Center" in the 2040 Plan

(2) The subdivision meets all required specifications of this chapter.

The existing project conforms with all of the Town's standards. The proposed modifications also comply with all Town standards.

(3) The subdivision will not be detrimental to the use or orderly development of other properties in the surrounding area and will not violate the character of existing standards for development of properties in the surrounding area.

The proposed uses are allowed by the Town, the additional lots and improvements achieved with the additional acreage allow for more services which benefit the surrounding communities and existing uses already approved within the project.

(4) The subdivision design will provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, will provide for the unified and orderly use of or extension of public infrastructure, and will not materially endanger the environment, public health, safety, or the general welfare.

Significant off-site roadway improvements have already been made on both NC 42 and Glen Laurel Road to insure orderly distribution of traffic to and from this project and surrounding communities. An updated TIA has been performed based upon the modifications. No additional improvements are warranted based upon the change in project intensity and completed road improvements. The project already has access to existing public water and sewer.

Planned developments must also meet the Master Plan Approval Criteria in Section 155.705(J)

MAJOR SUBDIVISION PLAN CHECKLIST

Pursuant to Article 7, Section 155.706 of the Unified Development Code, applications requesting a public hearing or administrative approval process shall submit a plan set to the Planning Department. These plans may include Master Plan, Site Plan, Subdivision Plan, Regulating Plan, Architectural Elevations, Landscape Plan, Photometric/Lighting Plan, Engineering Plans, and Survey. The plan requirements shall be based on the type of development application or approval process.

PLAN FORMAT

These standards are established to provide information pertaining to the graphic and format presentation of plans. The following is required for all types of plans, except where otherwise noted:

- All plans and architectural elevations shall be limited to 24" x 36" in size, and **folded to an 8.5" x 11" format.**

- Plans are to be drawn at the same engineering scale of 1" = 20'; 30'; 40'; 50'; 60' (architectural elevations and details are exempt from this requirement) with north oriented in the same direction.
- Plans may be drawn at an engineering scale of 1" = 100', if approved by the Planning Department or the Technical Review Committee (TRC).
- Architectural plans and elevations shall be drawn at an architectural scale of 1" = 3/32', 3/16', 1/8', 1/4', or 3/8'.
- All drawings, except elevations, isometric drawings, and renderings, shall be in two dimensional plan views.
- All text shall be clear and legible.
- Line weight hierarchy on all plans shall be consistent with common drafting standards.
- Multiple sheets shall be consecutively numbered (e.g. Sheet 1 of 4).
- All numerical references shall be rounded up to a maximum of two decimal points.

PLAN ELEMENTS AND GRAPHIC DATA (TO BE ON ALL SHEETS)

The following items include general and project information. This information is required to be present on all plan sheets, except where otherwise noted.

Provided		
Yes	**N/A**	
☒		Consultant Logo Box (name, address, phone number, fax, and e-mail, firm and license number)
☒		Project/Application Name
☒		Type of Plan
☒		Signature and Professional Seal with date (landscape plans, architectural elevations, engineering plans, surveys)
☒		Original/Submittal Date and Revision Date
☒		Sheet Number
☒		Vicinity Map
☒		North Arrow with NC Grid System
☒		Graphic Scale (engineering or architectural graphic and written scale)

The following elements are specific to each property and application request, and shall be shown graphically on the specific plan types listed below. These graphics shall be supported by text, labeling, and dimensional information (width, length, and depth).

SURVEY

Provided		
Yes	N/A	
☒		A signed and sealed boundary survey **(not more than a year old unless otherwise approved by the Planning Department)** with the bearings and distances of every property line shown. Distances shall be in feet or meters and decimals thereof. The number of decimal places shall be appropriate to the class of survey required. The survey must include any and all easements of record (referenced by Deed Book and Page) and must be prepared by a surveyor registered in the State of North Carolina.

EXISTING CONDITIONS SHEET

Provided		
Yes	N/A	
☒		The existing topographical conditions of the property with a two foot contour interval showing the location of any natural features such as water courses, wooded areas, steep slopes (above 25%), or other geological features.
☒		The existing streets and roadway improvements (medians, landscaping, signage, driveways, etc.) within 100 feet of project boundary.
☒		The existing structures located on the subject property.
☒		The existing structures within 100 feet of project boundary.
☒		The existing utilities (including inverts of pipes, rim elevations, wells and septic tanks, etc.) within 100 feet of project site.
☒		Label subject parcel and adjacent property acreage, owners, and zoning districts.

PRELIMINARY SITE PLAN

The items listed below are required to be delineated (in a tabular format) on the site plan:

Provided		
Yes	N/A	
☒		Site data table in tabular form
☒		Name of project (AKA names if applicable)
☒		Parcel identification number (and/or Tag number)
☒		Property size (acres and square feet)
☒		Property location (Town limits or ETJ)
☒		Existing zoning district
☒	☐	Proposed zoning district (if applicable)
☒	☐	Overlay (if applicable)

Provided		
Yes	N/A	
☒		Existing use
☒		Proposed use
☐	☒	Number of seats/students/fueling positions (as applicable).
☒	☐	Number of housing units proposed, per housing unit type.
☒	☐	Proposed density (number of units per acre)
☒	☐	Proposed intensity (gross floor area)
☒		Building coverage (as percentage of total site)
☐	☒	Impervious surface area (square feet and as percentage of total site)
☒	☐	Building height (number of stories and in feet)
☐	☒	Required parking (list requirement i.e. 1 space per 300 SF)
☒	☐	Proposed parking
☐	☒	Required/proposed handicap accessible parking
☐	☒	Provide name of Electric Provider.
☐	☒	Provide name of Water Provider.
☐	☒	Provide name of Sewer Provider.
☒	☐	Max building height.

Other site plan elements:

Provided		
Yes	N/A	
☒		Identify adjacent property owners, their parcel ID number, current zoning and present use.
☒	☐	Put a bubble around the affected area for amendments to previously approved projects.
☐	☒	Identify the location of lots, buildings and structures with finished floor elevations and applicable setbacks.
☒		Identify existing and future right of ways.
☒	☐	Identify Watershed Protection Areas.
☒	☐	Identify existing easements by type, and distinguish if public or private.
☒	☐	Identify proposed easements by type, and distinguish if public or private.
☒	☐	Identify Open Space/Common Areas, amenities.
☐	☒	Identify clear sight triangle at project ingress/egress points with dimensions.
☐	☒	Identify main entrance/access driveways, curb and gutter, cross section with ROW. Proposed driveway and setbacks must be shown.

Provided		
Yes	N/A	
☐	☒	Provide boundaries of Resource Conservation Areas (see UDC Section 155.500).
☐	☒	Provide an off-street parking and loading layout (with details, dimensions and access location). Accessible parking requirements are listed in NCSBC Volume 1C, 1999 edition. Show traffic circulation arrows.
☐	☒	Provide queuing details for drive-up/drive-thru facilities (if applicable).
☐	☒	Provide the locations and dimensions of existing and proposed sidewalks and accessible routes.
☒		Provide the location and details of refuse collection areas.
☐	☒	Provide the location, size and orientation of freestanding signs.
☐	☒	Identify proposed phasing (phasing lines) of construction on Phasing Plan sheet.
☐	☒	Cul-de-sacs must be dimensioned and meet Town of Clayton minimum design criteria.
☐	☒	Identify cluster mailbox unit (CBU) locations and details, including parking layout.

CONCEPTUAL ENGINEERING PLANS

Note: Conceptual engineering plans are deemed preliminary in nature. Review and approval of public infrastructure construction plans is a separate process performed by the Engineering Division.

Provided		
Yes	N/A	
☐	☒	Identify proposed streets and roadways (public and private) with dimensions and cross sections.
☐	☒	Identify the curve radii for all internal and external vehicular use areas.
☐	☒	Identify all access points to the project.
☐	☒	Identify existing conditions and proposed grading plans.
☐	☒	Identify Tree Conservation Areas shown on grading plan.
☐	☒	Show proposed flow of traffic.
☐	☒	Identify proposed traffic control signs and striping.
☐	☒	Identify the proposed water distribution system (including size) with location of fire hydrants and point of connection(s).
☐	☒	Identify the proposed sanitary sewer collection system (including size) and point of connection(s). If a municipal sewer connection is not available, please provide documentation from Johnston County Department of Environmental health that the location of septic tank and drain field is acceptable.
☐	☒	Provide preliminary wastewater allocation calculation.

Provided		
Yes	N/A	
☐	☒	Identify proposed grease traps.
☐	☒	Identify backflow prevention devices.
☐	☒	Identify slopes steeper than 2.5:1.
☐	☒	Identify the proposed storm water management system with location of inlets, piping and positive outfall along with typical section and top surface area of storm water retention/detention pond, including soil types, slope, bottom and top elevations, and finish floor elevations.
☐	☒	Provide a Stormwater Management Statement.
☐	☒	Floodplain development permit required for this parcel – see Engineering Dept.

FIRE PLAN

Fire Rescue (information to be shown on conceptual engineering plans)

Provided		
Yes	N/A	
☐	☒	Identify fire hydrant distribution (distance of hose lay).
☐	☒	Identify the sprinkler connection locations and size.
☐	☒	Identify fire lane designations and circulation around buildings (stripe fire lanes and show minimum stabilized access around all structures).
☐	☒	Identify the emergency evacuation route (access in and out of the property).
☐	☒	Identify fire apparatus turning radius.
☐	☒	Verify the location of fire hydrants is not interfering with required landscaping (must be 24" clearance of landscaping from bottom of steam fitting).
☐	☒	Identify the Lock Box/Knox Box locations.
☐	☒	Identify placard locations for hazardous materials.

PHASING PLAN

Provided		
Yes	N/A	
☐	☒	Provide a Phasing plan showing all proposed phases and phase titles, in different colors.

LANDSCAPE PLAN

Provided		
Yes	N/A	
☐	X	Provide a landscape plan identifying the location of all proposed landscaping (must be prepared by a landscape architect registered in North Carolina).
☐	X	Indicate the location, width and type of all required buffers.
☐	X	Indicate the location, width and type of landscaping within vehicular use areas.
☐	X	Indicate the location, width and type of landscaping used to screen drive-thru areas, service areas, loading areas, mechanical equipment and above ground utilities.
☐	X	Provide a plant list summary table which includes: 1. A planting key identifying the various planting elements 2. The quantity of each type of plant material proposed 3. The size, height, caliper and spacing of plant material proposed 4. The Botanical and common names of plant material proposed
☐	X	Verify/identify clear sight distances and safe-sight-triangles at project ingress/egress points.
☐	X	Provide an irrigation note to read as follows: "All landscaped areas shall be provided with an automatically operated irrigation system that will adequately cover all living plant material, such system shall include a rain sensor." (If irrigation will not be utilized, drought-tolerant species must be used).
☐	X	Provide a landscape maintenance note which states: "All landscaped areas shall be maintained in an attractive and healthy condition. Dead or diseased plantings shall be removed and replaced in a timely fashion".
☐	X	Identify and list any existing plant material which will be used to satisfy landscape requirements.

LIGHTING PLAN

Provided		
Yes	N/A	
☐	☒	Conceptual Lighting Plan - any common lighting should not spill over to other properties.
☐	☒	Identify the light source and provide a detail of the fixture.
☐	X	Identify the proposed height of fixtures.

ARCHITECTURAL ELEVATIONS AND FLOORPLAN

Provided		
Yes	**N/A**	
☐	X	Provide floor plans, elevations, construction materials, finishes and colors, along with type of construction of all buildings per North Carolina Building Code prepared by a professional architect registered in North Carolina. This should be provided in color.
☐	X	Indicate the height and number of stories for each structure.
☐	X	Indicate the location and screening method for all roof mounted structures or equipment.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town Council of the Town of Clayton to approve the subject Major Subdivision. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

Mark Ashness — *Print Name*

Signature of Applicant

3/2/20 — *Date*

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: The Pines at Glen ~~Walkel Phase 2~~ **Address or PIN #:** 167800-29-5295

AGENT/APPLICANT INFORMATION:

(Name - type, print clearly) Clayton Partners LLC

(Address) 1004 Wake Forest Road

(City, State, Zip) Raleigh, NC, 27604-1358

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (*list applicable requests*): Commercial Properties Inc. Major Subdivision Rezoning Wastewater Allocation Request

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

(Name - type, print clearly) Frank Floyd Clayton Partners LLC

(Owner's Signature)

(Address) 1004 Wake Forest Rd.

(City, State, Zip) Raleigh, NC 27604-1358

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Jaimie L. Cope, a Notary Public for the above State and County, this the 31 day of January, 2020.

SEAL

JAIMIE L. COPE
Notary Public
Wake County
My Commission Expires
6/16/2023
NORTH CAROLINA

Jaimie L. Cope
Notary Public

My Commission Expires: 6/16/2023

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167900-30-4169

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

LWB Clayton Apartments, LLC
(Name - type, print clearly)

F. Jay Adkins
(Owner's Signature)

P.O. Box 1328
(Address)

Cary, NC, 27512-1328
(City, State, Zip)

STATE OF NC
COUNTY OF Wake

Sworn and subscribed before me Ingrith Serrato, a Notary Public for the above State and County, this the 26th day of March, 20 20.

SEAL

INGRITH SERRATO
Notary Public, North Carolina
Wake County
My Commission Expires
February 25, 2024

Notary Public Ingrith S

My Commission Expires: 02-25-2024

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167800-29-3634

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

Shoppes at Glen Laurel, LLC
(Name - type, print clearly)

1004 Wake Forest Rd
(Address)

Eric V Rl
(Owner's Signature)

Raleigh, NC, 27603-1358
(City, State, Zip)

STATE OF NC
COUNTY OF Wake

Sworn and subscribed before me Ingrith Serrato, a Notary Public for the above State and County, this the 26th day of March, 20 20.

SEAL

INGRITH SERRATO
Notary Public, North Carolina
Wake County
My Commission Expires
February 25, 2024

Notary Public Ingrith S

My Commission Expires: 02-25-2024

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167800-19-9383

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

Glen Laurel Self Storage, LLC
(Name - type, print clearly)

324 Greenville Ave
(Address)

member manager
(Owner's Signature)

Wilmington, NC, 28403-3514
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Angela Harris, a Notary Public for the above State and County, this the 26 day of April, 20 20.

SEAL

ANGELA HARRIS NOTARY PUBLIC WAKE COUNTY, NC

Notary Public

My Commission Expires: 11/14/2022

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167800-19-8807

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

State Employees Credit Union
(Name - type, print clearly)

P.O. Box 27665
(Address)

(Owner's Signature)

Raleigh, NC, 27611-7665
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me M. Virginia Lee, a Notary Public for the above State and County, this the 26th day of March, 2020.

SEAL

M. Virginia Lee
Notary Public

My Commission Expires: November 20th, 2021

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167900-20-3003

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Major Subdivision
Wastewater Allocation Request

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

Shoppes at Glen Laurel, LLC
(Name - type, print clearly)

1004 Wake Forest Rd
(Address)

Raleigh, NC, 27603-1358
(City, State, Zip)

(Owner's Signature)

STATE OF NC
COUNTY OF Wake

Sworn and subscribed before me Ingrith Serrato, a Notary Public for the above State and County, this the 26th day of March, 2020.

SEAL

INGRITH SERRATO
Notary Public, North Carolina
Wake County
My Commission Expires
February 25, 2024

Notary Public

My Commission Expires: 02-25-2024

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167900-20-7014

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

Small Shoppes Developers, LLC
(Name - type, print clearly)

P.O. Box 1328
(Address)

(Owner's Signature)

Cary, NC, 27512-1328
(City, State, Zip)

STATE OF NC
COUNTY OF Wake

Sworn and subscribed before me Ingrith Serrato, a Notary Public for the above State and County, this the 26th day of March, 20 20.

SEAL

Notary Public

My Commission Expires: 02-25-2024

INGRITH SERRATO
Notary Public, North Carolina
Wake County
My Commission Expires
February 25, 2024

July 2018

TOWN OF CLAYTON
Planning Department
111 E. Second St., P.O. Box 879
Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

OWNER'S CONSENT FORM

Consent is required from the property owner(s) if an agent will act on their behalf. A separate form is required from each owner. Consent is valid for one year from date of notary, unless otherwise specified. All fields must be completed.

Project Name: Shoppes at Glen Laurel **Address or PIN #:** 167800-29-6894

AGENT/APPLICANT INFORMATION:

Mark P. Ashness, CE Group, Inc.
(Name - type, print clearly)

301 Glenwood Ave, Suite 220
(Address)
Raleigh, NC, 27603
(City, State, Zip)

I hereby give **CONSENT** to the above referenced agent/applicant to act on my behalf, to submit applications and all required materials and documents, and to attend and represent me at all meetings and public hearings pertaining to the following processes (***list applicable requests***):

Rezoning
Wastewater Allocation Request
Major Subdivision

Furthermore, I hereby give consent to the party designated above to agree to all terms and conditions which may arise as part of the approval of this application.

I hereby certify that I have authority to execute this consent form as/on behalf of the property owner. I understand that any false, inaccurate or incomplete information provided by me or my agent will result in the denial, revocation or administrative withdrawal of this application, request, approval or permits. I further agree to all terms and conditions which may be imposed as part of the approval of this application.

OWNER AUTHORIZATION:

Goodwill Community Foundation, Inc.
(Name - type, print clearly)
Goodwill Community Foundation, Inc.
By
(Owner's Signature)

4808 Chin Page Road
(Address)
Durham, NC, 27703-0000
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Angela Harris, a Notary Public for the above State and County, this the 26 day of April, 20 20.

SEAL

ANGELA HARRIS NOTARY PUBLIC WAKE COUNTY, NC

Notary Public

My Commission Expires: 11/14/2022

July 2018

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002

Town Council
August 17, 2020

STAFF REPORT

Application Number: 2020-39-SD
Project Name: Shoppes at Glen Laurel Preliminary Plat (Master Plan Modification)

Tag #: 05I04003V, 05I04003W, 05I04003, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E
Location: Corner of NC HWY 42 E and Glen Laurel Road
Overlay: Thoroughfare Overlay District & Watershed Protection Overlay
Applicant: CE Group Inc.
Owner: Several Property Owners (see application)
Project Planner: Haley Hogg, Senior Planner

Public Noticing Dates:
- **Neighborhood Meeting: March 19, 2020**
- **Sign Posted: August 7, 2020**
- **Newspaper Ad Published: August 5, 2020 and August 12, 2020**
- **Letters Mailed: August 6, 2020**

REQUEST: Modification to existing Master Plan (replaces 15-48-01-PDD master plan) to add an additional 10.5 acres of land and modify the proposed uses and arrangement of uses within the development.

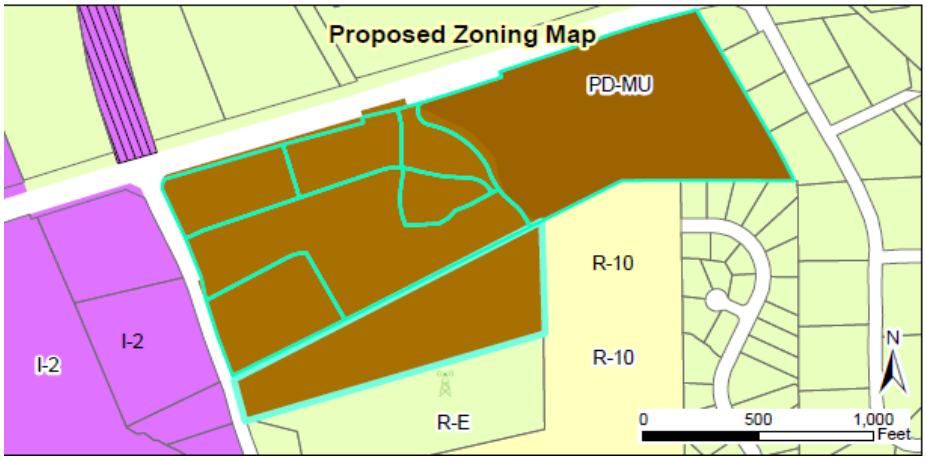
SITE DATA:

Acreage: 55.75 acres (including 10.5 additional acres)

Existing Use: Multi-Family, Financial Institution, Self-Storage Facility, Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-Estate (R-E)	Vacant
South	Residential-Estate (R-E) and Residential-10 (R-10)	Single-family residential; Town Park
East	Residential-Estate (R-E)	Single-family residential
West	Industrial-Heavy (I-1)	Caterpillar



DEVELOPMENT DATA:

Proposed Uses: Multi-Family, Assisted Living Facility, Daycare, Commercial, Office, Retail

Unit Count: 240 existing apartment units; proposed: 126 additional apartment units, 66 assisted living units, and 80 independent living units = 512 residential units total (includes existing)

Density: 15 units/acre (overall development)

Impervious Surface: Proposing 60% of overall master development; proposing maximum 80% per lot

Required Parking: Varies by individual Phase & Use; will be required to meet UDC requirements for parking when reviewed for individual site plans by phase/lot

Access/Streets: 5 existing access points; 3 off NC HWY 42 E and 2 off Glen Laurel Road

STAFF ANALYSIS AND COMMENTARY:

Overview

The applicant is requesting preliminary plat (master plan) approval to modify an existing master plan development. The applicant is proposing to add 10.5 acres of land as well as modify the proposed uses and dimensional standards throughout the development. The original master plan was approved in 2015 as an

attachment to rezoning 15-48-01-PDD. This new master plan application is running concurrently with rezoning request 2020-22-PDD to rezone the additional 10.5 acres from R-E to PD-MU. An annexation application is also running concurrently with this application to annex the additional land into the Town Limits so that it can receive Town services.

The original master plan was a bubble plan that outlined three different use types: multi-family apartments, self-storage facility, and commercial. The proposed new master plan includes a mixture of multi-family apartments, commercial/retail/office/restaurant, day care, independent living, assisted living, self-storage facility, and financial institution uses. Overall, it is more detailed than the original plan approved in 2015. The proposed plan updates the dimensional standards for each lot and adds an additional 10.5 acres of land. This master plan also proposes the ultimate subdivision of the development into individual lots.

Phases 1, 3, 4, 6, and 7 of the master plan have already been approved for development via Major Site Plans in accordance with the original master plan. Some of these lots are already constructed or construction has begun. The existing development has a total of 240 apartment units within Phase 1. The applicant is proposing to add 126 additional apartment units as well as 66 assisted living units and 80 independent living units. The overall density of the master plan, with the new land included, is 15 units/acre.

Each individual phase of the development will be required to obtain Site Plan approval in accordance with the requirements of the UDC, so that the Town can review the proposed layouts of each phase and ensure compliance with the standards set on the master plan. This is recommended as a condition of approval.

Landscaping and Buffering
The applicant has provided Class "C" landscape buffers around the perimeter of the site, as required by the Unified Development Code. The buffer is already installed in full for the existing apartment site (Ph. 1). Each individual phase will be reviewed for compliance with the UDC landscaping requirements at the time of Site Plan review.

Environmental
The applicant is proposing detention ponds throughout the development. The property is located within the Watershed Protection Overlay, which typically limits the amount of impervious surface coverage for developments. However, due to the utilization of on-site stormwater mitigation the development does not require a Special Intensity Allocation (SIA) from Town Council. The overall development is proposed to be 60% impervious surface coverage in total, not to exceed 70% per the master plan. Each site plan will be reviewed by the Town's Engineering department, which includes a stormwater component.

Multi-Modal Access
Greenway will be provided along Glen Laurel Road and along the frontage on NC HWY 42 E, as outlined in the original master plan and conditions of approval. Conditions of approval related to the greenway on the original master plan are proposed to be carried over on to any approvals of the proposed master plan/preliminary plat (see conditions of approval). Sidewalks will be required internally throughout the development during site plan review to ensure pedestrian connectivity between the lots and various uses.

Access/Streets
There are 5 access points to the mixed use development. Three of these are located off NC HWY 42 E and two are located off Glen Laurel Road. The northern most access point off Glen Laurel Road is already installed as a right-in/right-out only. The southern access point off Glen Laurel Road is installed as well and is a full access connecting into the self-storage facility.

The eastern and western most access points off NC HWY 42 E are right-in/right-outs only and are currently installed. The center access off NC HWY 42 E is a full signalized access point; this signal has been installed and is operational.

Traffic Impact Analysis
A Traffic Impact Analysis was performed in 2015 for this development's original master plan. An updated TIA has been submitted based on the proposed mixture of uses. The original trip generation per weekday was anticipated to be 11,733 trips. The new master plan is anticipated to decrease the number of trips per day, to 10,010 total trips.

NCDOT has reviewed the proposed modifications and trip generation, and they determined that no additional roadway improvements would be required for the proposed master plan. All traffic improvements required as a part of the original study in 2015 have been installed or are underway currently with the widening of NC HWY 42 E.

Trash Collection
Each individual phase will include trash collection and will be required to meet the UDC requirements for screening and placement.

Wastewater Allocation
The original master plan approval was granted wastewater allocation for 79,440 GPD. The applicant has submitted a new wastewater allocation request for an additional 69,015 GPD as a part of this master plan. This request has been included as an attachment to this staff report. The Town's Engineering department has reviewed the request and has completed a scoring sheet for the development, which is also included as an attachment to this staff report. If the master plan is approved, the Engineering department will present the allocation request and their findings to the Council. The Council will then make a separate motion regarding the wastewater allocation.

Consistency with Adopted Plans:

- **Comprehensive Plan 2040**
  The Comprehensive Plan's Future Land Use Map designates these properties as a Medium Density Residential/Neighborhood Center ("Neighborhood Mixed Use"). The proposed master plan is consistent with this designation as it provides a mixture of uses including residential but also neighborhood serving commercial uses.

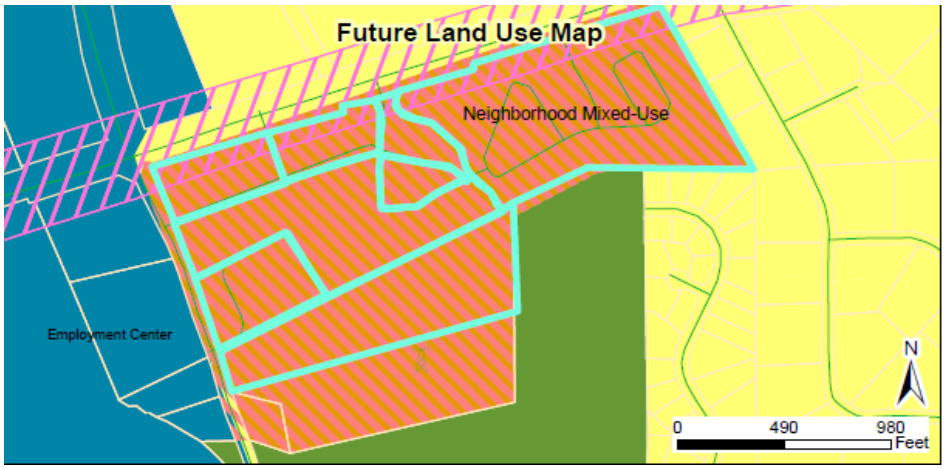
Comprehensive Plan Goals supporting the master plan request include:

- **Goal LU1:** Preserve Clayton's small-town character while allowing for growth and development in appropriate areas.

Comprehensive Plan Goals <u>not</u> supporting the master plan request include:

- None.

- **Unified Development Code**
  The proposed master plan has been reviewed by the Technical Review Committee (TRC) and is determined to meet requirements of the UDC. Individual phases will be subject to the requirements of the UDC as well.



CONSIDERATIONS

- The Town Council shall make final decisions regarding Preliminary Plats (Master Plans).
- Preliminary Plats shall address specific Findings of Fact. The burden of proof is on the applicant. These Findings all must be met for a Preliminary Plat to be approved.
- Staff does not make recommendations on Quasi-Judicial applications in regards to approval/denial.

FINDINGS OF FACT:

1. ***Consistency with the adopted plans and policies of the Town.***

- **Applicant Response:**

  The existing project and the +/- 10.465 AC Parcel (proposed for addition) are both located in a zone designated as " High Density Residential / Neighborhood Center" in the 2040 Plan

- **Staff Commentary:** The property is designated as "High Density Residential" and "Neighborhood Center" in the Comp Plan 2040's Future Land Use Map. The proposed master plan incorporates a mixture of residential and non-residential uses.

2. ***The subdivisions meets all required specifications of the Unified Development Code.***

- **Applicant Response:**

  The existing project conforms with all of the Town's standards. The proposed modifications also comply with all Town standards.

- **Staff Commentary:** The proposed master plan adheres to the minimum requirements of the Unified Development Code for a master plan including open space requirements, list of permitted uses, and dimensional standards.

3. ***The subdivision will not be detrimental to the use or orderly development of other properties in the surrounding area and will not violate the character of existing standards for development of properties in the surrounding area.***

- **Applicant Response:**

  The proposed uses are allowed by the Town, the additional lots and improvements achieved with the additional acreage allow for more services which benefit the surrounding communities and existing uses already approved within the project.

- **Staff Commentary:** The proposed uses are uses that are permitted within the Town. The applicant is proposing these uses be permitted outright in the PD-MU district for these parcels. The development has provided required traffic improvements outlined in the TIA and required by NCDOT.

4. ***That the subdivision design will provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, will provide for the unified and orderly use of or extension of public infrastructure, and will not materially endanger the environment, public health, safety, or the general welfare.***

- **Applicant Response:**

  Significant off-site roadway improvements have already been made on both NC 42 and Glen Laurel Road to insure orderly distribution of traffic to and from this project and surrounding communities. An updated TIA has been performed based upon the modifications. No additional improvements are warranted based upon the change in project intensity and completed road improvements. The project already has access to existing public water and sewer.

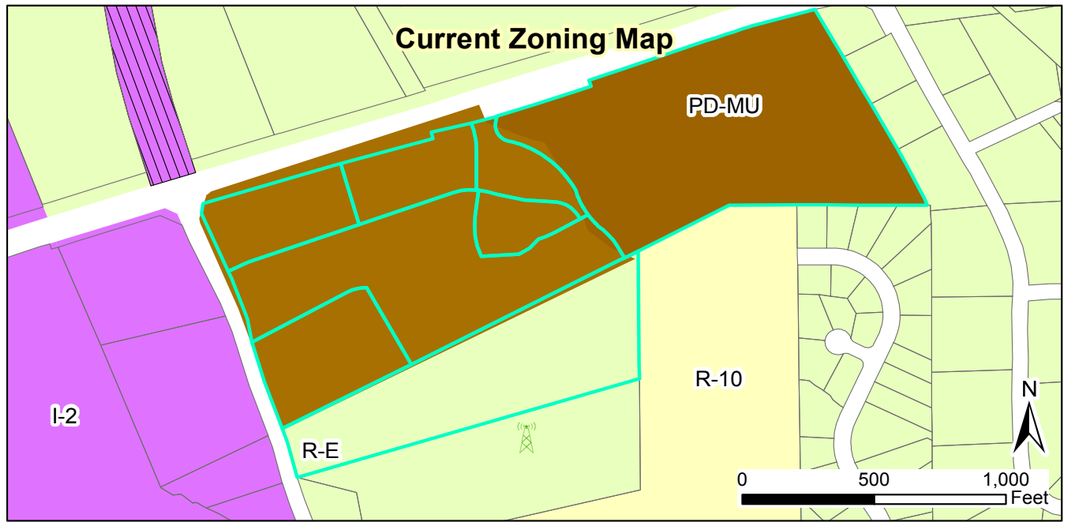
- **Staff Commentary:** Off-site roadway improvements have been installed as required in the original master plan for the development. An updated TIA was provided and no additional traffic improvements were required by NCDOT.

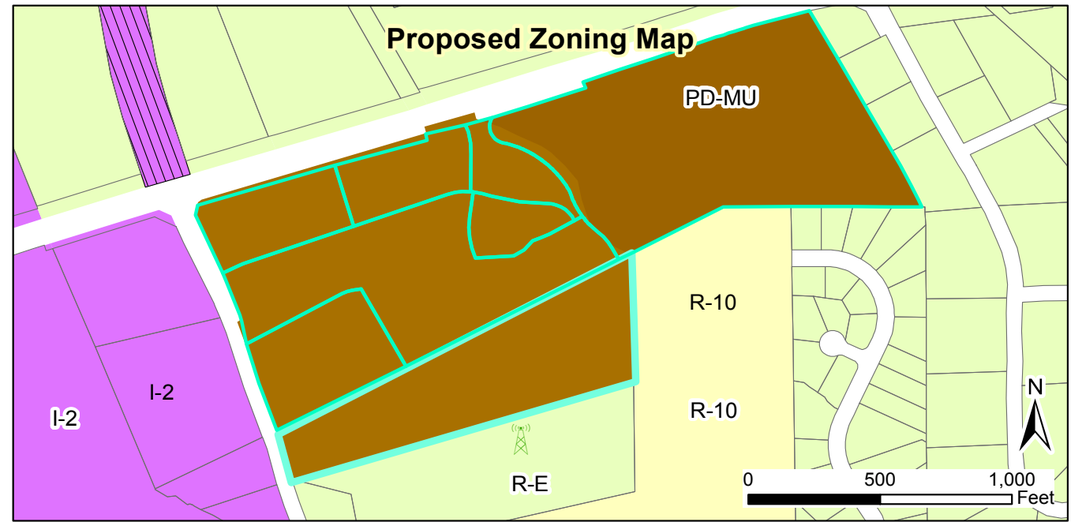
RECOMMENDED CONDITIONS OF APPROVAL:

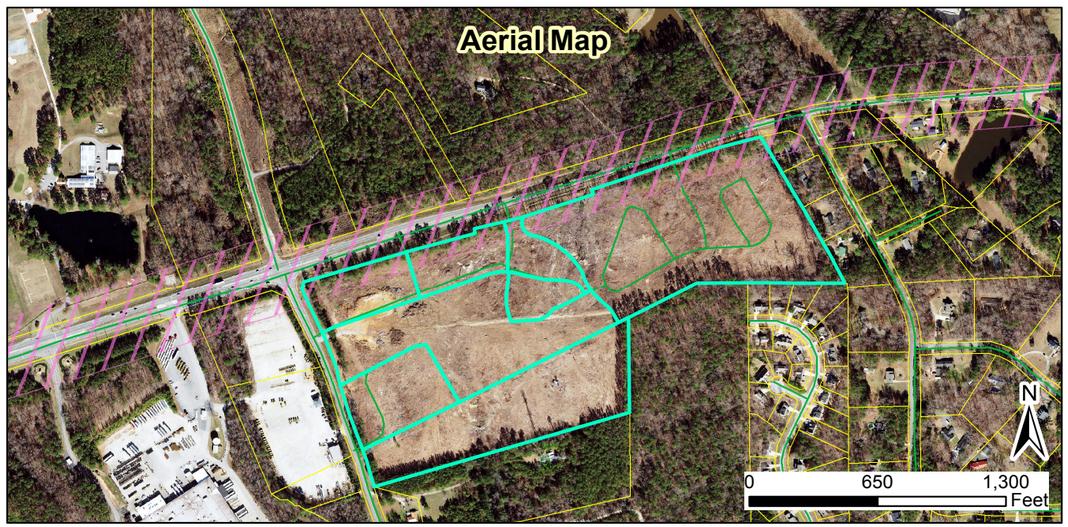
If approved, staff is recommending conditions of approval be placed upon the application. These conditions are outlined in an attachment to the staff report. The applicant has reviewed the attachment and is in agreement with the conditions proposed by staff.

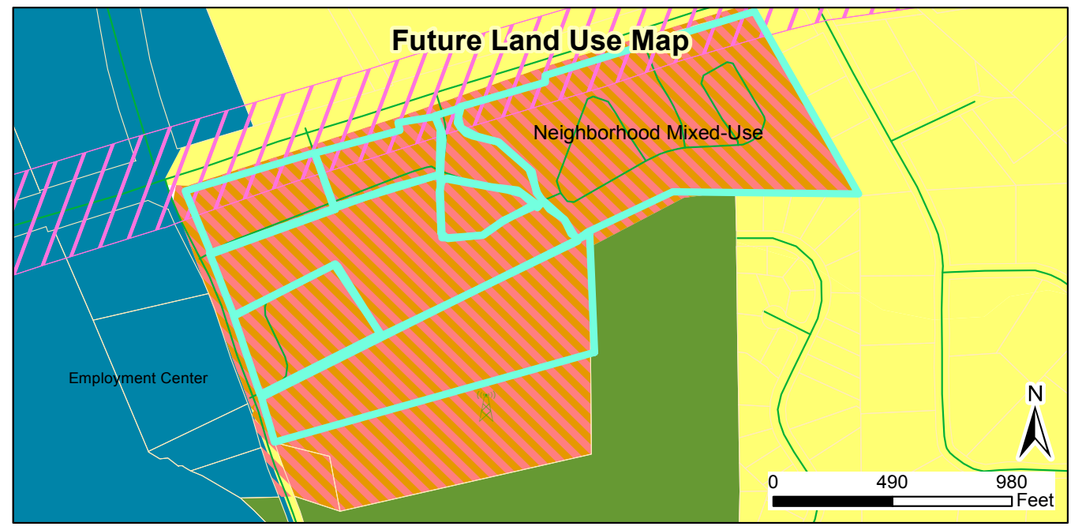
ATTACHMENTS:

1) Application
2) Staff Report Maps
3) Neighborhood Meeting Materials
4) Site Plan
5) Recommended Conditions of Approval – Applicant Signed
6) TC Adjacent Property Letter
7) Newspaper Ad
8) Updated Trip Generation Letter
9) Wastewater Allocation Request
10) Wastewater Allocation Request- Scoring Sheet









2020-39-SD
Shoppes at Glen Laurel Master Plan Modifiation (acting as a Preliminary Plat)
Request to add10.45 acres to an existing Planned Development Master Plan
Applicant: CE Group
Property Owners: Various owners (see application)
Tag #: 05I04003, 05I04003V, 05I04003W, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E

Staff Report Map

03/26/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Site

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2020\2020-39-SD - The Shoppes at Glen Laurel Master Plan Modification\Maps\Staff Report Map 2020-39-SD..mxd

MAJOR SUB MOD.

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Shoppes at Glen Laurel Major Subdivision Modification Date of Mailing: February 28, 2020

Date of Meeting: March 19, 2020 Time of Meeting: 6:30 PM

Location of Meeting: outside main entrance to Clayton Center

I hereby attest that letters were mailed to the addresses listed on the Adjacent Property Owners List (attached) ten days prior to the Neighborhood Meeting, and that all required information was presented at the Meeting:

Printed Name: Mark P. Ashness Signature: MARK P. ASHNESS

Meeting Summary/Minutes: *provide a summary of the discussion held at the meeting, including issues raised and any resolution discussed, and any changes made to the application as a result of the meeting.*

No attendees, No Changes

Please write clearly (or submit a typed summary). Use additional sheets if necessary.

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Shoppes at Glen Laurel

Application: Major Subdivision Modification

Location/Date: March 19th, 6:30 PM, Clayton Center

	NAME	ADDRESS
1	No attendees	
2		
3		
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CE GROUP
301 GLENWOOD AVENUE, SUITE 220
RALEIGH, NC 27603
Phone: (919) 367-8790
E-Mail: mark@cegroupinc.com

February 28, 2020

Dear Clayton Area Property Owner:

The purpose of this letter is to notify you of an application filed with the Town of Clayton for a land use change or development proposal involving property adjacent to, or in close proximity to, property shown in your ownership by Johnston County tax records. Per Town of Clayton regulations, a Neighborhood Meeting will be held to provide information to area residents about the proposal. A representative of the applicant will be preset to explain their application, answer questions, and solicit comments.

Meeting Date: **March 19, 2020** Meeting Time: **6:30 PM**

Meeting Location: **Clayton Center (York Meeting Room) 111 E. 2nd Street, Clayton NC**

Type of Application: **Modification to Major Subdivision**

Project / Proposal property address: **Parcel 05I04016E and Parcel 05I04003W, Glen Laurel Rd**

Description of project / proposal: **Proposed Modification to Existing Major Subdivision; Planned Development – Mixed Use – change of use (Parcel 05I04003W) and addition of property (Parcel 05I04016E)**

Upcoming public meetings for this
Application (Planning Board **May 2020**
And / Town Council): **May 2020**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A schedule of all upcoming public meeting for the application.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.
4. A map, drawing, or other depiction of the proposed land use change or development proposal.

A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and / or development proposal.

If you have any questions prior to or after this meeting, you may contact us at **919-367-8790 Ex. 101**. You may also contact the Planning Department at **919-553-5002**.

Sincerely,

Mark P. Ashness, PE
CE Group, Inc.

cc: Town of Clayton Planning Department

PROVIDING CIVIL / SITE & INFRASTRUCTURE CONSULTING SERVICES SINCE 1998

CONCEPT PLAN
FOR
THE SHOPPES AT GLENLAUREL
CLAYTON, NORTH CAROLINA
MARCH 2, 2010
FedEx
ups

CONCEPT PLAN
FOR
SHOPPES AT GLEN LAUREL
YTON, NORTH CAROLINA
MARCH 2, 2020
5 COMMERCIAL / RETAIL ± 18,000 SF ± 2.74 AC.
6 FOOD / RETAIL ± 7,000 SF ± 1.03 AC.
4 SECU ± 10,000 SF
7 GOODWILL ± 12,000 SF ± 1.50 AC.
2 COMMERCIAL / RETAIL ± 22,000 SF ± 3.34 AC.
8 COMMERCIAL / RETAIL ± 37,000 SF ± 5.53 AC.
9 APARTMENTS 48 UNITS ± 3.17 AC.
3 EX SELF STORAGE ± 120,000 SF ± 4.12 AC.
12 COMM. / RETAIL & APARTMENTS ± 10,000 SF ± 72 APTS ± 3.46 AC.
11 ASSISTED LIVING ± 64 BEDS ± 3.59 AC.
10 INDEPENDENT LIVING ± 77 UNITS ± 3.10 AC.
1 ± 19.98 AC. ±240 APTS UNITS (UNCHANGED)
CHANGE OF USE
TOWN OF CLAYTON PARK
PROPERTY ADDED WITH USES
DEVELOPMENT SUMMARY
PROJECT DENSITY
BUFFER AND SETBACKS
SITE
VICINITY MAP
CE GROUP

1/2

ADJACENT PROPERTY OWNERS LIST

Project Name: The Shoppes at Glen Laurel (Modification)

The following are all the persons, firms, or corporations owning property within 100 feet and immediately adjacent to the property (including across street rights of way) subject to this request. Where the subject property immediately adjoins a public or private right-of-way, landscape or riparian buffer, commonly-owned private area, public property, or homeowners' association property, then letters of notification shall be sent to adjoining property owners as if they directly abut the subject property. Please use a separate sheet if necessary

It is the responsibility of the applicant to correctly identify the current owner, based upon records in the Johnston County GIS Office, for all property owners of land within the required public notice radius.

PARCEL NUMBER	NAME	ADDRESS
167800-19-2673	NC KEEN LAND LLC COORPORATE TRUST CENTER	871 CRANES GAP RD, CARLISLE, PA 17013-9633
167800-18-6666,167800-18-9613,167800-28-5748	SANDRA SMITH PROVENZANO	2276 GLEN LAUREL RD, CLAYTON, NC 27527
167800-28-8063	TOWN OF CLAYTON	PO BOX 879, CLAYTON, NC 27528
167900-30-4169	LWB CLAYTON APARTMENTS, LLC	PO BOX 1328, CARY, NC 27512-1328
167900-20-3003	SHOPPES AT GLEN LAUREL, LLC ATTN: C. BRANTLEY TILLMAN, JR	1004 WAKE FOREST RD, RALEIGH, NC 27604-1358
167800-19-9383	GLEN LAUREL SELF STORAGE, LLC	1004 WAKE FOREST RD, RALEIGH, NC 27604-1358
167800-29-5295	CLAYTON PARTNERS, LLC	1004 WAKE FOREST RD, RALEIGH, NC 27604-1328
167800-19-8807	STATE EMPLOYEES CREDIT UNION	P.O. BOX 27665, RALEIGH, NC 27611-7665
167800-29-6894	GOODWILL COMMUNITY FOUNDATION, INC	4808 CHIN PAGE ROAD, DURHAM, NC 27703-0000
167900-20-7014	SMALL SHOPPES DEVELOPERS, LLC	P.O. BOX 1328, CARY, NC 27512-1328
167900-32-2677	FALCON HAMLET LLC	PO BOX 979 CARY, NC 27513-0979
167800-49-1621	WALTER KEVIN & TAMMY JO WHITE	413 BLACK FOREST DRIVE CLAYTON, NC 27520-0000
167800-39-7744	DAVID R & SARAH J WAGONER	429 BLACK FOREST DRIVE CLAYTON, NC 27527-0000
167800-49-0761	APRIL R. BAIN & RUSSELL JOHNSON	417 BLACK FOREST DR CLAYTON, NC 27527-5373
167900-30-9660	STEVENSON EARL & MARJORIE WILSON	2000 FOX RIDGE ROAD CLAYTON, NC 27527-0000
167900-40-0306	KEVIN THOMAS HAMILTON	2008 FOX RIDGE ROAD CLAYTON, NC 27527-0000
167900-40-0290	NILOUS BANKS JR	286 CAMDEN PLACE ST PRINCETON, NC 27569-9416

2/2

ADJACENT PROPERTY OWNERS LIST

Project Name: The Shoppes of Glen Laurel (Modification)

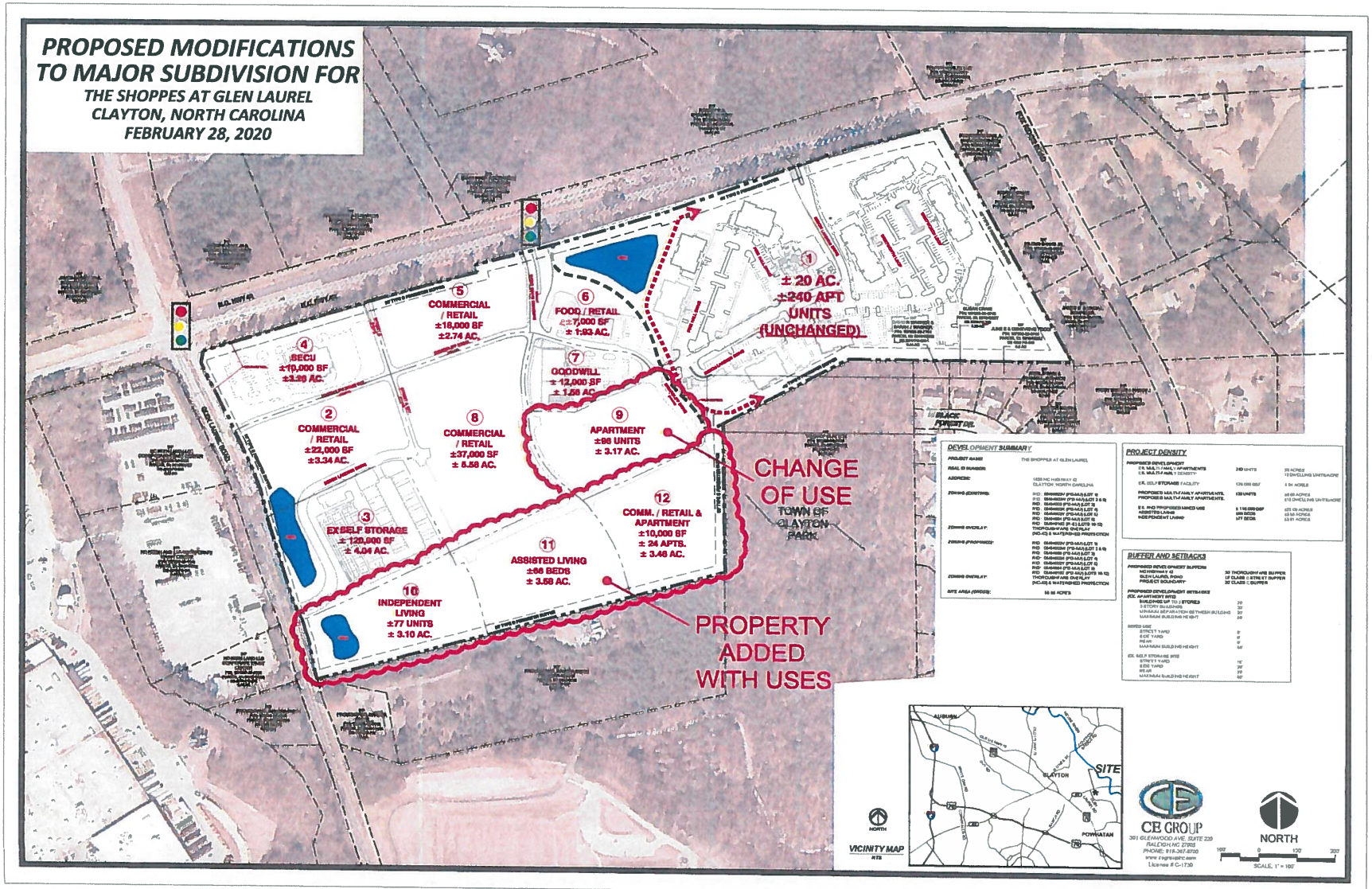
The following are all the persons, firms, or corporations owning property within 100 feet and immediately adjacent to the property (including across street rights of way) subject to this request. Where the subject property immediately adjoins a public or private right-of-way, landscape or riparian buffer, commonly-owned private area, public property, or homeowners' association property, then letters of notification shall be sent to adjoining property owners as if they directly abut the subject property. Please use a separate sheet if necessary

It is the responsibility of the applicant to correctly identify the current owner, based upon records in the Johnston County GIS Office, for all property owners of land within the required public notice radius.

PARCEL NUMBER	NAME	ADDRESS
167900-40-2006	JAMES R & LINDA L DEMPSTER	2024 FOX RIDGE RD, CLAYTON, NC 27527-0000
167800-39-9754	JUNE E & GENEVIEVE TOCCI	421 BLACK FOREST DR, CLAYTON, NC 27527-5373
167800-39-8745	SUSAN CRAIG	425 BLACK FOREST DRIVE, CLAYTON, NC 27520-0000
167800-49-3664	PATSY B STINE & NANCY J BRANTLEY	202 DEERFIELD DRIVE, CLAYTON, NC 27527-0000
167900-12-6241	ROBERT B & MARGARET H HUNT	1441 NC 42 EAST, CLAYTON, NC 27527-0000
167900-20-0817, 167900-11-5340	KEVIN MARK & ELIZABETH BRAME HUNT AMIGH	1423 N C HWY 42 EAST, CLAYTON, NC 27527-0000
167900-11-2193	JAMES B HUNT JR & ROBERT BRAME HUNT	1441 NC 42 EAST, CLAYTON, NC 27527-0000
167900-10-0512	JAME B HUNT JR & ROBERT B HUNTY	6653 D GOVERNOR HUNT RD, LUCAMA, NC 27851-0000

PROPOSED MODIFICATIONS TO MAJOR SUBDIVISION FOR

THE SHOPPES AT GLEN LAUREL
CLAYTON, NORTH CAROLINA
FEBRUARY 28, 2020

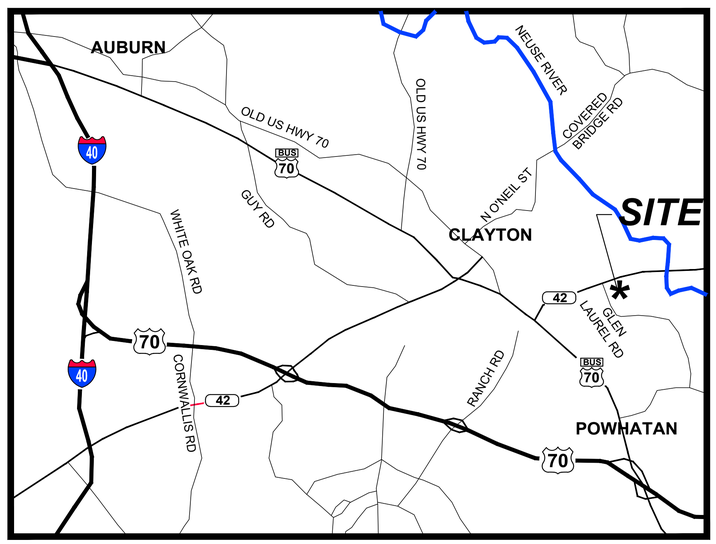


SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN) MODIFICATION

PRIOR APPROVAL# 15-48-01-PDD
PROJECT# 2020-39-SD

CLAYTON, NORTH CAROLINA
MARCH 2, 2020
(REVISED JULY 15, 2020)

Received by TOC 7/27/2020



INDEX TO DRAWINGS

COVER. 1
EXISTING BOUNDARYS. . . . . .2 - 5
EXISTING CONDITIONS PLAN. 6
ORIGINAL APPROVED MAJOR SUBDIVISION PLAN. 7
PROPOSED MAJOR SUBDIVISION PLAN (CONCEPT PLAN). 8

CE GROUP
301 GLENWOOD AVE. SUITE 220
RALEIGH,NC 27603
PHONE: 919-367-8790
www.cegroupinc.com
License # C-1739

NO.	DATE	REVISIONS
6.	07/15/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
5.	06/18/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
4.	06/12/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
3.	05/27/2020	REVISED APARTMENT BUILDING FLOOR LABEL.
2.	04/06/2020	REVISED PER TOWN OF CLAYTON REVIEW COMMENTS.
1.	04/03/2020	REVISED PER TOWN OF CLAYTON REVIEW COMMENTS.

CE GROUP
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RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
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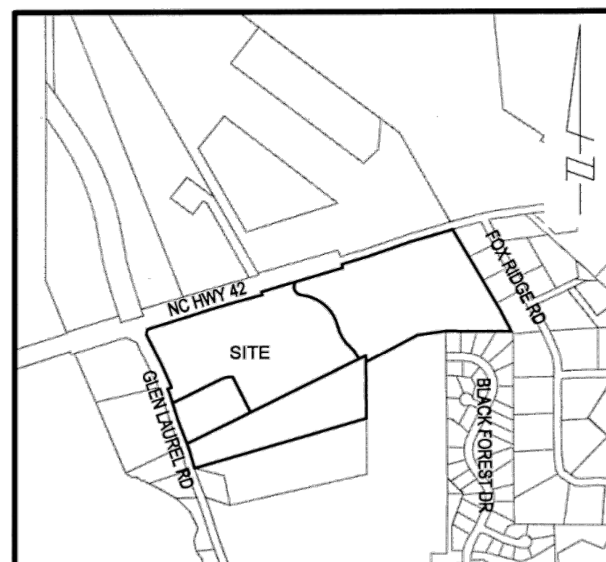
License # C-1739

NORTH CAROLINA PROFESSIONAL SEAL 18894 ENGINEER

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN)
MODIFICATION
COVER
TOWN OF CLAYTON, NORTH CAROLINA

Date:	MARCH 2, 2020
Scale:	N/A
Drawn:	JPD
Checked:	MPA
Project No.	127-264
Computer Dwg. Name	127-264_cover-2020 05 06

Sheet No:
1
Of 8



VICINITY MAP - 1" = 1000'

NOTE:
1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBERS 3720167900J & 3720167800J DATED DECEMBER 2, 2005.
8. PROPERTY IS ZONED PD-MU (PLANNED DEVELOPMENT MIXED USE) FOR LOTS 1, 2 & 3. CLAYTON PROPERTIES, LLC LOT IS ZONED R-E AND IS IN TOWN OF CLAYTON'S ETJ.
9. THE COORDINATES SHOWN ON THIS PLAT WERE DERIVED BY VRS (VIRTUAL REFERENCE STATION) GPS USING DUAL FREQUENCY RECEIVER. THIS METHOD RESULTS IN (NAD 1983/2011) - (CORS 96) POSITIONS AND NAVD 88 (MSL) ELEVATIONS USING THE CONTINUOUSLY OPERATING STATIONS MAINTAINED BY NORTH CAROLINA GEODETIC SURVEY.
10. SITE IS UNDER CONSTRUCTION.

CERTIFICATE OF FLOODWAY INFORMATION

PROPERTY SHOWN HEREON ____ IS __X__IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE.

FLOOD HAZARD PANEL NO. 3720167900J & 3720167800J

EFFECTIVE DATE: DECEMBER 2, 2005

4-2-18 [signature]
DATE GEORGE P. MARTIN P.L.S. NO. 3675

LINE TABLE

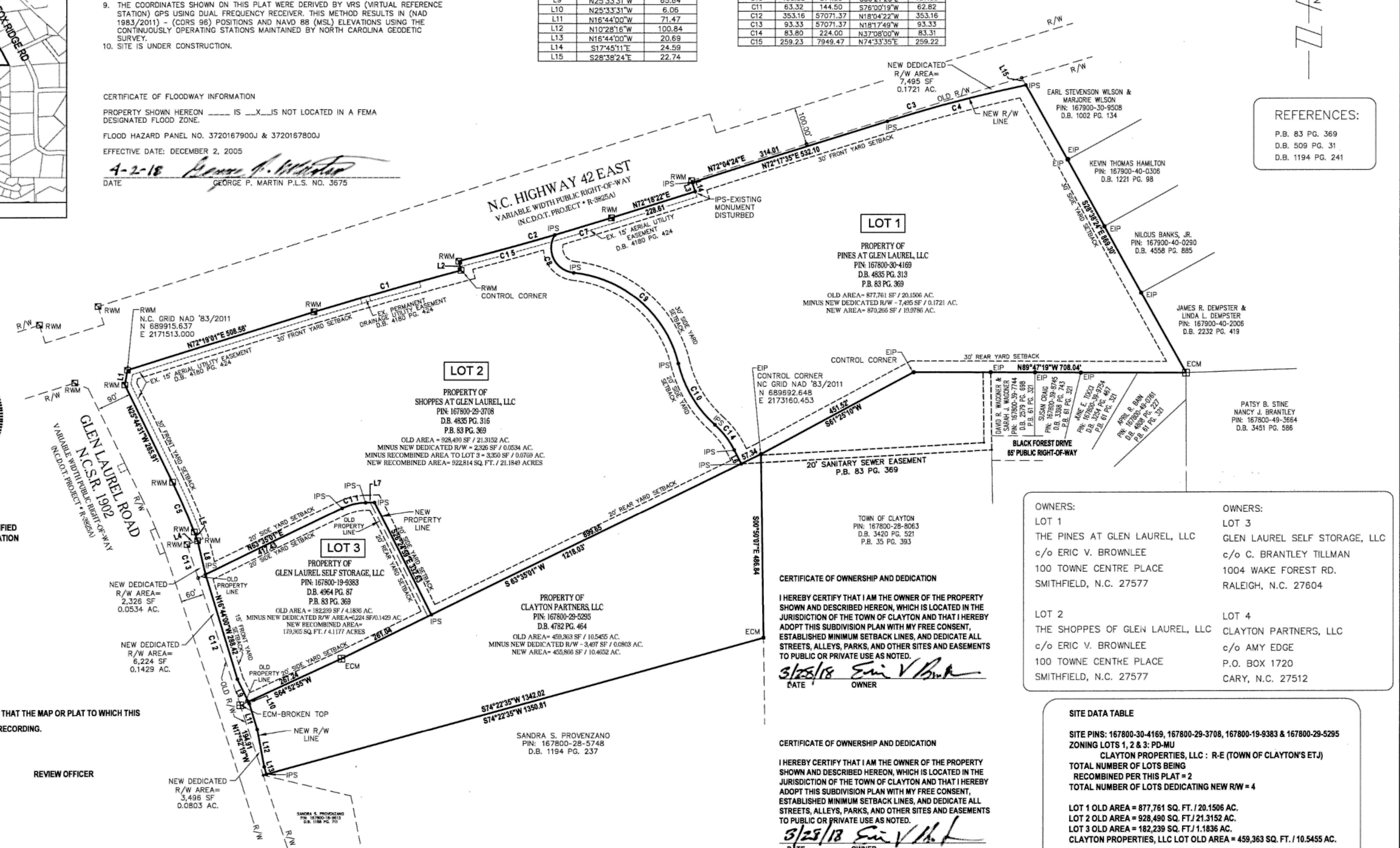
LINE	DIRECTION	DISTANCE
L1	N09°41'52"E	39.78
L2	N14°29'24"W	25.01
L3	S17°45'11"E	30.00
L4	N69°20'25"E	29.57
L5	N20°24'42"W	24.71
L6	S26°24'59"E	41.00
L7	S88°33'34"W	23.33
L8	N12°58'22"W	91.94
L9	N25°33'31"W	65.64
L10	N25°33'31"W	6.06
L11	N16°44'00"W	71.47
L12	N10°28'16"W	100.84
L13	N16°44'00"W	20.69
L14	S17°45'11"E	24.59
L15	S28°38'24"E	22.74

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD
C1	398.23	10976.87	S73°52'35"W	398.21
C2	412.95	7949.47	N74°00'21"E	412.90
C3	586.17	56177.56	S72°34'26"W	586.16
C4	372.99	3740.00	S75°09'00"W	372.83
C5	144.93	1511.32	N22°58'29"W	144.88
C6	259.23	7949.47	N74°33'35"E	259.22
C7	153.72	7949.47	N73°04'18"E	153.72
C8	132.18	65.88	S26°14'34"E	111.10
C9	388.57	315.09	N48°23'29"W	364.42
C10	190.88	314.39	S30°27'23"E	187.96
C11	63.32	144.50	S76°00'19"W	62.82
C12	353.16	57071.37	N18°04'22"W	353.16
C13	93.33	57071.37	N18°17'49"W	93.33
C14	83.80	224.00	N37°08'00"W	83.31
C15	259.23	7949.47	N74°33'35"E	259.22

LEGEND
EIP = EXISTING IRON PIPE
RWM = RIGHT-OF-WAY MONUMENT
ECM = EXISTING CONCRETE MONUMENT
CP = CALCULATED POINT
IPS = IRON PIPE SET
R/W = RIGHT-OF-WAY
[1430] DENOTES ADDRESS

REFERENCES:
P.B. 83 PG. 369
D.B. 509 PG. 31
D.B. 1194 PG. 241



I, GEORGE P. MARTIN, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION. DEED DESCRIPTION RECORDED IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

D. THAT THIS PLAT IS OF A SURVEY OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION;

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 2nd DAY OF APRIL, A.D., 2018.

[signature]
GEORGE P. MARTIN, PLS L-3675

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-3675 GEORGE P. MARTIN

CERTIFICATE REQUIRED ON RECOMBINATION PLATS

THIS PLAT REPRESENTS A RECOMBINATION OF PREVIOUSLY RECORDED PARCELS OF LAND AND DOES NOT CONSTITUTE A SUBDIVISION AS SPECIFIED BY THE NORTH CAROLINA GENERAL STATUES. APPROVAL FOR RECORDATION BY THE TOWN OF CLAYTON IS GRANTED BY CERTIFICATION BELOW.

4-3-18 [signature]
DATE PLANNING DIRECTOR-TOWN OF CLAYTON, NC

REVIEW OFFICER CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF JOHNSTON

[signature] REVIEW OFFICER OF JOHNSTON COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

[signature] 4/4/18 DATE REVIEW OFFICER

STATE OF NORTH CAROLINA, JOHNSTON COUNTY

THIS INSTRUMENT WAS PRESENTED FOR REGISTRATION AND RECORDING THIS 4 DAY OF April 2018 AT 2:08:31 PM

[signature] BY [signature]
REGISTER OF DEEDS ASST. REG. OF DEEDS
Deputy

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISHED MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS, AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.

3/28/18 [signature]
DATE OWNER

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISHED MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS, AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.

3/28/18 [signature]
DATE OWNER

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISHED MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS, AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.

3/30/18 [signature]
DATE OWNER

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISHED MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS, AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.

3/30/18 [signature]
DATE OWNER

OWNERS:
LOT 1
THE PINES AT GLEN LAUREL, LLC
c/o ERIC V. BROWNLEE
100 TOWNE CENTRE PLACE
SMITHFIELD, N.C. 27577

LOT 2
THE SHOPPES OF GLEN LAUREL, LLC
c/o ERIC V. BROWNLEE
100 TOWNE CENTRE PLACE
SMITHFIELD, N.C. 27577

OWNERS:
LOT 3
GLEN LAUREL SELF STORAGE, LLC
c/o C. BRANTLEY TILLMAN
1004 WAKE FOREST RD.
RALEIGH, N.C. 27604

LOT 4
CLAYTON PARTNERS, LLC
c/o AMY EDGE
P.O. BOX 1720
CARY, N.C. 27512

SITE DATA TABLE

SITE PINS: 167800-30-4169, 167800-29-3708, 167800-19-9383 & 167800-29-5295
ZONING LOTS 1, 2 & 3: PD-MU
CLAYTON PROPERTIES, LLC : R-E (TOWN OF CLAYTON'S ETJ)
TOTAL NUMBER OF LOTS BEING RECOMBINED PER THIS PLAT = 2
TOTAL NUMBER OF LOTS DEDICATING NEW R/W = 4

LOT 1 OLD AREA = 877,761 SQ. FT. / 20.1506 AC.
LOT 2 OLD AREA = 928,490 SQ. FT./ 21.3152 AC.
LOT 3 OLD AREA = 182,239 SQ. FT./ 1.1836 AC.
CLAYTON PROPERTIES, LLC LOT OLD AREA = 459,363 SQ. FT. / 10.5455 AC.

LOT 1 NEW AREA = 870,266 SQ. FT. / 19.9786 AC.
LOT 2 NEW AREA = 925,140 SQ. FT./ 21.2383 AC.
LOT 3 NEW AREA = 185,589 SQ. FT./ 4.2605 AC.
CLAYTON PROPERTIES, LLC NEW AREA = 455,866 SQ. FT. / 10.4652 AC.

NEW R/W DEDICATION AREAS
LOT 1 = 7,495 SQ. FT. / 0.1721 AC.
LOT 2 = 2,326 SQ. FT. / 0.0534 AC.
LOT 3 = 6,224 SQ. FT. / 0.0534 AC.
CLATYON PROPERTIES, LLC = 3.496 SQ. FT. / 0.0803 AC.

RECORDED IN
PLAT BOOK 86 PAGE 405

SCALE: 1" = 200'

0 100 200 400 600 800

REV.	DATE	DESCRIPTION	BY
1	03-28-18	REVISED OWNERS ADDRESSES	PM

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
- 6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
- TELEPHONE: (919)851-4422 OR (800)354-1879
FAX: (919)851-8968
- CERTIFICATION NUMBERS: NCBELS (C-0110); NCBLA (C-0267)

SURVEYED BY GS
DRAWN BY PM
CHECKED BY GPM
DATE 02-19-18

RECOMBINATION &
RIGHT-OF-WAY DEDICATION PLAT
FOR
LOTS 1, 2 & 3 HUNT SUBDIVISION &
CLAYTON PROPERTIES, LLC

CLAYTON TWSP JOHNSTON COUNTY NORTH CAROLINA

SHEET 1 OF 1

R:\2014\14262 - 1430 NC Hwy 42\SURVEY\14262LDD\dwg\14262 RECOMBINATION PLAT - LOT 3.dwg, 3/28/2018 10:42:12 AM, pat martin

NO.	REVISIONS	DATE
1.	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.	04/03/2020
2.	REVISED PER TOWN OF CLAYTON 2nd REVIEW COMMENTS.	05/06/2020
3.	REVISED APARTMENT BUILDING FLOOR LABEL.	05/27/2020
4.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/12/2020
5.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/19/2020
6.	REVISED APARTMENTS, AL, & IL BUILDINGS.	07/15/2020

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

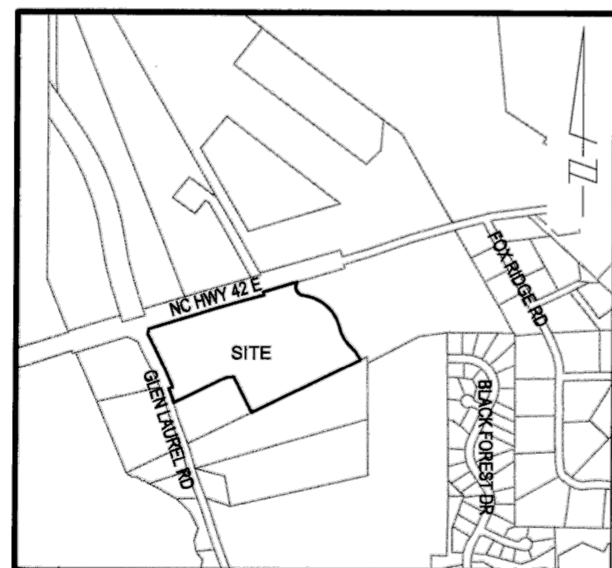
www.cegroupinc.com

License # C-1739

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN)
MODIFICATION
PB 86 PG 405
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: 1" = 200'
Drawn: SEE MAP
Checked: SEE MAP
Project No. 127-264
Computer Dwg. Name 127-264_existing plats-2020 05 06

Sheet No: 2 Of 8



VICINITY MAP - 1" = 1000'

NOTE:
1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBERS 3720167900K & 3720167800K DATED JUNE 20, 2018.
8. PROPERTY IS ZONED PD-MU (PLANNED DEVELOPMENT MIXED USE) FOR LOT 2 THOROUGHFARE OVERLAY 11 & WATERSHED PROTECTION
9. THE COORDINATES SHOWN ON THIS PLAT WERE DERIVED BY VRS (VIRTUAL REFERENCE STATION) GPS USING DUAL FREQUENCY RECEIVER. THIS METHOD RESULTS IN (NAD 1983/2011) - (CORS 96) POSITIONS AND NAVD 88 (MSL) ELEVATIONS USING THE CONTINUOUSLY OPERATING STATIONS MAINTAINED BY NORTH CAROLINA GEODETIC SURVEY.
10. SITE IS UNDER CONSTRUCTION.

NC GRID (NAD '83/2011)

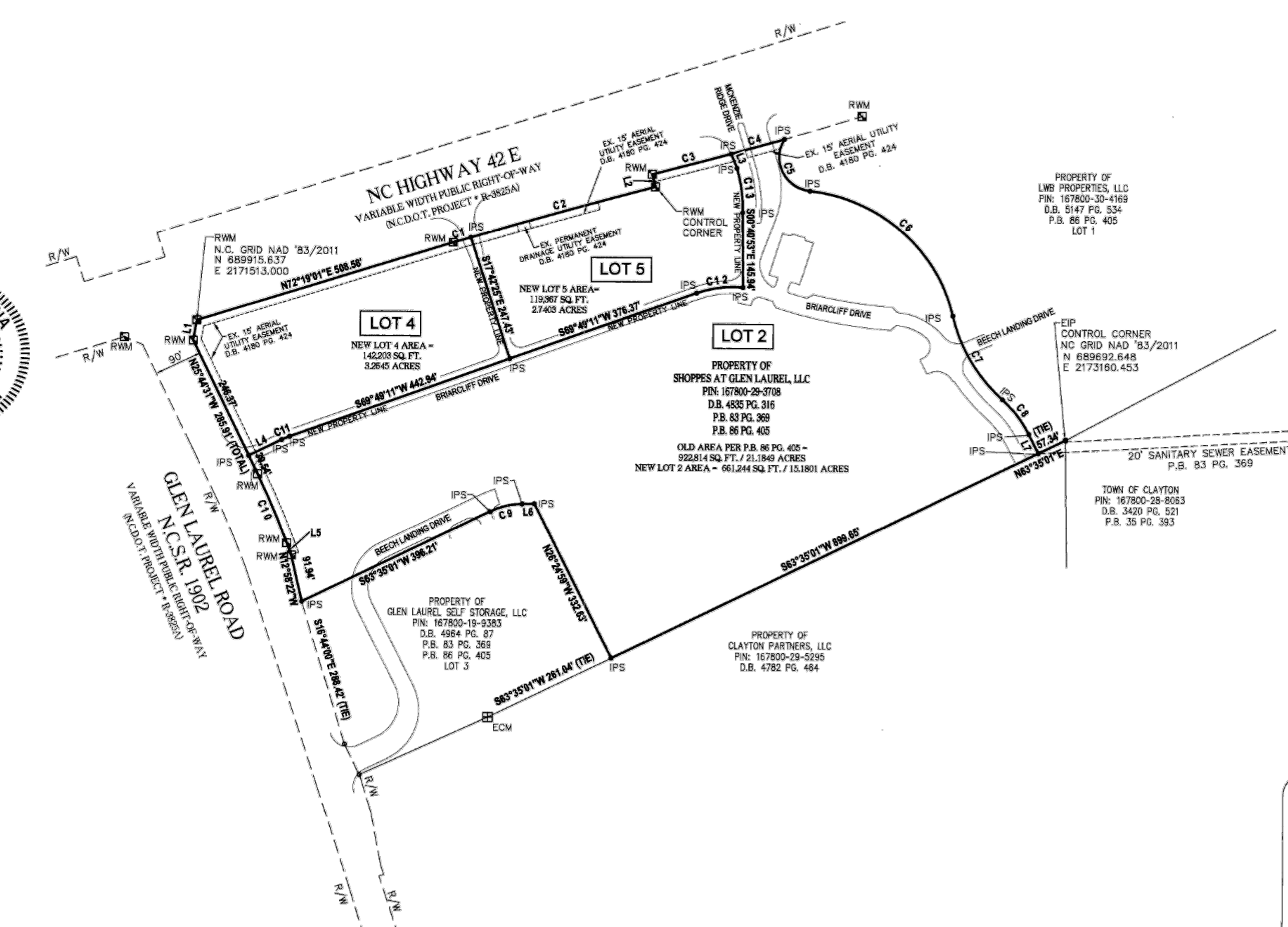
LEGEND
EIP = EXISTING IRON PIPE
RWM = RIGHT-OF-WAY MONUMENT
ECM = EXISTING CONCRETE MONUMENT
CP = CALCULATED POINT
IPS = IRON PIPE SET
R/W = RIGHT-OF-WAY
1430 DENOTES ADDRESS

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C1	10976.87	35.07	N72°55'43"E	35.07
C2	10976.87	363.16	N73°58'05"E	363.14
C3	7949.47	154.88	N74°56'09"E	154.88
C4	7949.47	104.35	N74°00'06"E	104.35
C5	65.88	132.18	S26°14'34"E	111.10
C6	315.09	388.57	S48°23'29"E	364.42
C7	314.39	190.88	S30°27'23"E	187.96
C8	224.00	83.80	S37°08'00"E	83.31
C9	144.50	63.32	S76°00'19"W	62.82
C10	1511.32	144.93	N22°58'29"W	144.88
C11	150.00	16.33	S66°42'06"W	16.32
C12	200.00	89.40	S82°37'33"W	88.66
C13	270.00	86.82	N07°35'01"W	86.45

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N09°41'52"E	39.78
L2	N14°29'24"W	25.01
L3	N21°41'14"W	29.74
L4	N63°35'01"E	69.56
L5	N20°24'42"W	24.71
L6	S88°33'34"W	23.33
L7	S26°24'59"E	41.00



I, DAN GREGORY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION. DEED DESCRIPTION RECORDED IN BOOK_SEE_, PAGE_REFERENCES_, ; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

A. THAT THIS PLAT IS OF A SURVEY THAT CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 6 DAY OF AUGUST, A.D., 2018.

NORTH CAROLINA PROFESSIONAL SEAL L-5240 LAND SURVEYOR DAN GREGORY

DAN GREGORY, PLS L-5240

CERTIFICATE OF FLOODWAY INFORMATION

PROPERTY SHOWN HEREON ____ IS _X_ IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE.

FLOOD HAZARD PANEL NO. 3720167900K & 3720167800K

EFFECTIVE DATE: JUNE 20, 2018

8/6/18
DATE DAN GREGORY P.L.S. NO. 5240

ZONING SETBACKS FOR COMMERCIAL RETAIL USE AS APPROVED BY MASTER PLAN 2015-48-01 PDD

STREET YARD: 30'
SIDE YARD: 20'
REAR: 20'
MAXIMUM BUILDING HEIGHT: 50'

SITE DATA TABLE

SITE PIN: 167800-29-3708
ZONING: PD-MU
TOTAL NUMBER OF EXISTING LOTS = 1
TOTAL NUMBER OF PROPOSED LOTS = 3

LOT 2 EXISTING AREA = 922,814 SQ. FT./ 21.1849 AC.

PROPOSED LOT 2 NEW AREA = 661,244 SQ. FT. / 15.1801 ACRES
PROPOSED LOT 4 AREA = 142,203 SQ. FT. / 3.2645 ACRES
PROPOSED LOT 5 AREA = 119,367 SQ. FT. / 2.7403 ACRES

OWNER:
LOT 2
THE SHOPPES AT GLEN LAUREL, LLC
c/o ERIC V. BROWNLEE
100 TOWNE CENTRE PLACE
SMITHFIELD, N.C. 27577

PLANNING DIRECTOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS RECORDED PLAT HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION ORDINANCE OF THE TOWN OF CLAYTON, NORTH CAROLINA, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE REGISTER OF DEEDS OF JOHNSTON COUNTY.
9-4-18
DATE PLANNING DIRECTOR – TOWN OF CLAYTON, NC

REVIEW OFFICER CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF JOHNSTON
I, Stephanie Richter, REVIEW OFFICER OF JOHNSTON COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.
9-5-18
DATE REVIEW OFFICER

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED.
8/13/2018
DATE OWNER

STATE OF NORTH CAROLINA, JOHNSTON COUNTY

THIS INSTRUMENT WAS PRESENTED FOR REGISTRATION AND RECORDING THIS 5th DAY OF September 20 18 AT 12:53:16 PM
Craig Olive BY LaKanda M. Neal
REGISTER OF DEEDS ~~ASST.~~ REG. OF DEEDS Deputy

RECORDED IN
PLAT BOOK 87 PAGE 375

SCALE: 1" = 200'
0 100 200 400 600 800

REV.	DATE	DESCRIPTION	BY
1	07-24-18	REVISED PER TOWN'S REVIEW COMMENTS	PM

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
- 6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
- TELEPHONE: (919)851-4422 OR (800)354-1879
FAX: (919)851-8968
- CERTIFICATION NUMBERS: NCBELS (C-0110); NCBLA (C-0267)

SURVEYED BY GS
DRAWN BY PM
CHECKED BY DG
DATE 06-29-18

MINOR SUBDIVISION PLAT
FOR
THE SHOPPES AT
GLEN LAUREL, LLC

CLAYTON TWSP JOHNSTON COUNTY NORTH CAROLINA

SHEET 1 OF 1

R:\2014\14262 - 1430 NC Hwy 42\SURVEY\14262LDD\dwg\14262 Minor Subd Plat.dwg, 8/6/2018 4:24:21 PM, pat martin

NO.	REVISIONS	DATE
6.	REVISED APARTMENTS, AL, & IL BUILDINGS.	07/15/2020
5.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/19/2020
4.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/12/2020
3.	REVISED APARTMENT BUILDING FLOOR LABEL.	05/27/2020
2.	REVISED PER TOWN OF CLAYTON 2nd REVIEW COMMENTS.	05/06/2020
1.	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.	04/03/2020

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

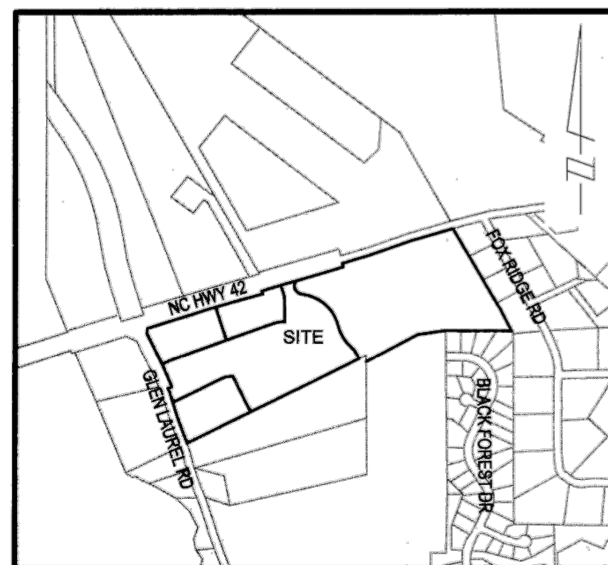
www.cegroupinc.com

License # C-1739

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN)
MODIFICATION
PB 87 PG 375
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: 1" = 200'
Drawn: SEE MAP
Checked: SEE MAP
Project No. 127-264
Computer Dwg. Name 127-264_existing plats-2020 05 06

Sheet No: 3 Of 8



VICINITY MAP - 1" = 1000'

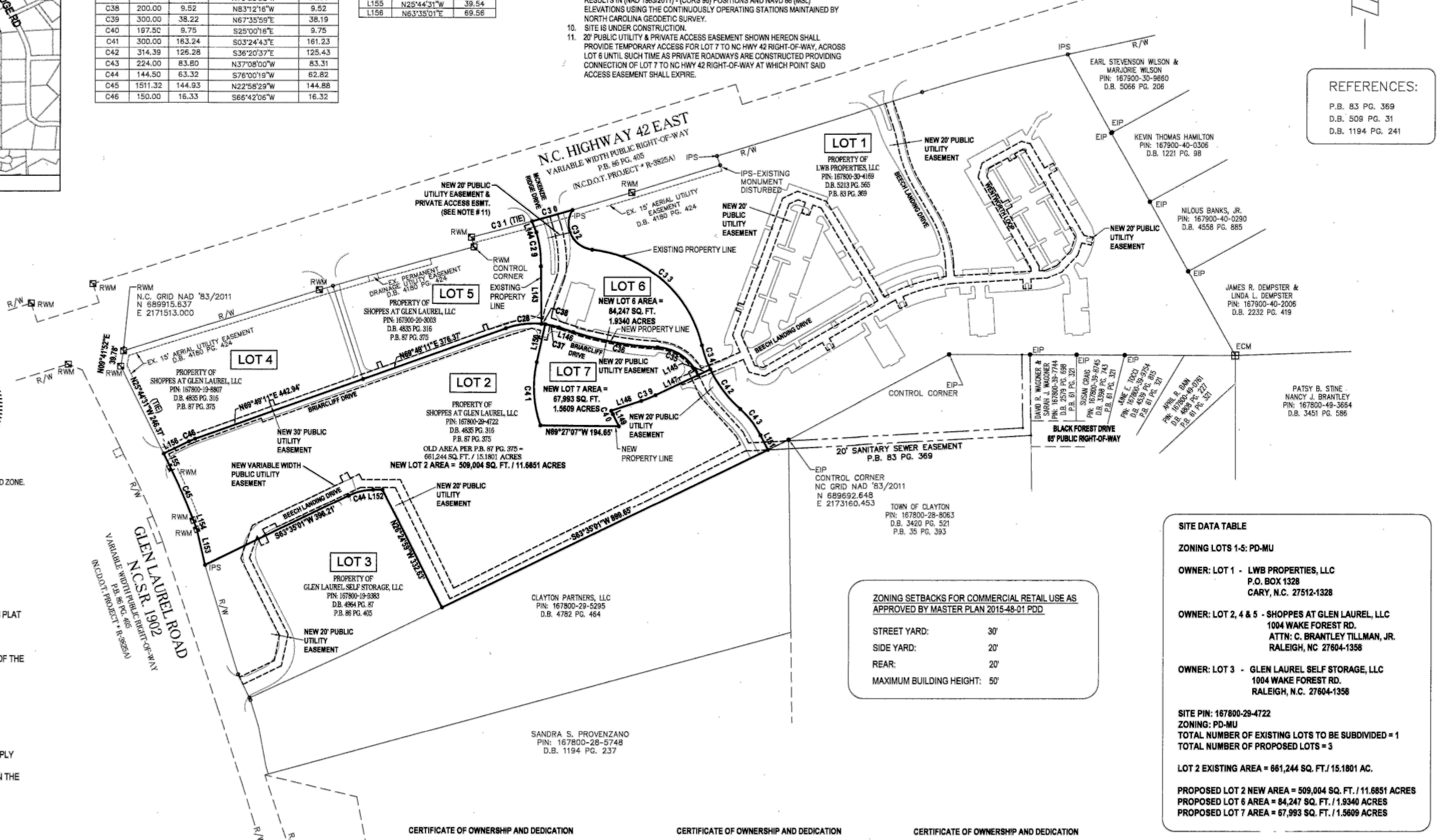
CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C28	200.00	89.40	S82°37'33"W	88.66
C29	270.00	86.82	N07°35'01"W	86.45
C30	7949.47	104.35	N74°00'06"E	104.35
C31	7949.47	154.88	N74°56'09"E	154.88
C32	65.88	132.18	S26°14'34"E	111.10
C33	315.09	388.57	N48°23'29"W	364.42
C34	314.39	64.61	S18°56'58"E	64.49
C35	114.50	129.23	N54°49'02"W	122.48
C36	800.00	213.02	S79°33'19"E	212.39
C37	200.00	34.61	N76°53'02"W	34.56
C38	200.00	9.52	N83°12'16"W	9.52
C39	300.00	38.22	N67°35'59"E	38.19
C40	197.50	9.75	S25°00'16"E	9.75
C41	300.00	163.24	S03°24'43"E	161.23
C42	314.39	126.28	S36°20'37"E	125.43
C43	224.00	83.80	N37°08'00"W	83.31
C44	144.50	63.32	S76°00'19"W	62.82
C45	1511.32	144.93	N22°58'29"W	144.88
C46	150.00	16.33	S66°42'06"W	16.32

LINE TABLE		
LINE	DIRECTION	DISTANCE
L143	S00°40'53"E	145.94
L144	N21°41'14"W	29.74
L145	N63°57'01"E	34.36
L146	N71°55'37"W	37.61
L147	N63°57'01"E	116.48
L148	N71°14'57"E	78.32
L149	N26°25'06"W	34.03
L150	S12°10'34"W	98.18
L151	S26°24'59"E	41.00
L152	S88°33'34"W	23.33
L153	N12°58'22"W	91.94
L154	N20°24'42"W	24.71
L155	N25°44'31"W	39.54
L156	N63°35'01"E	69.56

NOTE:
1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBERS 3720167900K & 3720167800K DATED JUNE 20, 2018.
8. PROPERTIES ARE ZONED PD-MU (PLANNED DEVELOPMENT MIXED USE) WITH THOROUGHFARE OVERLAY II AND WATERSHED PROTECTION AND THEY ARE LOCATED WITHIN THE TOWN OF CLAYTON'S TOWN LIMITS.
9. THE COORDINATES SHOWN ON THIS PLAT WERE DERIVED BY VRS (VIRTUAL REFERENCE STATION) GPS USING DUAL FREQUENCY RECEIVER. THIS METHOD RESULTS IN (NAD 1983/2011) - (CORS 96) POSITIONS AND NAVD 88 (MSL) ELEVATIONS USING THE CONTINUOUSLY OPERATING STATIONS MAINTAINED BY NORTH CAROLINA GEODETIC SURVEY.
10. SITE IS UNDER CONSTRUCTION.
11. 20' PUBLIC UTILITY & PRIVATE ACCESS EASEMENT SHOWN HEREON SHALL PROVIDE TEMPORARY ACCESS FOR LOT 7 TO NC HWY 42 RIGHT-OF-WAY, ACROSS LOT 6 UNTIL SUCH TIME AS PRIVATE ROADWAYS ARE CONSTRUCTED PROVIDING CONNECTION OF LOT 7 TO NC HWY 42 RIGHT-OF-WAY AT WHICH POINT SAID ACCESS EASEMENT SHALL EXPIRE.

LEGEND
EIP = EXISTING IRON PIPE
RWM = RIGHT-OF-WAY MONUMENT
ECM = EXISTING CONCRETE MONUMENT
CP = CALCULATED POINT
IPS = IRON PIPE SET
R/W = RIGHT-OF-WAY
[1430] DENOTES ADDRESS

REFERENCES:
P.B. 83 PG. 369
D.B. 509 PG. 31
D.B. 1194 PG. 241



ZONING SETBACKS FOR COMMERCIAL RETAIL USE AS APPROVED BY MASTER PLAN 2015-48-01 PDD

STREET YARD: 30'
SIDE YARD: 20'
REAR: 20'
MAXIMUM BUILDING HEIGHT: 50'

SITE DATA TABLE

ZONING LOTS 1-5: PD-MU

OWNER: LOT 1 - LWB PROPERTIES, LLC
P.O. BOX 1328
CARY, N.C. 27512-1328

OWNER: LOT 2, 4 & 5 - SHOPPES AT GLEN LAUREL, LLC
1004 WAKE FOREST RD.
ATTN: C. BRANTLEY TILLMAN, JR.
RALEIGH, NC 27604-1358

OWNER: LOT 3 - GLEN LAUREL SELF STORAGE, LLC
1004 WAKE FOREST RD.
RALEIGH, N.C. 27604-1358

SITE PIN: 167800-29-4722
ZONING: PD-MU
TOTAL NUMBER OF EXISTING LOTS TO BE SUBDIVIDED = 1
TOTAL NUMBER OF PROPOSED LOTS = 3

LOT 2 EXISTING AREA = 661,244 SQ. FT./ 15.1801 AC.

PROPOSED LOT 2 NEW AREA = 509,004 SQ. FT. / 11.6851 ACRES
PROPOSED LOT 6 AREA = 84,247 SQ. FT. / 1.9340 ACRES
PROPOSED LOT 7 AREA = 67,993 SQ. FT. / 1.5609 ACRES

I, DAN GREGORY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION. DEED DESCRIPTION RECORDED IN BOOK_SEE_, PAGE_REFERENCES_ ; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

A. THAT THIS PLAT IS OF A SURVEY THAT CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 7 DAY OF MARCH, A.D., 2019.

DAN GREGORY, PLS L-5240

NORTH CAROLINA PROFESSIONAL SEAL L-5240 LAND SURVEYOR DAN GREGORY

CERTIFICATE OF FLOODWAY INFORMATION

PROPERTY SHOWN HEREON ____ IS _X_ IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE.

FLOOD HAZARD PANEL NO. 3720167900K & 3720167800K

EFFECTIVE DATE: JUNE 20, 2018

3/7/19
DATE DAN GREGORY P.L.S. NO. 5240

TOWN OF CLAYTON TOWN MANAGER CERTIFICATION FOR A FINAL PLAT

"I HEREBY CERTIFY THAT THE TOWN OF CLAYTON, NC HAS APPROVED THIS PLAT FOR RECORDING IN THE OFFICE OF THE JOHNSTON COUNTY REGISTER OF DEEDS, AND ACCEPTS THE DEDICATION OF STREETS, EASEMENTS, RIGHTS-OF-WAY, AND PUBLIC LANDS SHOWN THEREON, BUT ASSUMES NO RESPONSIBILITY TO OPEN OR MAINTAIN THE SAME UNTIL, IN THE OPINION OF THE CLAYTON TOWN COUNCIL, IT IS IN THE PUBLIC INTEREST TO DO SO."

3-12-19
DATE TOWN MANAGER

PLANNING DIRECTOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS RECORDED PLAT HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION ORDINANCE OF THE TOWN OF CLAYTON, NORTH CAROLINA, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE REGISTER OF DEEDS OF JOHNSTON COUNTY.

3-11-19
DATE PLANNING DIRECTOR – TOWN OF CLAYTON, NC

REVIEW OFFICER CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF JOHNSTON

I, Stephanie Richter, REVIEW OFFICER OF JOHNSTON COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

3/14/19
DATE REVIEW OFFICER

STATE OF NORTH CAROLINA, JOHNSTON COUNTY

THIS INSTRUMENT WAS PRESENTED FOR REGISTRATION AND RECORDING THIS 14 DAY OF March 2019 AT 1:44:17PM

Craig Olive
REGISTER OF DEEDS BY ASST. REG. OF DEEDS Deputy

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I DEDICATE ALL ELECTRICAL SYSTEMS AND ALL SEWER AND WATER LINES TO THE TOWN OF CLAYTON.

3/8/19
DATE OWNER
Manager LWB Properties LLC

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I DEDICATE ALL ELECTRICAL SYSTEMS AND ALL SEWER AND WATER LINES TO THE TOWN OF CLAYTON.

3/8/19
DATE OWNER
Manager The Shoppes at Glen Laurel LLC

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I DEDICATE ALL ELECTRICAL SYSTEMS AND ALL SEWER AND WATER LINES TO THE TOWN OF CLAYTON.

3/8/19
DATE OWNER
Manager Glen Laurel Self Storage LLC

THIS PLAT IS BEING RECORDED ON TWO SHEETS. SEE SHEET 2 0F 2 FOR EASEMENT ANNOTATION.

RECORDED IN
PLAT BOOK 88 PAGE 334

SCALE: 1" = 200'

0 100 200 400 600 800

REV.	DATE	DESCRIPTION	BY
1	03-01-19	REVISED PER TOWN'S REVIEW COMMENTS	PM

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
• 6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
• TELEPHONE: (919)851-4422 OR (800)354-1879
FAX: (919)851-8968
• CERTIFICATION NUMBERS: NCBELS (C-0110); NCBLA (C-0267)

SURVEYED BY: PS
DRAWN BY: PM
CHECKED BY: DG
DATE: 01-09-19

MINOR SUBDIVISION AND EASEMENT DEDICATION PLAT
FOR
GLEN LAUREL MIXED USE

CLAYTON TWSP JOHNSTON COUNTY NORTH CAROLINA

SHEET 1 OF 2

R:\2014\14262 - 1430 NC Hwy 42\SURVEY\14262LDD\dwg\14262 MINOR SUBD & EASEMENT PLAT FOR ON-SITE UTILITIES.dwg, 3/7/2019 8:50:03 AM, pat martin

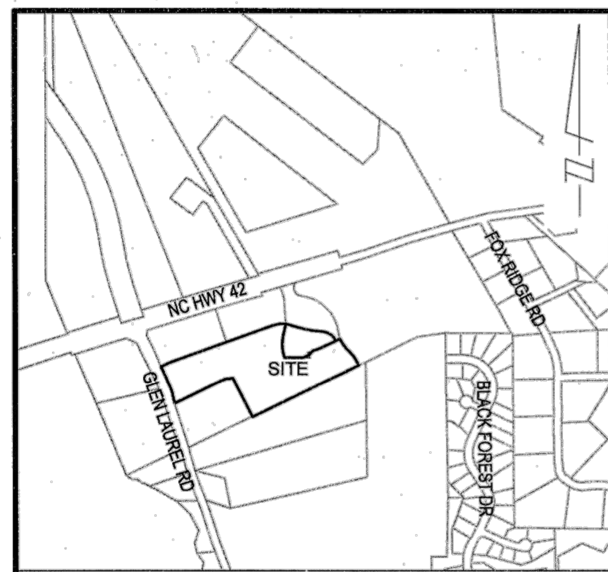
NO.	REVISIONS	DATE
6.	REVISED APARTMENTS, AL, & IL BUILDINGS.	07/15/2020
5.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/19/2020
4.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/12/2020
3.	REVISED APARTMENT BUILDING FLOOR LABEL.	05/27/2020
2.	REVISED PER TOWN OF CLAYTON 2nd REVIEW COMMENTS.	05/06/2020
1.	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.	04/03/2020

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN) MODIFICATION
PB 88 PG 334
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: 1" = 200'
Drawn: SEE MAP
Checked: SEE MAP
Project No. 127-264
Computer Dwg. Name 127-264_existing plats-2020 05 06

Sheet No: 4 Of 8



VICINITY MAP - 1" = 1000'

NOTE:
1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBERS 3720167900K & 3720167800K DATED JUNE 20, 2018.
8. PROPERTIES ARE ZONED PD-MU (PLANNED DEVELOPMENT MIXED USE) WITH THOROUGHFARE OVERLAY II AND WATERSHED PROTECTION AND THEY ARE LOCATED WITHIN THE TOWN OF CLAYTON'S TOWN LIMITS.
9. THE COORDINATES SHOWN ON THIS PLAT WERE DERIVED BY VRS (VIRTUAL REFERENCE STATION) GPS USING DUAL FREQUENCY RECEIVER. THIS METHOD RESULTS IN (NAD 1983/2011) - (CORS 96) POSITIONS AND NAVD 88 (MSL) ELEVATIONS USING THE CONTINUOUSLY OPERATING STATIONS MAINTAINED BY NORTH CAROLINA GEODETIC SURVEY.
10. SITE IS UNDER CONSTRUCTION.
11. 20' PUBLIC UTILITY & PRIVATE ACCESS EASEMENT SHOWN HEREON SHALL PROVIDE TEMPORARY ACCESS FOR LOT 7 TO NC HWY 42 RIGHT-OF-WAY, ACROSS LOT 6 UNTIL SUCH TIME AS PRIVATE ROADWAYS ARE CONSTRUCTED PROVIDING CONNECTION OF LOT 7 TO NC HWY 42 RIGHT-OF-WAY AT WHICH POINT SAID ACCESS EASEMENT SHALL EXPIRE.

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C1	200.00	34.61	S76°53'02"E	34.56
C2	800.00	213.02	S79°33'19"E	212.39
C3	114.50	129.23	S54°49'02"E	122.48
C4	300.00	38.22	S67°35'59"W	38.19
C5	197.50	9.75	S25°00'16"E	9.75
C6	300.00	153.24	N03°24'43"W	151.23
C7	200.00	9.52	S83°12'16"E	9.52
C13	314.39	126.28	S36°20'37"E	125.43
C14	224.00	83.80	S37°08'00"E	83.31
C15	144.50	63.32	S76°00'19"W	62.82
C16	1511.32	144.93	N22°58'29"W	144.88
C17	150.00	16.33	N66°42'06"E	16.32
C18	200.00	89.40	N82°37'33"E	88.66

LINE TABLE

LINE	DIRECTION	DISTANCE
L16	N63°57'01"E	34.36
L17	N88°33'34"E	23.33
L18	N20°24'42"W	24.71
L19	N25°44'31"W	39.54
L20	N26°25'06"W	12.14
L21	N26°25'06"W	21.89

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I DEDICATE ALL SEWER AND WATER LINES TO THE TOWN OF CLAYTON.

11-19-19 [signature]
DATE — OWNER - GOODWILL COMMUNITY FOUNDATION, INC.

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF CLAYTON AND THAT I HEREBY ADOPT THIS SUBDIVISION PLAN WITH MY FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, PARKS AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I DEDICATE ALL SEWER AND WATER LINES TO THE TOWN OF CLAYTON.

11-18-19 [signature]
DATE — OWNER - SHOPPES OF GLEN LAUREL, LLC

I, DAN GREGORY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION. DEED DESCRIPTION RECORDED IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK_SEE_, PAGE_REFERENCES_; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

D. THAT THIS PLAT IS OF A SURVEY OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION;

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 7 DAY OF NOVEMBER, A.D., 2019.

[signature]
DAN GREGORY, PLS L-5240

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-5240 DAN GREGORY

CERTIFICATE OF FLOODWAY INFORMATION

PROPERTY SHOWN HEREON ___ IS _X_ IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE.

FLOOD HAZARD PANEL NO. 3720167900K & 3720167800K

EFFECTIVE DATE: JUNE 20, 2018

11/7/19 [signature]
DATE — DAN GREGORY P.L.S. NO. 5240

CERTIFICATION REQUIRED ON RECOMBINATION PLATS

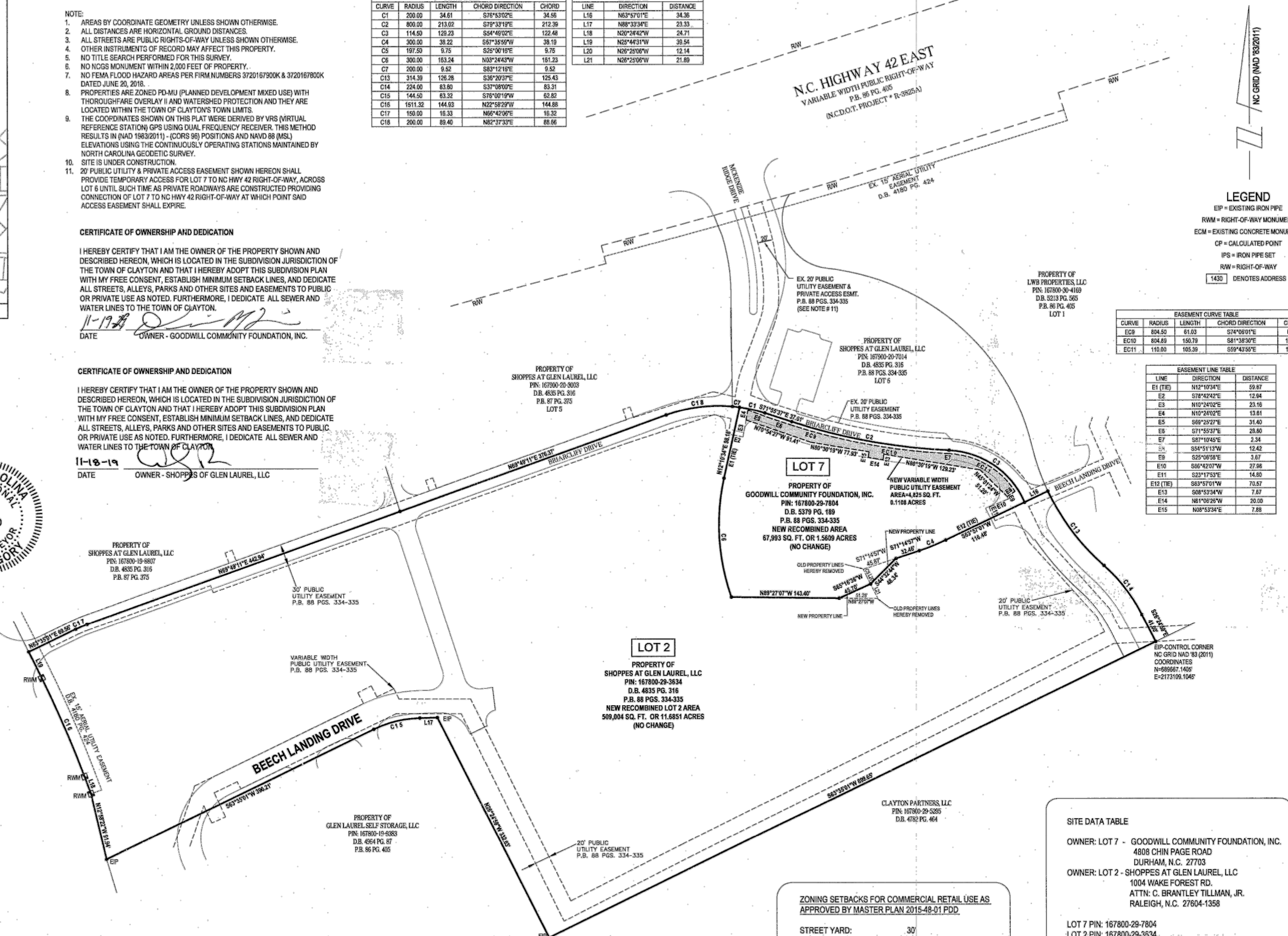
THIS PLAT REPRESENTS A RECOMBINATION OF PREVIOULSY RECORED PARCELS OF LAND AND DOES NOT CONSTITUTE A SUBDIVISION AS SPECIFIED BY THE NORTH CAROLINA GENERAL STATUES. APPROVAL FOR RECORDATION BY THE TOWN OF CLAYTON IS GRANTED BY CERTIFICATION BELOW.

11-25-19 [signature]
DATE — PLANNING DIRECTOR - TOWN OF CLAYTON, NC

REVIEW OFFICER CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF JOHNSTON
I, Stephanie Richter REVIEW OFFICER OF JOHNSTON COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

11-26-19 Stephanie Richter
DATE — REVIEW OFFICER



LEGEND

EIP = EXISTING IRON PIPE
RWM = RIGHT-OF-WAY MONUMENT
ECM = EXISTING CONCRETE MONUMENT
CP = CALCULATED POINT
IPS = IRON PIPE SET
R/W = RIGHT-OF-WAY
1430 DENOTES ADDRESS

EASEMENT CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
EC9	804.50	61.03	S74°06'01"E	61.01
EC10	804.89	150.79	S81°38'30"E	150.57
EC11	110.00	105.39	S59°43'55"E	101.41

EASEMENT LINE TABLE

LINE	DIRECTION	DISTANCE
E1 (TIE)	N12°10'34"E	59.87
E2	S78°42'42"E	12.94
E3	N10°24'02"E	23.16
E4	N10°24'02"E	13.61
E5	S69°25'27"E	31.40
E6	S71°55'37"E	28.80
E7	S87°10'45"E	2.34
E8	S54°51'13"W	12.42
E9	S25°06'58"E	3.67
E10	S86°42'07"W	27.98
E11	S23°17'53"E	14.80
E12 (TIE)	S63°57'01"W	70.57
E13	S08°53'34"W	7.67
E14	N81°06'26"W	20.00
E15	N08°53'34"E	7.88

SITE DATA TABLE

OWNER: LOT 7 - GOODWILL COMMUNITY FOUNDATION, INC.
4808 CHIN PAGE ROAD
DURHAM, N.C. 27703
OWNER: LOT 2 - SHOPPES AT GLEN LAUREL, LLC
1004 WAKE FOREST RD.
ATTN: C. BRANTLEY TILLMAN, JR.
RALEIGH, N.C. 27604-1358

LOT 7 PIN: 167800-29-7804
LOT 2 PIN: 167800-29-3634
ZONING: PD-MU

ZONING SETBACKS FOR COMMERCIAL RETAIL USE AS APPROVED BY MASTER PLAN 2015-48-01 PDD

STREET YARD:	30'
SIDE YARD:	20'
REAR:	20'
MAXIMUM BUILDING HEIGHT:	50'

STATE OF NORTH CAROLINA, JOHNSTON COUNTY

THIS INSTRUMENT WAS PRESENTED FOR REGISTRATION AND RECORDING THIS 26 DAY OF November 2019 AT 11:58:43AM

Craig Olive — REGISTER OF DEEDS — BY Patty P. [signature] Asst. — ASST. REG. OF DEEDS

THE PURPOSE OF THIS PLAT IS TO RECOMBINE THE COMMON PROPERTY LINE OF LOTS 2 & 7 WITH AN EQUAL SWAP OF LAND AND FOR THE WIDENING OF THE PUBLIC UTILITY EASEMENT ON LOT 7

RECORDED IN PLAT BOOK 90 PAGE 70

SCALE: 1" = 100'

0 50 100 200 300 400

REV.	DATE	DESCRIPTION	BY
1	11-06-19	REVISED PER TOWN'S REVIEW COMMENTS	PM

BNK

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
- 6310 CHAPEL HILL ROAD, SUITE 250 RALEIGH, NORTH CAROLINA 27607
- TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
- CERTIFICATION NUMBERS: NCBELS (C-0110); NCBLA (C-0267)

SURVEYED BY: PS
DRAWN BY: PM
CHECKED BY: DG
DATE: 09-24-19

RECOMBINATION AND EASEMENT DEDICATION PLAT
FOR
LOT 2 & LOT 7
GLEN LAUREL MIXED USE

CLAYTON TWSP — JOHNSTON COUNTY — NORTH CAROLINA

SHEET 1 OF 1

R:\2014\14262 - 1430 NC Hwy 42\SURVEY\14262LDD\dwg\14262 RECOMB & EASEMENT PLAT - LOT 7 & 2.dwg, 18x24 SHEET 1, 11/7/2019 1:43:39 PM, pat martin

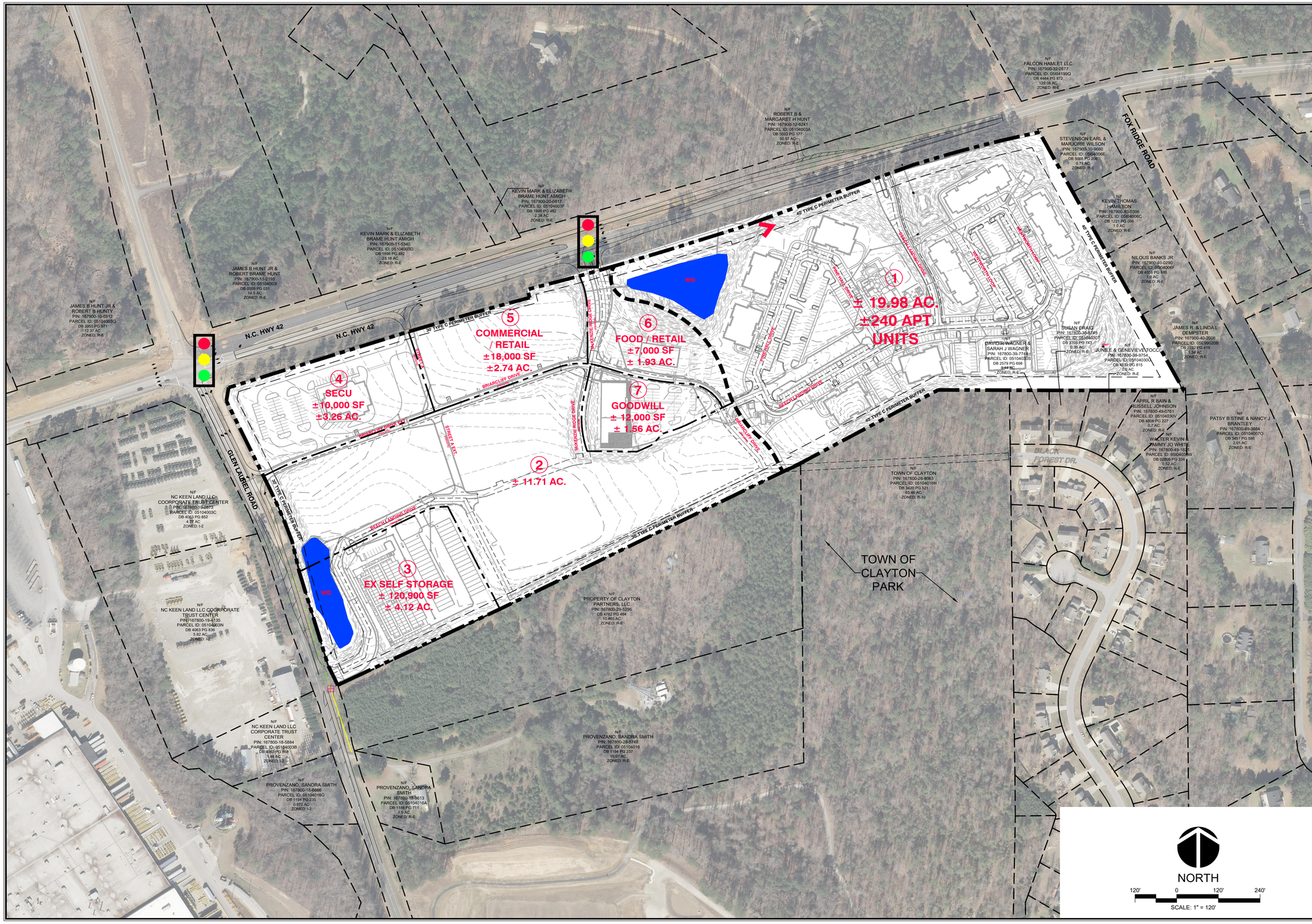
NO.	REVISIONS	DATE
6.	REVISED APARTMENTS, AL, & IL BUILDINGS.	07/15/2020
5.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/19/2020
4.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/12/2020
3.	REVISED APARTMENT BUILDING FLOOR LABEL.	05/27/2020
2.	REVISED PER TOWN OF CLAYTON 2nd REVIEW COMMENTS.	05/06/2020
1.	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.	04/03/2020

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN) MODIFICATION
PB 90 PG 70
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: 1" = 100'
Drawn: SEE MAP
Checked: SEE MAP
Project No. 127-264
Computer Dwg. Name 127-264_existing plats-2020 05 06

Sheet No: 5 Of 8



N.O.	DATE	REVISIONS
6.	07/15/2020	REVISED APARTMENTS, AL & IL BUILDINGS.
5.	06/18/2020	REVISED APARTMENTS, AL & IL BUILDINGS.
4.	06/12/2020	REVISED APARTMENTS, AL & IL BUILDINGS.
3.	05/27/2020	REVISED APARTMENT BUILDING FLOOR LABEL.
2.	04/28/2020	REVISED PER TOWN OF CLAYTON HARRIS REVIEW COMMENTS.
1.	04/08/2020	REVISED PER TOWN OF CLAYTON HARRIS REVIEW COMMENTS.

CE GROUP

301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

www.cegroupinc.com

License # C-1739

NORTH CAROLINA PROFESSIONAL SEAL 18894 ENGINEER

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN) MODIFICATION
EXISTING CONDITIONS
TOWN OF CLAYTON, NORTH CAROLINA

Date:	MARCH 2, 2020
Scale:	1" = 100'
Drawn:	JPD
Checked:	MPA
Project No.	127-264
Computer Dwg. Name	127-264_existing-conditions-2020 05 06

Sheet No: 6 Of 8

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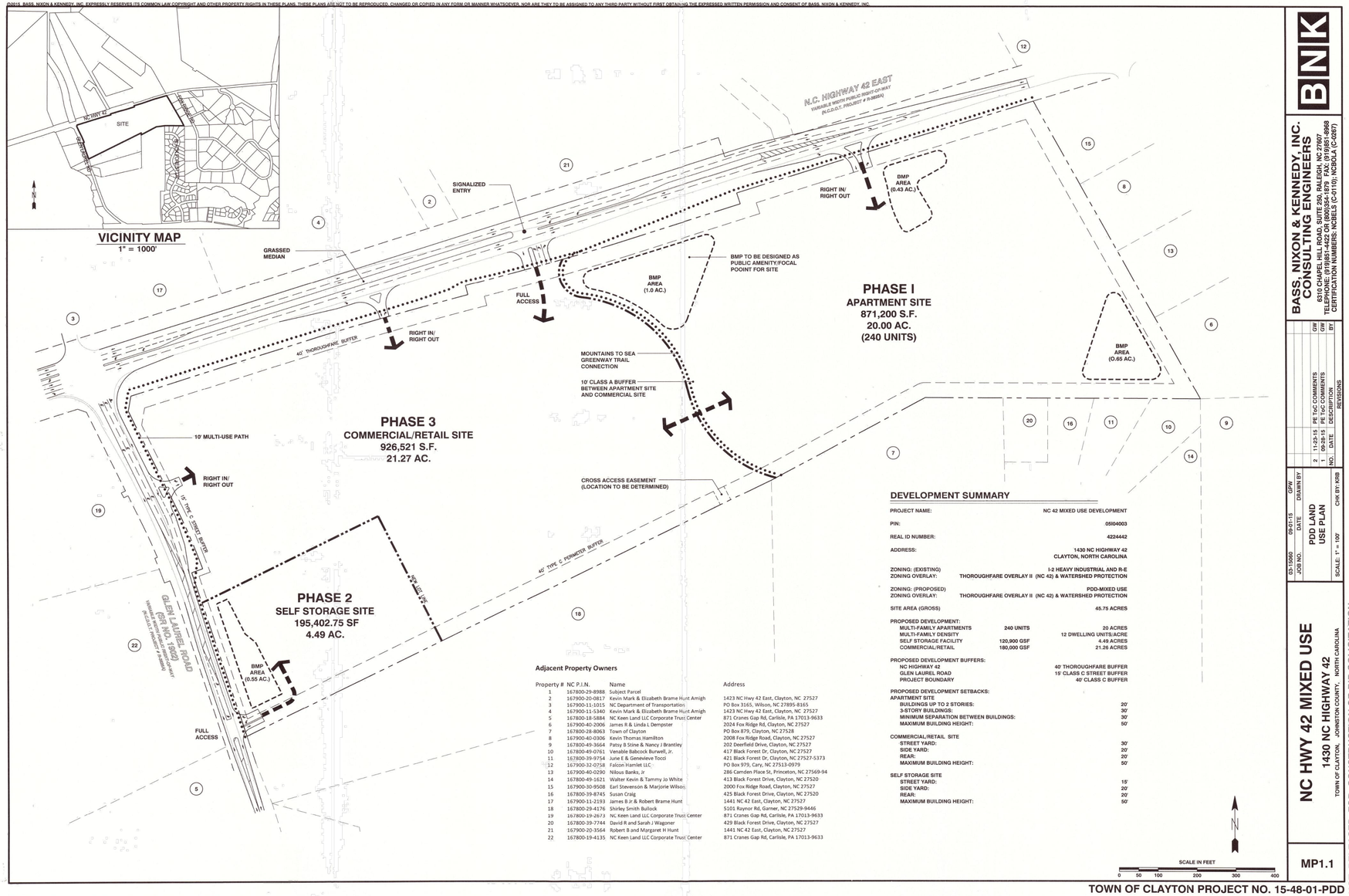
VICINITY MAP
1" = 1000'



DEVELOPMENT SUMMARY

PROJECT NAME:		NC 42 MIXED USE DEVELOPMENT
PIN:		05I04003
REAL ID NUMBER:		4224442
ADDRESS:		1430 NC HIGHWAY 42 CLAYTON, NORTH CAROLINA
ZONING: (EXISTING)		I-2 HEAVY INDUSTRIAL AND R-E
ZONING OVERLAY:		THOROUGHFARE OVERLAY II (NC 42) & WATERSHED PROTECTION
ZONING: (PROPOSED)		PDD-MIXED USE
ZONING OVERLAY:		THOROUGHFARE OVERLAY II (NC 42) & WATERSHED PROTECTION
SITE AREA (GROSS)		45.75 ACRES
PROPOSED DEVELOPMENT:		
MULTI-FAMILY APARTMENTS	240 UNITS	20 ACRES
MULTI-FAMILY DENSITY		12 DWELLING UNITS/ACRE
SELF STORAGE FACILITY	120,900 GSF	4.49 ACRES
COMMERCIAL/RETAIL	180,000 GSF	21.26 ACRES
PROPOSED DEVELOPMENT BUFFERS:		
NC HIGHWAY 42		40' THOROUGHFARE BUFFER
GLEN LAUREL ROAD		15' CLASS C STREET BUFFER
PROJECT BOUNDARY		40' CLASS C BUFFER
PROPOSED DEVELOPMENT SETBACKS:		
APARTMENT SITE		
BUILDINGS UP TO 2 STORIES:		20'
3-STORY BUILDINGS:		30'
MINIMUM SEPARATION BETWEEN BUILDINGS:		30'
MAXIMUM BUILDING HEIGHT:		50'
COMMERCIAL/RETAIL SITE		
STREET YARD:		30'
SIDE YARD:		20'
REAR:		20'
MAXIMUM BUILDING HEIGHT:		50'
SELF STORAGE SITE		
STREET YARD:		15'
SIDE YARD:		20'
REAR:		20'
MAXIMUM BUILDING HEIGHT:		50'

Adjacent Property Owners

Property #	NC P.I.N.	Name	Address
1	167800-29-8988	Subject Parcel	
2	167900-20-0817	Kevin Mark & Elizabeth Brame Hunt Amigh	1423 NC Hwy 42 East, Clayton, NC 27527
3	167900-11-1015	NC Department of Transportation	PO Box 3165, Wilson, NC 27895-8165
4	167900-11-5340	Kevin Mark & Elizabeth Brame Hunt Amigh	1423 NC Hwy 42 East, Clayton, NC 27527
5	167800-18-5884	NC Keen Land LLC Corporate Trust Center	871 Cranes Gap Rd, Carlisle, PA 17013-9633
6	167900-40-2006	James R & Linda L Dempster	2024 Fox Ridge Rd, Clayton, NC 27527
7	167800-28-8063	Town of Clayton	PO Box 879, Clayton, NC 27528
8	167900-40-0306	Kevin Thomas Hamilton	2008 Fox Ridge Road, Clayton, NC 27527
9	167800-49-3664	Patsy B Stine & Nancy J Brantley	202 Deerfield Drive, Clayton, NC 27527
10	167900-49-0761	Venable Babcock Burwell, Jr.	417 Black Forest Dr, Clayton, NC 27527
11	167800-39-9754	June E & Genevieve Tocci	421 Black Forest Dr, Clayton, NC 27527-5373
12	167900-32-0758	Falcon Hamlet LLC	PO Box 979, Cary, NC 27513-0979
13	167900-40-0290	Nilous Banks, Jr	286 Camden Place St, Princeton, NC 27569-94
14	167800-49-1621	Walter Kevin & Tammy Jo White	413 Black Forest Drive, Clayton, NC 27520
15	167900-30-9508	Earl Stevenson & Marjorie Wilson	2000 Fox Ridge Road, Clayton, NC 27527
16	167800-39-8745	Susan Craig	425 Black Forest Drive, Clayton, NC 27520
17	167900-11-2193	James B Jr & Robert Brame Hunt	1441 NC 42 East, Clayton, NC 27527
18	167800-29-4176	Shirley Smith Bullock	5101 Raynor Rd, Garner, NC 27529-9446
19	167800-19-2673	Nc Keen Land LLC Corporate Trust Center	871 Cranes Gap Rd, Carlisle, PA 17013-9633
20	167800-39-7744	David R and Sarah J Wagoner	429 Black Forest Drive, Clayton, NC 27527
21	167900-20-3564	Robert B and Margaret H Hunt	1441 NC 42 East, Clayton, NC 27527
22	167800-19-4135	NC Keen Land LLC Corporate Trust Center	871 Cranes Gap Rd, Carlisle, PA 17013-9633

SCALE IN FEET
0 50 100 200 300 400

R:\2015\15060 - Clayton NC 42 Mixed Use Tillman\CIVIL\Preliminary\15060-Base-PDD.dwg, PDD PLAN, 11/23/2015 11:33:29 AM, garry

TOWN OF CLAYTON PROJECT NO. 15-48-01-PDD

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

BNK

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6510 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919) 851-1912 FAX: (919) 851-1918 LICENSE NO: C-0910
CERTIFICATION NUMBERS: NCBELS (C-0110) NCBPLA (C-0287)

NO.	DATE	DESCRIPTION	BY
2	11-23-15	PE ToC COMMENTS	GW
1	09-28-15	PE ToC COMMENTS	GW

REVISIONS

03-15060 | 09-01-15 | GPW
JOB NO. | DATE | DRAWN BY

PDD LAND USE PLAN

SCALE: 1" = 100' | CHK BY: KRB

NC HWY 42 MIXED USE
1430 NC HIGHWAY 42
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

MP1.1

NO.	DATE	REVISIONS
6.	07/15/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
5.	06/18/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
4.	06/12/2020	REVISED APARTMENTS, AL, & IL BUILDINGS.
3.	05/27/2020	REVISED APARTMENT BUILDING FLOOR LABEL.
2.	04/06/2020	REVISED PER TOWN OF CLAYTON REVIEW COMMENTS.
1.	04/03/2020	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.

CE GROUP
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RALEIGH,NC 27603
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PRIOR APPROVAL# 15-48-01-PDD DATE: 12/7/2015

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN)
MODIFICATION
ORIGINAL MASTER PLAN
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: SEE MAP
Drawn: SEE MAP
Checked: SEE MAP
Project No. 127-264
Computer Dwg. Name 127-264_original-approved-2020 05 05

Sheet No: 7 Of 8

MINIMUM ARCHITECTURAL STANDARDS

MATERIALS

MATERIALS SUCH AS BRICK, GLASS, STONE, MARBLE, GRANITE, ASHLAR MASONRY, PRE-CAST OR POURED CONCRETE OR SIMILAR MATERIALS ARE THE RECOMMENDED FINISHES.

THE USE OF CONCRETE AS A FRONT PRIMARY FACADE MATERIAL WILL ONLY BE ALLOWED IF DESIGN INCLUDES SIGNIFICANT ARCHITECTURAL FEATURES OF COLOR AND TEXTURE.

THE CHOICE OF BUILDING MATERIALS SHOULD BE IN CHARACTER WITH AND COMPATIBLE WITH ABUTTING BUILDINGS. FACADE DESIGN MATERIALS SHOULD BE AMONGST THE BEST QUALITY FOR PRIMARY FACADES. SECONDARY FACADES (SIDES OR REAR) SHOULD COMPLEMENT THE PRIMARY FAÇADE WITH SIMILAR DESIGN TREATMENT S BUT BE LESS INTENSIVE AND ADHERE TO STANDARD DETAILS OF THE ARCHITECTURAL STYLE.

EXTERIOR BUILDING MATERIALS SHALL BE CONSISTENT OR COMPATIBLE ON ALL EXTERIOR FACADES AND/OR FLOOR LEVELS OF A BUILDING. EXPOSED FRAMING OF ATTACHED STRUCTURES, UNLESS INTEGRAL TO THE DESIGN OR DESIGNED AS AN EXPOSED ELEMENT (I.E., HEAVY TIMBER OR FINISHED METAL), SHALL NOT BE ALLOWED.

MATERIALS USED IN ATTACHED STRUCTURES SHALL BE APPROPRIATE WITH AND COMPLIMENTARY TO THE PRINCIPAL STRUCTURE. SUGGESTED BUILDING ACCENT MATERIALS COULD BE COPPER, ALUMINUM, WOOD, METAL, ACCENT STONE, CULTURED STONE, CUT STONE, ACCENT STUCCO, ACCENT EFIS, FORMED CONCRETE AND TERRACOTTA. ALL OTHER MATERIALS SHALL BE SUBMITTED TO THE MASTER DEVELOPER FOR APPROVAL. THE USE OF EIFS AS A PRIMARY FACADE MATERIAL WILL NOT BE ALLOWED UNLESS APPROVED BY THE MASTER DEVELOPER.

ROOFTOP MECHANICAL EQUIPMENT, IF USED, SHALL BE LOCATED TO NOT BE VISIBLE FROM THE PUBLIC WAY OR SHALL BE ADEQUATELY SCREENED WITH MATERIALS THAT ARE COMPLIMENTARY AND CONSISTENT WITH THE BUILDING ARCHITECTURE AND ROOF DESIGN/FINISH. BUILDING FACADES THAT ARE CLAD WITH A SINGULAR EXTERIOR SURFACE MATERIAL SHOULD PROVIDE ADDITIONAL DESIGN ELEMENT(S) TO PROVIDE ARCHITECTURAL RELIEF TO THE WALL WITH DETAILS THAT ARE CONSISTENT WITH THE PRIMARY FACADE DESIGN.

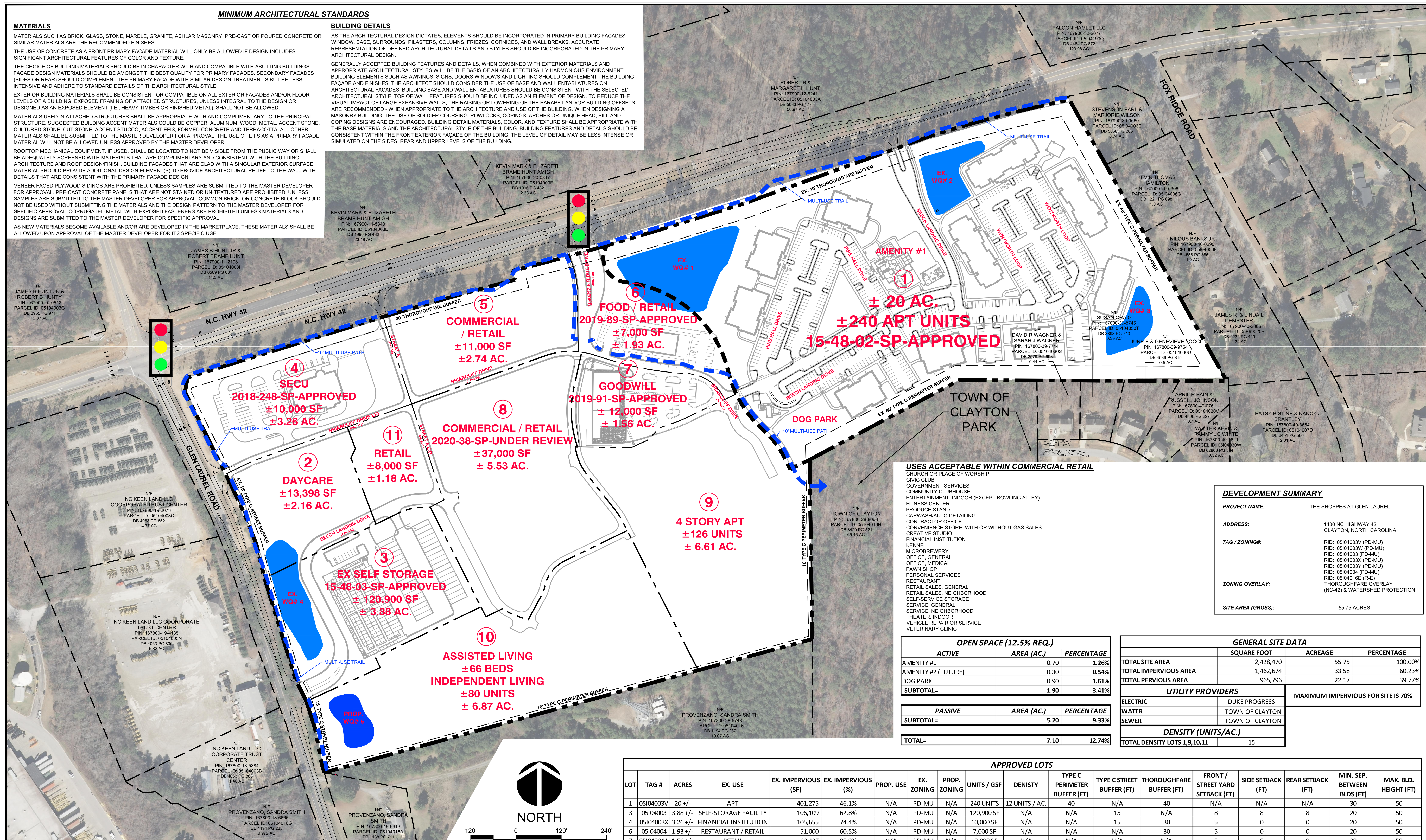
VENEER FACED PLYWOOD SIDINGS ARE PROHIBITED, UNLESS SAMPLES ARE SUBMITTED TO THE MASTER DEVELOPER FOR APPROVAL. PRE-CAST CONCRETE PANELS THAT ARE NOT STAINED OR UN-TEXTURED ARE PROHIBITED, UNLESS SAMPLES ARE SUBMITTED TO THE MASTER DEVELOPER FOR APPROVAL. COMMON BRICK, OR CONCRETE BLOCK SHOULD NOT BE USED WITHOUT SUBMITTING THE MATERIALS AND THE DESIGN PATTERN TO THE MASTER DEVELOPER FOR SPECIFIC APPROVAL. CORRUGATED METAL WITH EXPOSED FASTENERS ARE PROHIBITED UNLESS MATERIALS AND DESIGNS ARE SUBMITTED TO THE MASTER DEVELOPER FOR SPECIFIC APPROVAL.

AS NEW MATERIALS BECOME AVAILABLE AND/OR ARE DEVELOPED IN THE MARKETPLACE, THESE MATERIALS SHALL BE ALLOWED UPON APPROVAL OF THE MASTER DEVELOPER FOR ITS SPECIFIC USE.

BUILDING DETAILS

AS THE ARCHITECTURAL DESIGN DICTATES, ELEMENTS SHOULD BE INCORPORATED IN PRIMARY BUILDING FACADES: WINDOW, BASE, SURROUNDS, PILASTERS, COLUMNS, FRIEZES, CORNICES, AND WALL BREAKS. ACCURATE REPRESENTATION OF DEFINED ARCHITECTURAL DETAILS AND STYLES SHOULD BE INCORPORATED IN THE PRIMARY ARCHITECTURAL DESIGN.

GENERALLY ACCEPTED BUILDING FEATURES AND DETAILS, WHEN COMBINED WITH EXTERIOR MATERIALS AND APPROPRIATE ARCHITECTURAL STYLES WILL BE THE BASIS OF AN ARCHITECTURALLY HARMONIOUS ENVIRONMENT. BUILDING ELEMENTS SUCH AS AWNINGS, SIGNS, DOORS WINDOWS AND LIGHTING SHOULD COMPLEMENT THE BUILDING FAÇADE AND FINISHES. THE ARCHITECT SHOULD CONSIDER THE USE OF BASE AND WALL ENTABLATURES ON ARCHITECTURAL FACADES. BUILDING BASE AND WALL ENTABLATURES SHOULD BE CONSISTENT WITH THE SELECTED ARCHITECTURAL STYLE. TOP OF WALL FEATURES SHOULD BE INCLUDED AS AN ELEMENT OF DESIGN. TO REDUCE THE VISUAL IMPACT OF LARGE EXPANSIVE WALLS, THE RAISING OR LOWERING OF THE PARAPET AND/OR BUILDING OFFSETS ARE RECOMMENDED - WHEN APPROPRIATE TO THE ARCHITECTURE AND USE OF THE BUILDING. WHEN DESIGNING A MASONRY BUILDING, THE USE OF SOLDIER COURSING, ROWLOCKS, COPINGS, ARCHES OR UNIQUE HEAD, SILL AND COPING DESIGNS ARE ENCOURAGED. BUILDING DETAIL MATERIALS, COLOR, AND TEXTURE SHALL BE APPROPRIATE WITH THE BASE MATERIALS AND THE ARCHITECTURAL STYLE OF THE BUILDING. BUILDING FEATURES AND DETAILS SHOULD BE CONSISTENT WITHIN THE FRONT EXTERIOR FAÇADE OF THE BUILDING. THE LEVEL OF DETAIL MAY BE LESS INTENSE OR SIMULATED ON THE SIDES, REAR AND UPPER LEVELS OF THE BUILDING.



USES ACCEPTABLE WITHIN COMMERCIAL RETAIL

- CHURCH OR PLACE OF WORSHIP
- CIVIC CLUB
- GOVERNMENT SERVICES
- COMMUNITY CLUBHOUSE
- ENTERTAINMENT, INDOOR (EXCEPT BOWLING ALLEY)
- FITNESS CENTER
- PRODUCE STAND
- CARWASH/AUTO DETAILING
- CONTRACTOR OFFICE
- CONVENIENCE STORE, WITH OR WITHOUT GAS SALES
- CREATIVE STUDIO
- FINANCIAL INSTITUTION
- KENNEL
- MICROBREWERY
- OFFICE, GENERAL
- OFFICE, MEDICAL
- PAWN SHOP
- PERSONAL SERVICES
- RESTAURANT
- RETAIL SALES, GENERAL
- RETAIL SALES, NEIGHBORHOOD
- SELF-SERVICE STORAGE
- SERVICE, GENERAL
- SERVICE, NEIGHBORHOOD
- THEATER, INDOOR
- VEHICLE REPAIR OR SERVICE
- VETERINARY CLINIC

DEVELOPMENT SUMMARY

PROJECT NAME: THE SHOPPES AT GLEN LAUREL

ADDRESS: 1430 NC HIGHWAY 42, CLAYTON, NORTH CAROLINA

TAG / ZONING#:
RID: 05I04003V (PD-MU)
RID: 05I04003W (PD-MU)
RID: 05I04003 (PD-MU)
RID: 05I04003X (PD-MU)
RID: 05I04003Y (PD-MU)
RID: 05I04004 (PD-MU)
RID: 05I04016E (R-E)

ZONING OVERLAY: THOROUGHFARE OVERLAY (NC-42) & WATERSHED PROTECTION

SITE AREA (GROSS): 55.75 ACRES

OPEN SPACE (12.5% REQ.)

ACTIVE	AREA (AC.)	PERCENTAGE
AMENITY #1	0.70	1.26%
AMENITY #2 (FUTURE)	0.30	0.54%
DOG PARK	0.90	1.61%
SUBTOTAL=	**1.90**	**3.41%**

PASSIVE	AREA (AC.)	PERCENTAGE
SUBTOTAL=	**5.20**	**9.33%**
TOTAL=	**7.10**	**12.74%**

GENERAL SITE DATA

	SQUARE FOOT	ACREAGE	PERCENTAGE
TOTAL SITE AREA	2,428,470	55.75	100.00%
TOTAL IMPERVIOUS AREA	1,462,674	33.58	60.23%
TOTAL PERVIOUS AREA	965,796	22.17	39.77%

MAXIMUM IMPERVIOUS FOR SITE IS 70%

UTILITY PROVIDERS

ELECTRIC	DUKE PROGRESS
WATER	TOWN OF CLAYTON
SEWER	TOWN OF CLAYTON

DENSITY (UNITS/AC.)

TOTAL DENSITY LOTS 1,9,10,11	15

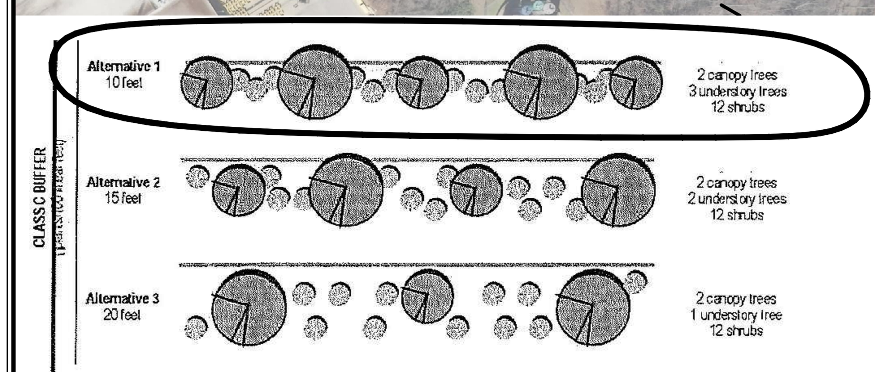
APPROVED LOTS

LOT	TAG #	ACRES	EX. USE	EX. IMPERVIOUS (SF)	EX. IMPERVIOUS (%)	PROP. USE	EX. ZONING	PROP. ZONING	UNITS / GSF	DENISTY	TYPE C PERIMETER BUFFER (FT)	TYPE C STREET BUFFER (FT)	THOROUGHFARE BUFFER (FT)	FRONT / STREET YARD SETBACK (FT)	SIDE SETBACK (FT)	REAR SETBACK (FT)	MIN. SEP. BETWEEN BLDS (FT)	MAX. BLD. HEIGHT (FT)
1	05I04003V	20 +/-	APT	401,275	46.1%	N/A	PD-MU	N/A	240 UNITS	12 UNITS / AC.	40	N/A	40	N/A	N/A	N/A	30	50
3	05I04003	3.88 +/-	SELF-STORAGE FACILITY	106,109	62.8%	N/A	PD-MU	N/A	120,900 SF	N/A	N/A	15	N/A	8	8	8	20	50
4	05I04003X	3.26 +/-	FINANCIAL INSTITUTION	105,655	74.4%	N/A	PD-MU	N/A	10,000 SF	N/A	N/A	15	30	5	0	0	20	50
6	05I04004	1.93 +/-	RESTAURANT / RETAIL	51,000	60.5%	N/A	PD-MU	N/A	7,000 SF	N/A	N/A	N/A	30	5	0	0	20	50
7	05I04004A	1.56 +/-	RETAIL	60,427	88.9%	N/A	PD-MU	N/A	12,000 SF	N/A	N/A	N/A	N/A	5	0	0	20	50

FUTURE LOTS

LOT	TAG #	ACRES	EX. USE	PROP. USE	PROP. IMPERVIOUS (SF) (80% MAX)	EX. ZONING	PROP. ZONING	GROSS SQUARE FEET	UNITS / BEDS	DENISTY	TYPE C PERIMETER BUFFER (FT)	TYPE C STREET BUFFER (FT)	THOROUGHFARE BUFFER (FT)	FRONT / STREET YARD SETBACK (FT)	SIDE SETBACK (FT)	REAR SETBACK (FT)	MIN. SEP. BETWEEN BLDS (FT)	MAX. BLD. HEIGHT (FT)
2	TBD	2.16	VACANT	DAYCARE	75,271	PD-MU	PD-MU	13,398	N/A	N/A	N/A	15	N/A	8	8	8	20	50
5	05I04003Y	2.74	VACANT	COMMERCIAL / RETAIL	95,483	PD-MU	PD-MU	11,000	N/A	N/A	N/A	N/A	30	8	8	8	20	50
8	TBD	5.53	VACANT	COMMERCIAL / RETAIL	192,709	PD-MU	PD-MU	37,000	N/A	N/A	N/A	N/A	N/A	8	8	8	20	50
9	TBD	6.61	VACANT	APT / AMENITY	230,345	PD-MU / R-E	PD-MU	174,032	126	20 +/- UNITS/AC.	10	N/A	N/A	8	8	8	30	50
10	TBD	6.88	VACANT	INDEPENDENT LIVING	239,754	R-E	PD-MU	77,898	80	12 +/- UNITS/AC.	10	15	N/A	8	8	8	20	50
				ASSISTED LIVING				37,330	66	10 +/- BEDS/AC.								
11	TBD	1.18	VACANT	RETAIL	41,120	R-E	PD-MU	8,000	N/A	N/A	N/A	N/A	N/A	8	8	8	20	50

COVERED SIDEWALK IS EXCLUDED FROM BUFFER SETBACK REQUIREMENTS.



Class C buffer shall include a wall, opaque fence, evergreen hedge, berm, or combination thereof with a minimum height of six feet at installation.

NOTE:
1) ALL LOTS WILL BE REVIEWED AS A SEPARATE MAJOR SITE PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
2) USES MAY BE REARRANGED TO DIFFERENT LOTS, SO LONG AS THEY DO NOT EXCEED MAXIMUM UNIT COUNT OR BUILDING SIZE AND CAN STILL COMPLY WITH REQUIRED DIMENSIONAL STANDARDS OUTLINED IN THIS MASTER PLAN.
3) USES MAY BE REARRANGED TO DIFFERENT LOTS, SO LONG AS THEY DO NOT EXCEED MAXIMUM UNIT COUNT OR BUILDING SIZE AND CAN STILL COMPLY WITH REQUIRED DIMENSIONAL STANDARDS OUTLINED IN THIS MASTER PLAN.
4) ANY PROPOSED USE WILL BE SUBJECT TO THE PARKING FOR THAT USE OUTLINED IN THE UNIFIED DEVELOPMENT CODE.
5) NO OUTDOOR STORAGE SHALL OCCUR AS A PART OF THE DEVELOPMENT.

REVISIONS

NO.	REVISIONS	DATE
7.	REVISED MULTI-USE TRAIL TO ORIGINAL LOCATION	07/23/2020
6.	REVISED APARTMENTS, AL, & IL BUILDINGS.	07/15/2020
5.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/19/2020
4.	REVISED APARTMENTS, AL, & IL BUILDINGS.	06/12/2020
3.	REVISED APARTMENT BUILDING FLOOR LABEL.	05/27/2020
2.	REVISED PER TOWN OF CLAYTON 2nd REVIEW COMMENTS.	05/06/2020
1.	REVISED PER TOWN OF CLAYTON 1st REVIEW COMMENTS.	04/03/2020

CE GROUP
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FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

NORTH CAROLINA PROFESSIONAL SEAL 18894 ENGINEER MARK P. ASHNESS
7/23/20

SHOPPES AT GLEN LAUREL
MAJOR SUBDIVISION (MASTER PLAN) MODIFICATION
PROPOSED MASTER PLAN REVISION
TOWN OF CLAYTON, NORTH CAROLINA

Date: MARCH 2, 2020
Scale: 1" = 100'
Drawn: JPD
Checked: MPA
Project No. 127-264
Computer Dwg. Name 127-264_major-sub-mod-2020 07 15

Sheet No: 8 Of 8

PUBLIC NOTICE

In accordance with NC GS 160A-364 the Clayton Town Council will hold a public hearing and evidentiary hearing on Monday, August 17, 2020, at 6 PM at Town Hall, 111 East Second Street, to consider the following requests:

- **2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning; request to rezone 10.5 acres of land from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). The property is located off Glen Laurel Road. TAG #: 05I04016E**
- **2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan Major Modification; request for a master plan to add 10.5 acres of land to an existing Planned Development and modify the uses and standards of the lots within the master plan. The properties are located off Glen Laurel Road and NC HWY 42 E. TAG #: 05I04003V, 05I04003W, 05I04003, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E.**

For the Rezoning the Town Council will hold a public hearing. The Clayton Town Council reserves the right to approve the request as presented or any portion of the request without necessity of withdrawal or modification of the application or additional public hearing on the matter. Likewise, the Town Council may designate approval to the district requested or another district or districts without modification of the request or additional public hearing.

For the Preliminary Plat (Master Plan) the Council will hold an evidentiary hearing. During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

This is an open meeting and the public is invited to attend.

Haley Hogg, Senior Planner
919-553-5002

The Johnstonian Newspaper

Please advertise on the following dates:
Wednesday, August 5, 2020
Wednesday, August 12, 2020

Affidavit of publication required.

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

August 6, 2020

NOTICE

SUBJECT:	**Project:**	2020-22-PDD Shoppes at Glen Laurel Planned Development Rezoning
		2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan
	Address:	Located off Glen Laurel Road
	TAG #:	05I04016E
	Applicant:	CE Group / Commercial Properties

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Town Council will hold a public hearing and evidentiary hearing on ***Monday, August 17, 2020 at 6:00 PM***, to make a decision on the above referenced Rezoning and Preliminary Plat applications.

The Town Council will hold a Public Hearing to consider the above referenced rezoning request. The applicant is requesting to rezone 10.5 acres of land from Residential-Estate (R-E) to Planned Development Mixed Use (PD-MU). This property is located off Glen Laurel Road. TAG # 05I04016E. Please see the map on the back of this letter. The Clayton Town Council reserves the right to approve the request as presented or any portion of the request without necessity of withdrawal or modification of the application or additional public hearing on the matter. Likewise, the Town Council may designate approval to the district requested or another district or districts without modification of the request or additional public hearing.

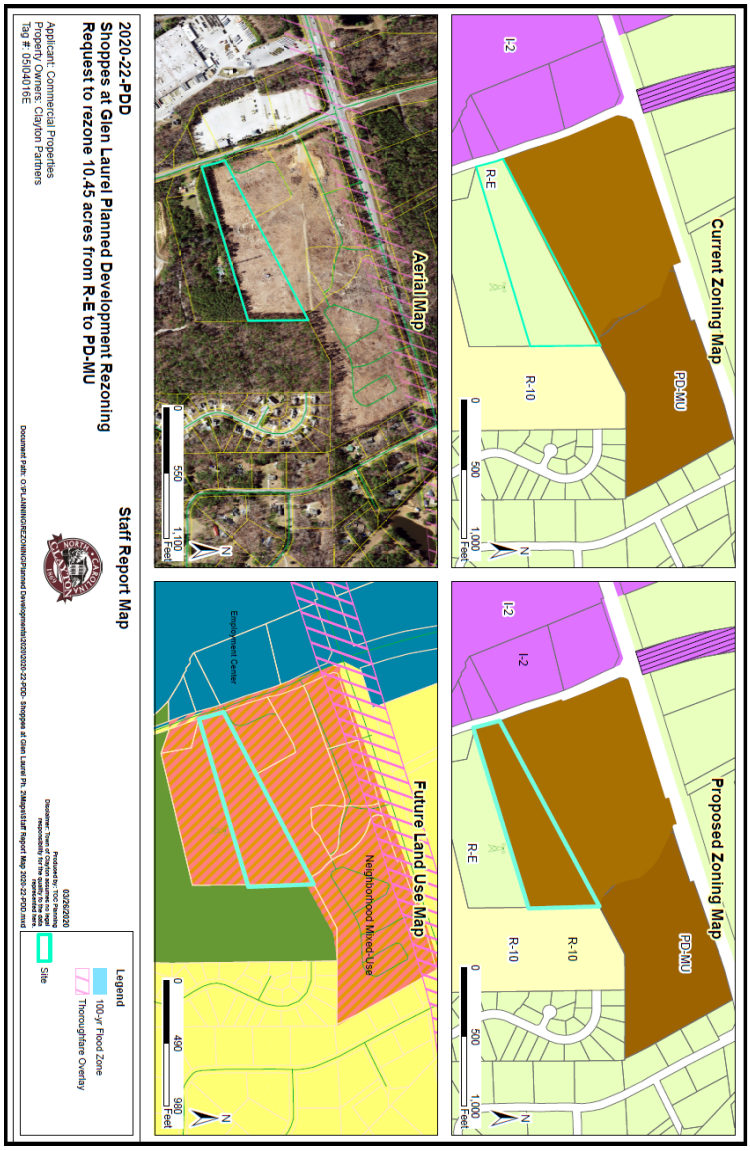
The Town Council will hold an Evidentiary Hearing to consider the above referenced Preliminary Plat (Master Plan) request. The applicant is requesting a major modification to a previously approved master plan for the Shoppes at Glen Laurel Planned Development to add 10.5 acres of land to the master plan, update the mixture of uses proposed, and modify the permitted dimensional standards for each lot within the development. The properties are located off NC HWY 42 E and Glen Laurel Road. TAG #s: 05I04003V, 05I04003W, 05I04003, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E. Please see the map on the back of this letter. During an evidentiary hearing, the Clayton Town Council must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath.

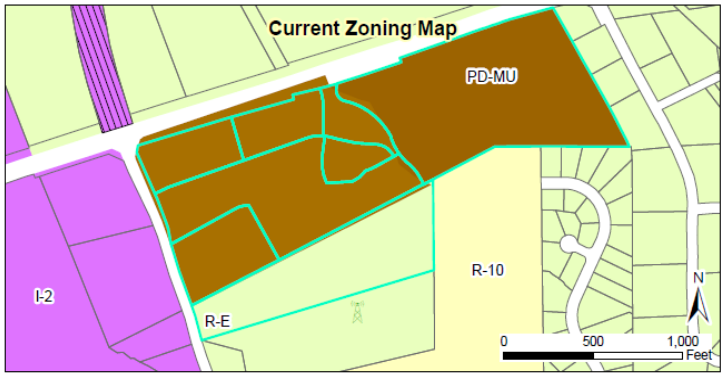
Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this proposed rezoning request. You are invited to join this meeting and express your opinions on this request to the Planning Board.

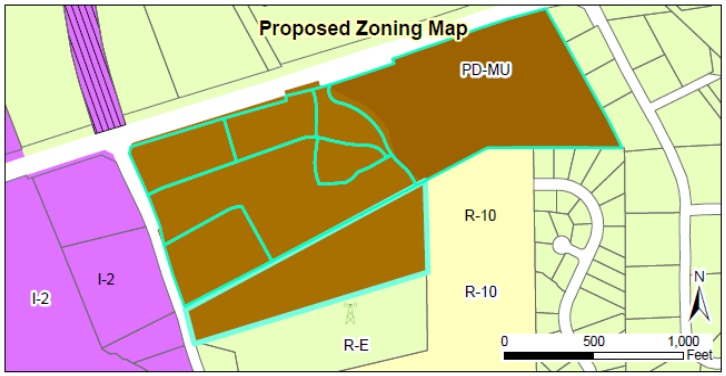
If you should need additional assistance or information, please contact the Planning Department at (919) 553-5002 or email at hhogg@townofclaytonnc.org.

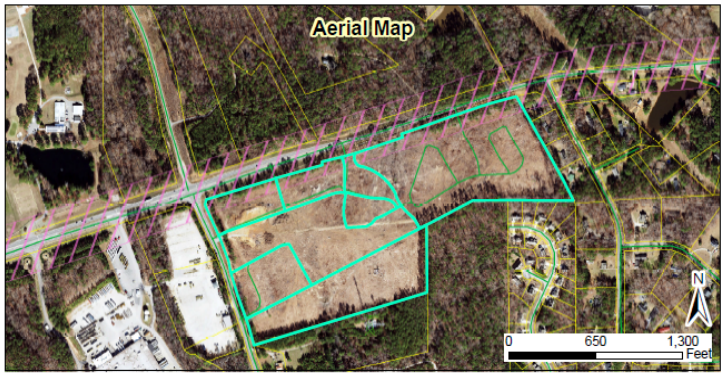
Sincerely,

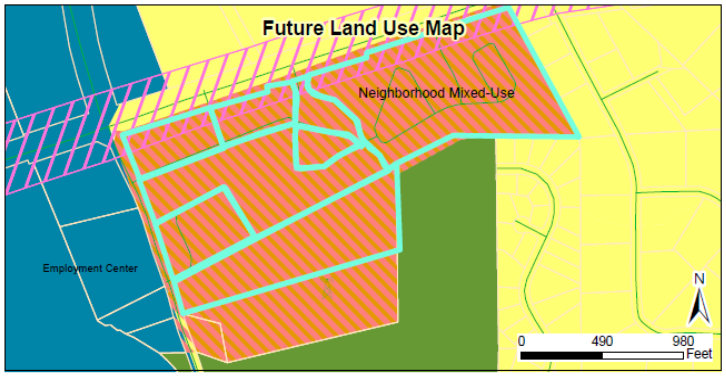
Haley Hogg, ACIP, CZO
Senior Planner











2020-39-SD
Shoppes at Glen Laurel Master Plan Modifiation (acting as a Preliminary Plat)
Request to add10.45 acres to an existing Planned Development Master Plan

Applicant: CE Group
Property Owners: Various owners (see application)
Tag #: 05I04003, 05I04003V, 05I04003W, 05I04003X, 05I04003Y, 05I04004, 05I04004A, 05I04016E

Staff Report Map

03/26/2020
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2020\2020-39-SD - The Shoppes at Glen Laurel Master Plan Modification\Maps\Staff Report Map 2020-39-SD_.mxd

Legend
- 100-yr Flood Zone
- Thoroughfare Overlay
- Site

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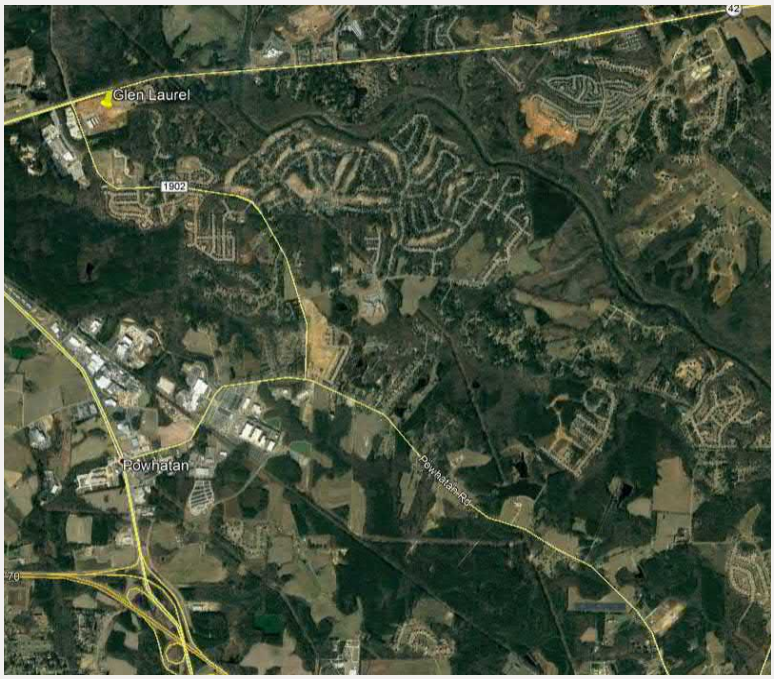

Glen Laurel Mixed Use

Traffic Impact Analysis Update
Clayton, North Carolina

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TRAFFIC IMPACT ANALYSIS

FOR THE

Glen Laurel Mixed Use

LOCATED
IN
CLAYTON, NORTH CAROLINA

Andrew K. Ritter

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March 2020
RKA Project #19308

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TRAFFIC IMPACT ANALYSIS
GLEN LAUREL MIXED USED
CLAYTON, NORTH CAROLINA

EXECUTIVE SUMMARY

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Glen Laurel development to be located in the southeast quadrant of the intersection of NC 42 and Glen Laurel Road in Clayton, North Carolina. It should be noted that this TIA is an update of a previous TIA, Hunt Property, submitted in November of 2015. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed in 2022, is assumed to consist of the following uses:

- 336 units Multi-Family (Low-Rise) Housing
- 10,000 sq. ft. Bank
- 96,000 sq. ft. Shopping Center
- 14,000 sq. ft. Day Care
- 120,900 sq. ft. Mini-Warehouse
- 77 units Congregate Care Facility
- 66 beds Assisted Living

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Clayton (Town) and consists of the following existing intersections:

- NC 42 and US 70 Business
- NC 42 and East Front Street
- NC 42 and Glen Laurel Road
- Glen Laurel Road and Site Drive 1
- NC 42 and Site Drive 2 (Beech Landing)

Based on coordination with the NCDOT and the Town, it was determined there were no adjacent developments to consider with this study.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2019) Traffic Conditions
- Background (2022) Traffic Conditions
- Combined (2022) Traffic Conditions

Based on the findings of this study, the recommended improvements from the previous TIA, Hunt Property, suffice and no additional improvements are necessary. See a more detailed description of the recommended improvements below. Refer to Figure E-1 for an illustration of the recommended lane configuration for the proposed development.

TIP R-3825 Improvements

NC 42 through Study Area

- Provide two through lanes on the eastbound and westbound approaches of NC 42 with a median.

Recommended Improvements by Developer

Glen Laurel Road and Site Drive 1

- Construct right-in / right-out westbound approach with one ingress and one egress lane.
- Provide an exclusive northbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for westbound approach.

NC 42 and Site Drive 2 (Beech Landing)

- Construct right-in / right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.

Glen Laurel Road and Site Drive 3

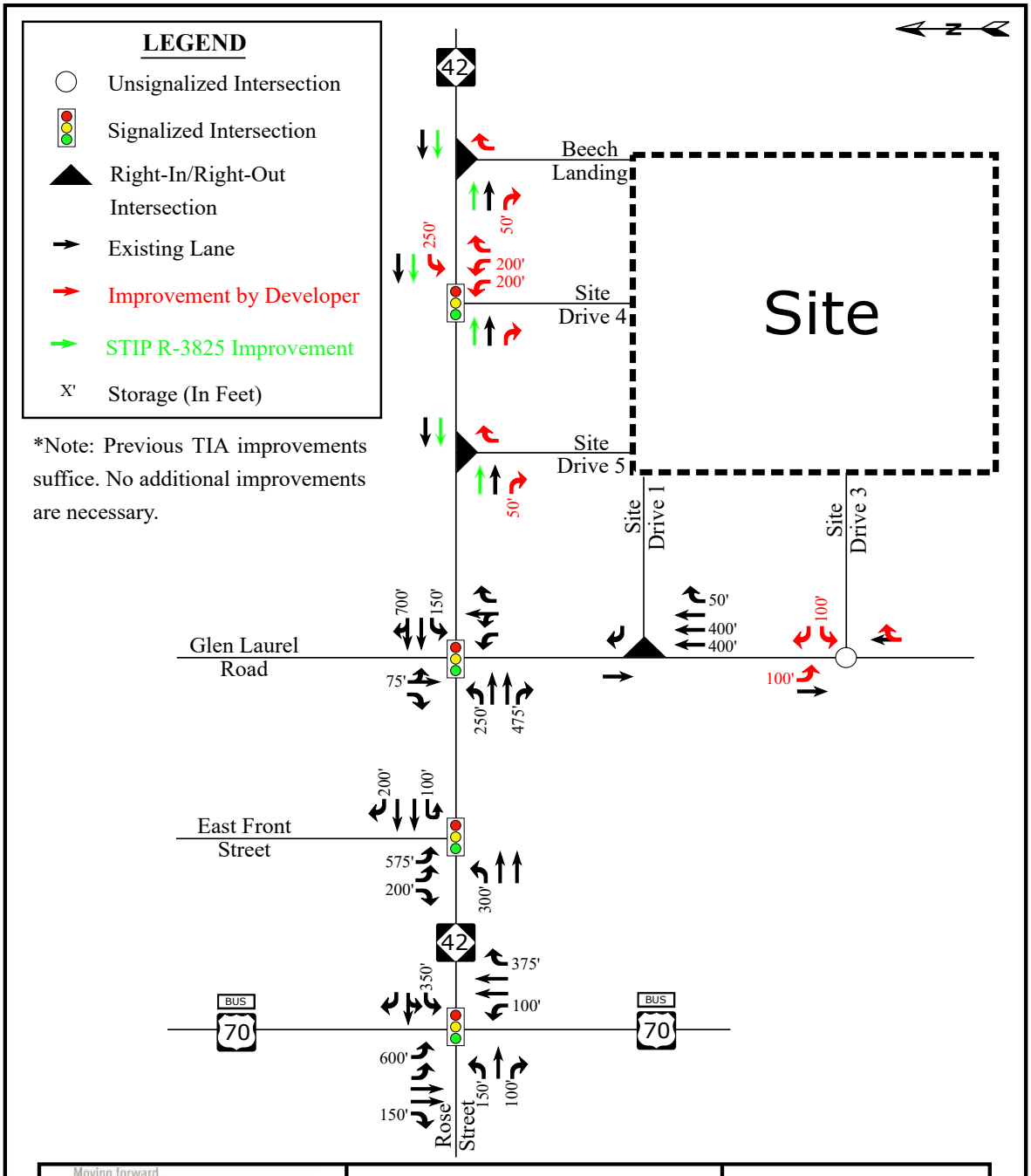
- Construct westbound approach with one ingress and two egress lanes striped as one left-turn lane with 100 feet of storage and one right-turn lane.
- Provide an exclusive southbound left-turn lane with at least 100 feet of storage and appropriate deceleration and taper.
- Provide stop-control for westbound approach.

NC 42 and Site Drive 4

- Construct northbound approach with one ingress and three egress lanes striped as two left-turn lanes, each with 200 feet of storage, and one right-turn lane.
- Provide an exclusive westbound left-turn lane with at least 250 feet of storage and appropriate deceleration and taper.
- Provide an exclusive eastbound right-turn lane that extends to Site Drive 5.
- Install a traffic signal at the intersection when warranted or prior to the opening of the development. Coordinate the signal with the existing signal at the intersection of Glen Laurel Road and NC 42.

NC 42 and Site Drive 5

- Construct a right-in/right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.



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Glen Laurel
Mixed Use Update
Clayton, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure E-1

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TRAFFIC IMPACT ANALYSIS – UPDATE
GLEN LAUREL MIXED USE
CLAYTON, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Glen Laurel development to be located in the southeast quadrant of the intersection of NC 42 and Glen Laurel Road in Clayton, North Carolina. It should be noted that this TIA is an update of a previous TIA, Hunt Property, submitted in November of 2015. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed in 2022, is assumed to consist of the following uses:

- 336 units Multi-Family (Low-Rise) Housing
- 10,000 sq. ft. Bank
- 96,000 sq. ft. Shopping Center
- 14,000 sq. ft. Day Care
- 120,900 sq. ft. Mini-Warehouse
- 77 units Congregate Care Facility
- 66 beds Assisted Living

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2019) Traffic Conditions
- Background (2022) Traffic Conditions
- Combined (2022) Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located in the southeast quadrant of the intersection of US 70 Business and Glen Laurel Road in Clayton, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Clayton (Town) and consists of the following existing intersections:

- NC 42 and US 70 Business
- NC 42 and East Front Street
- NC 42 and Glen Laurel Road
- Glen Laurel Road and Site Drive 1
- NC 42 and Site Drive 2 (Beech Landing)

Refer to Appendix A for the approved scoping documentation.

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2022, is assumed to consist of the following uses:

- 336 units Multi-Family (Low-Rise) Housing
- 10,000 sq. ft. Bank
- 96,000 sq. ft. Shopping Center
- 14,000 sq. ft. Day Care
- 120,900 sq. ft. Mini-Warehouse
- 77 units Congregate Care Facility
- 66 beds Assisted Living

Site access is proposed via one full movement intersection on Glen Laurel Road. Site access will also be provided via a new signalized intersection and a right-in/right-out movement on NC 42. Refer to Figure 2 for a copy of the preliminary site plan.

1.3. Adjacent Land Uses

The proposed development is located in an area consisting primarily of undeveloped land and residential development.

1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	Maintained By	2017 AADT (vpd)
US 70 Business	US 70 BUS	4-lane divided	45 mph	NCDOT	34,000
NC 42	NC 42	4-lane divided	50 mph	NCDOT	24,000
East Front Street	N/A	2-lane undivided	35 mph	City	2,860*
Glen Laurel Road	N/A	2-lane undivided	45 mph	City	6,400*

* ADT based on the traffic counts from 2019 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.

N

LEGEND

Proposed Site Location

Study Intersection

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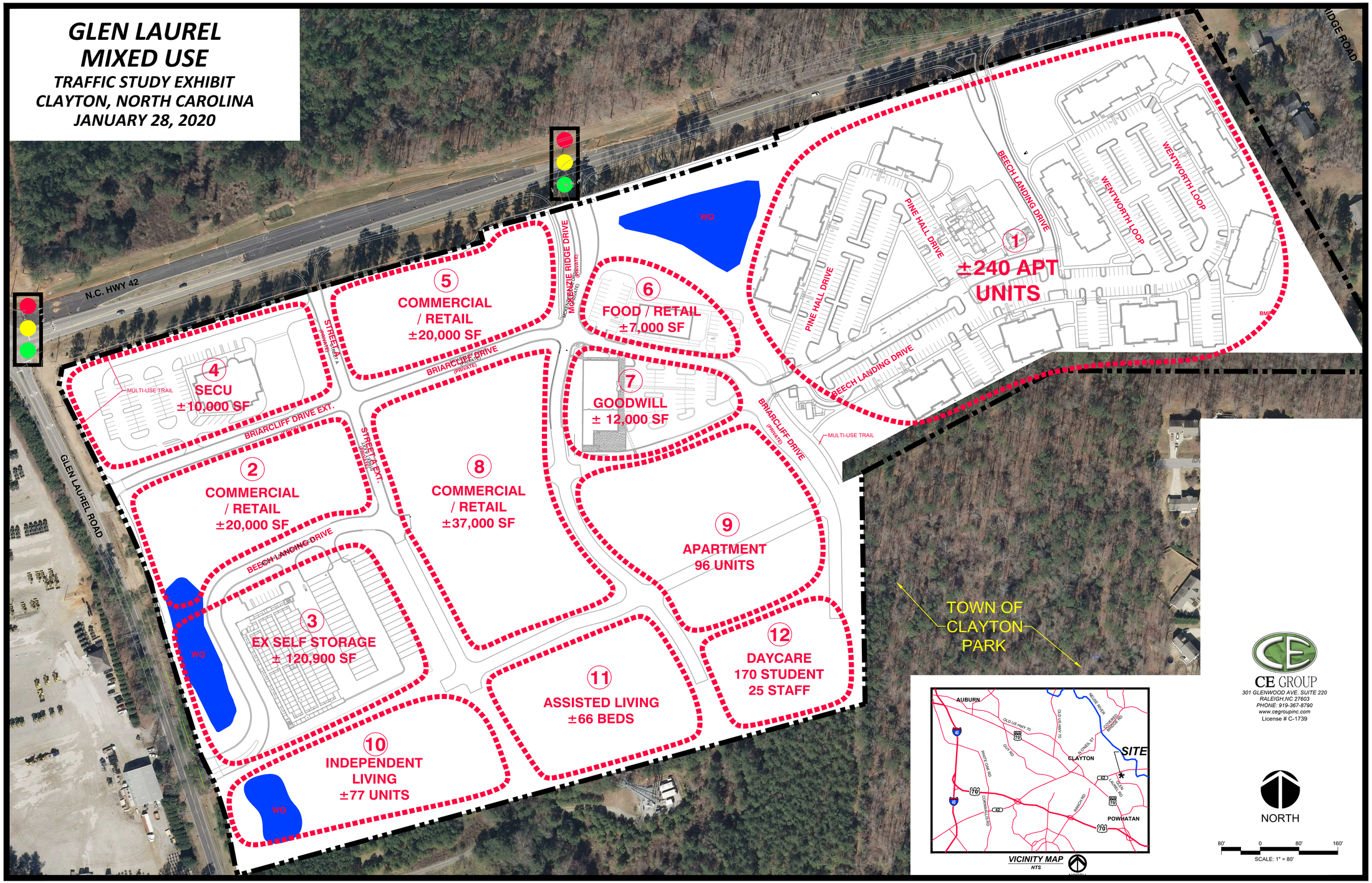
GLEN LAUREL MIXED USE

TRAFFIC STUDY EXHIBIT
CLAYTON, NORTH CAROLINA
JANUARY 28, 2020



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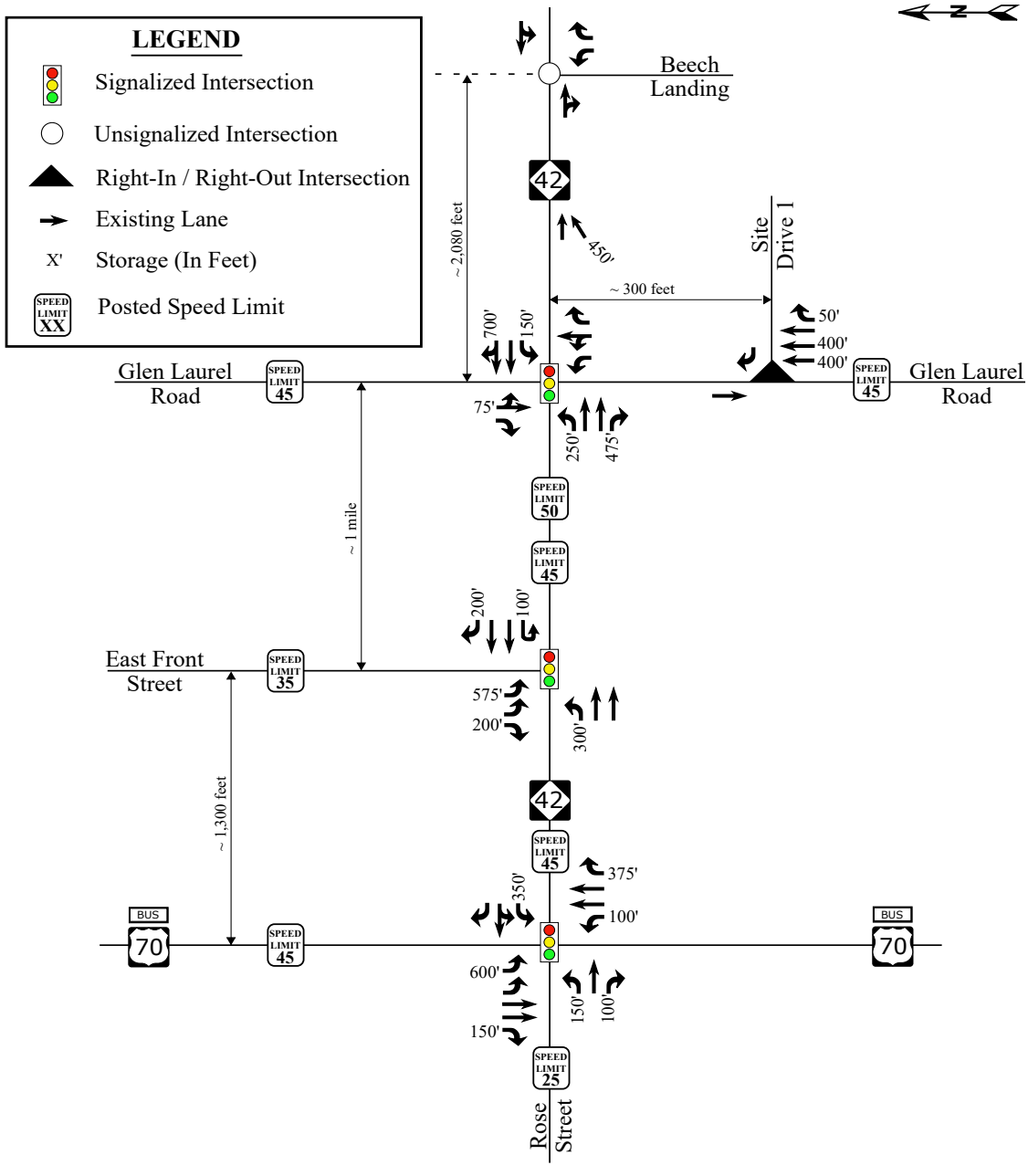

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Mixed Use Update
Clayton, NC

Existing
Lane Configurations

Scale: Not to Scale

Figure 3

2. EXISTING (2019) PEAK HOUR CONDITIONS

2.1. Existing (2019) Peak Hour Traffic

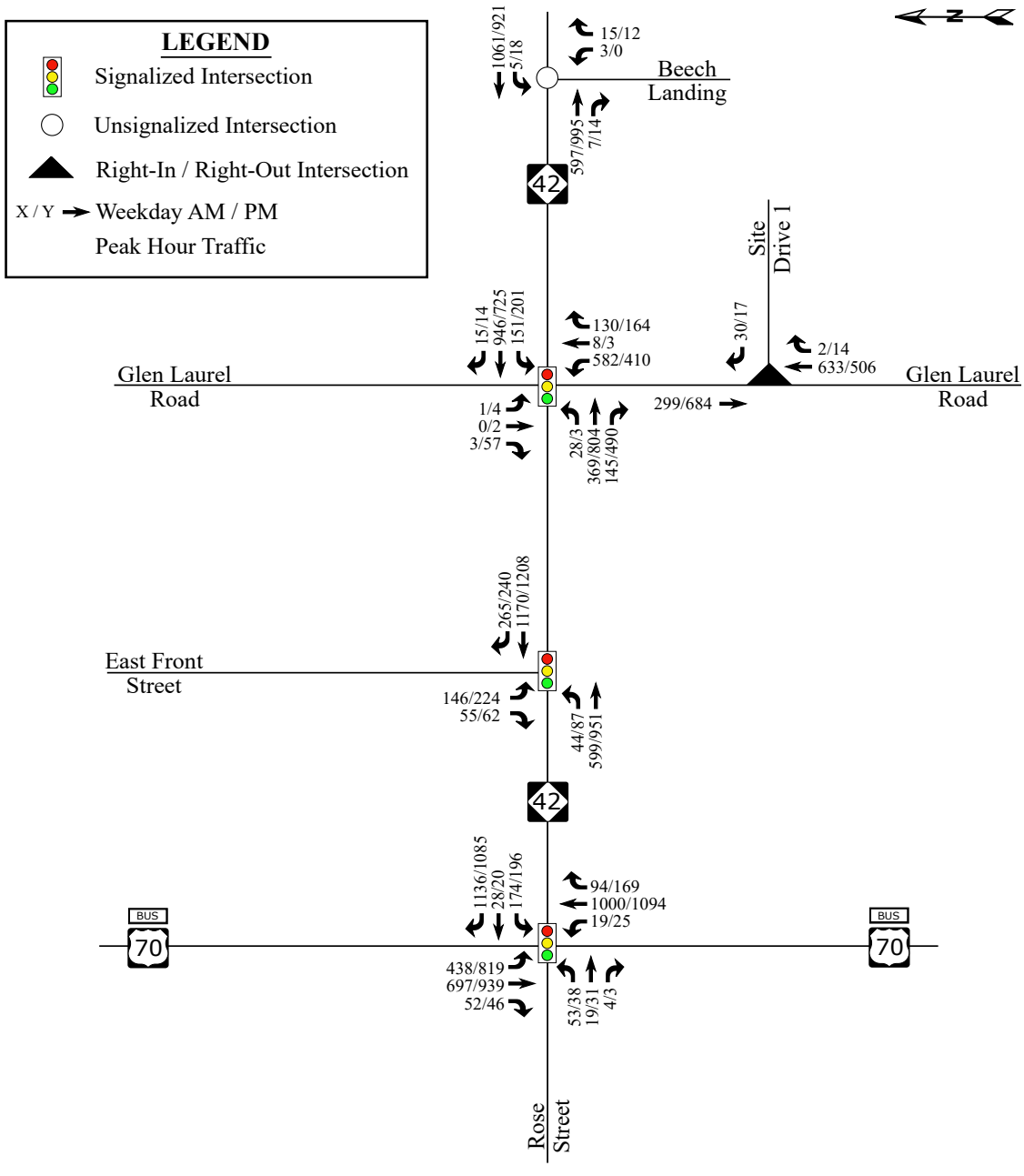
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in September of 2019 by RKA during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- NC 42 and US 70 Business
- NC 42 and East Front Street
- NC 42 and Glen Laurel Road
- Glen Laurel Road and Site Drive 1
- NC 42 and Site Drive 2 (Beech Landing)

It should be noted that some parcels and site drives of the development are built-out; therefore, turning movements at the site drives were counted. These movement volumes were removed from the network and instead taken into consideration in the site trip generation, which is a more appropriate and conservative approach for this study. Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figures 4a, 4b, and 4c for existing (2019) weekday AM and PM peak hour traffic volumes, existing site traffic volumes to be removed from the network, and modified existing (2019) peak hour traffic volumes, respectively. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of Existing (2019) Peak Hour Traffic

The existing (2019) weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. Signal information was obtained from NCDOT and is included in Appendix C. It should be noted that all signalized intersections analyzed were coordinated and Congestion Management minimum cycle lengths were met for all scenarios. The results of the analysis are presented in Section 7 of this report.



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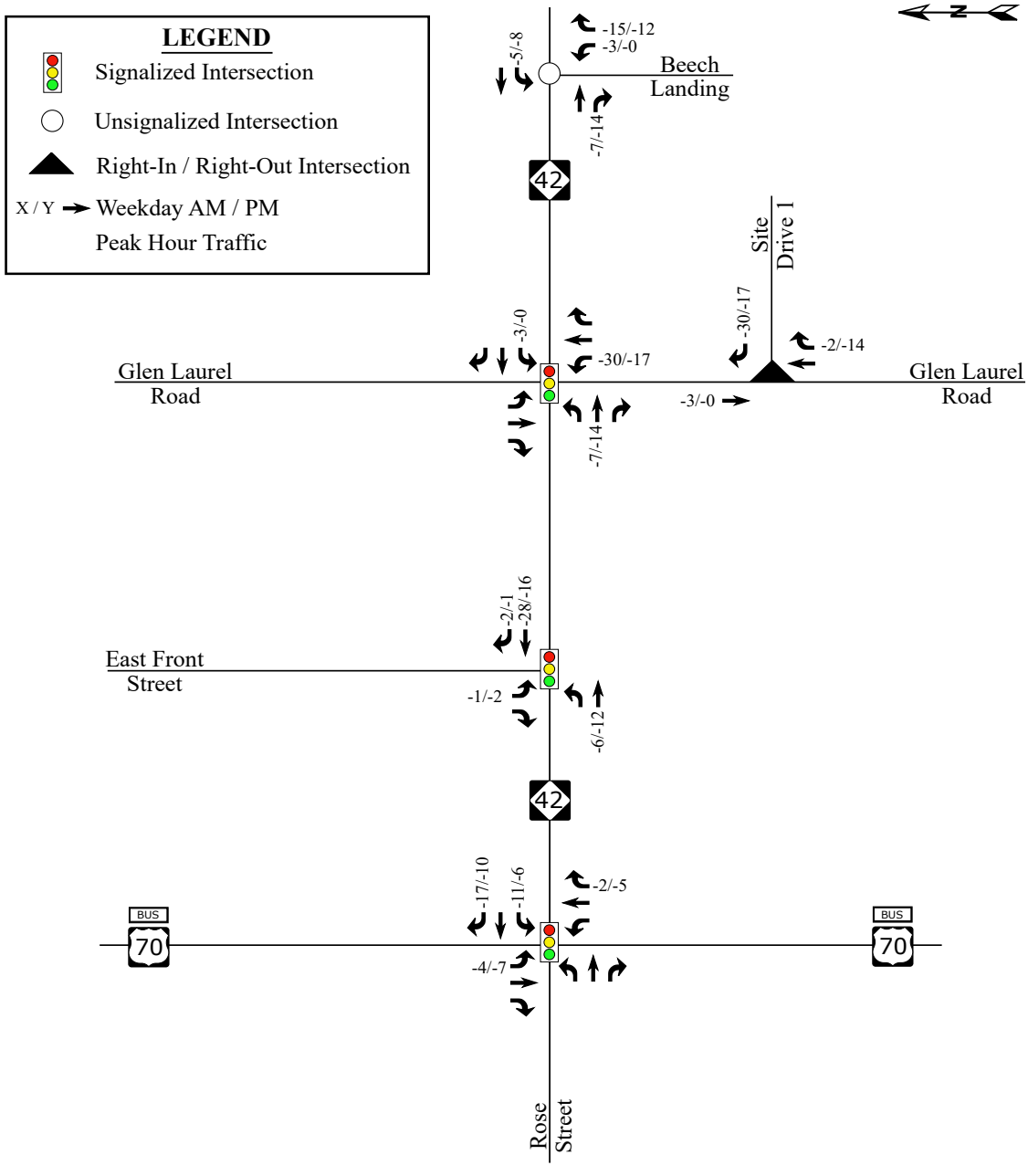
Existing (2019)
Peak Hour Traffic

Scale: Not to Scale

Figure 4a



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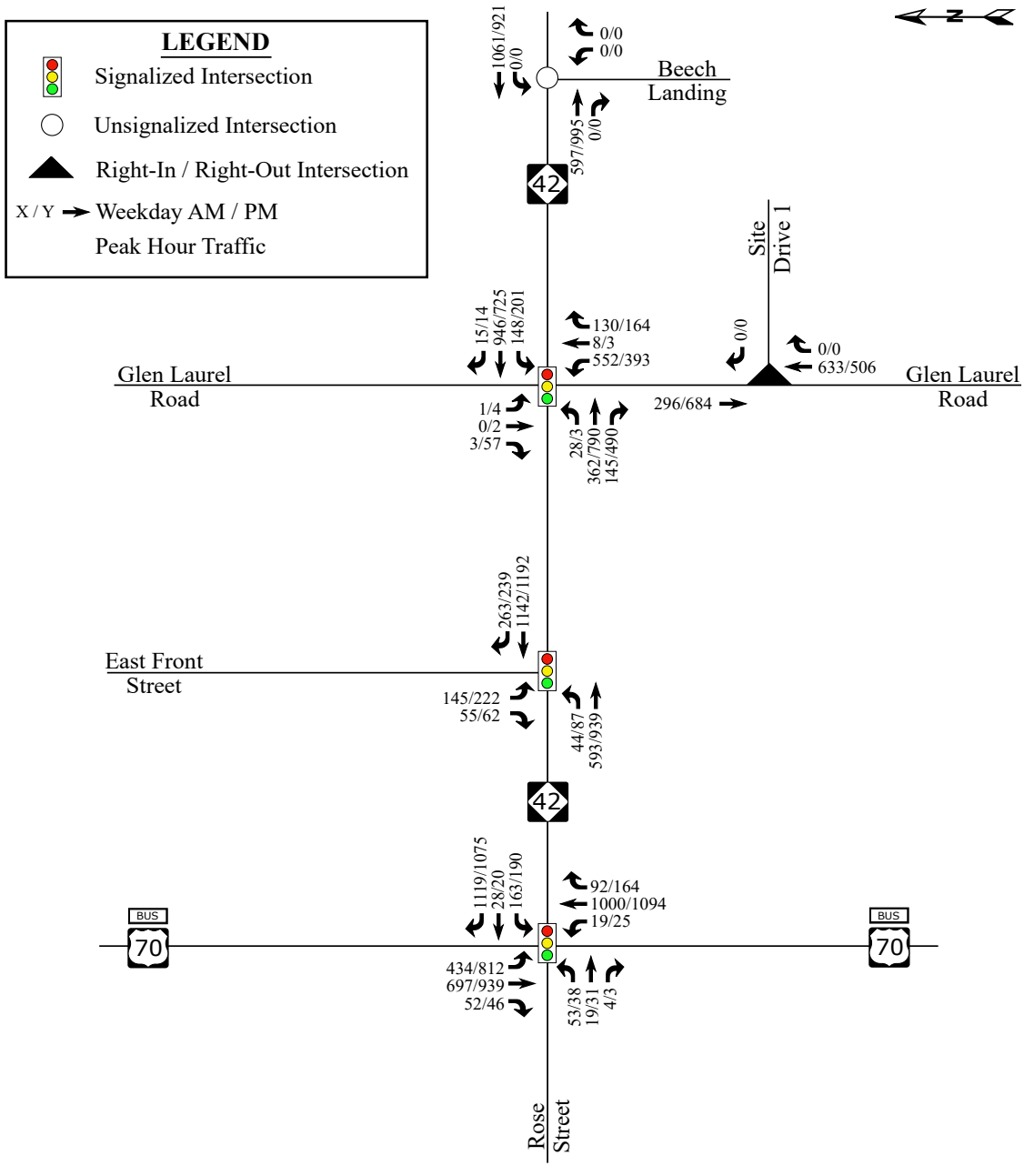
Glen Laurel
Mixed Use Update
Clayton, NC

Existing Site Traffic to be Removed from Network

Scale: Not to Scale

Figure 4b



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Glen Laurel
Mixed Use Update
Clayton, NC

Modified Existing (2019)
Peak Hour Traffic

Scale: Not to Scale

Figure 4c

3. BACKGROUND (2022) PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, background traffic projections are needed. Background traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. Background traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of 3% would be used to generate projected (2022) weekday AM and PM peak hour traffic volumes.

3.2. Adjacent Development Traffic

Based on coordination with the NCDOT and the Town, it was determined there were no adjacent developments to consider with this study.

3.3. Future Roadway Improvements

Based on coordination with the NCDOT and the Town, it was determined State Transportation Improvement Program (STIP) project R-3825B was to be considered in this study. This project involves the widening of NC 42 from Glen Laurel Road to Buffalo Road in Johnston County.

The STIP R-3825B roadway plans can be found in Appendix D.

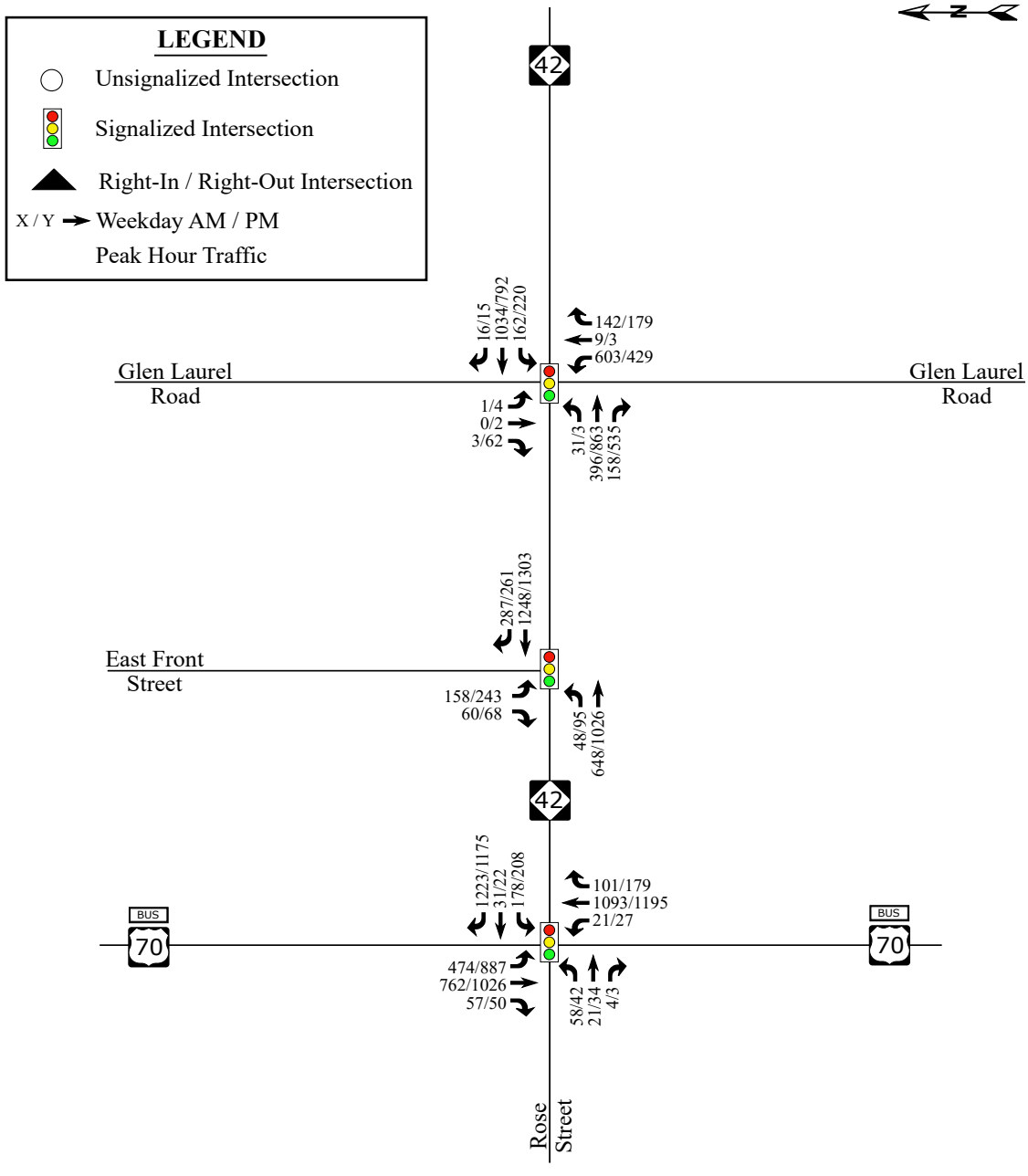
3.4. Background (2022) Peak Hour Traffic Volumes

The background (2022) traffic volumes were determined by projecting the existing (2019) peak hour traffic to the year 2022. Refer to Figure 5 for an illustration of the background (2022) peak hour traffic volumes at the study intersections.

3.5. Analysis of Background (2022) Peak Hour Traffic Conditions

The background (2022) AM and PM peak hour traffic volumes at the study intersections were

analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.



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Glen Laurel
Mixed Use Update
Clayton, NC

Background (2022)
Peak Hour Traffic

Scale: Not to Scale

Figure 5

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of approximately 336 multi-family townhomes, a 10,000 sq. ft. bank, a 96,000 sq. ft. shopping center, a 10,000 sq. ft. day care, a 120,900 sq. ft. mini-warehouse, a congregate care facility with 77 units, and assisted senior living with 66 beds. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Table 2 provides a summary of the trip generation potential for the site.

Table 2: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multi-Family (Low-Rise) Housing (220)	336 dwellings	2,500	35	116	110	64
Bank (912)	10,000 sq. ft.	1,000	55	40	102	103
Shopping Center (820)	96,000 sq. ft.	5,900	124	76	253	274
Day Care (565)	10,000 sq. ft.	670	82	72	73	83
Mini-Warehouse (151)	120,900 sq. ft.	190	7	5	10	11
Congregate Care Facility (253)	77 units	160	4	2	8	8
Assisted Living (254)	66 beds	180	8	4	10	12
Total Trips		**10,600**	**315**	**315**	**566**	**555**
Internal Capture (1% AM, 2% PM)			*-3*	*-3*	*-11*	*-11*
Total External Trips			**312**	**312**	**555**	**544**
Pass-By Trips: Shopping Center (34% PM)			--	--	*-88*	*-88*
Pass-By Trips: Drive-In Bank (29% AM, 35% PM)			*-14*	*-14*	*-35*	*-35*
Total Primary Trips			**298**	**298**	**432**	**421**

It is estimated that the proposed development will generate approximately 10,600 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 630 trips (315 entering and 315 exiting) will occur during the AM peak hour and 1,122 trips (566 entering and 555 exiting) will occur during the PM peak hour.

Internal capture of trips between the office, residential, and retail uses was considered in this study. Internal capture is the consideration for trips that will be made within the site between different land uses, so the vehicle technically never leaves the internal site but can still be considered as a trip to that specific land use. Internal capture typically only considers trips between residential, office, and retail/restaurant land uses. Based on ITE 10th Edition methodology, an AM peak hour internal capture rate of 1% and a PM peak hour internal capture rate of 2% was applied to the total trips. The internal capture reductions are expected to account for approximately 6 trips (3 entering and 3 exiting) during the AM peak hour and 22 trips (11 entering and 11 exiting) trips during the PM peak hour.

Pass-by trips were also taken into consideration in this study. Pass-by trips are made by the traffic already using the adjacent roadway, entering the site as an intermediate stop on their way to another destination. Pass-by percentages are applied to site trips after adjustments for internal capture. Pass-by trips are expected to account for approximately 28 trips (14 entering and 14 exiting) during the weekday AM peak hour and approximately 246 trips (123 entering and 123 exiting) during the weekday PM peak hour. It should be noted that the pass-by trips were balanced, as it is likely that these trips would enter and exit in the same hour.

The total primary site trips are the calculated site trips after the reduction for internal capture and pass-by trips. Primary site trips are expected to generate approximately 596 trips (298 entering and 298 exiting) during the weekday AM peak hour and 853 trips (432 entering and 421 exiting) will occur during the weekday PM peak hour.

4.2. Site Trip Distribution and Assignment

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment.

It is estimated that the residential site trips will be distributed as follows:

- 40% to/from the north via US 70 Business
- 5% to/from the north via East Front Street
- 20% to/from the east via NC 42
- 25% to/from the south via US 70 Business
- 10% to/from the south via Glen Laurel Road

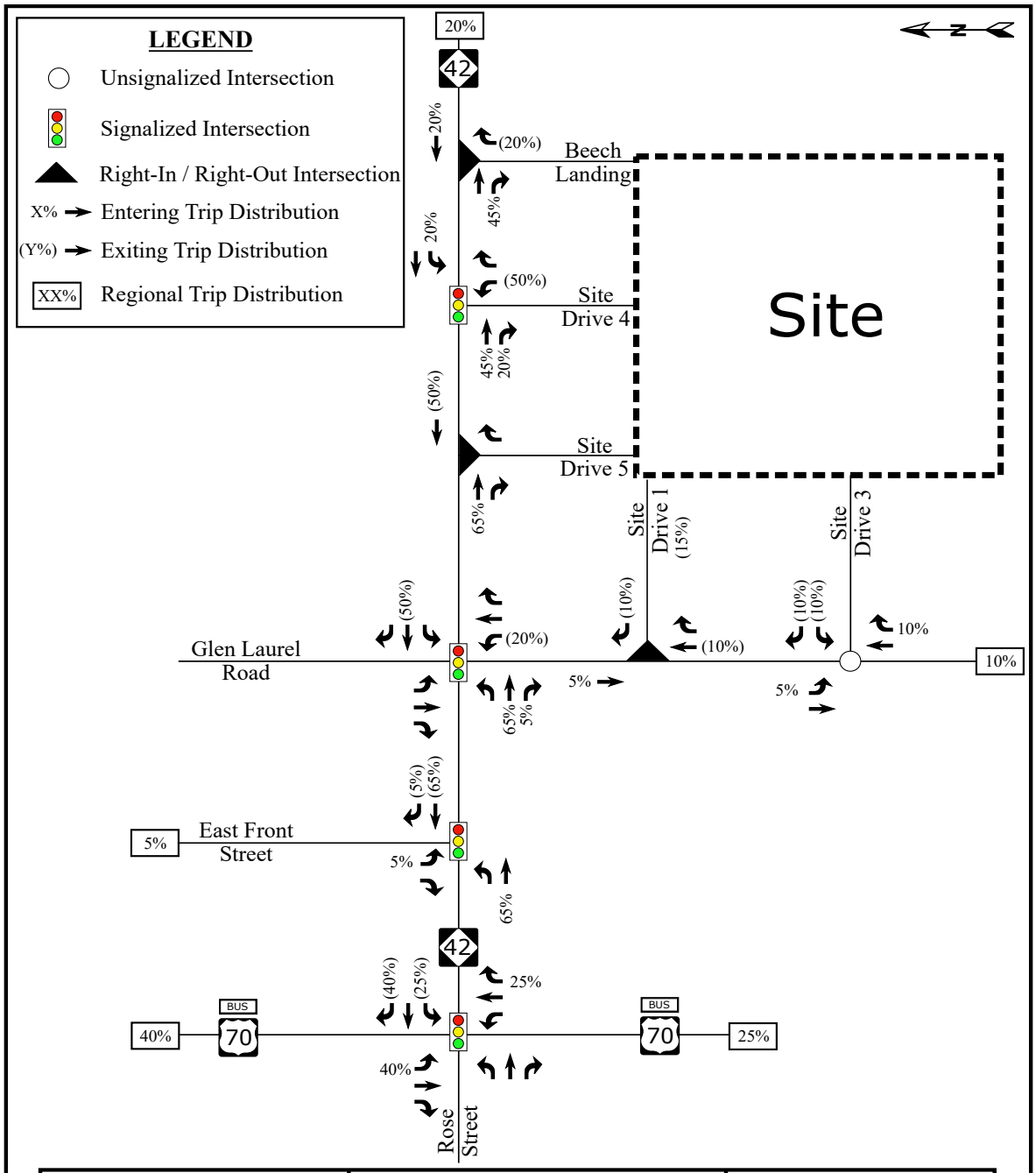
It is estimated that the non-residential site trips will be distributed as follows:

- 25% to/from the north via US 70 Business
- 10% to/from the north via East Front Street
- 40% to/from the east via NC 42
- 15% to/from the south via Glen Laurel Road
- 10% to/from the south via US 70 Business

The residential and non-residential site trip distributions are shown in Figure 6a and 6b, respectively. Refer to Figures 7a and 7b for the residential and non-residential site trip assignments, respectively.

The pass-by site trips were distributed based on existing traffic patterns with consideration given to the proposed driveway access and site layout. Refer to Figure 8 for the pass-by site trip distribution. Pass-by site trips are shown in Figure 9.

The total site trips were determined by adding the primary site trips and the pass-by site trips. Refer to Figure 10 for the total peak hour site trips at the study intersections.



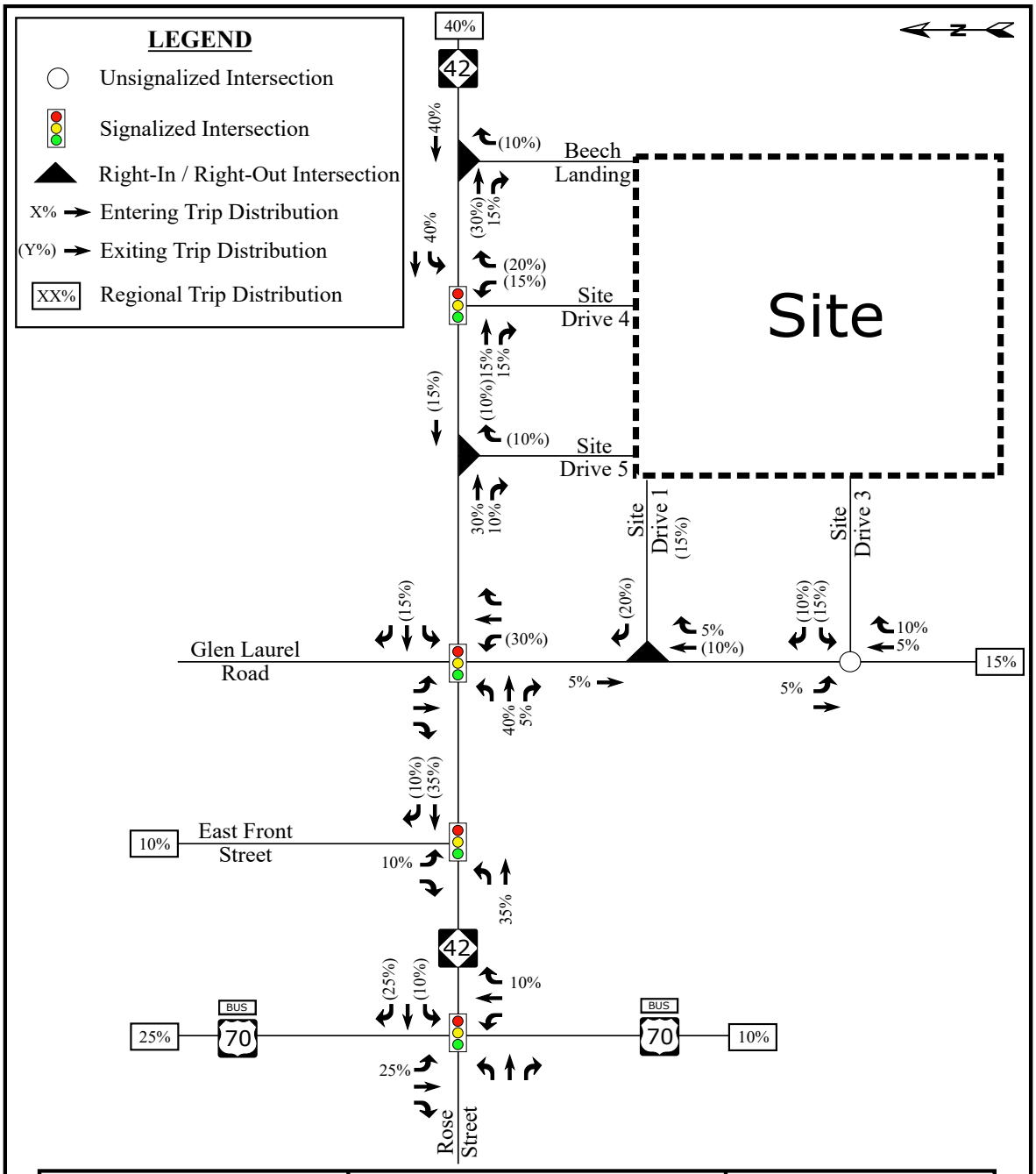
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Residential
Site Trip Distribution

Scale: Not to Scale

Figure 6a



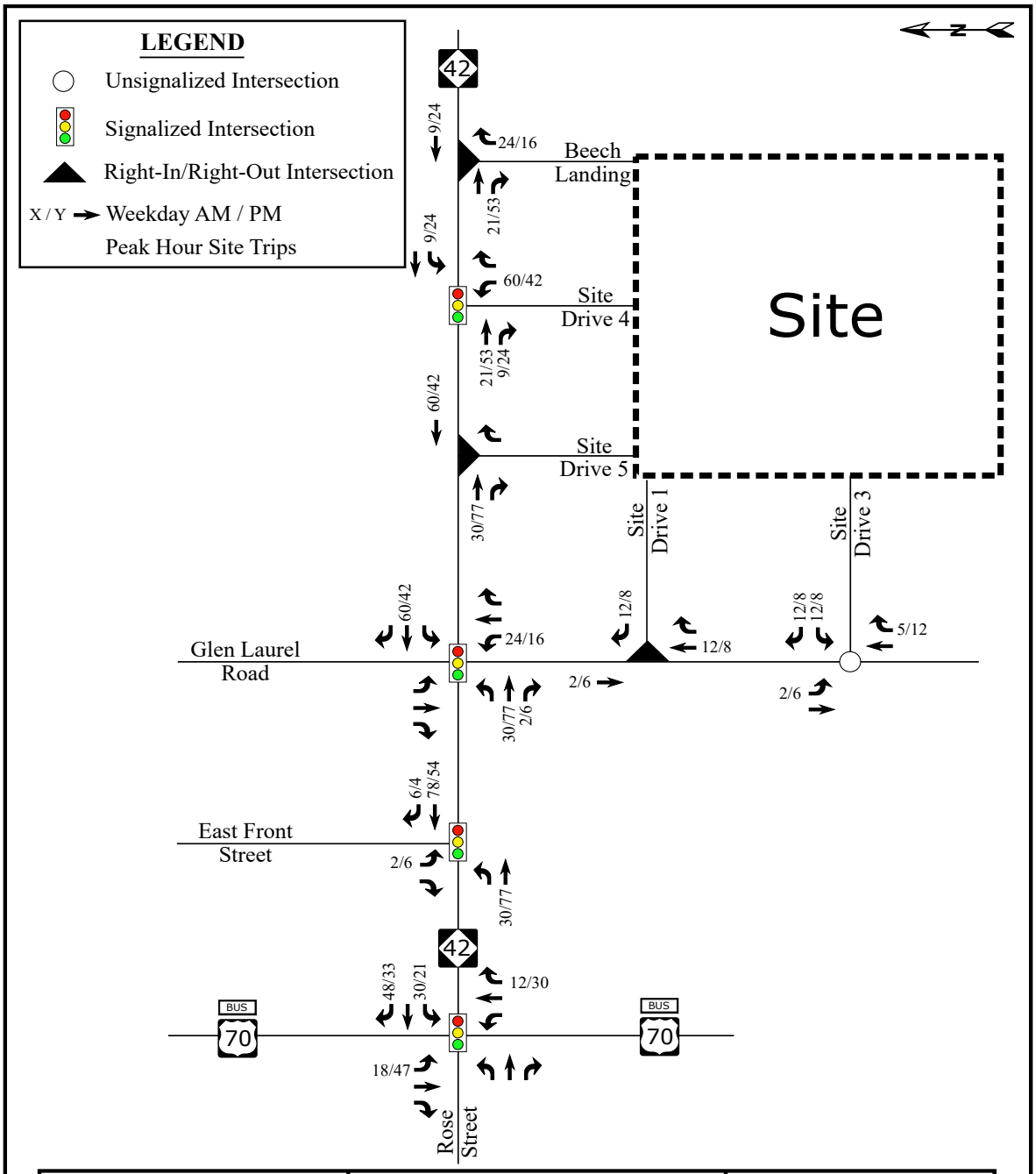
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Non-Residential
Site Trip Distribution

Scale: Not to Scale

Figure 6b



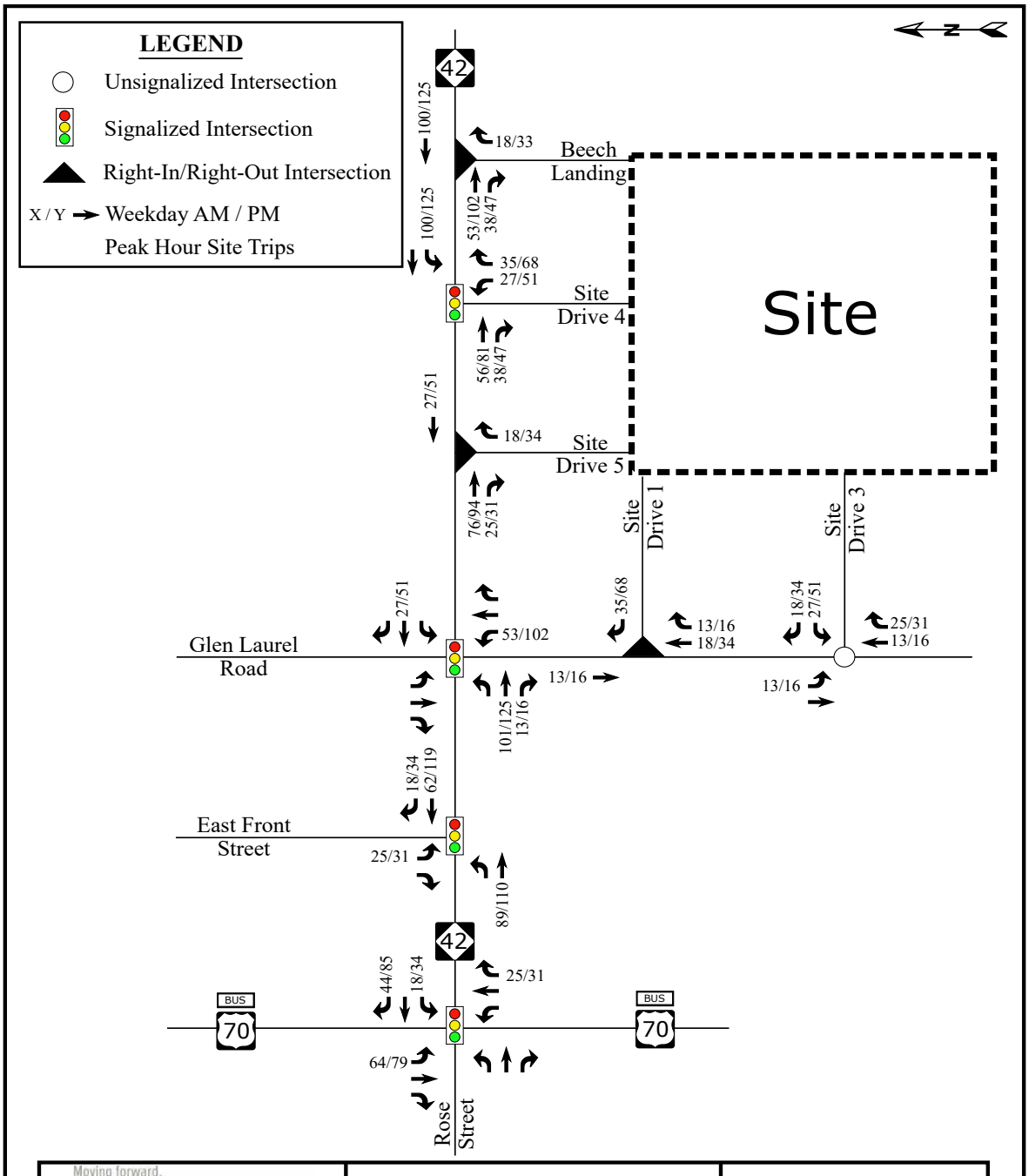
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Residential
Site Trip Assignment

Scale: Not to Scale

Figure 7a



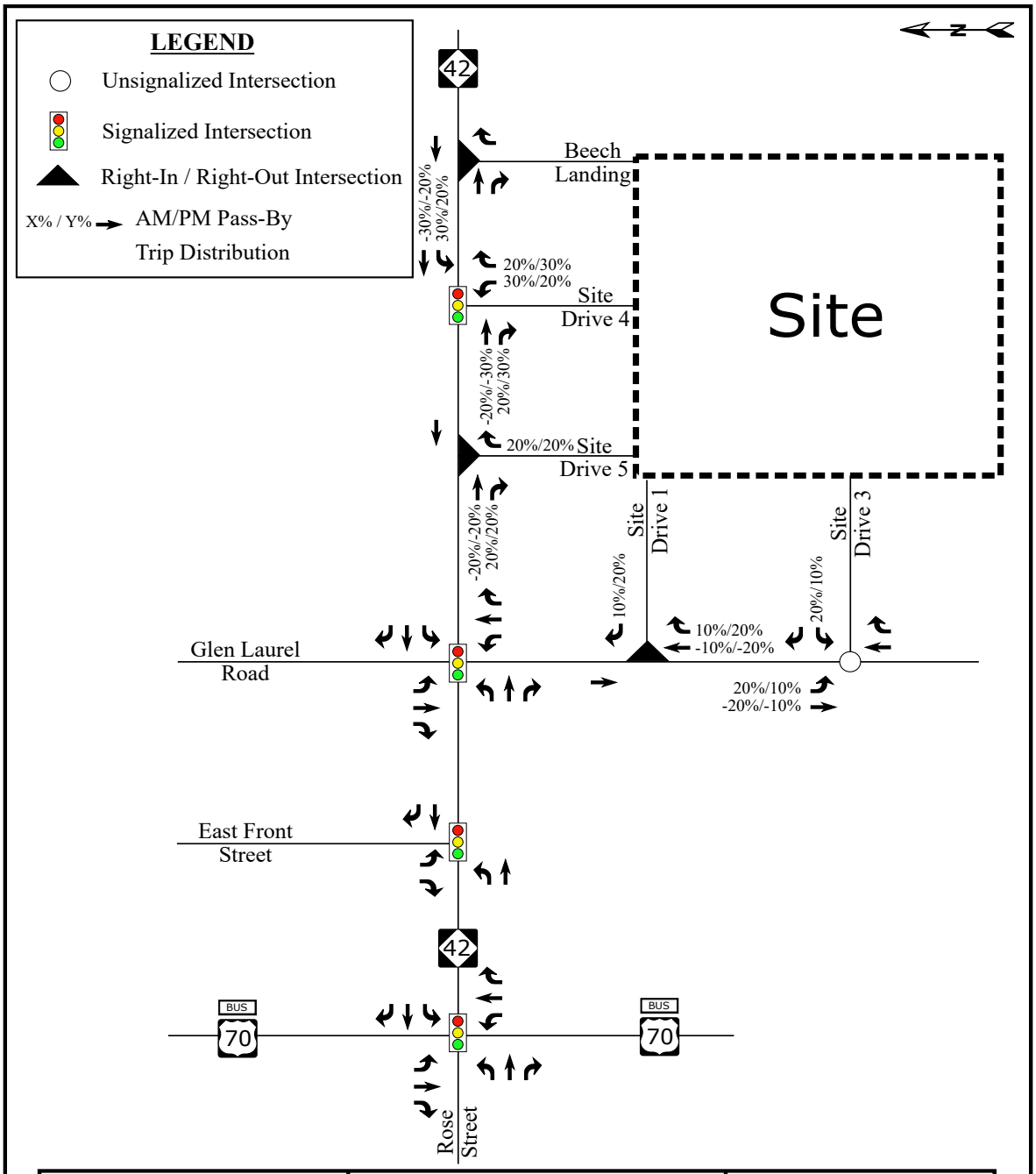
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Non-Residential
Site Trip Assignment

Scale: Not to Scale

Figure 7b

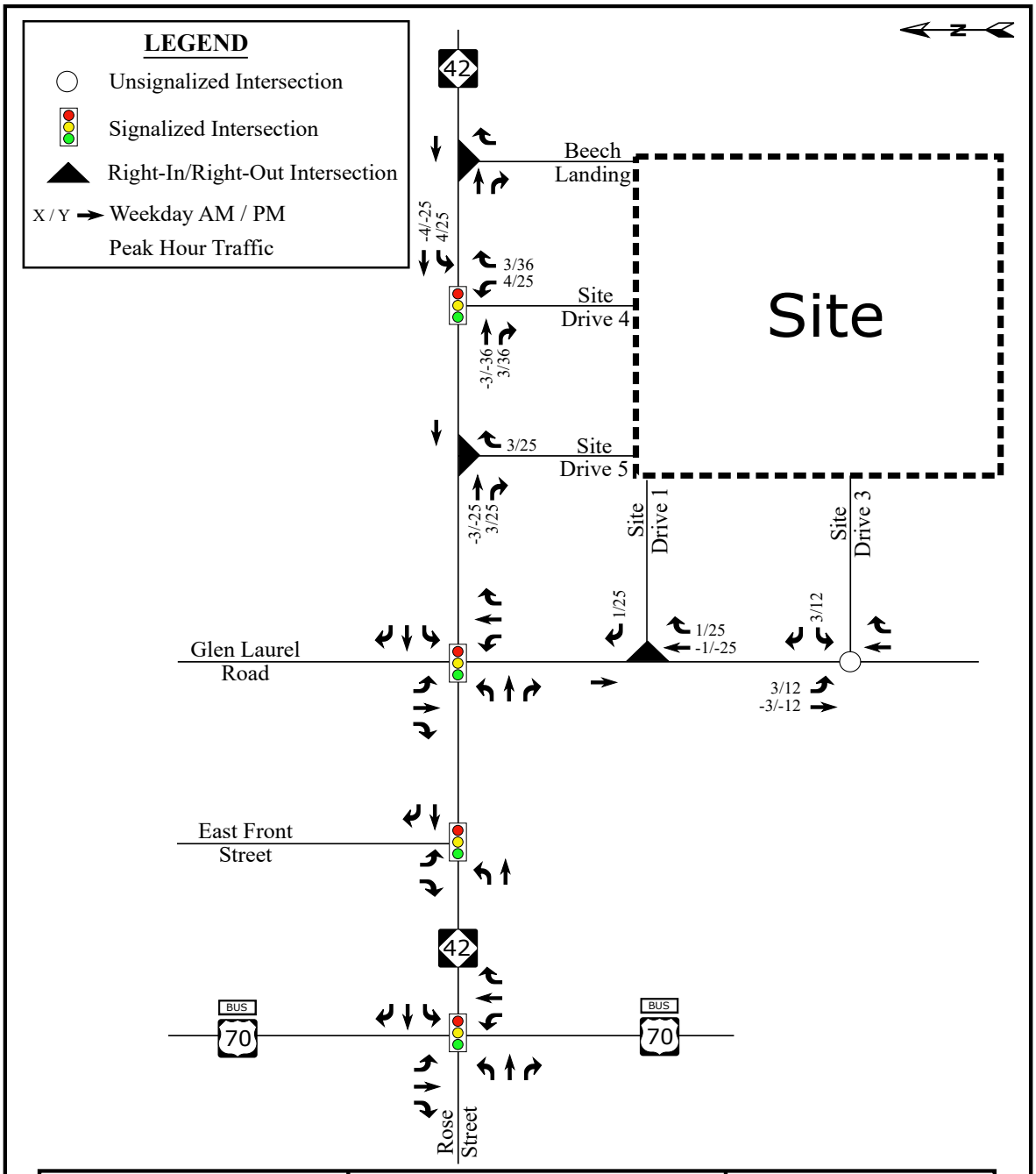


Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Pass-By
Trip Distribution

Scale: Not to Scale | Figure 8



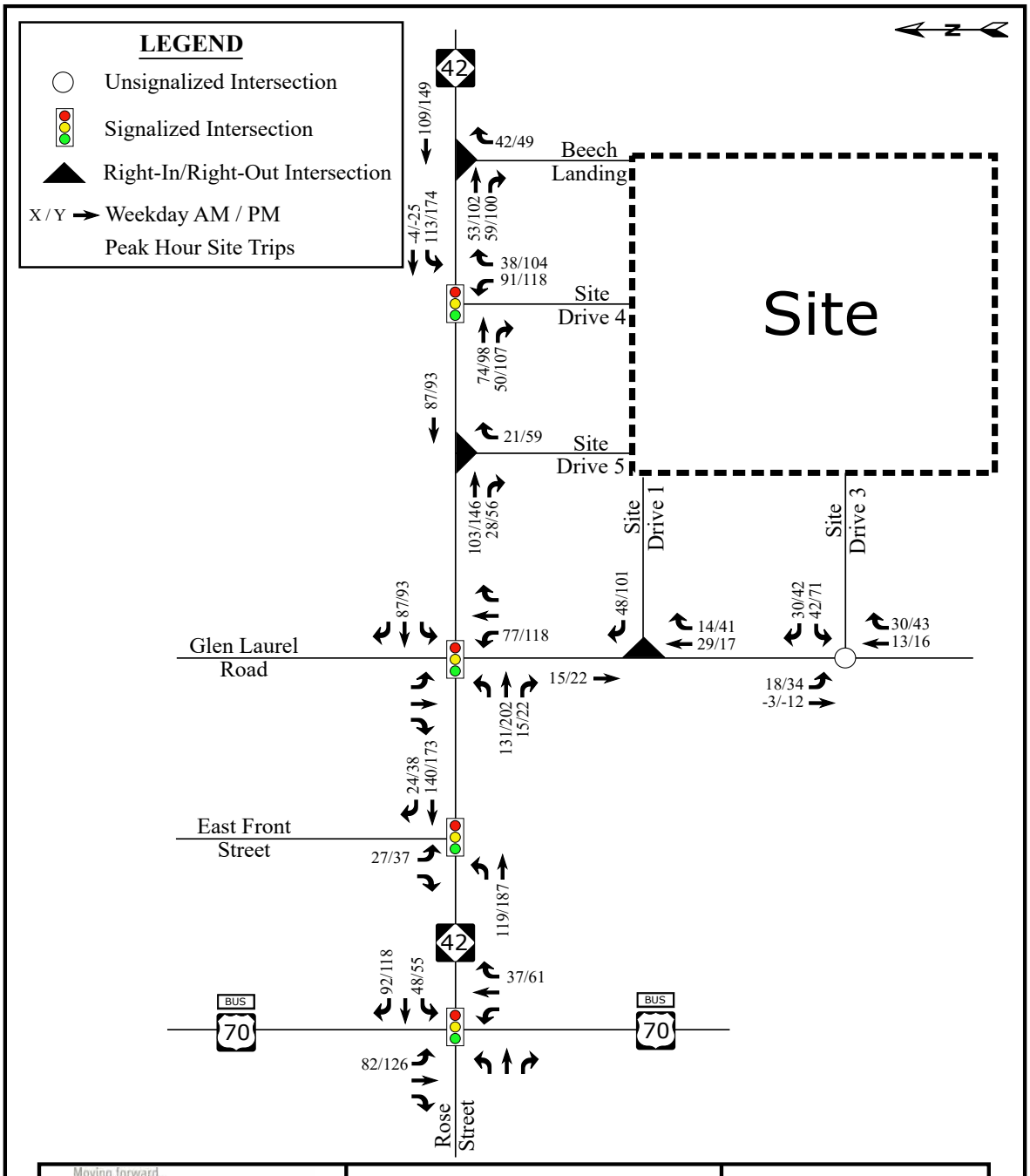
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Pass-By
Trip Assignment

Scale: Not to Scale

Figure 9



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Total Site Trip Assignment

Scale: Not to Scale

Figure 10

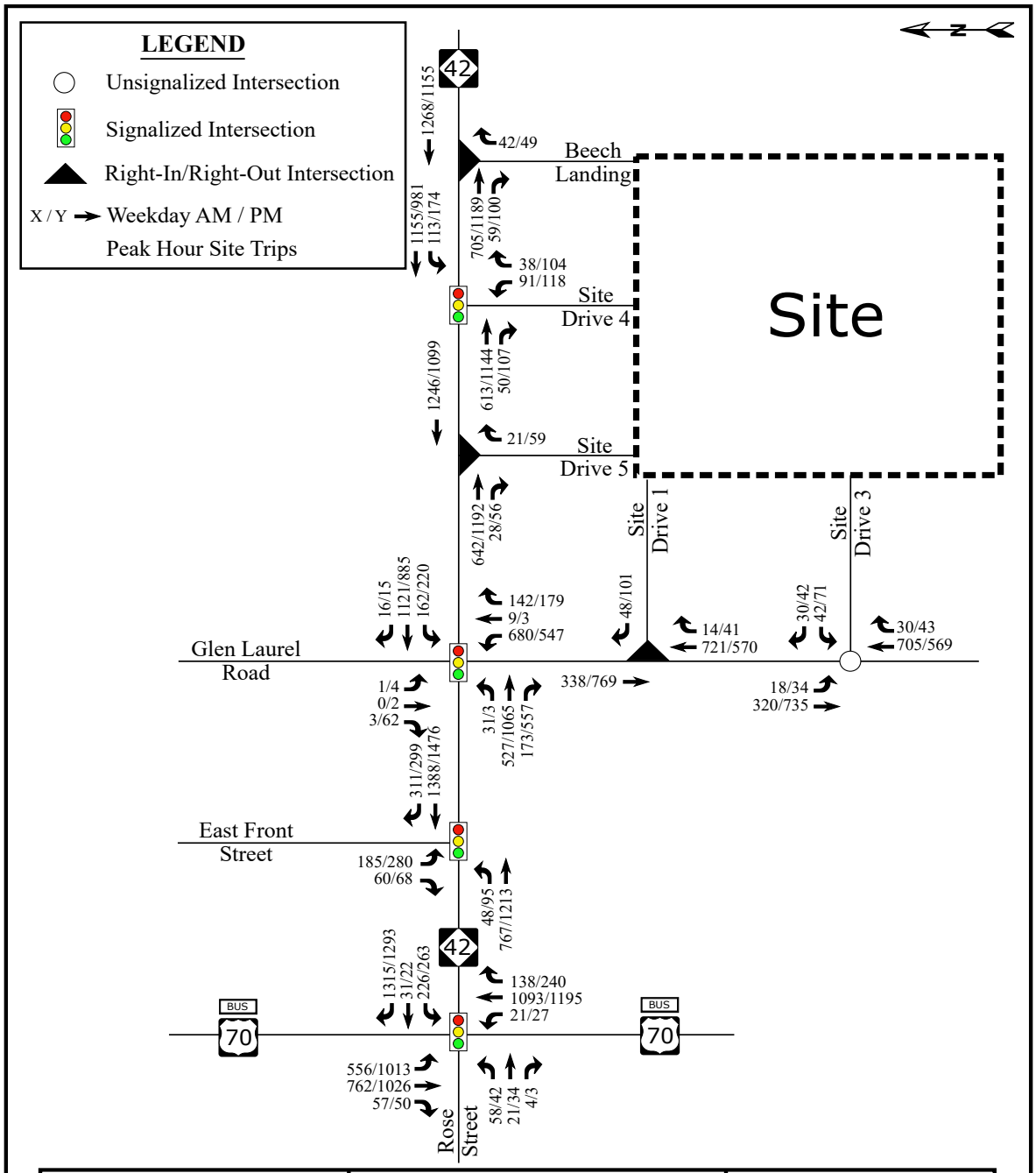
5. COMBINED (2022) TRAFFIC CONDITIONS

5.1. Combined (2022) Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the background (2022) traffic volumes to determine the combined (2022) traffic volumes. Refer to Figure 11 for an illustration of the combined (2022) peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of Combined (2022) Peak Hour Traffic

Study intersections were analyzed with the combined (2022) traffic volumes using the same methodology previously discussed for existing and background traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Combined (2022)
Peak Hour Traffic

Scale: Not to Scale

Figure 11

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual, 6th Edition* (HCM) published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 10.3), was used to complete the analyses for most of the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level "F" where breakdown conditions are evident. Refer to Table 3 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 3: Highway Capacity Manual – Levels-of-Service and Delay

UNSIGNALIZED INTERSECTION		SIGNALIZED INTERSECTION	
LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

6.1 Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the NCDOT Congestions Management Guidelines.

7. CAPACITY ANALYSIS

7.1. US 70 Business and NC 42

The existing signalized intersection of US 70 Business and NC 42 was analyzed under existing (2019), background (2022), and combined (2022) traffic conditions with existing lane configurations and traffic control. Refer to Table 4 for a summary of the analysis results. Refer to Appendix E for the Synchro capacity analysis reports.

Table 4: Analysis Summary of US 70 Business and NC 42

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB	1 LT, 1 TH, 1 RT	E	C (32)	E	D (37)
	WB	1 LT, 1 LT-TH, 1 RT	C		C	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	
Background (2022) Conditions	EB	1 LT, 1 TH, 1 RT	E	C (35)	F	D (40)
	WB	1 LT, 1 LT-TH, 1 RT	C		C	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	
Combined (2022) Conditions	EB	1 LT, 1 TH, 1 RT	E	D (39)	F	D (47)
	WB	1 LT, 1 LT-TH, 1 RT	D		D	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	

Capacity analysis of existing (2019), background (2022), and combined (2022) traffic conditions indicates the intersection of US 70 Business and NC 42 is expected to operate at an overall LOS D or better during both weekday AM and PM peak hours. The eastbound approach is expected to operate at LOS F in the weekday PM peak hour of the future scenarios; however, the eastbound approach delay is not expected to increase significantly.

7.2. NC 42 and East Front Street

The existing signalized intersection of NC 42 and East Front Street was analyzed under existing (2019), background (2022), and combined (2022) traffic conditions with existing lane configurations and traffic control. Refer to Table 5 for a summary of the analysis results. Refer to Appendix F for the Synchro capacity analysis reports.

Table 5: Analysis Summary of NC 42 and East Front Street

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (12)	A B E	B (15)
Background (2022) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (12)	B B E	B (18)
Combined (2022) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (13)	B B E	C (22)

Capacity analysis of existing (2019) and background (2022) traffic conditions indicate the intersection of NC 42 and East Front Street are expected to operate at an overall LOS B during both weekday AM and PM peak hours. Under combined (2022) traffic conditions, the intersection is expected to operate at an overall LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour. The southbound approach is expected to operate at LOS E in the future scenarios; however, the southbound approach delay is not expected to increase significantly.

7.3. NC 42 and Glen Laurel Road

The existing signalized intersection of NC 42 and Glen Laurel Road was analyzed under existing (2019), background (2022), and combined (2022) traffic conditions with existing lane configurations and traffic control. Refer to Table 6 for a summary of the analysis results. Refer to Appendix G for the Synchro capacity analysis reports.

Table 6: Analysis Summary of NC 42 and Glen Laurel Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB	1 LT, 2 TH, 1 RT	A	C (30)	A	C (27)
	WB	1 LT, 1 TH, 1 TH-RT	B		C	
	NB	1 LT, 1 TH-RT	E		E	
	SB	1 LT-TH, 1 RT	E		F	
Background (2022) Conditions	EB	1 LT, 2 TH, 1 RT	B	C (32)	B	C (30)
	WB	1 LT, 1 TH, 1 TH-RT	C		C	
	NB	1 LT, 1 TH-RT	E		E	
	SB	1 LT-TH, 1 RT	E		F	
Combined (2022) Conditions	EB	1 LT, 2 TH, 1 RT	B	D (37)	C	D (38)
	WB	1 LT, 1 TH, 1 TH-RT	C		C	
	NB	1 LT, 1 TH-RT	E		E	
	SB	1 LT-TH, 1 RT	E		F	

Capacity analysis of existing (2019) and background (2022) traffic conditions indicates the intersection of NC 42 and Glen Laurel Road is expected to operate at an overall LOS C during both weekday AM and PM peak hours. Under combined (2022) traffic conditions, the intersection is expected to operate at an overall LOS D during both the weekday AM and PM peak hours. There is a LOS degradation from C to D in the weekday PM peak hour between the background (2022) conditions and the combined (2022) conditions. No delay or queue impacts were identified.

7.4. Glen Laurel Road and Site Drive 1

The proposed signalized intersection of Glen Laurel and Site Drive 1 was analyzed under combined (2022) traffic conditions with proposed lane configurations and traffic control. Refer to Table 7 for a summary of the analysis results. Refer to Appendix H for the Synchro capacity analysis reports.

Table 7: Analysis Summary of Glen Laurel and Site Drive 1

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	WB NB SB	**1 RT** 3 TH, **1 RT** 1 TH	B[1] -- --	N/A	B[1] -- --	N/A

1. Level of service for minor-street approach.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of Glen Laurel Road and Site Drive 1 are expected to operate at LOS B during both the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the northbound approach.

7.5. NC 42 and Site Drive 2 (Beech Landing)

The proposed unsignalized intersection of NC 42 and Site Drive 2 (Beech Landing) was analyzed under combined (2022) traffic conditions with proposed lane configurations and traffic control. Refer to Table 8 for a summary of the analysis results. Refer to Appendix I for the Synchro capacity analysis reports.

Table 8: Analysis Summary of NC 42 and Site Drive 2 (Beech Landing)

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** 2 TH **1 RT**	-- -- B[1]	N/A	-- -- C[1]	N/A

1. Level of service for minor-street approach.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of NC 42 and Site Drive 2 (Beech Landing) is expected to operate at LOS C or better during the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the eastbound approach.

7.6. Glen Laurel Road and Site Drive 3

The proposed unsignalized intersection of Glen Laurel Road and Site Drive 3 was analyzed under combined (2022) traffic conditions with proposed lane configurations and traffic control. Refer to Table 9 for a summary of the analysis results. Refer to Appendix J for the Synchro capacity analysis reports.

Table 9: Analysis Summary of Glen Laurel Road and Site Drive 3

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	WB NB SB	**1 LT, 1 RT** 1 TH-**RT** **1 LT**, 1 TH	C[1] -- A[2]	N/A	F[1] -- A[2]	N/A

1. Level of service for minor-street approach.
2. Level of service for major-street left-turn movement.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of Glen Laurel Road and Site Drive 3 is expected to operate at LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour. The major-street left-turn movement at the intersection is expected to operate at LOS A during both the weekday AM and PM peak hours. It should be noted that the signal at the intersection of NC 42 and Glen Laurel Road is expected to provide some gaps in the southbound traffic, which may allow fewer delays for exiting traffic than shown in the analysis reports.

Right and left-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. A right-turn lane is recommended at the westbound approach. A left-turn lane is recommended at the southbound approach.

7.7. NC 42 and Site Drive 4

The proposed signalized intersection of NC 42 and Site Drive 4 was analyzed under combined (2022) traffic conditions with proposed lane configurations and traffic control. Refer to Table 10 for a summary of the analysis results. Refer to Appendix K for the Synchro capacity analysis reports.

Table 10: Analysis Summary of Glen Laurel Road and Site Drive 4

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** **1 LT**, 2 TH **2 LT, 1 RT**	B A E	B (14)	A B E	B (14)

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the intersection of NC 42 and Site Drive 4 is expected to operate at an overall LOS B during the weekday AM and PM peak hours.

Right and left-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. A right-turn lane is recommended at the eastbound approach. A left-turn lane is recommended at the westbound approach.

7.8. NC 42 and Site Drive 5

The proposed unsignalized intersection of NC 42 and Site Drive 5 was analyzed under combined (2022) traffic conditions with proposed lane configurations and traffic control. Refer to Table 11 for a summary of the analysis results. Refer to Appendix L for the Synchro capacity analysis reports.

Table 11: Analysis Summary of Glen Laurel Road and Site Drive 5

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** 2 TH **1 RT**	-- -- B[1]	N/A	-- -- C[1]	N/A

1. Level of service for minor-street approach.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of NC 42 and Site Drive 5 expected to operate at LOS C or better during the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the eastbound approach.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Glen Laurel mixed-use development, to be located in the southeast quadrant of the intersection of NC 42 and Glen Laurel Road in Clayton, North Carolina. The proposed development is expected to be built out in 2022. Site access is proposed via one full movement intersection on Glen Laurel Road. Site access will also be provided via a new signalized intersection and a right-in/right-out movement on NC 42.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2020) Traffic Conditions
- Background (2022) Traffic Conditions
- Combined (2022) Traffic Conditions

Trip Generation

It is estimated that the proposed development will generate approximately 10,600 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, primary site trips are expected to generate approximately 596 trips (298 entering and 298 exiting) during the weekday AM peak hour and 853 trips (432 entering and 421 exiting) will occur during the weekday PM peak hour.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the Town's LDO and NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the exception of the intersections listed below. A summary of the study area intersections that are expected to need improvements are as follows:

Glen Laurel Road and Site Drive 3

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of Glen Laurel Road and Site Drive 3 is expected to operate at LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour. It should be noted that the signal at the intersection of NC 42 and Glen Laurel Road is expected to provide some gaps in the southbound traffic, which may allow fewer delays for exiting traffic than shown in the analysis reports.

9. RECOMMENDATIONS

Based on the findings of this study, the recommended improvements from the previous TIA, Hunt Property, suffice and no additional improvements are necessary. See a more detailed description of the recommended improvements below. Refer to Figure 12 for an illustration of the recommended lane configuration for the proposed development.

TIP R-3825 Improvements

NC 42 through Study Area

- Provide two through lanes on the eastbound and westbound approaches of NC 42 with a median.

Recommended Improvements by Developer

Glen Laurel Road and Site Drive 1

- Construct right-in/right-out westbound approach with one ingress and one egress lane.
- Provide an exclusive northbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for westbound approach.

NC 42 and Site Drive 2 (Beech Landing)

- Construct right-in/right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.

Glen Laurel Road and Site Drive 3

- Construct westbound approach with one ingress and two egress lanes striped as one left-turn lane with 100 feet of storage and one right-turn lane.
- Provide an exclusive southbound left-turn lane with at least 100 feet of storage and appropriate deceleration and taper.

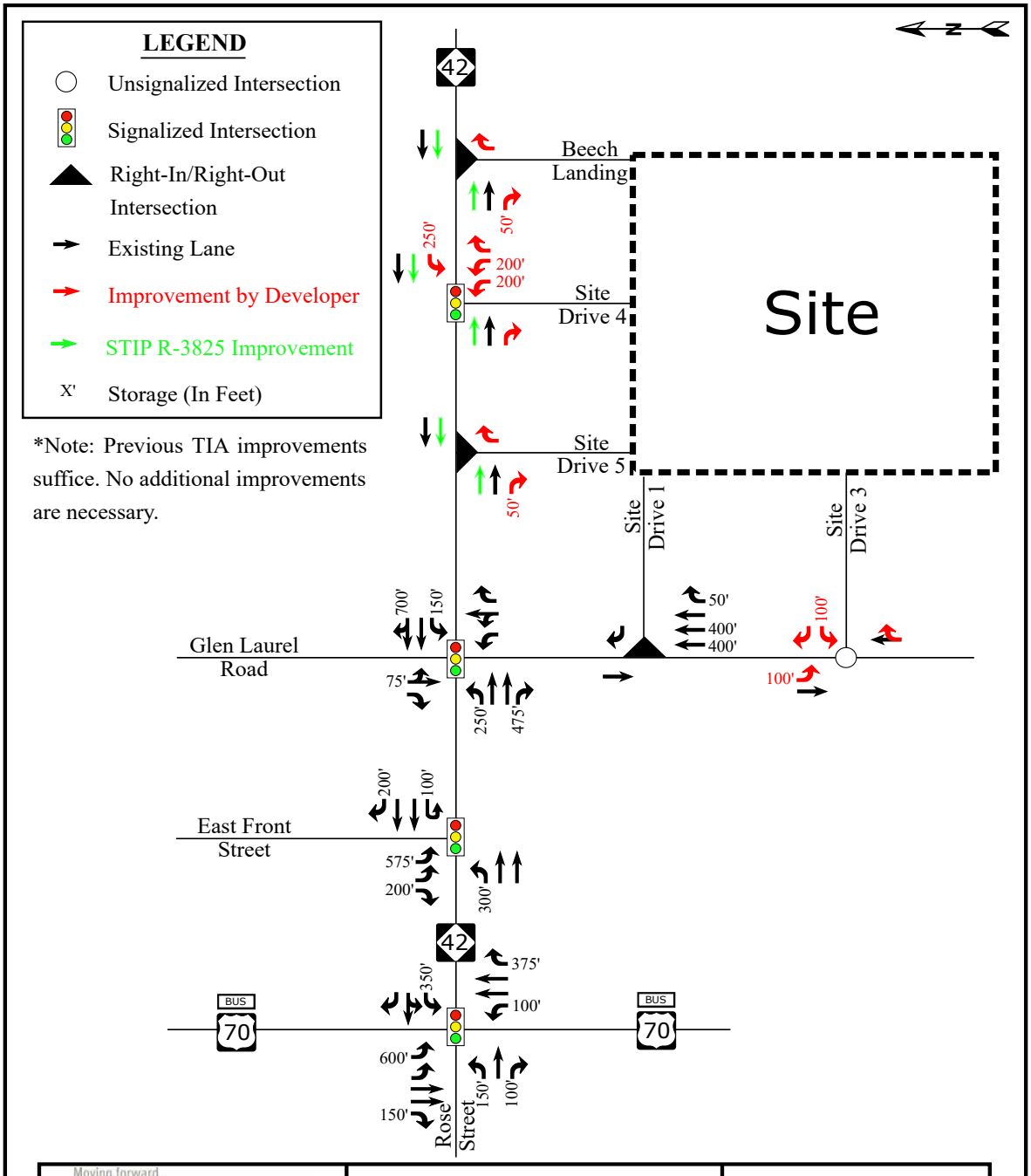
- Provide stop-control for westbound approach.

NC 42 and Site Drive 4

- Construct northbound approach with one ingress and three egress lanes striped as two left-turn lanes, each with 200 feet of storage, and one right-turn lane.
- Provide an exclusive westbound left-turn lane with at least 250 feet of storage and appropriate deceleration and taper.
- Provide an exclusive eastbound right-turn lane that extends to Site Drive 5.
- Install a traffic signal at the intersection when warranted or prior to the opening of the development. Coordinate the signal with the existing signal at the intersection of Glen Laurel Road and NC 42.

NC 42 and Site Drive 5

- Construct a right-in/right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure 12

TECHNICAL APPENDIX

APPENDIX A

SCOPING DOCUMENTATION

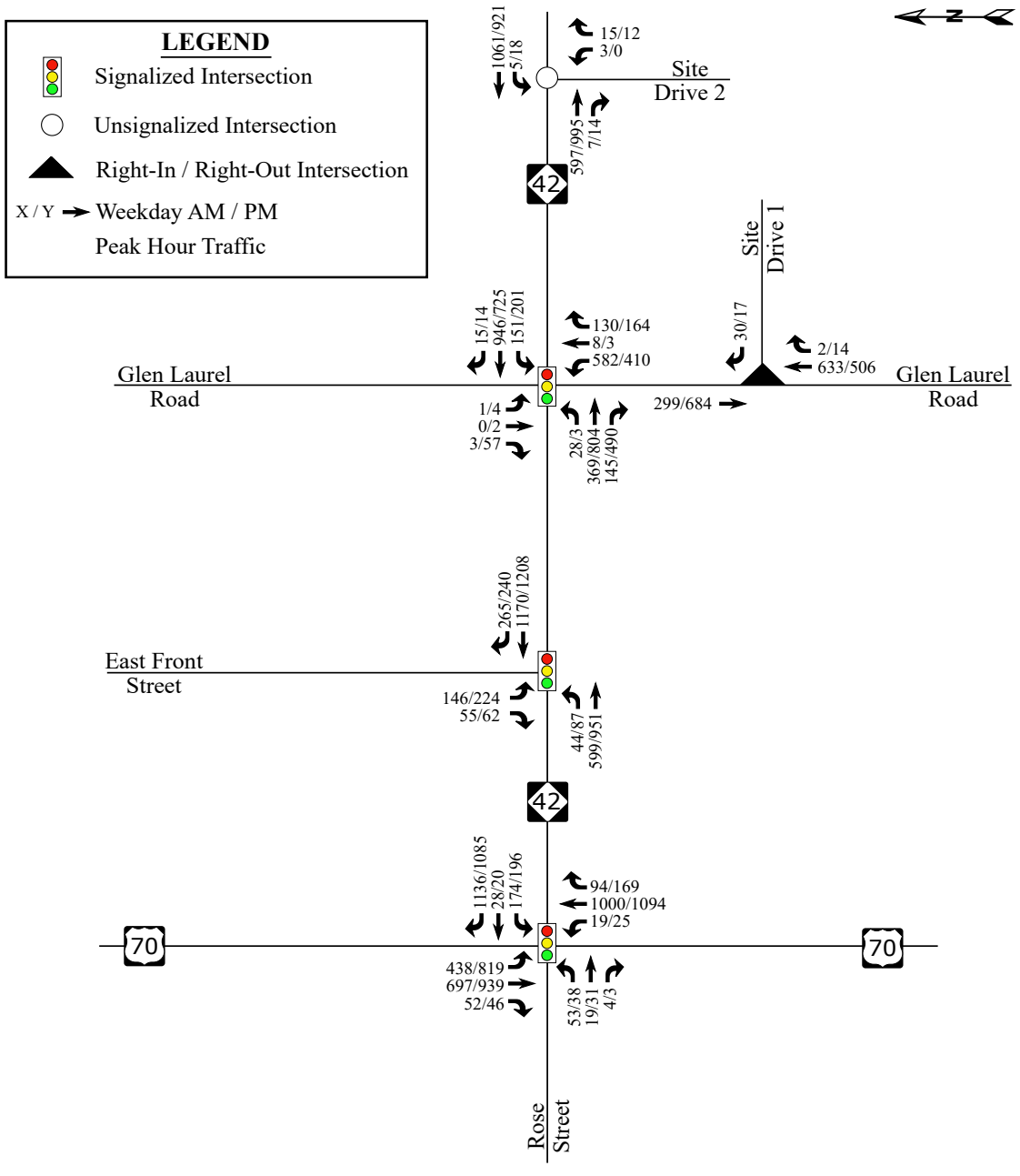
RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone: 919-872-5115
www.rameykemp.com

Glen Laurel Mixed Use

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. The self-storage was also constructed at time of counts but was not yet open for business; therefore, the self-storage land use is applied in full to these calculations. Refer to Table 1 for a detailed breakdown of the proposed site trip generation.

Table 1: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multi-Family (Low-Rise) Housing (220)	336 dwellings	2,500	35	116	110	64
Bank (912)	10,000 sq. ft.	1,000	55	40	102	103
Shopping Center (820)	96,000 sq. ft.	5,900	124	76	253	274
Day Care Center (565)	14,000 sq. ft.	670	82	72	73	83
Mini-Warehouse (151)	120,900 sq. ft.	190	7	5	10	11
Congregate Care Facility (253)	77 units	160	4	2	8	8
Assisted Living (254)	66 beds	180	8	4	10	12
Total Trips		**10,600**	**315**	**315**	**566**	**555**
Internal Capture (1% AM, 2 % PM)			*-3*	*-3*	*-11*	*-11*
Pass-By Trips: Shopping Center (34% PM)			--	--	*-88*	*-88*
Pass-By Trips: Drive-In Bank (29% AM, 35% PM)			*-14*	*-14*	*-35*	*-35*
Total Primary Trips			**298**	**298**	**432**	**421**



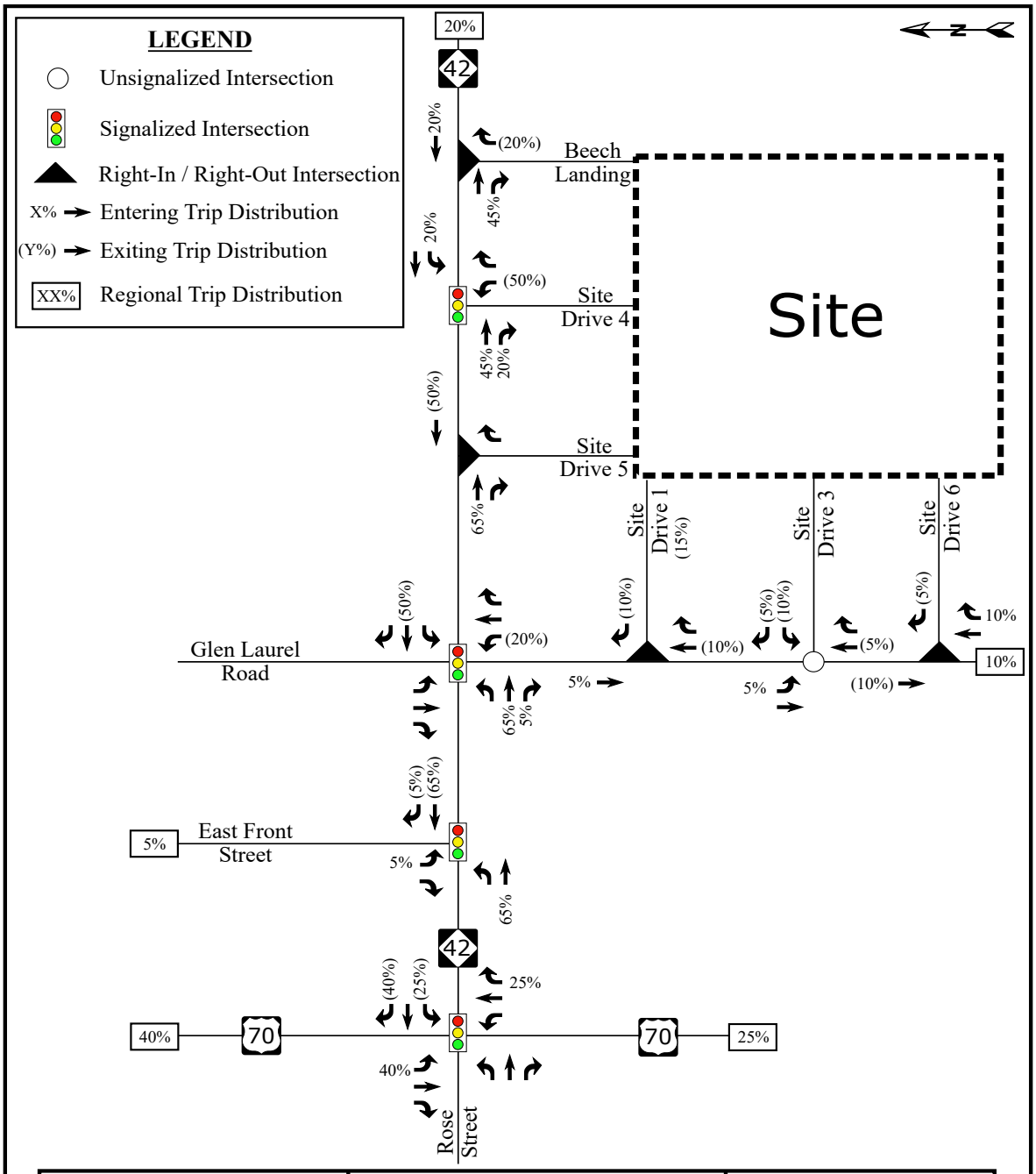
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Glen Laurel
Mixed Use Update
Clayton, NC

Existing (2019)
Peak Hour Traffic

Scale: Not to Scale

Figure 4



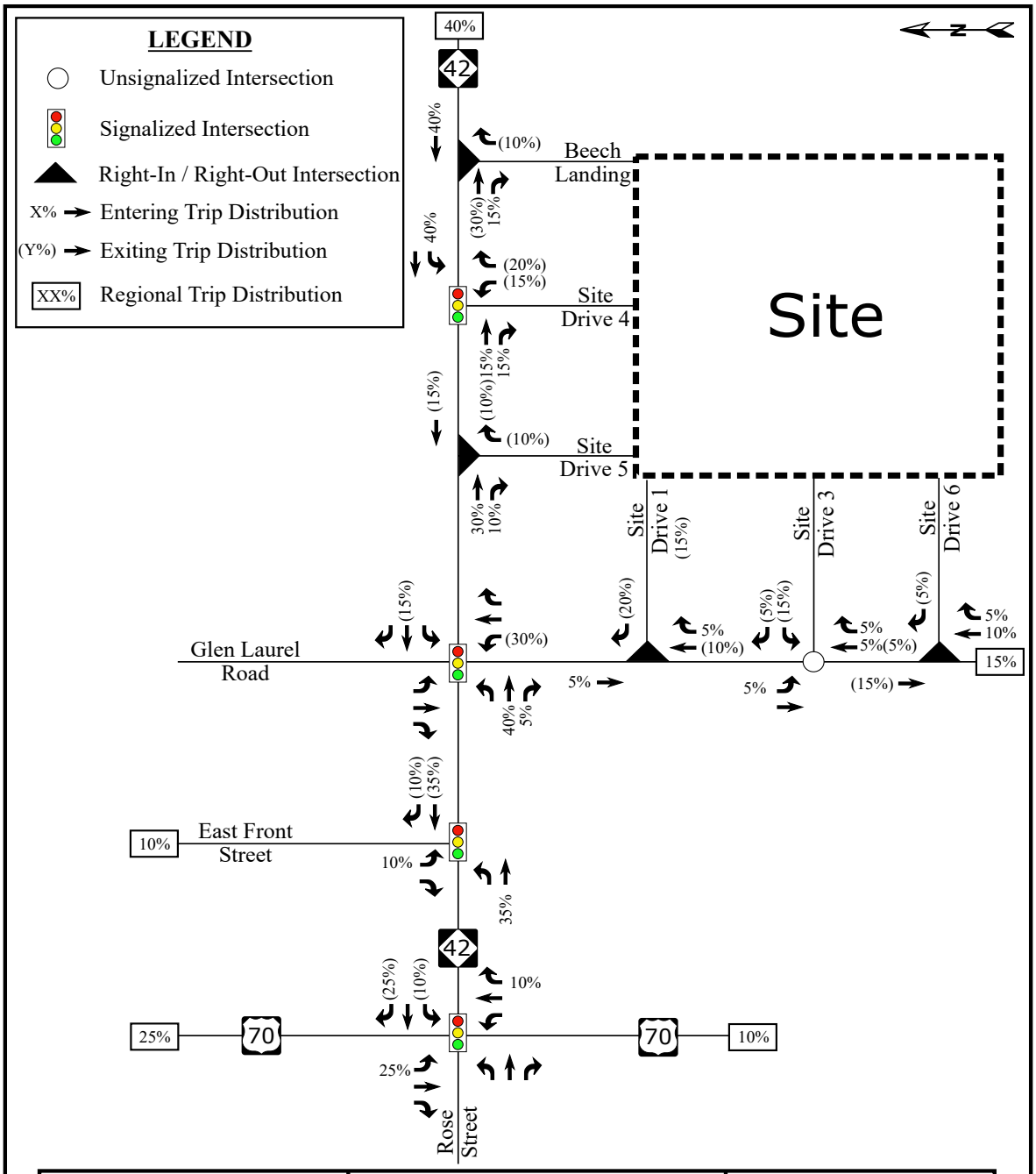
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Glen Laurel
Mixed Use Update
Clayton, NC

Residential
Site Trip Distribution

Scale: Not to Scale

Figure 8



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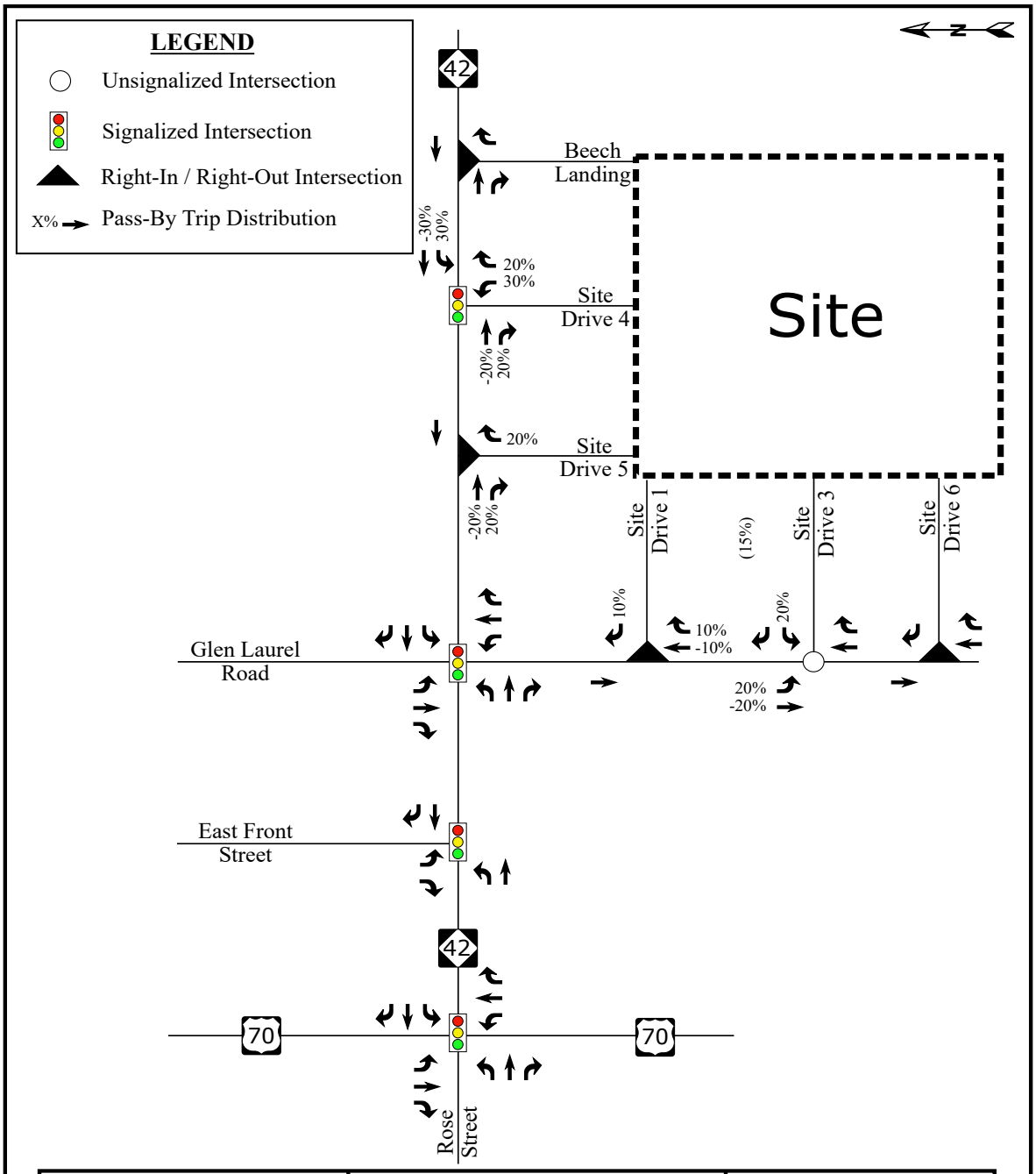
Glen Laurel
Mixed Use Update
Clayton, NC

Primary Commercial
Site Trip Distribution

Scale: Not to Scale

Figure 8



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Glen Laurel
Mixed Use Update
Clayton, NC

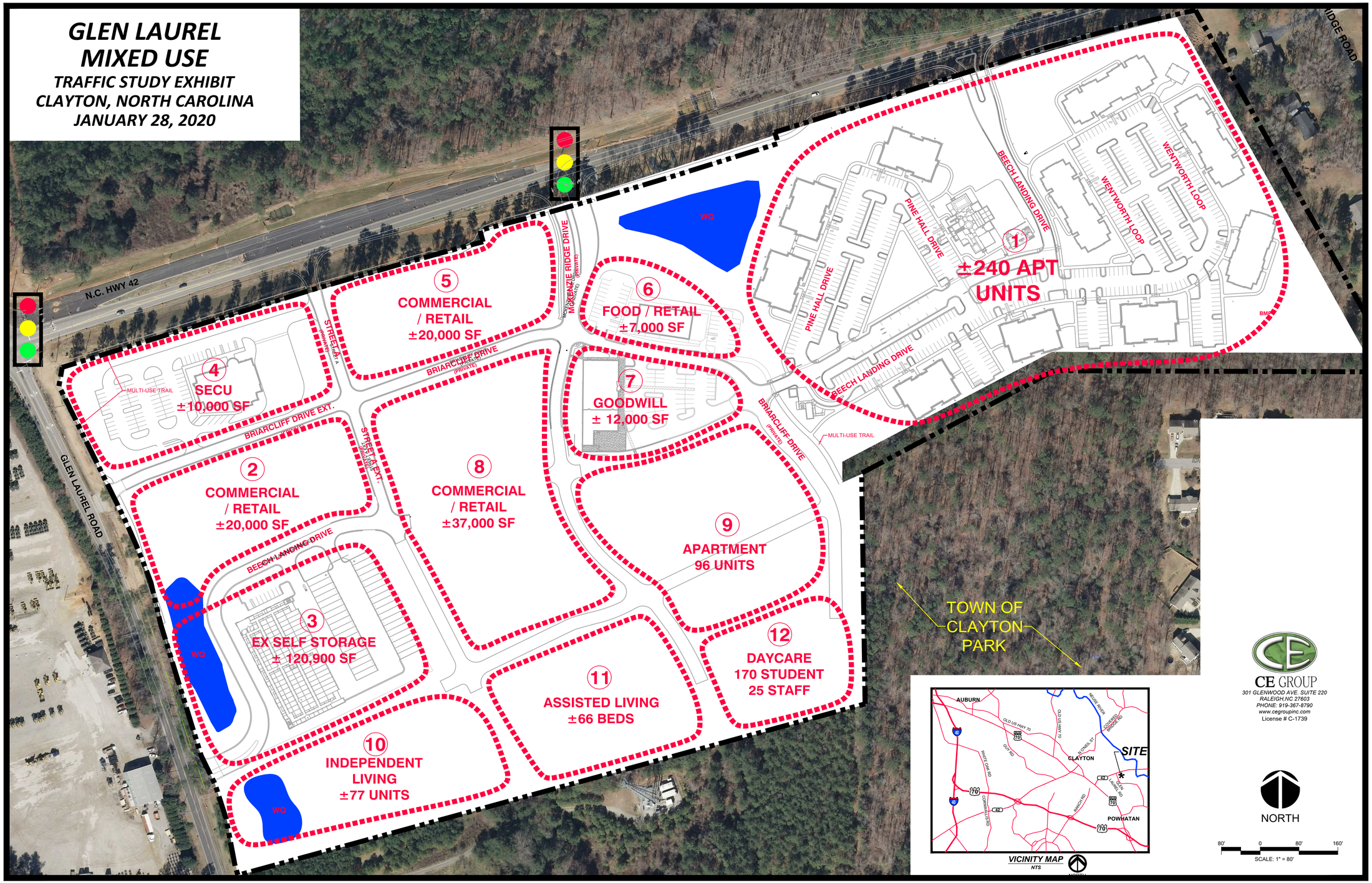
Pass-By
Trip Distribution

Scale: Not to Scale

Figure 10

GLEN LAUREL MIXED USE

TRAFFIC STUDY EXHIBIT
CLAYTON, NORTH CAROLINA
JANUARY 28, 2020



CE GROUP
301 GLENWOOD AVE. SUITE 220
RALEIGH,NC 27603
PHONE: 919-367-8790
www.cegroupinc.com
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APPENDIX B

TRAFFIC COUNTS

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and US 70 Business
Site Code : 00000001
Start Date : 9/24/2019
Page No : 1

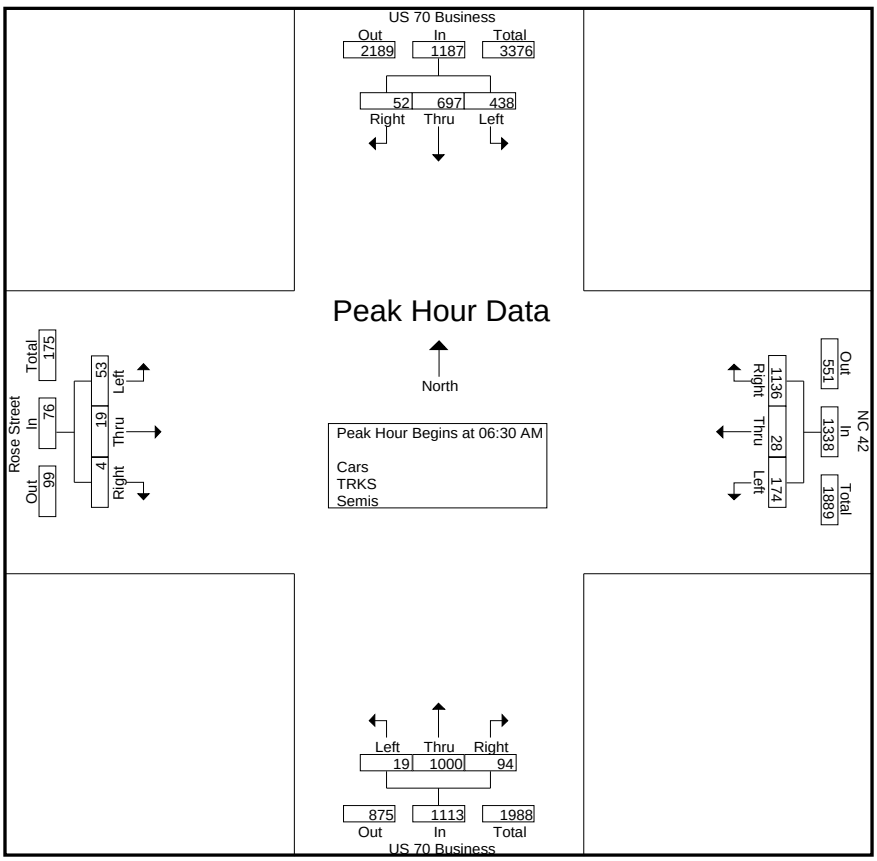
Groups Printed- Cars - TRKS - Semis

	US 70 Business From North					NC 42 From East					US 70 Business From South					Rose Street From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:30 AM	7	221	78	1	306	287	10	47	0	344	23	267	9	0	299	1	2	10	0	13	1	962	963
06:45 AM	7	173	110	0	290	302	9	54	14	365	19	255	2	0	276	0	5	22	0	27	14	958	972
Total	14	394	188	1	596	589	19	101	14	709	42	522	11	0	575	1	7	32	0	40	15	1920	1935
07:00 AM	15	149	115	0	279	259	7	38	0	304	30	254	3	0	287	1	4	12	0	17	0	887	887
07:15 AM	23	154	135	0	312	288	2	35	0	325	22	224	5	0	251	2	8	9	0	19	0	907	907
07:30 AM	3	160	162	0	325	265	7	37	0	309	22	199	3	0	224	1	1	13	0	15	0	873	873
07:45 AM	9	155	168	0	332	248	0	35	0	283	28	195	4	0	227	0	15	6	0	21	0	863	863
Total	50	618	580	0	1248	1060	16	145	0	1221	102	872	15	0	989	4	28	40	0	72	0	3530	3530
08:00 AM	10	172	169	0	351	233	6	28	0	267	22	144	6	0	172	1	14	5	0	20	0	810	810
08:15 AM	8	159	147	0	314	259	7	41	0	307	51	135	6	2	192	1	5	9	0	15	2	828	830
08:30 AM	6	139	136	0	281	235	4	39	0	278	19	166	1	0	186	1	5	5	0	11	0	756	756
08:45 AM	6	116	139	0	261	275	9	35	0	319	27	143	3	0	173	3	6	9	0	18	0	771	771
Total	30	586	591	0	1207	1002	26	143	0	1171	119	588	16	2	723	6	30	28	0	64	2	3165	3167
*** BREAK ***																							
04:00 PM	15	200	181	0	396	192	5	45	0	242	46	230	1	0	277	2	12	5	0	19	0	934	934
04:15 PM	5	197	209	0	411	205	9	45	0	259	38	171	2	0	211	0	9	7	0	16	0	897	897
04:30 PM	6	211	199	0	416	245	12	54	0	311	37	226	6	0	269	1	4	8	0	13	0	1009	1009
04:45 PM	14	209	232	0	455	238	5	72	0	315	35	225	2	0	262	1	4	10	0	15	0	1047	1047
Total	40	817	821	0	1678	880	31	216	0	1127	156	852	11	0	1019	4	29	30	0	63	0	3887	3887
05:00 PM	10	264	171	0	445	251	2	34	0	287	56	306	5	1	367	2	6	9	0	17	1	1116	1117
05:15 PM	12	215	248	0	475	320	7	50	0	377	43	308	8	0	359	0	11	9	0	20	0	1231	1231
05:30 PM	10	251	168	0	429	276	6	40	0	322	35	255	10	0	300	0	10	10	0	20	0	1071	1071
05:45 PM	11	196	262	0	469	237	13	32	0	282	45	194	3	0	242	0	12	13	0	25	0	1018	1018
Total	43	926	849	0	1818	1084	28	156	0	1268	179	1063	26	1	1268	2	39	41	0	82	1	4436	4437
06:00 PM	9	177	190	0	376	179	4	27	1	210	33	171	8	0	212	1	7	7	0	15	1	813	814
06:15 PM	8	177	234	1	419	0	0	0	0	0	0	0	0	0	0	0	12	8	0	20	1	439	440
Grand Total	194	3695	3453	2	7342	4794	124	788	15	5706	631	4068	87	3	4786	18	152	186	0	356	20	18190	18210
Apprch %	2.6	50.3	47			84	2.2	13.8			13.2	85	1.8			5.1	42.7	52.2					
Total %	1.1	20.3	19		40.4	26.4	0.7	4.3		31.4	3.5	22.4	0.5		26.3	0.1	0.8	1		2	0.1	99.9	
Cars	191	3551	3311		7055	4660	119	754		5547	584	3904	83		4574	14	148	182		344	0	0	17520
% Cars	98.5	96.1	95.9	100	96.1	97.2	96	95.7	93.3	97	92.6	96	95.4	100	95.5	77.8	97.4	97.8	0	96.6	0	0	96.2
TRKS	3	112	109		224	95	5	16		117	23	115	3		141	3	4	3		10	0	0	492
% TRKS	1.5	3	3.2	0	3.1	2	4	2	6.7	2	3.6	2.8	3.4	0	2.9	16.7	2.6	1.6	0	2.8	0	0	2.7
Semis	0	32	33		65	39	0	18		57	24	49	1		74	1	0	1		2	0	0	198
% Semis	0	0.9	1	0	0.9	0.8	0	2.3	0	1	3.8	1.2	1.1	0	1.5	5.6	0	0.5	0	0.6	0	0	1.1

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and US 70 Business
Site Code : 00000001
Start Date : 9/24/2019
Page No : 2

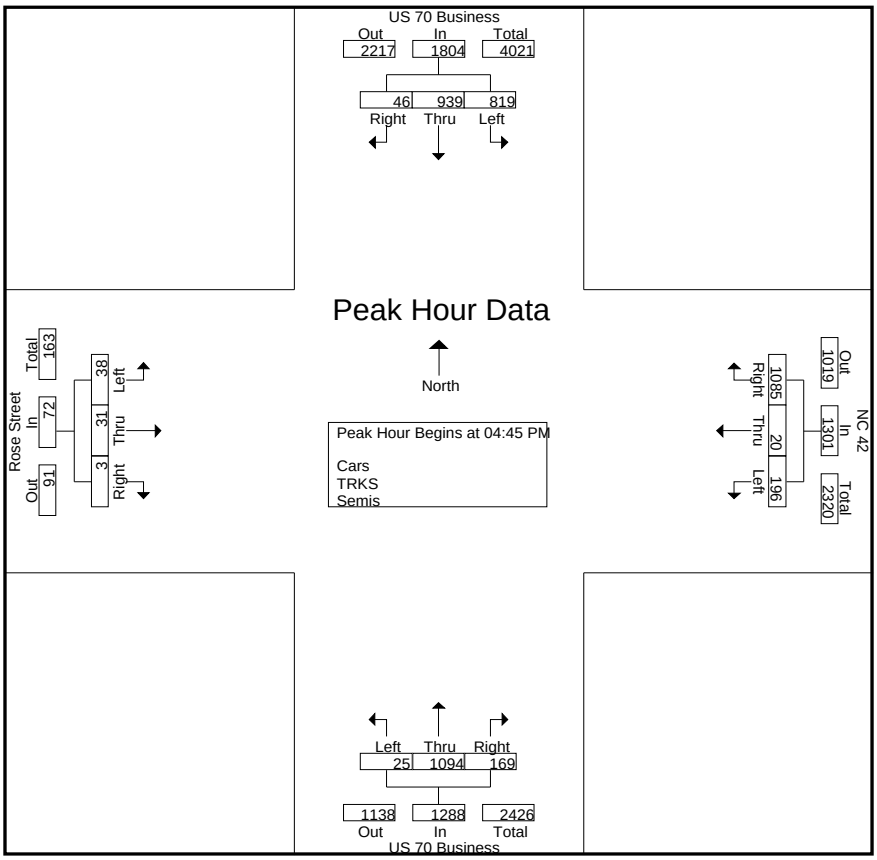
	US 70 Business From North				NC 42 From East				US 70 Business From South				Rose Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:30 AM																	
06:30 AM	7	221	78	306	287	10	47	344	23	267	9	299	1	2	10	13	962
06:45 AM	7	173	110	290	302	9	54	365	19	255	2	276	0	5	22	27	958
07:00 AM	15	149	115	279	259	7	38	304	30	254	3	287	1	4	12	17	887
07:15 AM	23	154	135	312	288	2	35	325	22	224	5	251	2	8	9	19	907
Total Volume	52	697	438	1187	1136	28	174	1338	94	1000	19	1113	4	19	53	76	3714
% App. Total	4.4	58.7	36.9		84.9	2.1	13		8.4	89.8	1.7		5.3	25	69.7		
PHF	.565	.788	.811	.951	.940	.700	.806	.916	.783	.936	.528	.931	.500	.594	.602	.704	.965



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and US 70 Business
Site Code : 00000001
Start Date : 9/24/2019
Page No : 3

	US 70 Business From North				NC 42 From East				US 70 Business From South				Rose Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	209	232	455	238	5	72	315	35	225	2	262	1	4	10	15	1047
05:00 PM	10	264	171	445	251	2	34	287	56	306	5	367	2	6	9	17	1116
05:15 PM	12	215	248	475	320	7	50	377	43	308	8	359	0	11	9	20	1231
05:30 PM	10	251	168	429	276	6	40	322	35	255	10	300	0	10	10	20	1071
Total Volume	46	939	819	1804	1085	20	196	1301	169	1094	25	1288	3	31	38	72	4465
% App. Total	2.5	52.1	45.4		83.4	1.5	15.1		13.1	84.9	1.9		4.2	43.1	52.8		
PHF	.821	.889	.826	.949	.848	.714	.681	.863	.754	.888	.625	.877	.375	.705	.950	.900	.907



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and East Front Street
Site Code : 00000002
Start Date : 9/24/2019
Page No : 1

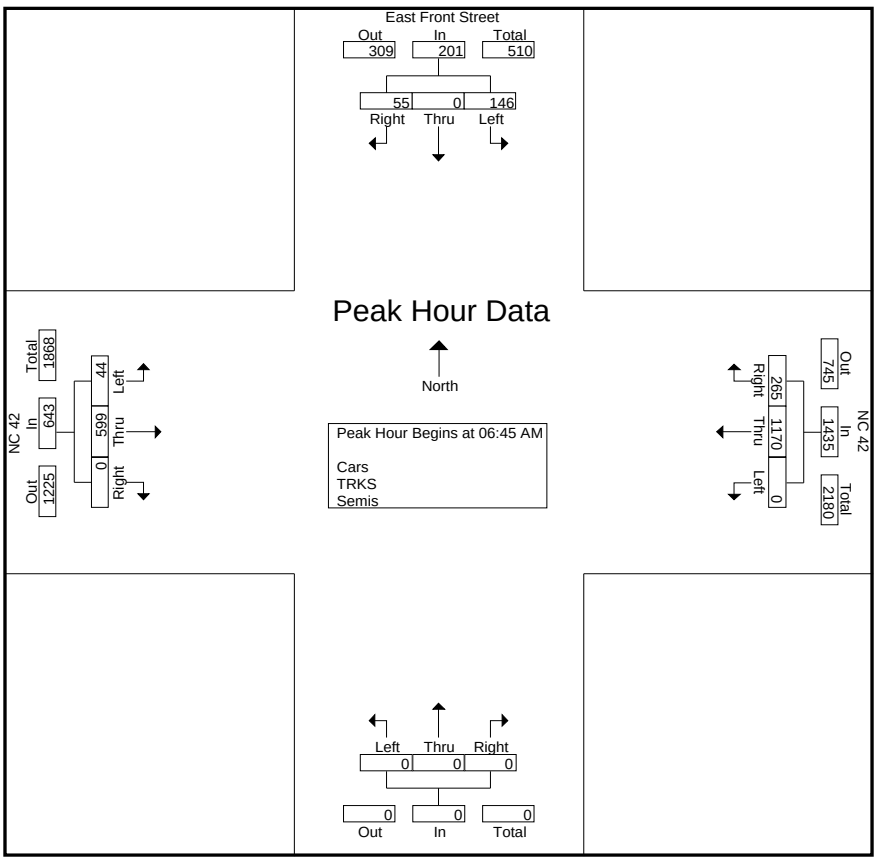
Groups Printed- Cars - TRKS - Semis

	East Front Street From North					NC 42 From East					From South					NC 42 From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:30 AM	11	0	22	0	33	53	322	0	0	375	0	0	0	0	0	0	90	11	0	101	0	509	509
06:45 AM	10	0	20	0	30	92	332	0	0	424	0	0	0	0	0	0	129	9	0	138	0	592	592
Total	21	0	42	0	63	145	654	0	0	799	0	0	0	0	0	0	219	20	0	239	0	1101	1101
07:00 AM	11	0	43	0	54	54	278	0	0	332	0	0	0	0	0	0	142	8	0	150	0	536	536
07:15 AM	12	0	48	0	60	75	273	0	0	348	0	0	0	0	0	0	156	10	0	166	0	574	574
07:30 AM	22	0	35	0	57	44	287	0	0	331	0	0	0	0	0	0	172	17	0	189	0	577	577
07:45 AM	12	0	22	0	34	63	238	0	0	301	0	0	0	0	0	0	194	16	0	210	0	545	545
Total	57	0	148	0	205	236	1076	0	0	1312	0	0	0	0	0	0	664	51	0	715	0	2232	2232
08:00 AM	3	0	27	0	30	51	239	0	0	290	0	0	0	0	0	0	183	21	0	204	0	524	524
08:15 AM	11	0	29	0	40	40	277	0	0	317	0	0	0	0	0	0	164	12	0	176	0	533	533
08:30 AM	27	0	30	0	57	63	258	0	0	321	0	0	0	0	0	0	148	15	0	163	0	541	541
08:45 AM	13	0	26	0	39	77	294	0	0	371	0	0	0	0	0	0	152	19	0	171	0	581	581
Total	54	0	112	0	166	231	1068	0	0	1299	0	0	0	0	0	0	647	67	0	714	0	2179	2179
*** BREAK ***																							
04:00 PM	12	0	79	0	91	69	212	0	0	281	0	0	0	0	0	0	219	24	0	243	0	615	615
04:15 PM	16	0	61	0	77	37	221	0	0	258	0	0	0	0	0	0	228	31	0	259	0	594	594
04:30 PM	13	0	48	0	61	56	300	0	0	356	0	0	0	0	0	0	216	17	0	233	0	650	650
04:45 PM	19	0	44	0	63	70	289	0	0	359	0	0	0	0	0	0	252	17	0	269	0	691	691
Total	60	0	232	0	292	232	1022	0	0	1254	0	0	0	0	0	0	915	89	0	1004	0	2550	2550
05:00 PM	13	0	65	0	78	58	269	0	0	327	0	0	0	0	0	0	204	26	0	230	0	635	635
05:15 PM	17	0	67	0	84	56	350	0	0	406	0	0	0	0	0	0	279	27	0	306	0	796	796
05:30 PM	13	0	57	0	70	70	282	0	0	352	0	0	0	0	0	0	166	26	0	192	0	614	614
05:45 PM	13	0	80	0	93	67	234	0	0	301	0	0	0	0	0	0	284	27	0	311	0	705	705
Total	56	0	269	0	325	251	1135	0	0	1386	0	0	0	0	0	0	933	106	0	1039	0	2750	2750
06:00 PM	11	0	85	0	96	51	186	0	0	237	0	0	0	0	0	0	207	31	0	238	0	571	571
06:15 PM	23	0	74	0	97	48	216	0	0	264	0	0	0	0	0	0	0	0	0	0	0	361	361
Grand Total	282	0	962	0	1244	1194	5357	0	0	6551	0	0	0	0	0	0	3585	364	0	3949	0	11744	11744
Apprch %	22.7	0	77.3			18.2	81.8	0			0	0	0			0	90.8	9.2					
Total %	2.4	0	8.2		10.6	10.2	45.6	0		55.8	0	0	0		0	0	30.5	3.1		33.6	0	100	
Cars	271	0	952		1223	1174	5207	0		6381	0	0	0		0	0	3410	345		3755	0	0	11359
% Cars	96.1	0	99	0	98.3	98.3	97.2	0	0	97.4	0	0	0	0	0	0	95.1	94.8	0	95.1	0	0	96.7
TRKS	10	0	8		18	16	122	0		138	0	0	0		0	0	108	11		119	0	0	275
% TRKS	3.5	0	0.8	0	1.4	1.3	2.3	0	0	2.1	0	0	0	0	0	0	3	3	0	3	0	0	2.3
Semis	1	0	2		3	4	28	0		32	0	0	0		0	0	67	8		75	0	0	110
% Semis	0.4	0	0.2	0	0.2	0.3	0.5	0	0	0.5	0	0	0	0	0	0	1.9	2.2	0	1.9	0	0	0.9

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and East Front Street
Site Code : 00000002
Start Date : 9/24/2019
Page No : 2

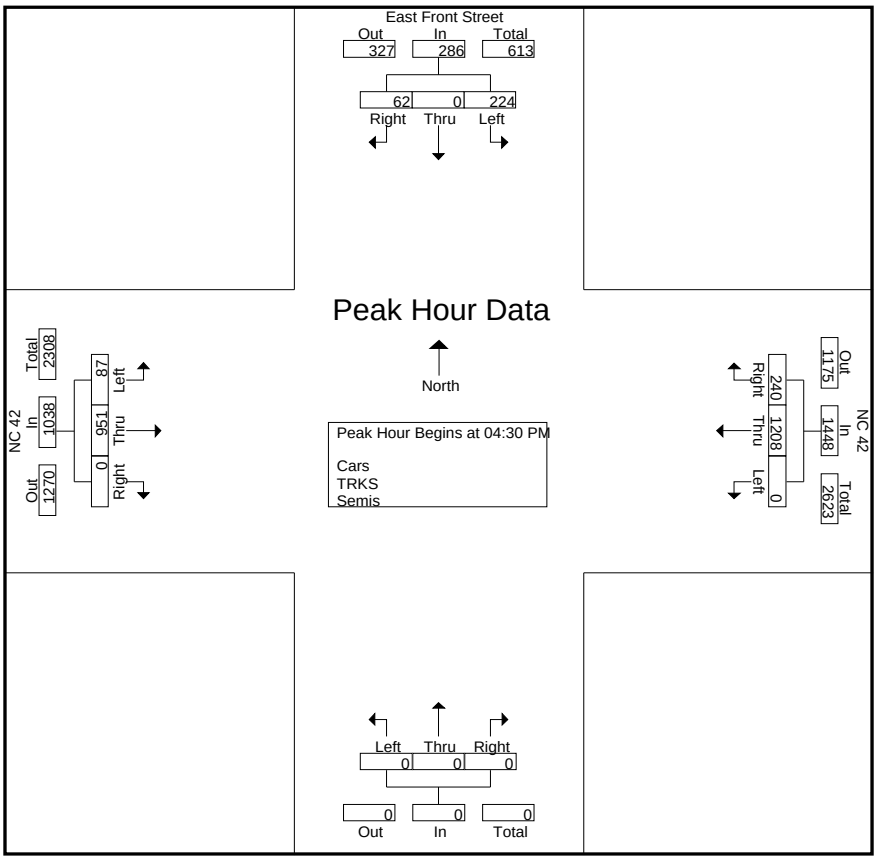
	East Front Street From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	10	0	20	30	92	332	0	424	0	0	0	0	0	129	9	138	592
07:00 AM	11	0	43	54	54	278	0	332	0	0	0	0	0	142	8	150	536
07:15 AM	12	0	48	60	75	273	0	348	0	0	0	0	0	156	10	166	574
07:30 AM	22	0	35	57	44	287	0	331	0	0	0	0	0	172	17	189	577
Total Volume	55	0	146	201	265	1170	0	1435	0	0	0	0	0	599	44	643	2279
% App. Total	27.4	0	72.6		18.5	81.5	0		0	0	0		0	93.2	6.8		
PHF	.625	.000	.760	.838	.720	.881	.000	.846	.000	.000	.000	.000	.000	.871	.647	.851	.962



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and East Front Street
Site Code : 00000002
Start Date : 9/24/2019
Page No : 3

	East Front Street From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	13	0	48	61	56	300	0	356	0	0	0	0	0	216	17	233	650
04:45 PM	19	0	44	63	70	289	0	359	0	0	0	0	0	252	17	269	691
05:00 PM	13	0	65	78	58	269	0	327	0	0	0	0	0	204	26	230	635
05:15 PM	17	0	67	84	56	350	0	406	0	0	0	0	0	279	27	306	796
Total Volume	62	0	224	286	240	1208	0	1448	0	0	0	0	0	951	87	1038	2772
% App. Total	21.7	0	78.3		16.6	83.4	0		0	0	0		0	91.6	8.4		
PHF	.816	.000	.836	.851	.857	.863	.000	.892	.000	.000	.000	.000	.000	.852	.806	.848	.871



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and Glen Laurel Road
Site Code : 00000003
Start Date : 9/24/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	Glen Laurel Road From North					NC 42 From East					Glen Laurel Road From South					NC 42 From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:30 AM	0	0	0	0	0	3	231	37	0	271	32	1	161	0	194	26	81	1	0	108	0	573	573
06:45 AM	0	0	0	0	0	3	250	40	0	293	20	3	188	0	211	22	89	5	0	116	0	620	620
Total	0	0	0	0	0	6	481	77	0	564	52	4	349	0	405	48	170	6	0	224	0	1193	1193
07:00 AM	2	0	0	0	2	6	218	40	1	264	31	2	111	0	144	50	101	16	0	167	1	577	578
07:15 AM	1	0	1	0	2	3	247	34	0	284	47	2	122	2	171	47	98	6	0	151	2	608	610
07:30 AM	1	0	0	0	1	3	198	33	1	234	40	0	110	0	150	34	127	27	0	188	1	573	574
07:45 AM	0	0	0	0	0	2	226	46	0	274	25	1	100	0	126	39	132	20	0	191	0	591	591
Total	4	0	1	0	5	14	889	153	2	1056	143	5	443	2	591	170	458	69	0	697	4	2349	2353
08:00 AM	2	0	0	0	2	6	184	50	0	240	27	4	98	0	129	41	128	24	0	193	0	564	564
08:15 AM	2	0	0	0	2	0	233	52	0	285	20	2	95	0	117	39	136	13	0	188	0	592	592
08:30 AM	0	0	0	0	0	2	211	33	0	246	38	2	100	0	140	33	123	15	0	171	0	557	557
08:45 AM	0	1	1	0	2	2	244	24	0	270	24	1	124	0	149	29	110	13	0	152	0	573	573
Total	4	1	1	0	6	10	872	159	0	1041	109	9	417	0	535	142	497	65	0	704	0	2286	2286
*** BREAK ***																							
04:00 PM	19	2	8	0	29	3	172	48	0	223	49	0	61	0	110	123	208	1	0	332	0	694	694
04:15 PM	11	2	4	0	17	1	169	39	0	209	59	2	56	0	117	79	180	4	0	263	0	606	606
04:30 PM	16	3	6	0	25	0	161	30	0	191	30	0	80	0	110	110	199	2	0	311	0	637	637
04:45 PM	19	5	2	0	26	0	182	42	0	224	66	0	100	0	166	118	175	0	3	293	3	709	712
Total	65	12	20	0	97	4	684	159	0	847	204	2	297	0	503	430	762	7	3	1199	3	2646	2649
05:00 PM	21	4	5	0	30	0	174	48	0	222	44	0	113	0	157	115	163	2	10	280	10	689	699
05:15 PM	25	0	2	0	27	11	183	50	0	244	58	1	127	0	186	118	205	0	0	323	0	780	780
05:30 PM	18	1	1	0	20	2	186	37	0	225	40	1	113	0	154	105	178	1	0	284	0	683	683
05:45 PM	10	1	0	0	11	1	176	65	0	242	36	0	100	0	136	122	193	1	0	316	0	705	705
Total	74	6	8	0	88	14	719	200	0	933	178	2	453	0	633	460	739	4	10	1203	10	2857	2867
06:00 PM	4	0	1	0	5	0	180	49	0	229	30	1	70	0	101	145	228	1	0	374	0	709	709
06:15 PM	0	0	1	0	1	0	180	40	0	220	0	0	0	0	0	0	0	0	0	0	0	221	221
Grand Total	151	19	32	0	202	48	4005	837	2	4890	716	23	2029	2	2768	1395	2854	152	13	4401	17	12261	12278
Apprch %	74.8	9.4	15.8			1	81.9	17.1			25.9	0.8	73.3			31.7	64.8	3.5					
Total %	1.2	0.2	0.3		1.6	0.4	32.7	6.8		39.9	5.8	0.2	16.5		22.6	11.4	23.3	1.2		35.9	0.1	99.9	
Cars	148	18	30		196	46	3883	807		4738	680	23	2005		2710	1372	2723	148		4256	0	0	11900
% Cars	98	94.7	93.8	0	97	95.8	97	96.4	100	96.9	95	100	98.8	100	97.8	98.4	95.4	97.4	100	96.4	0	0	96.9
TRKS	2	0	2		4	2	102	29		133	34	0	22		56	20	107	3		130	0	0	323
% TRKS	1.3	0	6.2	0	2	4.2	2.5	3.5	0	2.7	4.7	0	1.1	0	2	1.4	3.7	2	0	2.9	0	0	2.6
Semis	1	1	0		2	0	20	1		21	2	0	2		4	3	24	1		28	0	0	55
% Semis	0.7	5.3	0	0	1	0	0.5	0.1	0	0.4	0.3	0	0.1	0	0.1	0.2	0.8	0.7	0	0.6	0	0	0.4

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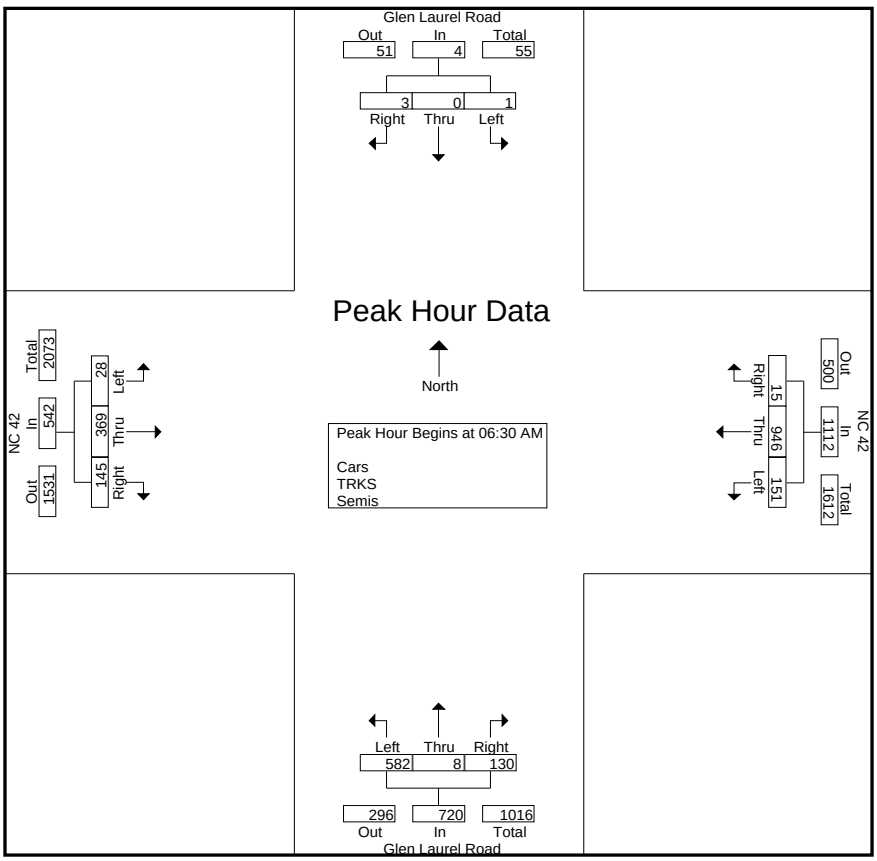
File Name : NC 42 and Glen Laurel Road
Site Code : 00000003
Start Date : 9/24/2019
Page No : 2

	Glen Laurel Road From North				NC 42 From East				Glen Laurel Road From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:30 AM																	
06:30 AM	0	0	0	0	3	231	37	271	32	1	161	194	26	81	1	108	573
06:45 AM	0	0	0	0	3	250	40	293	20	3	188	211	22	89	5	116	620
07:00 AM	2	0	0	2	6	218	40	264	31	2	111	144	50	101	16	167	577
07:15 AM	1	0	1	2	3	247	34	284	47	2	122	171	47	98	6	151	608
Total Volume	3	0	1	4	15	946	151	1112	130	8	582	720	145	369	28	542	2378
% App. Total	75	0	25		1.3	85.1	13.6		18.1	1.1	80.8		26.8	68.1	5.2		
PHF	.375	.000	.250	.500	.625	.946	.944	.949	.691	.667	.774	.853	.725	.913	.438	.811	.959



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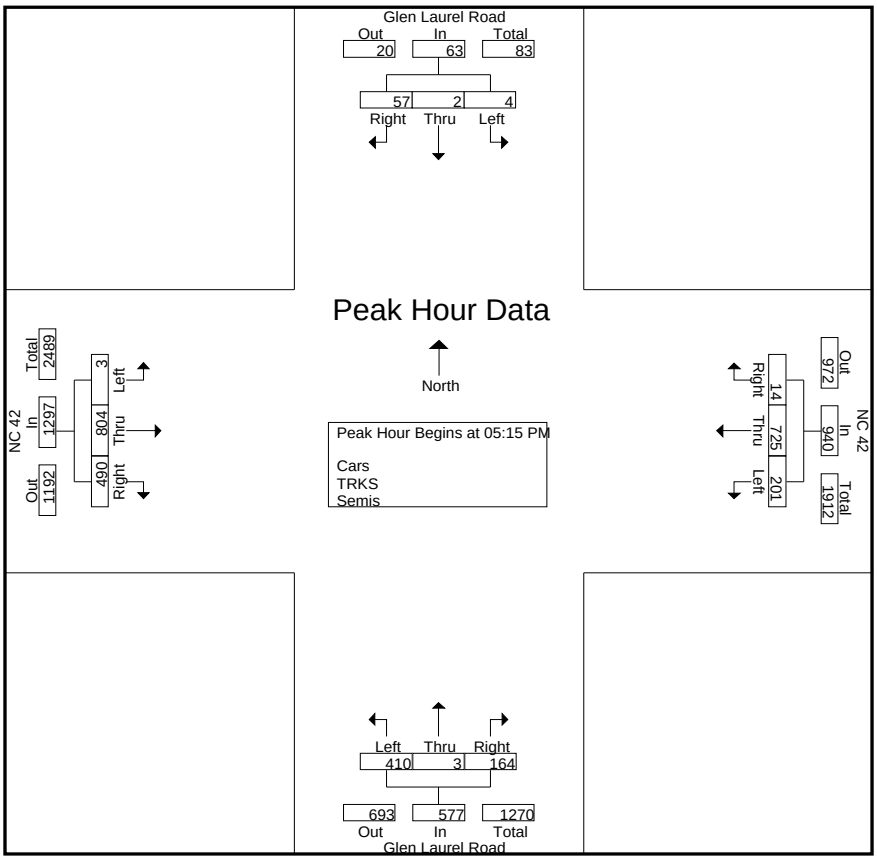
File Name : NC 42 and Glen Laurel Road
Site Code : 00000003
Start Date : 9/24/2019
Page No : 3

	Glen Laurel Road From North				NC 42 From East				Glen Laurel Road From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	25	0	2	27	11	183	50	244	58	1	127	186	118	205	0	323	780
05:30 PM	18	1	1	20	2	186	37	225	40	1	113	154	105	178	1	284	683
05:45 PM	10	1	0	11	1	176	65	242	36	0	100	136	122	193	1	316	705
06:00 PM	4	0	1	5	0	180	49	229	30	1	70	101	145	228	1	374	709
Total Volume	57	2	4	63	14	725	201	940	164	3	410	577	490	804	3	1297	2877
% App. Total	90.5	3.2	6.3		1.5	77.1	21.4		28.4	0.5	71.1		37.8	62	0.2		
PHF	.570	.500	.500	.583	.318	.974	.773	.963	.707	.750	.807	.776	.845	.882	.750	.867	.922



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File Name : Glen Laurel Road and Right-In Right-Out Site Drive
Site Code : 00000002
Start Date : 9/25/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	Glen Laurel Road From North					Right-In/Right-Out Site Drive From East					Glen Laurel Road From South					From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:30 AM	0	61	0	0	61	7	0	0	0	7	0	173	0	0	173	0	0	0	0	0	0	241	241
06:45 AM	0	68	0	0	68	6	0	0	0	6	0	189	0	0	189	0	0	0	0	0	0	263	263
Total	0	129	0	0	129	13	0	0	0	13	0	362	0	0	362	0	0	0	0	0	0	504	504
07:00 AM	0	77	0	0	77	11	0	0	0	11	0	121	0	0	121	0	0	0	0	0	0	209	209
07:15 AM	0	93	0	0	93	6	0	0	0	6	2	150	0	0	152	0	0	0	0	0	0	251	251
07:30 AM	0	61	0	0	61	5	0	0	0	5	0	133	0	0	133	0	0	0	0	0	0	199	199
07:45 AM	0	89	0	0	89	4	0	0	0	4	0	116	0	0	116	0	0	0	0	0	0	209	209
Total	0	320	0	0	320	26	0	0	0	26	2	520	0	0	522	0	0	0	0	0	0	868	868
08:00 AM	0	95	0	0	95	9	0	0	0	9	0	119	0	0	119	0	0	0	0	0	0	223	223
08:15 AM	0	64	0	0	64	5	0	0	0	5	0	124	0	0	124	0	0	0	0	0	0	193	193
08:30 AM	0	58	0	0	58	1	0	0	0	1	1	140	0	0	141	0	0	0	0	0	0	200	200
08:45 AM	0	57	0	0	57	6	0	0	0	6	1	124	0	0	125	0	0	0	0	0	0	188	188
Total	0	274	0	0	274	21	0	0	0	21	2	507	0	0	509	0	0	0	0	0	0	804	804
*** BREAK ***																							
04:00 PM	0	141	0	0	141	2	0	0	0	2	1	118	0	0	119	0	0	0	0	0	0	262	262
04:15 PM	0	115	0	0	115	5	0	0	0	5	1	113	0	0	114	0	0	0	0	0	0	234	234
04:30 PM	0	131	0	0	131	2	0	0	0	2	1	110	0	0	111	0	0	0	0	0	0	244	244
04:45 PM	0	136	0	0	136	2	0	0	0	2	1	130	0	0	131	0	0	0	0	0	0	269	269
Total	0	523	0	0	523	11	0	0	0	11	4	471	0	0	475	0	0	0	0	0	0	1009	1009
05:00 PM	0	179	0	0	179	3	0	0	0	3	1	111	0	0	112	0	0	0	0	0	0	294	294
05:15 PM	0	175	0	0	175	3	0	0	0	3	4	133	0	0	137	0	0	0	0	0	0	315	315
05:30 PM	0	168	0	0	168	5	0	0	0	5	4	113	0	0	117	0	0	0	0	0	0	290	290
05:45 PM	0	179	0	0	179	4	0	0	0	4	3	129	0	0	132	0	0	0	0	0	0	315	315
Total	0	701	0	0	701	15	0	0	0	15	12	486	0	0	498	0	0	0	0	0	0	1214	1214
06:00 PM	0	162	0	0	162	5	0	0	0	5	3	131	0	0	134	0	0	0	0	0	0	301	301
06:15 PM	0	116	0	0	116	6	0	0	0	6	1	95	0	0	96	0	0	0	0	0	0	218	218
Grand Total	0	2225	0	0	2225	97	0	0	0	97	24	2572	0	0	2596	0	0	0	0	0	0	4918	4918
Apprch %	0	100	0			100	0	0			0.9	99.1	0			0	0	0					
Total %	0	45.2	0		45.2	2	0	0		2	0.5	52.3	0		52.8	0	0	0		0	0	100	
Cars	0	2170	0		2170	95	0	0		95	23	2508	0		2531	0	0	0		0	0	0	4796
% Cars	0	97.5	0	0	97.5	97.9	0	0	0	97.9	95.8	97.5	0	0	97.5	0	0	0	0	0	0	0	97.5
TRKS	0	49	0		49	2	0	0		2	1	60	0		61	0	0	0		0	0	0	112
% TRKS	0	2.2	0	0	2.2	2.1	0	0	0	2.1	4.2	2.3	0	0	2.3	0	0	0	0	0	0	0	2.3
Semis	0	6	0		6	0	0	0		0	0	4	0		4	0	0	0		0	0	0	10
% Semis	0	0.3	0	0	0.3	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0	0.2

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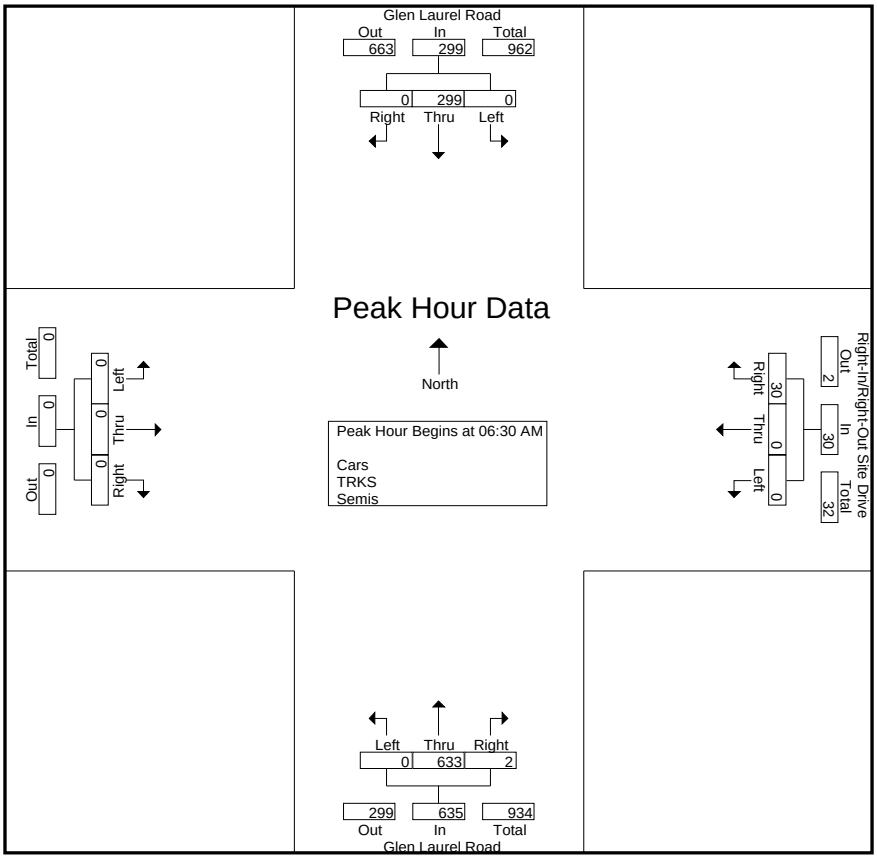
File Name : Glen Laurel Road and Right-In Right-Out Site Drive
Site Code : 00000002
Start Date : 9/25/2019
Page No : 2

	Glen Laurel Road From North				Right-In/Right-Out Site Drive From East				Glen Laurel Road From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:30 AM																	
06:30 AM	0	61	0	61	7	0	0	7	0	173	0	173	0	0	0	0	241
06:45 AM	0	68	0	68	6	0	0	6	0	189	0	189	0	0	0	0	263
07:00 AM	0	77	0	77	11	0	0	11	0	121	0	121	0	0	0	0	209
07:15 AM	0	93	0	93	6	0	0	6	2	150	0	152	0	0	0	0	251
Total Volume	0	299	0	299	30	0	0	30	2	633	0	635	0	0	0	0	964
% App. Total	0	100	0		100	0	0		0.3	99.7	0		0	0	0		
PHF	.000	.804	.000	.804	.682	.000	.000	.682	.250	.837	.000	.840	.000	.000	.000	.000	.916



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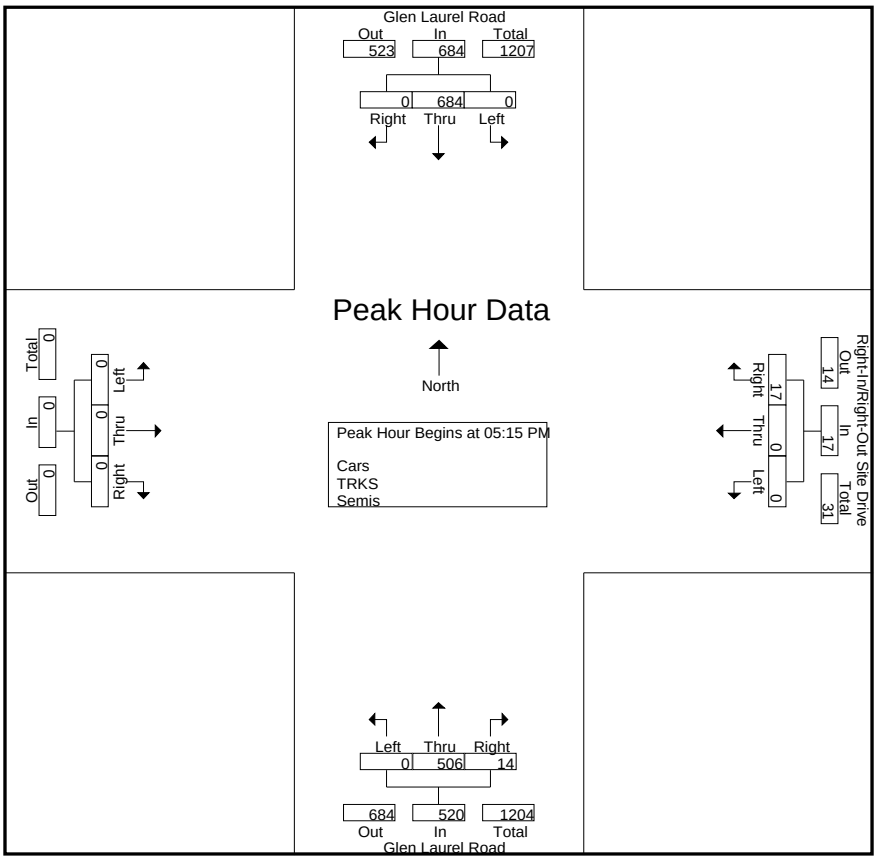
File Name : Glen Laurel Road and Right-In Right-Out Site Drive
Site Code : 00000002
Start Date : 9/25/2019
Page No : 3

	Glen Laurel Road From North				Right-In/Right-Out Site Drive From East				Glen Laurel Road From South				From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	175	0	175	3	0	0	3	4	133	0	137	0	0	0	0	315
05:30 PM	0	168	0	168	5	0	0	5	4	113	0	117	0	0	0	0	290
05:45 PM	0	179	0	179	4	0	0	4	3	129	0	132	0	0	0	0	315
06:00 PM	0	162	0	162	5	0	0	5	3	131	0	134	0	0	0	0	301
Total Volume	0	684	0	684	17	0	0	17	14	506	0	520	0	0	0	0	1221
% App. Total	0	100	0		100	0	0		2.7	97.3	0		0	0	0		
PHF	.000	.955	.000	.955	.850	.000	.000	.850	.875	.951	.000	.949	.000	.000	.000	.000	.969



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File Name : NC 42 and Beech Landing (Site Drive)
Site Code : 00000004
Start Date : 9/25/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	From North					NC 42 From East					Beech Landing (Site Drive) From South					NC 42 From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:30 AM	0	0	0	0	0	0	291	0	0	291	3	0	0	0	3	0	101	0	0	101	0	395	395
06:45 AM	0	0	0	0	0	0	280	0	0	280	2	0	3	0	5	2	149	0	0	151	0	436	436
Total	0	0	0	0	0	0	571	0	0	571	5	0	3	0	8	2	250	0	0	252	0	831	831
07:00 AM	0	0	0	0	0	0	284	1	0	285	1	0	2	0	3	2	135	0	0	137	0	425	425
07:15 AM	0	0	0	0	0	0	261	1	0	262	3	0	0	0	3	3	158	0	0	161	0	426	426
07:30 AM	0	0	0	0	0	0	205	0	0	205	7	0	0	0	7	1	144	0	0	145	0	357	357
07:45 AM	0	0	0	0	0	0	311	3	0	314	4	0	1	0	5	1	160	0	0	161	0	480	480
Total	0	0	0	0	0	0	1061	5	0	1066	15	0	3	0	18	7	597	0	0	604	0	1688	1688
08:00 AM	0	0	0	0	0	0	259	2	0	261	2	0	0	0	2	2	157	0	0	159	0	422	422
08:15 AM	0	0	0	0	0	1	229	0	0	230	1	0	2	0	3	2	161	0	0	163	0	396	396
08:30 AM	0	0	0	0	0	0	236	2	0	238	2	0	1	0	3	0	137	0	0	137	0	378	378
08:45 AM	0	0	0	0	0	0	290	2	0	292	0	0	0	0	0	5	128	0	0	133	0	425	425
Total	0	0	0	0	0	1	1014	6	0	1021	5	0	3	0	8	9	583	0	0	592	0	1621	1621
*** BREAK ***																							
04:00 PM	0	0	0	0	0	0	182	3	0	185	1	0	1	0	2	3	291	0	0	294	0	481	481
04:15 PM	0	0	0	0	0	0	177	4	0	181	1	0	1	0	2	5	253	0	0	258	0	441	441
04:30 PM	0	0	0	0	0	0	198	4	0	202	0	0	0	0	0	7	254	0	0	261	0	463	463
04:45 PM	0	0	0	0	0	0	188	0	0	188	1	0	1	0	2	1	249	0	0	250	0	440	440
Total	0	0	0	0	0	0	745	11	0	756	3	0	3	0	6	16	1047	0	0	1063	0	1825	1825
05:00 PM	0	0	0	0	0	0	199	1	0	200	6	0	0	0	6	1	255	0	0	256	0	462	462
05:15 PM	0	0	0	0	0	0	216	2	0	218	6	0	0	0	6	4	245	0	0	249	0	473	473
05:30 PM	0	0	0	0	0	0	247	2	0	249	1	0	0	0	1	2	237	0	0	239	0	489	489
05:45 PM	0	0	0	0	0	0	228	8	0	236	4	0	0	0	4	1	242	0	0	243	0	483	483
Total	0	0	0	0	0	0	890	13	0	903	17	0	0	0	17	8	979	0	0	987	0	1907	1907
06:00 PM	0	0	0	0	0	0	230	6	0	236	1	0	0	0	1	7	271	0	0	278	0	515	515
06:15 PM	0	0	0	0	0	0	226	3	0	229	1	0	1	0	2	7	223	0	0	230	0	461	461
Grand Total	0	0	0	0	0	1	4737	44	0	4782	47	0	13	0	60	56	3950	0	0	4006	0	8848	8848
Apprch %	0	0	0			0	99.1	0.9			78.3	0	21.7			1.4	98.6	0					
Total %	0	0	0		0	0	53.5	0.5		54	0.5	0	0.1		0.7	0.6	44.6	0		45.3	0	100	
Cars	0	0	0		0	1	4627	43		4671	47	0	13		60	56	3826	0		3882	0	0	8613
% Cars	0	0	0	0	0	100	97.7	97.7	0	97.7	100	0	100	0	100	100	96.9	0	0	96.9	0	0	97.3
TRKS	0	0	0		0	0	78	1		79	0	0	0		0	0	100	0		100	0	0	179
% TRKS	0	0	0	0	0	0	1.6	2.3	0	1.7	0	0	0	0	0	0	2.5	0	0	2.5	0	0	2
Semis	0	0	0		0	0	32	0		32	0	0	0		0	0	24	0		24	0	0	56
% Semis	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0.6

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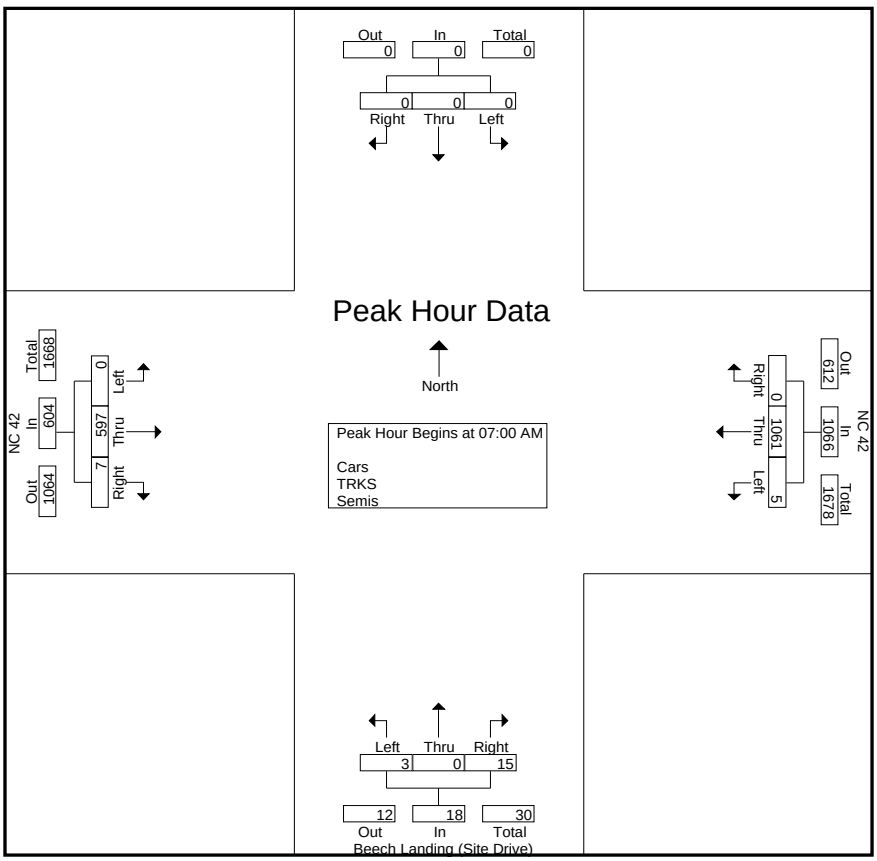
File Name : NC 42 and Beech Landing (Site Drive)
Site Code : 00000004
Start Date : 9/25/2019
Page No : 2

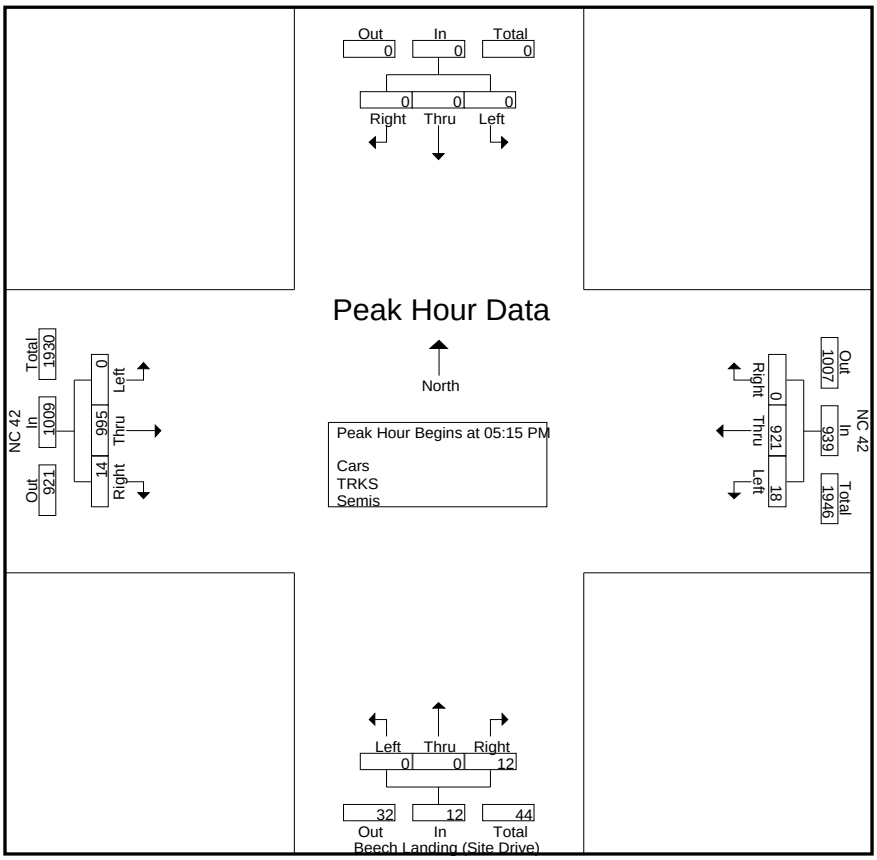
	From North				NC 42 From East				Beech Landing (Site Drive) From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	284	1	285	1	0	2	3	2	135	0	137	425
07:15 AM	0	0	0	0	0	261	1	262	3	0	0	3	3	158	0	161	426
07:30 AM	0	0	0	0	0	205	0	205	7	0	0	7	1	144	0	145	357
07:45 AM	0	0	0	0	0	311	3	314	4	0	1	5	1	160	0	161	480
Total Volume	0	0	0	0	0	1061	5	1066	15	0	3	18	7	597	0	604	1688
% App. Total	0	0	0		0	99.5	0.5		83.3	0	16.7		1.2	98.8	0		
PHF	.000	.000	.000	.000	.000	.853	.417	.849	.536	.000	.375	.643	.583	.933	.000	.938	.879



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : NC 42 and Beech Landing (Site Drive)
Site Code : 00000004
Start Date : 9/25/2019
Page No : 3

	From North				NC 42 From East				Beech Landing (Site Drive) From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	0	0	0	0	216	2	218	6	0	0	6	4	245	0	249	473
05:30 PM	0	0	0	0	0	247	2	249	1	0	0	1	2	237	0	239	489
05:45 PM	0	0	0	0	0	228	8	236	4	0	0	4	1	242	0	243	483
06:00 PM	0	0	0	0	0	230	6	236	1	0	0	1	7	271	0	278	515
Total Volume	0	0	0	0	0	921	18	939	12	0	0	12	14	995	0	1009	1960
% App. Total	0	0	0		0	98.1	1.9		100	0	0		1.4	98.6	0		
PHF	.000	.000	.000	.000	.000	.932	.563	.943	.500	.000	.000	.500	.500	.918	.000	.907	.951



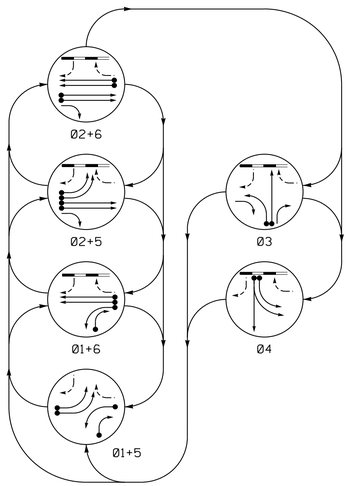
APPENDIX C

SIGNAL PLANS

DocuSign Envelope ID: E4F3E28E-7500-4AE7-B8CB-A54B2AB35C2B

PROJECT REFERENCE NO.	SHEET NO.
36249.3384	Sig-1

PHASING DIAGRAM



RAIL PREEMPT PHASES
(High Priority)

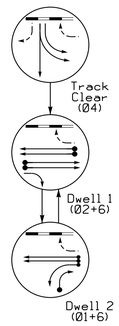
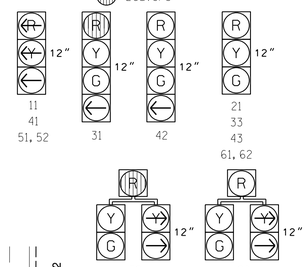


TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	02+6	01+5	01+6	03	04	TRACK CLEAR	DWELL 1	DWELL 2	FLASH
11	~~R~~	~~R~~	~~←~~	~~←~~	~~R~~	~~R~~	~~R~~	~~R~~	~~←~~	~~R~~
21	G	G	R	R	R	R	R	G	R	Y
22	G	G	R	R	R/G	R	R	G	R	Y
31	R	R	R	R	G	R	R	R	R	R
32	R	R	R/G	R/G	G	R	R	R	R	R
33	R	R	R	R	G	R	R	R	R	R
41	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~←~~	~~←~~	~~R~~	~~R~~	~~R~~
42	R	R	R	R	R	G	G	R	R	R
43	R	R	R	R	R	G	G	R	R	R
51,52	~~←~~	~~R~~	~~←~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
61,62	R	G	R	G	R	R	R	G	G	Y

SIGNAL FACE I.D.

All Heads L.E.D.
Louvers



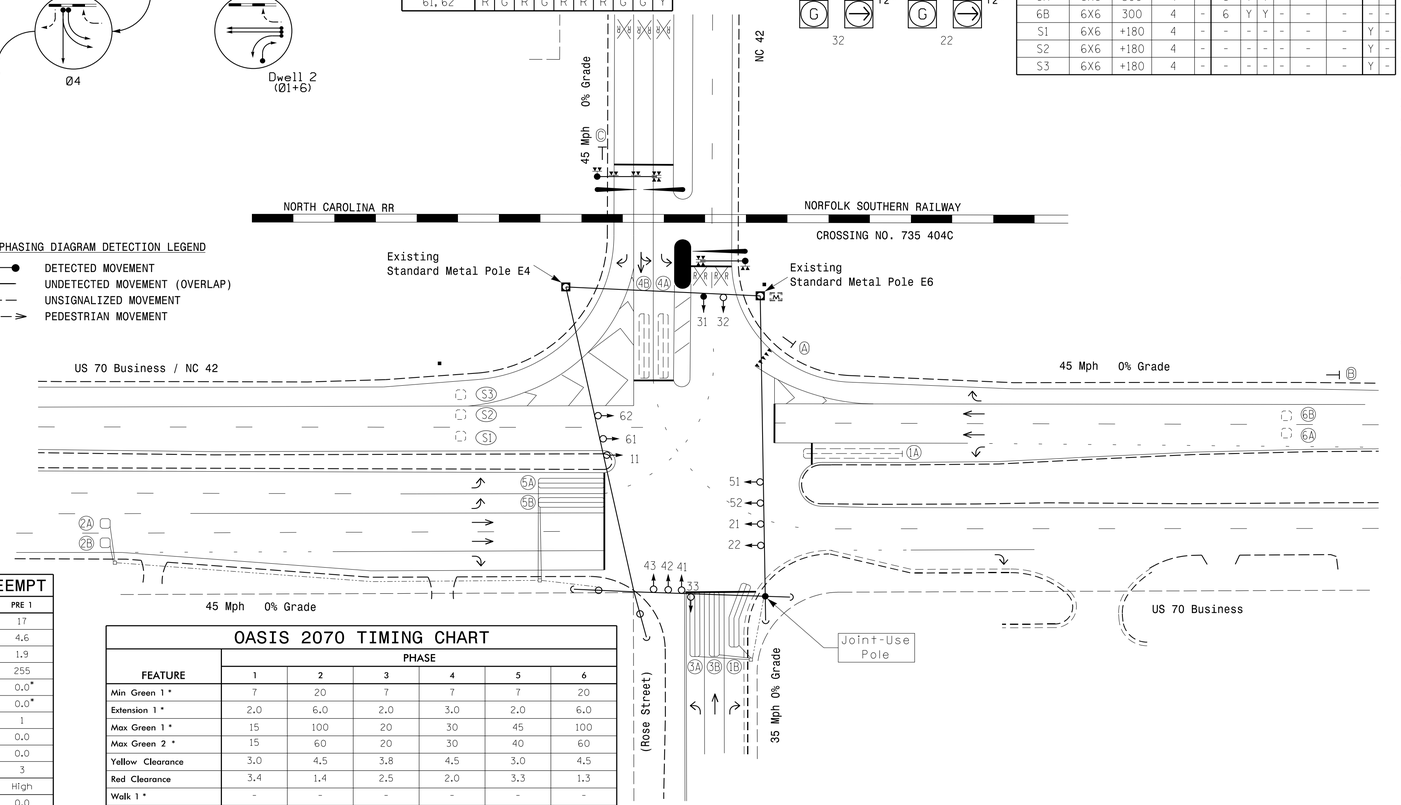
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X60	+5	2-4-2	-	1	Y	Y	-	-	-	-	-
1B	6X40	+5	2-4-2	Y	1	Y	Y	-	-	15	-	-
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	-
2B	6X6	300	6	Y	2	Y	Y	-	-	-	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	3	-	-
3B	6X40	0	2-4-2	Y	3	Y	Y	-	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-	-
5A	6X40	+5	2-4-2	Y	5	Y	Y	-	-	-	-	-
5B	6X40	+5	2-4-2	Y	5	Y	Y	-	-	-	-	-
6A	6X6	300	4	-	6	Y	Y	-	-	-	-	-
6B	6X6	300	4	-	6	Y	Y	-	-	-	-	-
S1	6X6	+180	4	-	-	-	-	-	-	-	Y	-
S2	6X6	+180	4	-	-	-	-	-	-	-	Y	-
S3	6X6	+180	4	-	-	-	-	-	-	-	Y	-

6 Phase
Fully Actuated
w/ RR Preemption
Clayton US 70 Business CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012 and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: http://connect.ncdot.gov/resources/safety/pages/its-and-signals.aspx
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 and/or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Reposition existing signal head numbered 31.
6. Set all detector units to presence mode.
7. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data: Master Asset #10401, Controller Asset #1037.



OASIS 2070 RR PREEMPT

FUNCTION	PRE 1
Interval 1 – Track Clearance Green	17
Interval 1 – Track Clearance Yellow	4.6
Interval 1 – Track Clearance Red	1.9
Interval 2 – Dwell Green	255
Interval 2 – Dwell Yellow	0.0*
Interval 2 – Dwell Red	0.0*
Interval 5 – Exit Green	1
Interval 5 – Yellow	0.0
Interval 5 – Red	0.0
Exit Phase(s)	3
Priority	High
Delay Time	0.0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	4.6
Red Clear Before Pre	1.9
Dwell Min Time	7
Enable Backup Protection	N
Ped Clear Through Yellow	N
Omit Overlaps	P

* Time defaults to time used for phase during normal operation

This signal was designed for advanced preemption.

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green 1 *	7	20	7	7	7	20
Extension 1 *	2.0	6.0	2.0	3.0	2.0	6.0
Max Green 1 *	15	100	20	30	45	100
Max Green 2 *	15	60	20	30	40	60
Yellow Clearance	3.0	4.5	3.8	4.5	3.0	4.5
Red Clearance	3.4	1.4	2.5	2.0	3.3	1.3
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5
Max Variable Initial *	-	34	-	-	-	34
Time Before Reduction *	-	30	-	-	-	30
Time To Reduction *	-	45	-	-	-	45
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

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

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Master Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	RxR Track	
N/A	Railroad Cantilever	
N/A	Railroad Gate and Flasher	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	RR Advance Warning Sign (W10-2R)	Ⓑ
Ⓒ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓒ

NC Dept of Transportation
Division of Highways
Engineering Drawing Date: 2/25/2015
Ed Alexander
ITS & Signals Unit

Prepared In the offices of:
RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-872-6153 Fax.
www.rameykemp.com

Signal Upgrade

Prepared For:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy, Garner, NC 27529

SCALE 0 40 1"=40'

US 70 Business at NC 42 and Rose Street

Division 4 Johnston County Clayton

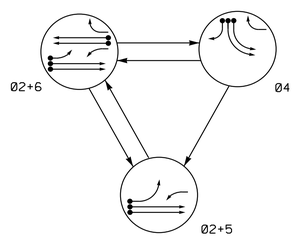
PLAN DATE: February 2015 REVIEWED BY: WJ Hamilton
PREPARED BY: NE Burns RKA PROJ. NO: 13229 (040)

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 32396 ENGINEER WILLIAM J. HAMILTON
DocuSigned by: William J. Hamilton 2/25/2015
SIGNATURE DATE
SIG. INVENTORY NO. 04-1037

PROJECT REFERENCE NO.	SHEET NO.
	Sig. 1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

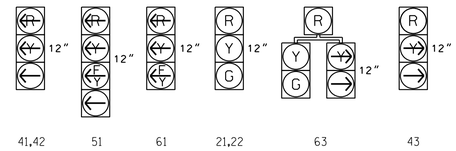
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 04	FLASH
21,22	G	G	R	Y
41,42	~~R~~	~~R~~	~~←~~	~~R~~
43	R	R	→	R
51	~~←~~	~~Y~~	~~R~~	~~Y~~
61	~~Y~~	~~Y~~	~~R~~	~~Y~~
62	R	G	R	Y
63	R	G	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



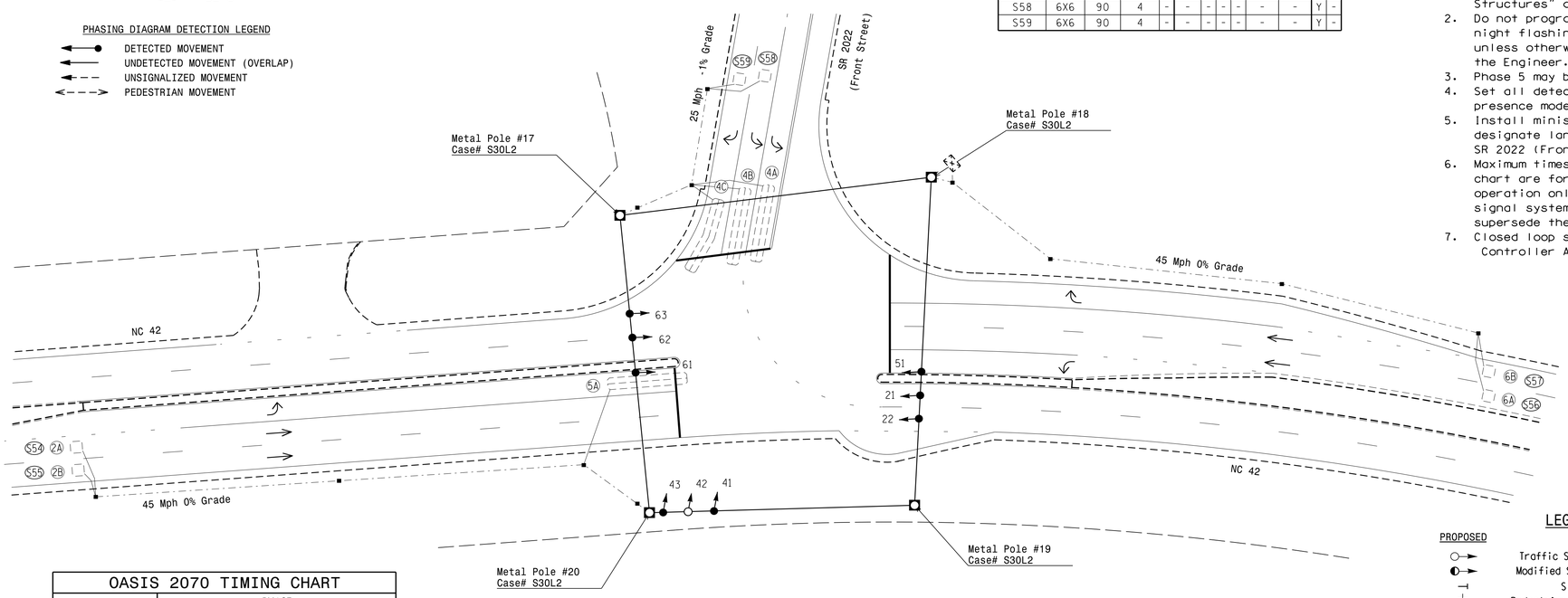
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A/S54	6X6	300	5	-	2	Y	Y	-	-	-	Y	-
2B/S55	6X6	300	5	-	2	Y	Y	-	-	-	Y	-
4A	6X40	+5	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	6X40	+5	2-4-2	-	4	Y	Y	-	-	3	-	-
4C	6X40	+5	2-4-2	-	4	Y	Y	-	-	15	-	-
5A	6X40	+5	2-4-2	-	5	Y	Y	-	-	15	-	-
					2	Y	Y	Y	-	3	-	-
6A/S56	6X6	300	4	-	6	Y	Y	-	-	-	Y	-
6B/S57	6X6	300	4	-	6	Y	Y	-	-	-	Y	-
S58	6X6	90	4	-	-	-	-	-	-	-	Y	-
S59	6X6	90	4	-	-	-	-	-	-	-	Y	-

3 Phase
Fully Actuated
US 70 Bus/NC 42 CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Install miniskips to designate lane separations for SR 2022 (Front Street)
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. Closed loop system data: Controller Asset #1234.



OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	12	7	7	12
Extension 1 *	6.0	2.0	2.0	6.0
Max Green 1 *	90	20	20	90
Yellow Clearance	4.5	3.0	3.0	4.5
Red Clearance	2.0	3.2	3.4	2.0
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	1.5	-	-	1.5
Max Variable Initial *	34	-	-	34
Time Before Reduction *	15	-	-	15
Time To Reduce *	45	-	-	45
Minimum Gap	3.0	-	-	3.0
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

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

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	Metal Strain Pole	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	

Signal Upgrade

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 42
At
SR 2022 (Front Street)

Division 4 Johnston County Clayton

PLAN DATE: March 2015 REVIEWED BY: Jason Galloway
PREPARED BY: K.G. Peedin, Jr REVIEWED BY:

SCALE 0 30 1"=30'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 29904 ENGINEER JASON P. GALLOWAY

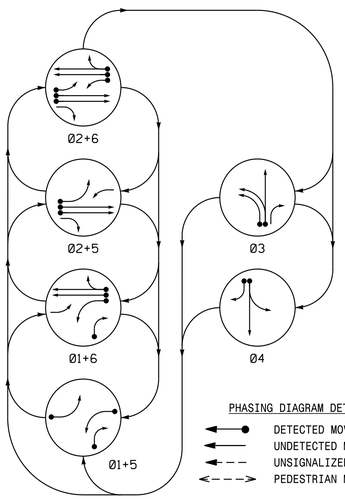
DocuSigned by: Jason Galloway 4/10/2015
—F7F0DEA7D8374D4D...
DATE

SIG. INVENTORY NO. 04-1234

10-APR-2015 15:19
S:\TTSSUM\ITS\Signals\Signal Design Section\Eastern Region\Div-04\04-1234\04-1234_sig_dsn_2015smds.dgn
kgpeedin

PROJECT REFERENCE NO.	SHEET NO.
N/A	Sig.1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

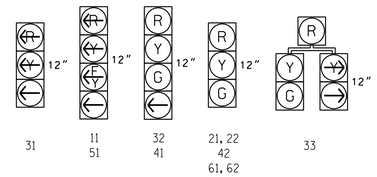
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	FLASH
11	←	←	F Y	F Y	~~R~~	~~R~~	~~Y~~
21, 22	R	R	G	G	R	R	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~
32	R	R	R	R	G ←	R	~~R~~
33	R/←	R/←	R	R	G	R	R
41	R	R	R	R	R	G ←	R
42	R	R	R	R	R	G	R
51	←	F Y	←	F Y	~~R~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



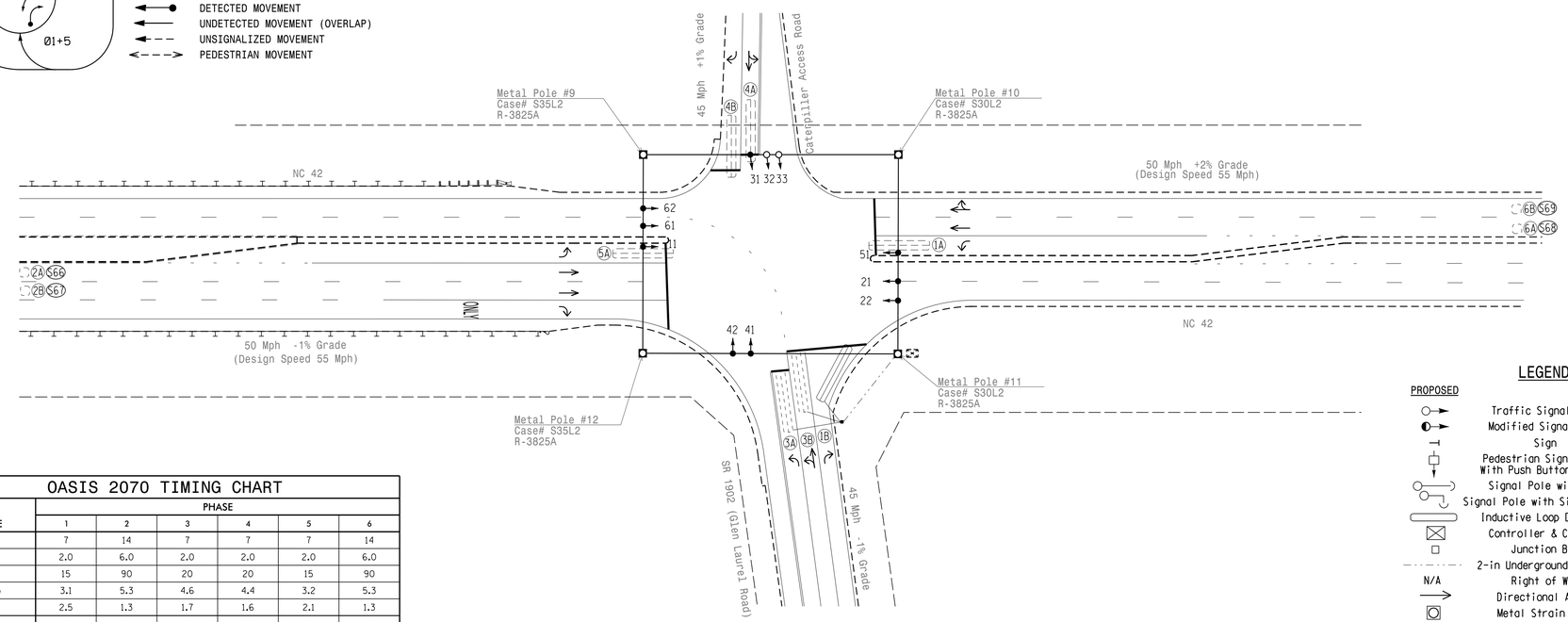
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP / NEW CARD
1A	6X40	+5	2-4-2	-	1	Y	Y	-	-	15	- / -
					6	Y	Y	Y	-	3	- / -
1B	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	- / -
2A/S66	6X6	420	6	-	2	Y	Y	-	-	-	- / -
2B/S67	6X6	420	6	-	2	Y	Y	-	-	-	- / -
3A	6X40	0	2-4-2	-	3	Y	Y	-	-	3	- / -
3B	6X40	0	2-4-2	-	3	Y	Y	-	-	3	- / -
4A	6X40	+5	2-4-2	-	4	Y	Y	-	-	3	- / -
4B	6X40	+5	2-4-2	-	4	Y	Y	-	-	15	- / -
5A	6X40	+5	2-4-2	-	5	Y	Y	-	-	15	- / -
					2	Y	Y	Y	-	3	- / -
6A/S68	6X6	420	6	-	6	Y	Y	-	-	-	- / -
6B/S69	6X6	420	6	-	6	Y	Y	-	-	-	- / -

6 Phase
Fully Actuated
US 70 Bus.- NC 42 CLS (Clayton)
10401

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Reposition existng signal head numbered #31.
6. Set all detector units to presence mode.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Closed loop system data: Controller Asset #1083.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Metal Strain Pole	
N/A	Guardrail	

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green 1 *	7	14	7	7	7	14
Extension 1	2.0	6.0	2.0	2.0	2.0	6.0
Max Green 1 *	15	90	20	20	15	90
Yellow Clearance	3.1	5.3	4.6	4.4	3.2	5.3
Red Clearance	2.5	1.3	1.7	1.6	2.1	1.3
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	-	2.5
Max Variable Initial *	-	46	-	-	-	46
Time Before Reduction *	-	15	-	-	-	15
Time To Reduce *	-	45	-	-	-	45
Minimum Gap	-	3.4	-	-	-	3.4
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

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

Signal Upgrade

Prepared for: Transportation Mobility and Safety Division, Traffic Engineering Branch, Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40 — 1"=40'

NC 42
at
SR 1902 (Glen Laurel Road)/
Caterpillar Access Road
Division 4 Johnston County Clayton

PLAN DATE:	August 2019	REVIEWED BY:	Z.W.Little
PREPARED BY:	X. Han	RKA PROJ. NO:	15074 (040)

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030530 ENGINEER ZACHARY M. LITTLE

DocuSigned by: Zachary Little 9/25/2019
ENGINEER'S SIGNATURE DATE

SIG. INVENTORY NO. 04-1083

25-SEP-2019 11:35
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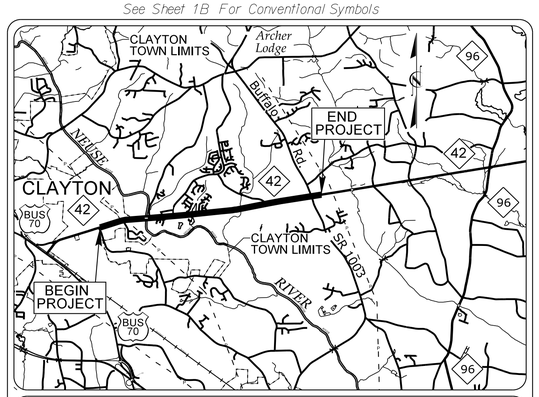
admxxx

APPENDIX D

FUTURE ROADWAY IMPROVEMENTS

TIP PROJECT: R-3825B

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3825B	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34552.1.FR3	STP-0042(58)	P.E.	

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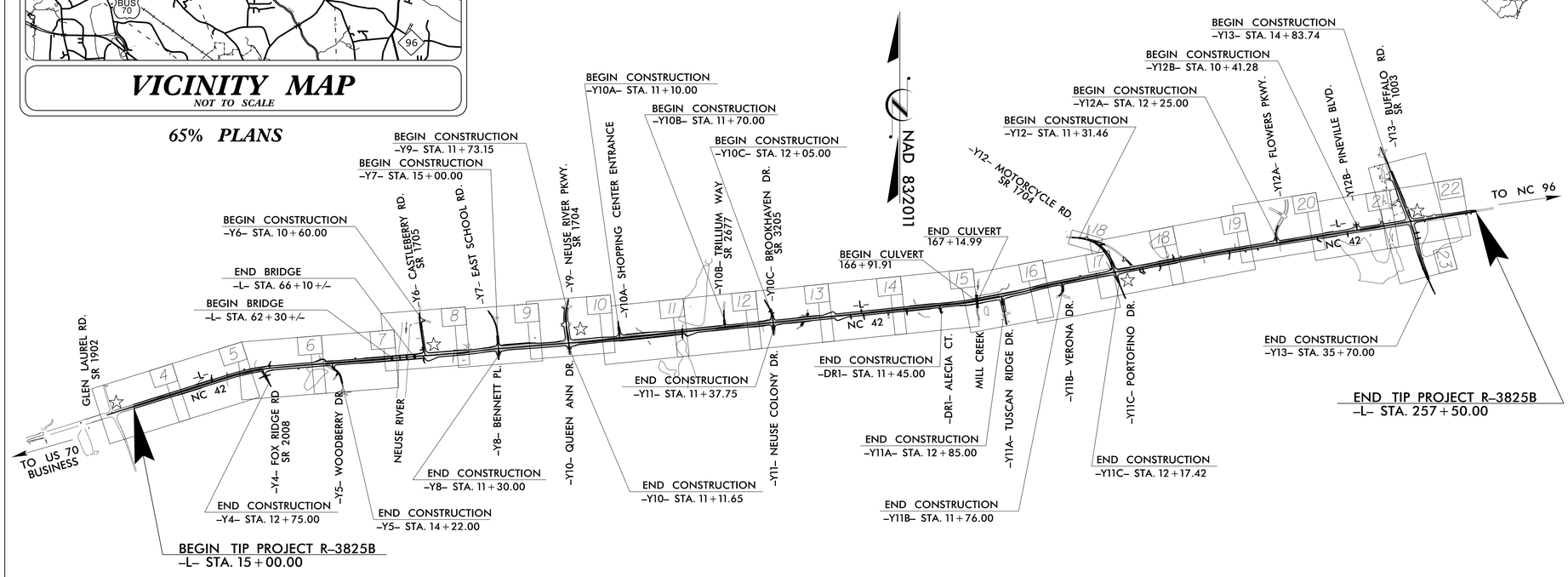
LOCATION: NC 42 FROM SR 1902 (GLEN LAUREL RD) TO SR 1003 (BUFFALO RD)

TYPE OF WORK: GRADING, PAVING, STRUCTURES, DRAINAGE AND SIGNALS

65% PLANS



CLEARING ON THIS PROJECT WILL BE PERFORMED TO THE LIMITS ESTABLISHED BY NCDOT METHOD __.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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CONTRACT:

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 19,000
ADT 2040 = 37,400
K = 9%
D = 65%
T = 6% *
V = 60 MPH
* (TTST % + DUAL %)
FUNC. CLASS = RURAL MINOR ARTERIAL
REGIONAL TIER
DESIGN EXCEPTION (GRADE)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-3825B = 4.517 MILES
LENGTH STRUCTURE TIP PROJECT R-3825B = 0.076 MILES
TOTAL LENGTH OF TIP PROJECT R-3825B = 4.593 MILES

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE • C-2243

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 17, 2016

LETTING DATE:
JUNE 19, 2018

ED EDENS, P.E.
PROJECT ENGINEER

KEVIN VAN METRE, P.E.
PROJECT DESIGN ENGINEER

GARY R. LOVERING, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

9/24/2015
25-APR-2016 09:50
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$$$$USERNAME$$$$

04/16/11

Note: Not to Scale

***S.U.E. = Subsurface Utility Engineering**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	1B

INCOMPLETE PLANS
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CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — R/W
- Proposed Right of Way Line with Iron Pin and Cap Marker — R/W
- Proposed Right of Way Line with Concrete or Granite R/W Marker — R/W
- Proposed Control of Access Line with Concrete C/A Marker — C/A
- Existing Control of Access — C/A
- Proposed Control of Access — C/A
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

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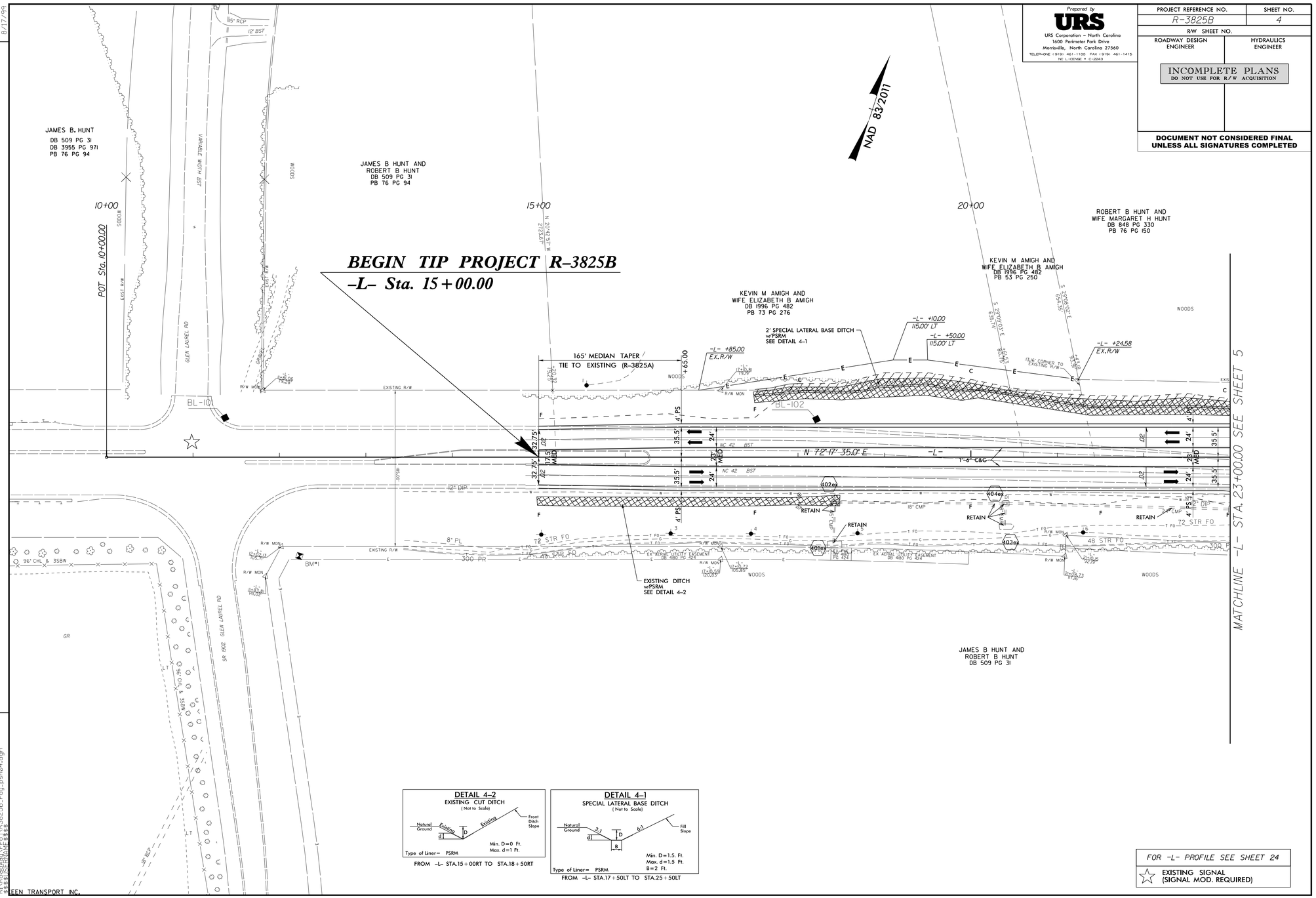
NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DETAIL 4-2
EXISTING CUT DITCH
(Not to Scale)

Type of Liner= PSRM
FROM -L- STA.15+00RT TO STA.18+50RT

DETAIL 4-1
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Type of Liner= PSRM
FROM -L- STA.17+50LT TO STA.25+50LT

FOR -L- PROFILE SEE SHEET 24

☆ EXISTING SIGNAL
(SIGNAL MOD. REQUIRED)

REVISIONS

8/17/99

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...EEN TRANSPORT INC.

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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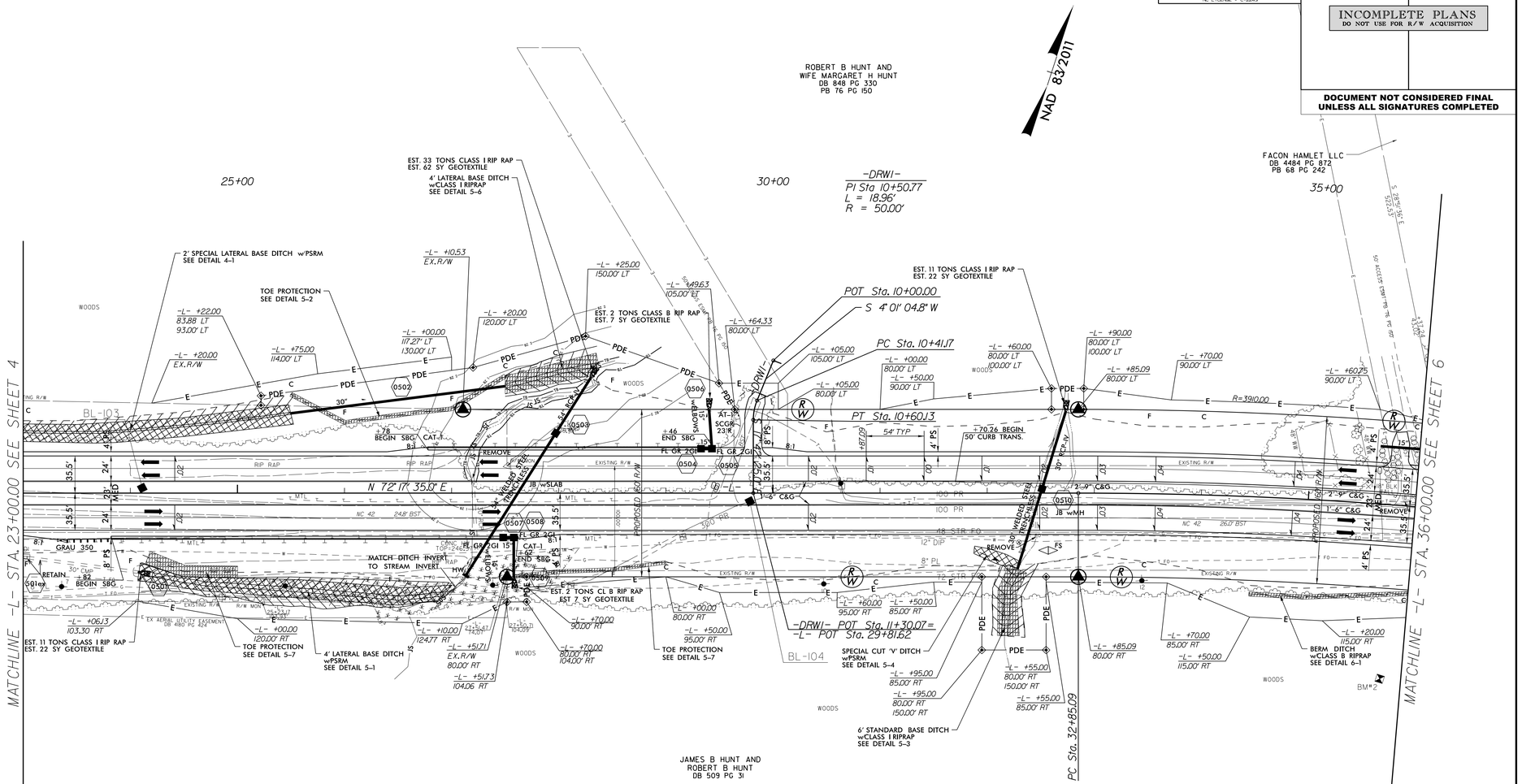
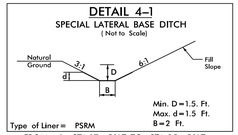
REVISIONS

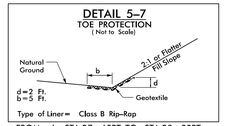


DETAIL 4-1
SPECIAL LATERAL BASE DITCH
(Not to Scale)



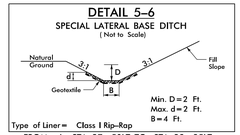
FROM -L- STA.17 + 50LT TO STA.25 + 50LT

DETAIL 5-7
TOE PROTECTION
(Not to Scale)



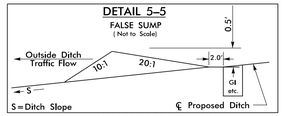
FROM -L- STA.27 + 60RT TO STA.29 + 00RT
FROM -L- STA.24 + 15RT TO STA.25 + 00RT

DETAIL 5-6
SPECIAL LATERAL BASE DITCH
(Not to Scale)



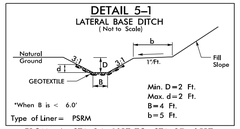
FROM -L- STA. 27 + 50LT TO STA. 28 + 35LT

DETAIL 5-5
FALSE SUMP
(Not to Scale)



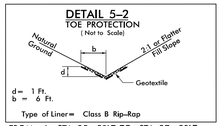
-L- STA.32 + 49RT, TOP ELEV. = 252.85'

DETAIL 5-1
LATERAL BASE DITCH
(Not to Scale)



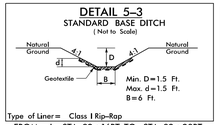
FROM -L- STA. 24 + 10RT TO STA. 27 + 05RT

DETAIL 5-2
TOE PROTECTION
(Not to Scale)



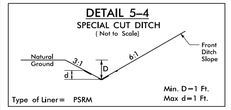
FROM -L- STA. 25 + 50LT TO STA. 27 + 50LT

DETAIL 5-3
STANDARD BASE DITCH
(Not to Scale)



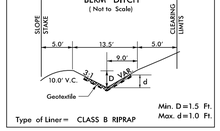
FROM -L- STA. 32 + 16RT TO STA. 32 + 28RT
EST. 80 TONS CLASS I RIPRAP, EST. DDE 101CY, EST. 134SY GEOTEXTILE

DETAIL 5-4
SPECIAL CUT DITCH
(Not to Scale)



FROM -L- STA. 31 + 90RT TO STA. 32 + 28RT

DETAIL 6-1
BERM DITCH
(Not to Scale)



FROM -L- STA.34 + 50RT TO STA.38 + 00RT

-L- NC 42

PI Sta 37+23.14
Δ = 13° 05' 00.0" (RT)
D = 1° 29' 59.6"
L = 872.29'
T = 438.05'
R = 3,820.00'
e = 4%
Runoff = 216'

FOR -L- PROFILE SEE SHEET 24

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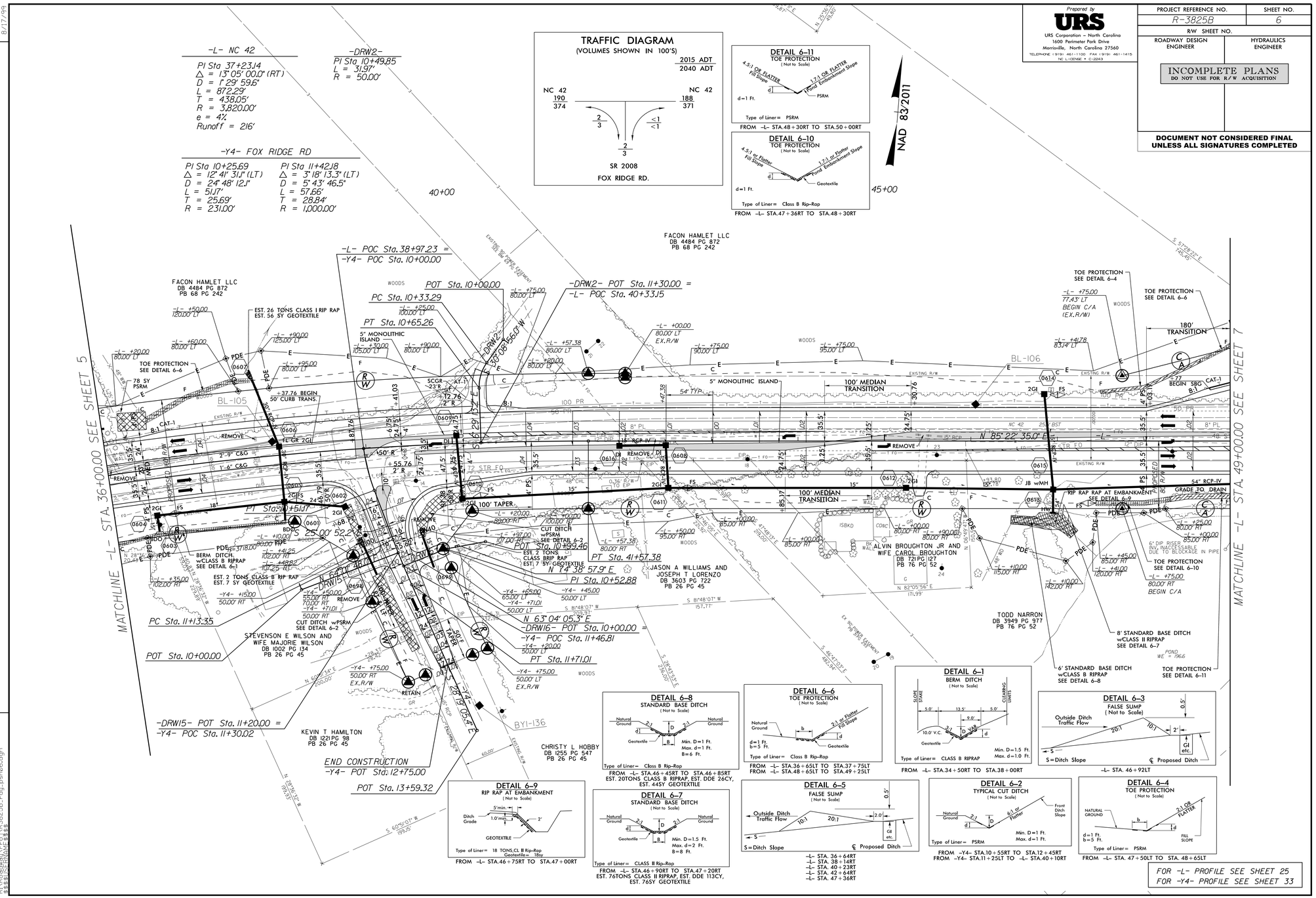

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NC LICENSE # C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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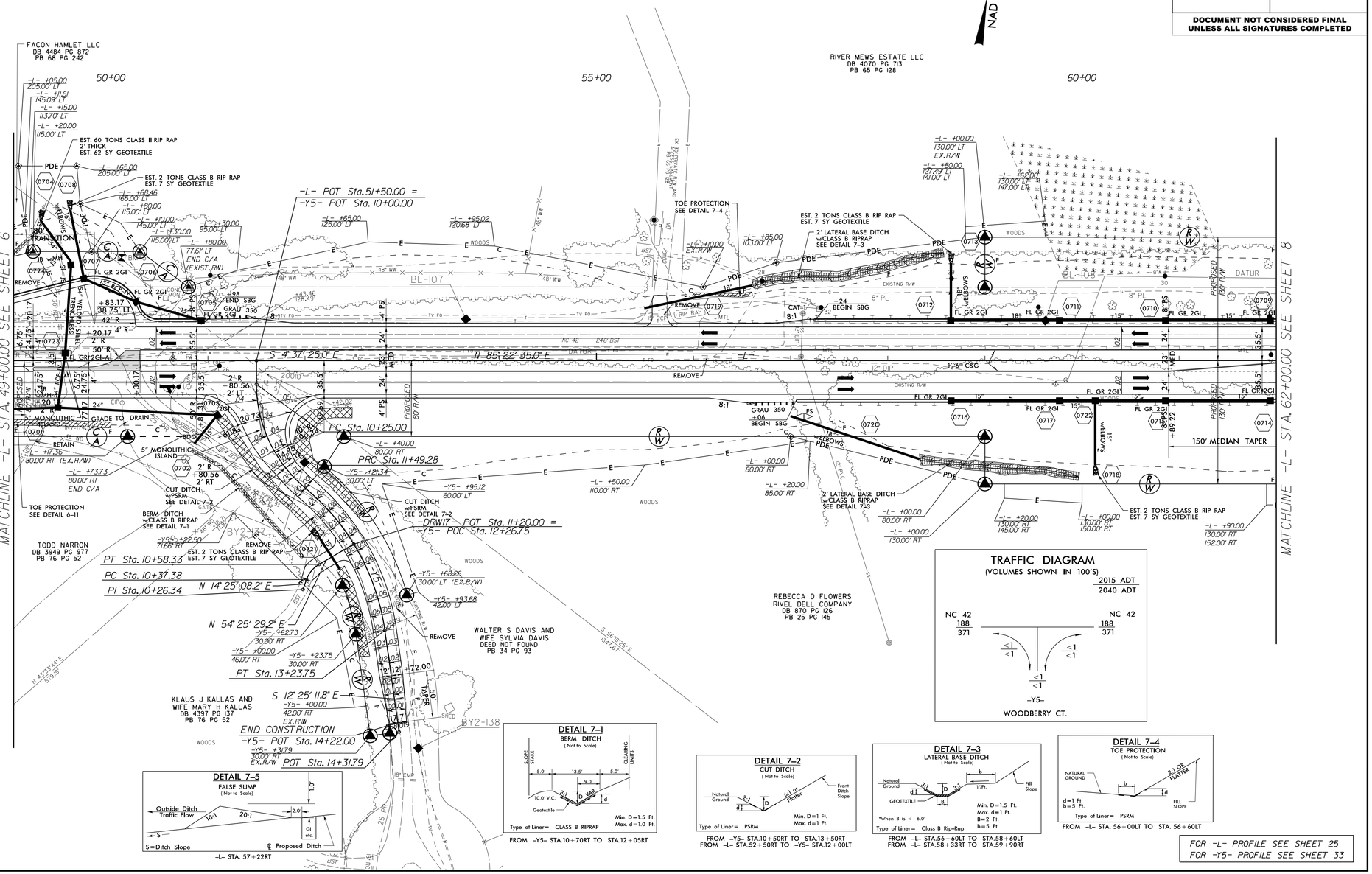
-Y5- WOODBERRY CT

PI Sta 10+91.31
Δ = 49° 26' 53.2" (LT)
D = 39° 47' 19.4"
L = 124.28'
T = 66.31'
R = 144.00'

PI Sta 12+40.57
Δ = 41° 39' 06.4" (RT)
D = 23° 52' 23.7"
L = 174.47'
T = 91.29'
R = 240.00'

-DRW17-
PI Sta 10+48.30
L = 20.95'
R = 30.00'

NAD 83/2011



TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

NC 42 188 / 371 — NC 42 188 / 371

<1 / <1 — <1 / <1

<1 / <1

-Y5-
WOODBERRY CT.

DETAIL 7-1
BERM DITCH
(Not to Scale)

Type of Liner= CLASS B RIPRAP
Min. D=1.5 Ft.
Max. d=1.0 Ft.

FROM -Y5- STA.10+70RT TO STA.12+05RT

DETAIL 7-2
CUT DITCH
(Not to Scale)

Type of Liner= PSRM
Min. D=1 Ft.
Max. d=1 Ft.

FROM -Y5- STA.10+50RT TO STA.13+50RT
FROM -L- STA.52+50RT TO -Y5- STA.12+00LT

DETAIL 7-3
LATERAL BASE DITCH
(Not to Scale)

*When B is < 6.0'
Type of Liner= Class B Rip-Rap
Min. D=1.5 Ft.
Max. d=1 Ft.
B=2 Ft.
b=5 Ft.

FROM -L- STA.56+60LT TO STA.58+60LT
FROM -L- STA.58+33RT TO STA.59+90RT

DETAIL 7-4
TOE PROTECTION
(Not to Scale)

d=1 Ft.
b=5 Ft.
Type of Liner= PSRM

FROM -L- STA. 56+00LT TO STA. 56+60LT

DETAIL 7-5
FALSE SUMP
(Not to Scale)

S=Ditch Slope
℄ Proposed Ditch
-L- STA. 57+22RT

FOR -L- PROFILE SEE SHEET 25
FOR -Y5- PROFILE SEE SHEET 33

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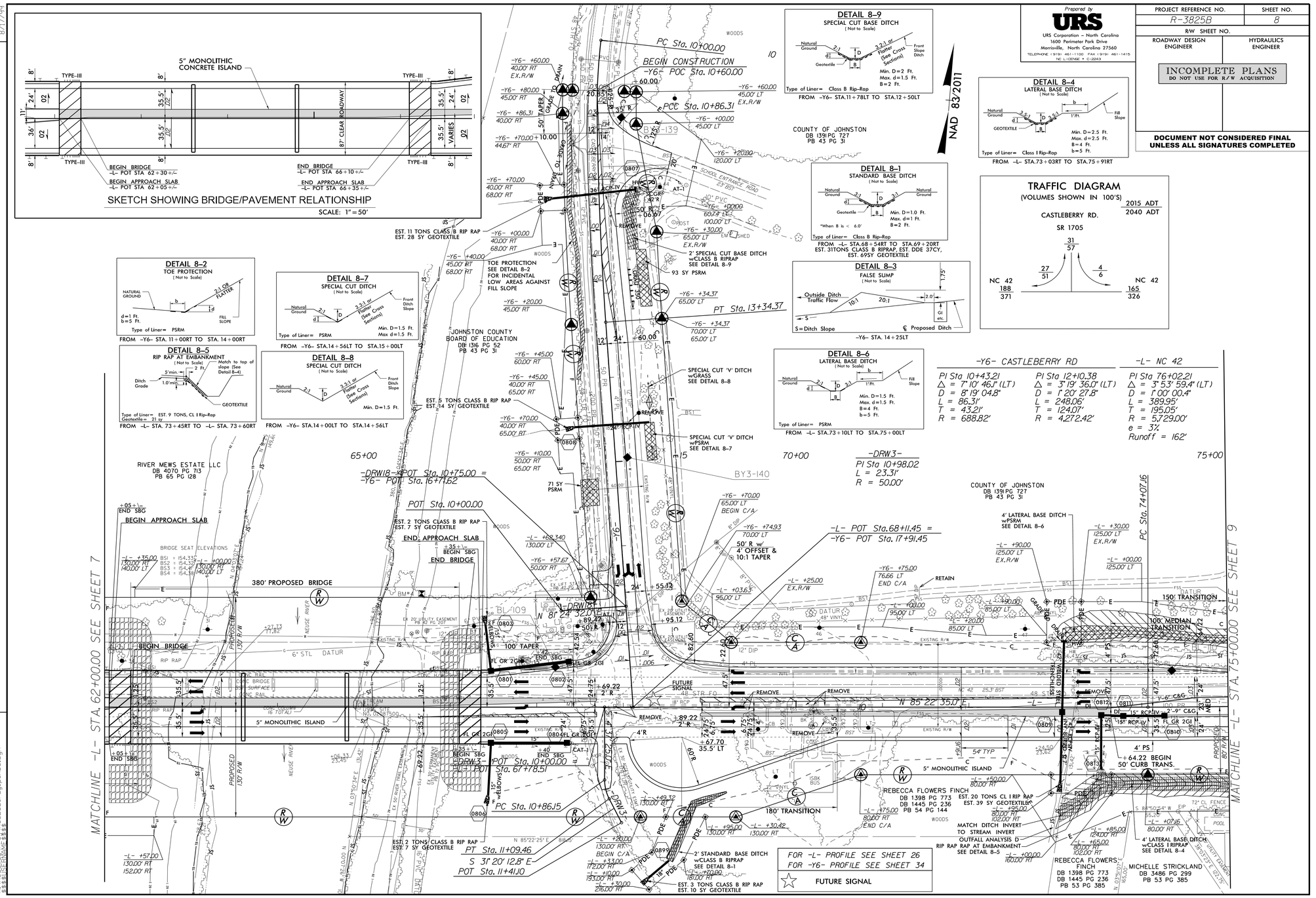

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NC LICENSE • C-2243

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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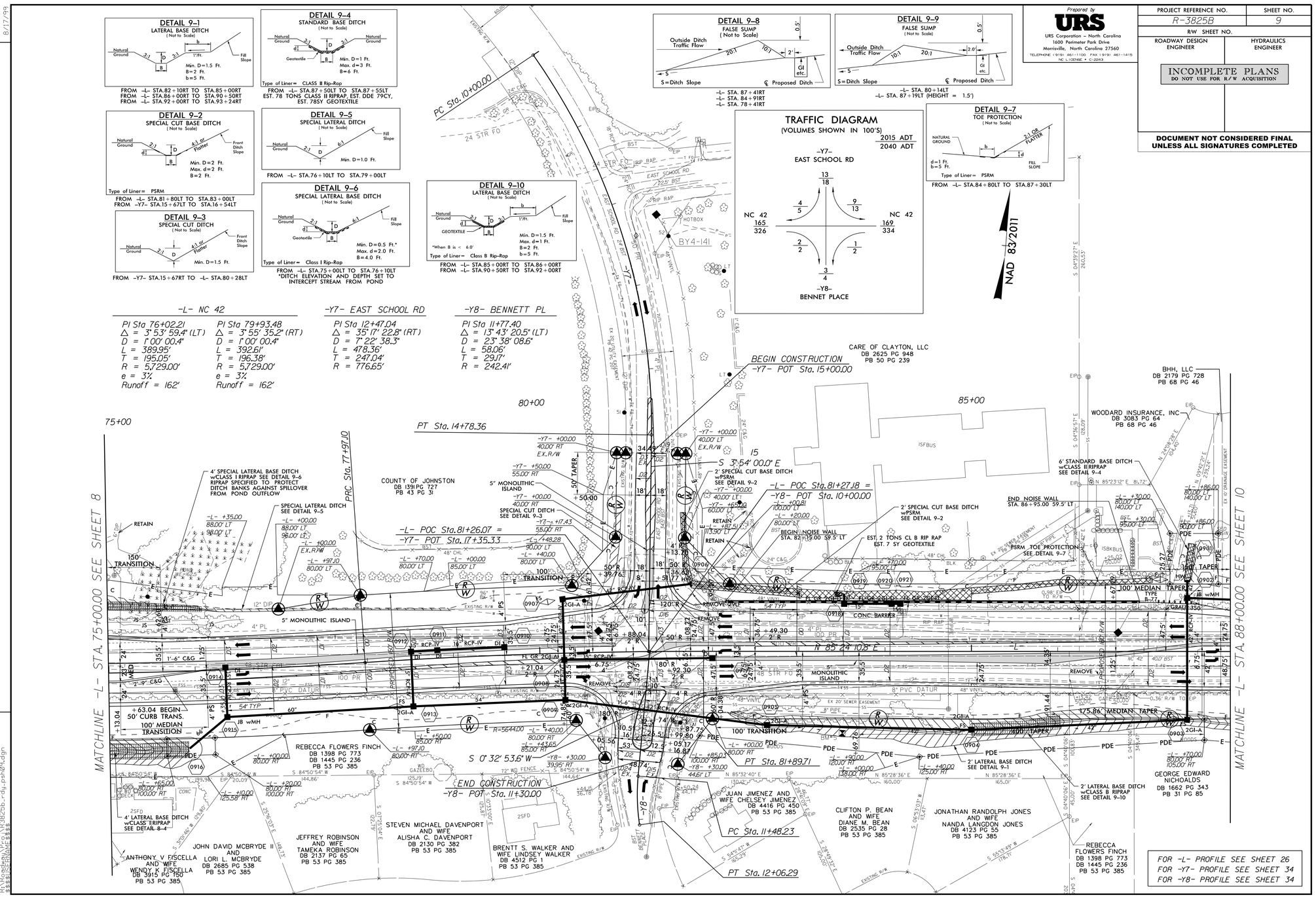

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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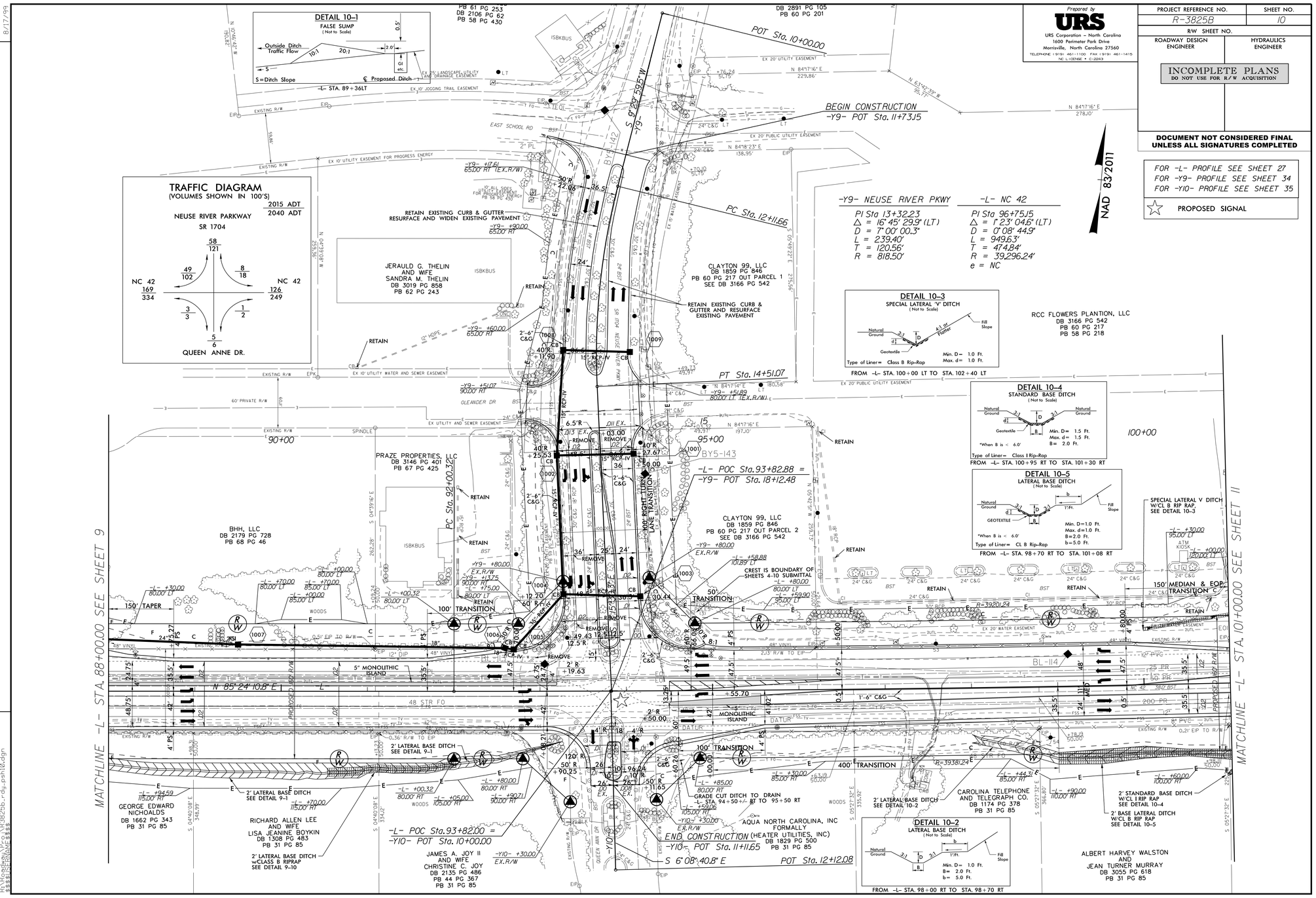

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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FOR -L- PROFILE SEE SHEET 27
FOR -Y9- PROFILE SEE SHEET 34
FOR -Y10- PROFILE SEE SHEET 35

☆ PROPOSED SIGNAL

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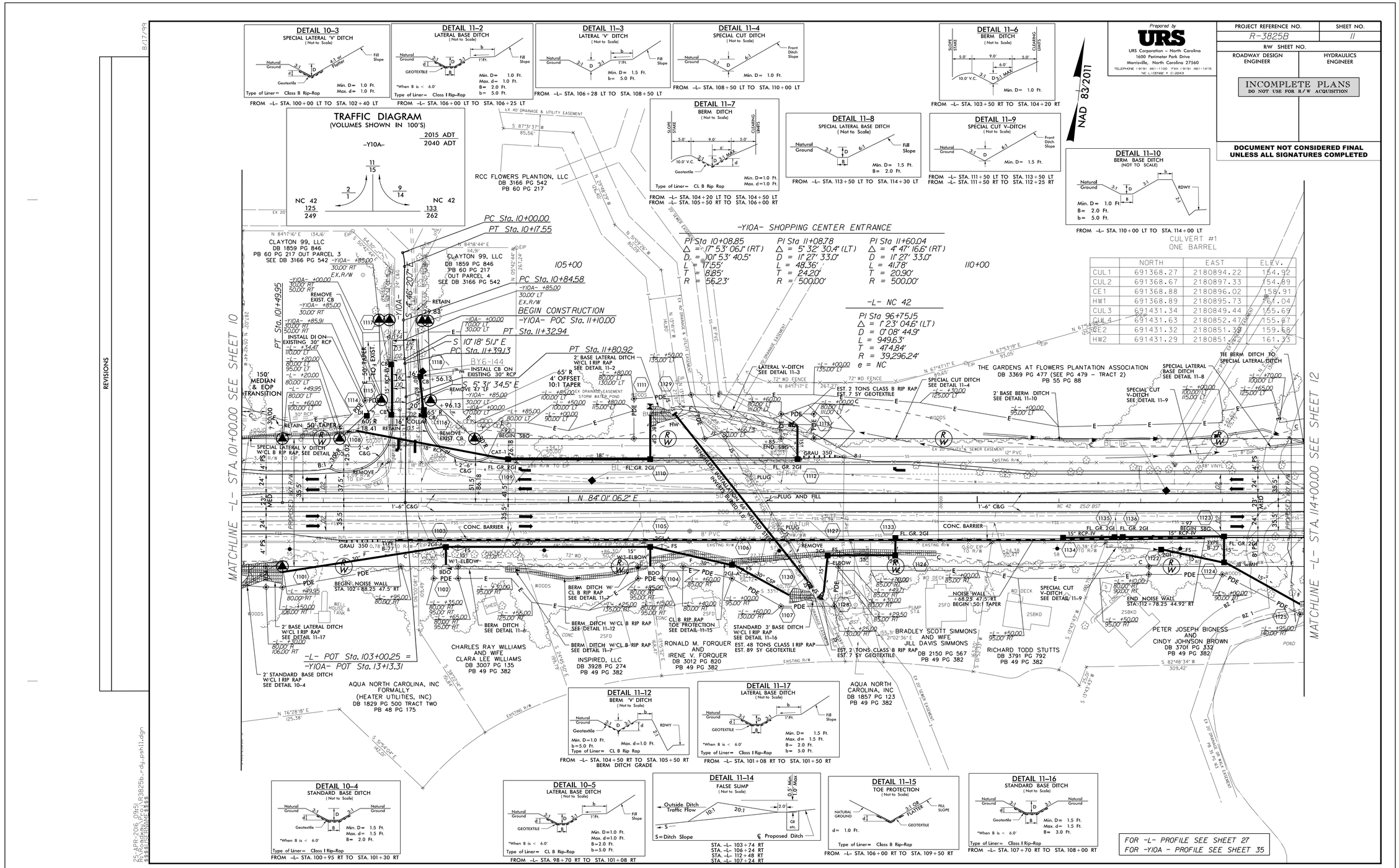
DETAIL 10-3
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
Geotextile
Fill Slope
4:1 or Flatter
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
Type of Liner= Class B Rip-Rap
FROM -L- STA. 100+00 LT TO STA. 102+40 LT
DETAIL 11-2
LATERAL BASE DITCH
(Not to Scale)
GEOTEXTILE
*When B is < 6.0'
Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 2.0 Ft.
b= 5.0 Ft.
Type of Liner= Class I Rip-Rap
FROM -L- STA. 106+00 LT TO STA. 106+25 LT
DETAIL 11-3
LATERAL 'V' DITCH
(Not to Scale)
Min. D= 1.5 Ft.
b= 5.0 Ft.
FROM -L- STA. 106+28 LT TO STA. 108+50 LT
DETAIL 11-4
SPECIAL CUT DITCH
(Not to Scale)
Front Ditch Slope
Min. D= 1.0 Ft.
FROM -L- STA. 108+50 LT TO STA. 110+00 LT
DETAIL 11-6
BERM DITCH
(Not to Scale)
SLOPE STAKE
CLEARING LIMITS
Min. D= 1.0 Ft.
FROM -L- STA. 103+50 RT TO STA. 104+20 RT
DETAIL 11-7
BERM DITCH
(Not to Scale)
Type of Liner= CL B Rip Rap
Min. D=1.0 Ft.
Max. d=1.0 Ft.
FROM -L- STA. 104+20 LT TO STA. 104+50 LT
FROM -L- STA. 105+50 RT TO STA. 106+00 RT
DETAIL 11-8
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
B= 2.0 Ft.
FROM -L- STA. 113+50 LT TO STA. 114+30 LT
DETAIL 11-9
SPECIAL CUT V-DITCH
(Not to Scale)
Min. D= 1.5 Ft.
FROM -L- STA. 111+50 LT TO STA. 113+50 LT
FROM -L- STA. 111+50 RT TO STA. 112+25 RT
DETAIL 11-10
BERM BASE DITCH
(NOT TO SCALE)
RDWY
Min. D= 1.0 Ft.
B= 2.0 Ft.
b= 5.0 Ft.
FROM -L- STA. 110+00 LT TO STA. 114+00 LT
TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)
2015 ADT
2040 ADT
-Y10A-
NC 42
125
249
133
262
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PROJECT REFERENCE NO.
R-3825B
SHEET NO.
11
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
NAD 83/2011
MATCHLINE -L- STA. 101+00.00 SEE SHEET 10
MATCHLINE -L- STA. 114+00.00 SEE SHEET 12
-Y10A- SHOPPING CENTER ENTRANCE
PI Sta 10+08.85
Δ = 17° 53' 06.1" (RT)
D = 10° 53' 40.5"
L = 171.55'
T = 88.85'
R = 526.23'
PI Sta 11+08.78
Δ = 5° 32' 30.4" (LT)
D = 11° 27' 33.0"
L = 48.36'
T = 24.20'
R = 500.00'
PI Sta 11+60.04
Δ = 4° 47' 16.6" (RT)
D = 11° 27' 33.0"
L = 41.78'
T = 20.90'
R = 500.00'
-L- NC 42
PI Sta 96+75.15
Δ = 1° 23' 04.6" (LT)
D = 0° 08' 44.9"
L = 949.63'
T = 474.84'
R = 39,296.24'
e = NC
CULVERT #1
ONE BARREL
NORTH EAST ELEV.
CUL1 691368.27 2180894.22 154.92
CUL2 691368.67 2180897.33 154.89
CE1 691368.88 2180896.02 158.91
HW1 691368.89 2180895.73 161.04
CUL3 691431.34 2180849.44 155.69
CUL4 691431.63 2180852.47 155.87
CE2 691431.32 2180851.33 159.68
HW2 691431.29 2180851.22 161.33
PC Sta. 10+00.00
PT Sta. 10+17.55
PC Sta. 10+84.58
BEGIN CONSTRUCTION
-Y10A- POC Sta. 11+10.00
PT Sta. 11+32.94
PT Sta. 11+80.92
PC Sta. 11+39.13
105+00
110+00
CLAYTON 99, LLC
DB 1859 PG 846
PB 60 PG 217 OUT PARCEL 3
SEE DB 3166 PG 542
RCC FLOWERS PLANTION, LLC
DB 3166 PG 542
PB 60 PG 217
THE GARDENS AT FLOWERS PLANTATION ASSOCIATION
DB 3369 PG 477 (SEE PG 479 - TRACT 2)
PB 55 PG 88
CHARLES RAY WILLIAMS AND WIFE CLARA LEE WILLIAMS
DB 3007 PG 135
PB 49 PG 382
INSPIRED, LLC
DB 3928 PG 274
PB 49 PG 382
RONALD M. FORQUER AND IRENE V. FORQUER
DB 3012 PG 820
PB 49 PG 382
BRADLEY SCOTT SIMMONS AND WIFE JILL DAVIS SIMMONS
DB 2150 PG 567
PB 49 PG 382
RICHARD TODD STUTTS
DB 3791 PG 792
PB 49 PG 382
PETER JOSEPH BIGNESS AND CINDY JOHNSON BROWN
DB 3701 PG 332
PB 49 PG 382
AQUA NORTH CAROLINA, INC FORMALLY (HEATER UTILITIES, INC)
DB 1829 PG 500 TRACT TWO
PB 48 PG 175
AQUA NORTH CAROLINA, INC
DB 1857 PG 123
PB 49 PG 382
-L- POT Sta. 103+00.25 = -Y10A- POT Sta. 13+13.31
BEGIN NOISE WALL STA. 102+88.25 47.5' RT
NOISE WALL +68.25 47.5' RT BEGIN 50:1 TAPER
END NOISE WALL STA. 112+78.25 44.92' RT
2' BASE LATERAL DITCH W/CL I RIP RAP SEE DETAIL 11-17
2' STANDARD BASE DITCH W/CL I RIP RAP SEE DETAIL 10-4
BERM DITCH W/CL B RIP RAP SEE DETAIL 11-7
BERM DITCH W/CL B RIP RAP SEE DETAIL 11-6
BERM DITCH W/CL B RIP RAP SEE DETAIL 11-12
BERM DITCH W/CL B RIP RAP SEE DETAIL 11-7
CL B RIP RAP TOE PROTECTION SEE DETAIL 11-15
STANDARD 3' BASE DITCH W/CL I RIP RAP SEE DETAIL 11-16
EST. 48 TONS CLASS I RIP RAP
EST. 89 SY GEOTEXTILE
EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE
EST. 2 TONS CLASS B RIP RAP
EST. 7 SY GEOTEXTILE
LATERAL V-DITCH SEE DETAIL 11-3
SPECIAL CUT DITCH SEE DETAIL 11-4
2' BASE BERM DITCH SEE DETAIL 11-10
SPECIAL LATERAL BASE DITCH SEE DETAIL 11-8
SPECIAL CUT V-DITCH SEE DETAIL 11-9
TIE BERM DITCH TO SPECIAL LATERAL DITCH
SPECIAL LATERAL V DITCH W/CL B RIP RAP, SEE DETAIL 11-2
INSTALL DI ON EXISTING 30" RCP
INSTALL CB ON EXISTING 30" RCP
REMOVE 47 LF
REMOVE EXIST. CB
150' MEDIAN & EOP TRANSITION
50' TAPER
65' R
4' OFFSET
10:1 TAPER
BEGIN SBG
END SBG
CONC. BARRIER
-L- PLUG AND FILL
N 84°01' 06.2" E
DETAIL 11-12
BERM 'V' DITCH
(Not to Scale)
Min. D=1.0 Ft.
b=5.0 Ft.
Max. d=1.0 Ft.
Type of Liner= CL B Rip Rap
FROM -L- STA. 104+50 RT TO STA. 105+50 RT
BERM DITCH GRADE
DETAIL 11-17
LATERAL BASE DITCH
(Not to Scale)
*When B is < 6.0'
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.
Type of Liner= Class I Rip-Rap
FROM -L- STA. 101+08 RT TO STA. 101+50 RT
DETAIL 10-4
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
*When B is < 6.0'
Type of Liner= Class I Rip-Rap
FROM -L- STA. 100+95 RT TO STA. 101+30 RT
DETAIL 10-5
LATERAL BASE DITCH
(Not to Scale)
Min. D=1.0 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.
*When B is < 6.0'
Type of Liner= CL B Rip-Rap
FROM -L- STA. 98+70 RT TO STA. 101+08 RT
DETAIL 11-14
FALSE SUMP
(Not to Scale)
Outside Ditch Traffic Flow
S=Ditch Slope
Proposed Ditch
STA. -L- 103+74 RT
STA. -L- 106+24 RT
STA. -L- 112+48 RT
STA. -L- 107+24 RT
DETAIL 11-15
TOE PROTECTION
(Not to Scale)
NATURAL GROUND
FILL SLOPE
GEOTEXTILE
d= 1.0 Ft.
Type of Liner= Class B Rip-Rap
FROM -L- STA. 106+00 RT TO STA. 109+50 RT
DETAIL 11-16
STANDARD BASE DITCH
(Not to Scale)
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 3.0 Ft.
*When B is < 6.0'
Type of Liner= Class I Rip-Rap
FROM -L- STA. 107+70 RT TO STA. 108+00 RT
FOR -L- PROFILE SEE SHEET 27
FOR -Y10A - PROFILE SEE SHEET 35
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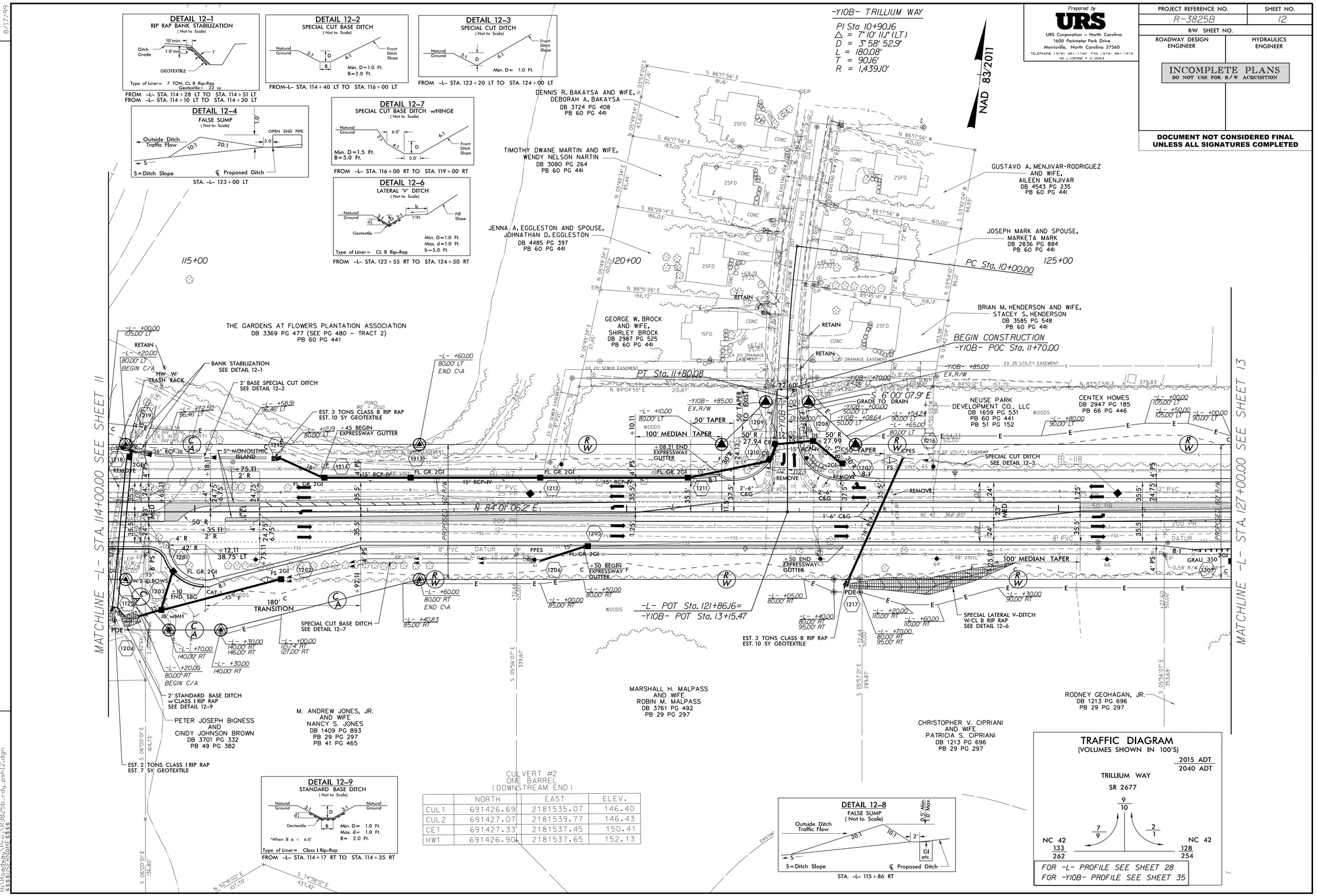
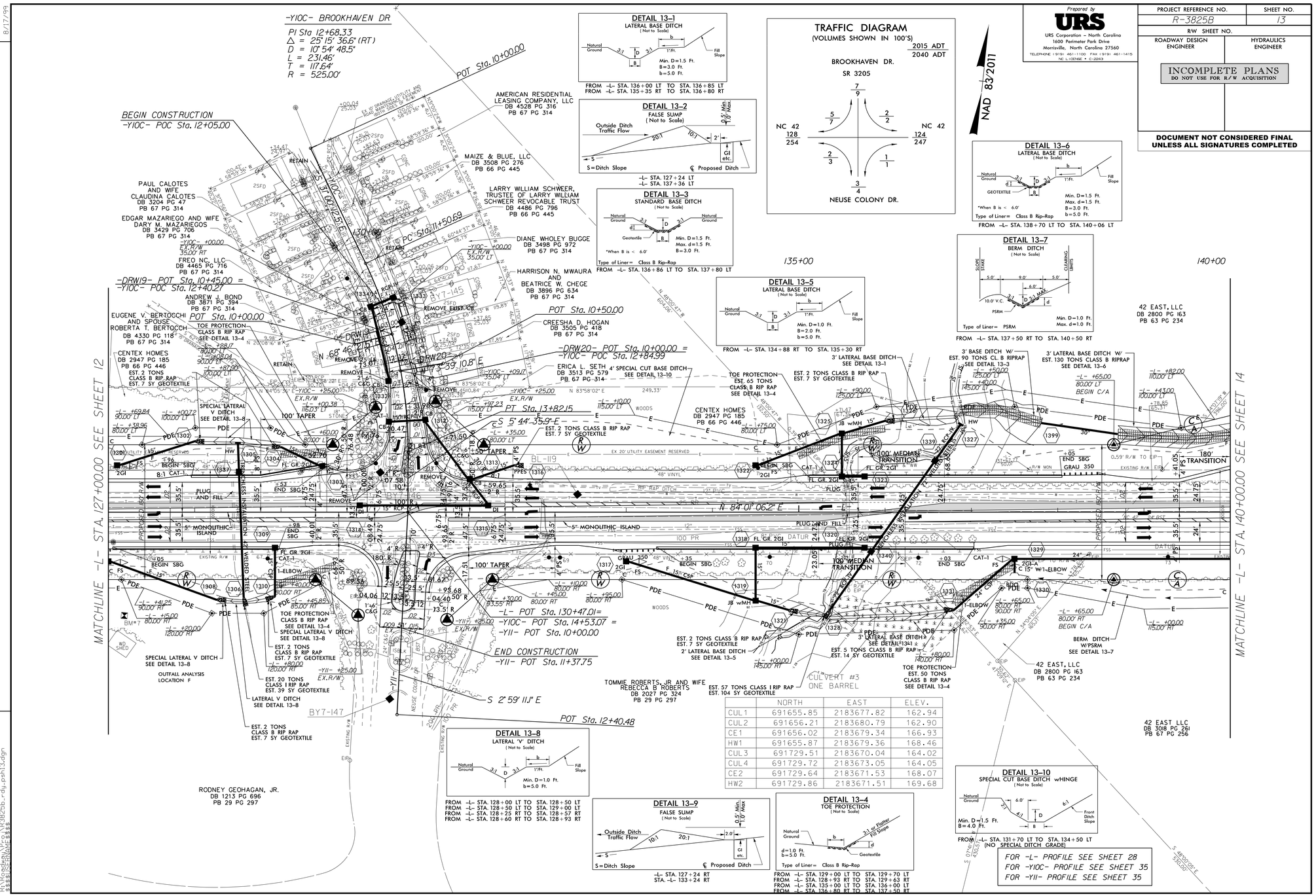


CULVERT #2
ONE BARREL
(DOWNSTREAM END)

	NORTH	EAST	ELEV.
CUL1	691426.69	2181535.07	146.40
CUL2	691427.07	2181539.77	146.43
CE1	691427.33	2181537.45	150.41
HW1	691426.90	2181537.65	152.13



	NORTH	EAST	ELEV.
CUL1	691655.85	2183677.82	162.94
CUL2	691656.21	2183680.79	162.90
CE1	691656.02	2183679.34	166.93
HW1	691655.87	2183679.36	168.46
CUL3	691729.51	2183670.04	164.02
CUL4	691729.72	2183673.05	164.05
CE2	691729.64	2183671.53	168.07
HW2	691729.86	2183671.51	169.68

DETAIL 13-1
LATERAL BASE DITCH
(Not to Scale)

Min. D=1.5 Ft.
B=3.0 Ft.
b=5.0 Ft.

FROM -L- STA. 136+00 LT TO STA. 136+85 LT
FROM -L- STA. 135+35 RT TO STA. 136+80 RT

DETAIL 13-2
FALSE SUMP
(Not to Scale)

S=Ditch Slope
℄ Proposed Ditch

-L- STA. 127+24 LT
-L- STA. 137+36 LT

DETAIL 13-3
STANDARD BASE DITCH
(Not to Scale)

*When B is < 6.0'

Type of Liner= Class B Rip-Rap

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=3.0 Ft.

FROM -L- STA. 136+86 LT TO STA. 137+80 LT

DETAIL 13-5
LATERAL BASE DITCH
(Not to Scale)

Min. D=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM -L- STA. 134+88 RT TO STA. 135+30 RT

DETAIL 13-6
LATERAL BASE DITCH
(Not to Scale)

*When B is < 6.0'

Type of Liner= Class B Rip-Rap

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=3.0 Ft.
b=5.0 Ft.

FROM -L- STA. 138+70 LT TO STA. 140+06 LT

DETAIL 13-7
BERM DITCH
(Not to Scale)

Type of Liner= PSRM

Min. D=1.0 Ft.
Max. d=1.0 Ft.

FROM -L- STA. 137+50 RT TO STA. 140+50 RT

DETAIL 13-8
LATERAL 'V' DITCH
(Not to Scale)

Min. D=1.0 Ft.
b=5.0 Ft.

FROM -L- STA. 128+00 LT TO STA. 128+50 LT
FROM -L- STA. 128+50 LT TO STA. 129+00 LT
FROM -L- STA. 128+25 RT TO STA. 128+57 RT
FROM -L- STA. 128+60 RT TO STA. 128+93 RT

DETAIL 13-9
FALSE SUMP
(Not to Scale)

S=Ditch Slope
℄ Proposed Ditch

-L- STA. 127+24 RT
STA. -L- 133+24 RT

DETAIL 13-4
TOE PROTECTION
(Not to Scale)

d=1.0 Ft.
b=5.0 Ft.

Type of Liner= Class B Rip-Rap

FROM -L- STA. 129+00 LT TO STA. 129+70 LT
FROM -L- STA. 128+93 RT TO STA. 129+63 RT
FROM -L- STA. 135+00 LT TO STA. 136+00 LT
FROM -L- STA. 136+80 RT TO STA. 137+50 RT

DETAIL 13-10
SPECIAL CUT BASE DITCH w/HINGE
(Not to Scale)

Min. D=1.5 Ft.
B=4.0 Ft.

FROM -L- STA. 131+70 LT TO STA. 134+50 LT
(NO SPECIAL DITCH GRADE)

FOR -L- PROFILE SEE SHEET 28
FOR -Y10C- PROFILE SEE SHEET 35
FOR -Y11- PROFILE SEE SHEET 35

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

2015 ADT
2040 ADT

BROOKHAVEN DR.
SR 3205
NC 42 128 254
NC 42 124 247
NEUSE COLONY DR.

NAD 83/2011

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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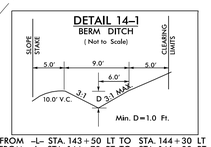
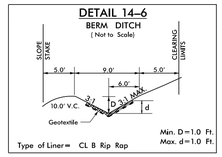
NAD 83/2011

DETAIL 14–1
BERM DITCH
(Not to Scale)



FROM –L– STA. 143+50 LT TO STA. 144+30 LT
FROM –L– STA. 144+70 RT TO STA. 146+00 RT
FROM –L– STA. 146+70 LT TO STA. 147+50 LT
FROM –L– STA. 149+00 LT TO STA. 152+00 LT

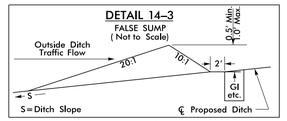
DETAIL 14–6
BERM DITCH
(Not to Scale)



Type of Liner= CL B Rip Rap

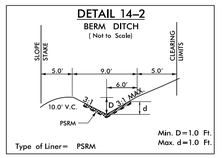
FROM –L– STA. 141+60 LT TO STA. 143+50 LT
FROM –L– STA. 142+00 RT TO STA. 143+25 RT
FROM –L– STA. 143+25 RT TO STA. 144+20 RT
FROM –L– STA. 144+30 LT TO STA. 146+12 LT
FROM –L– STA. 144+70 RT TO STA. 146+00 RT
FROM –L– STA. 146+70 LT TO STA. 147+50 LT

DETAIL 14–3
FALSE SUMP
(Not to Scale)



–L– STA. 141+14 RT
–L– STA. 143+06 RT
–L– STA. 152+14 LT

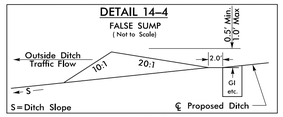
DETAIL 14–2
BERM DITCH
(Not to Scale)



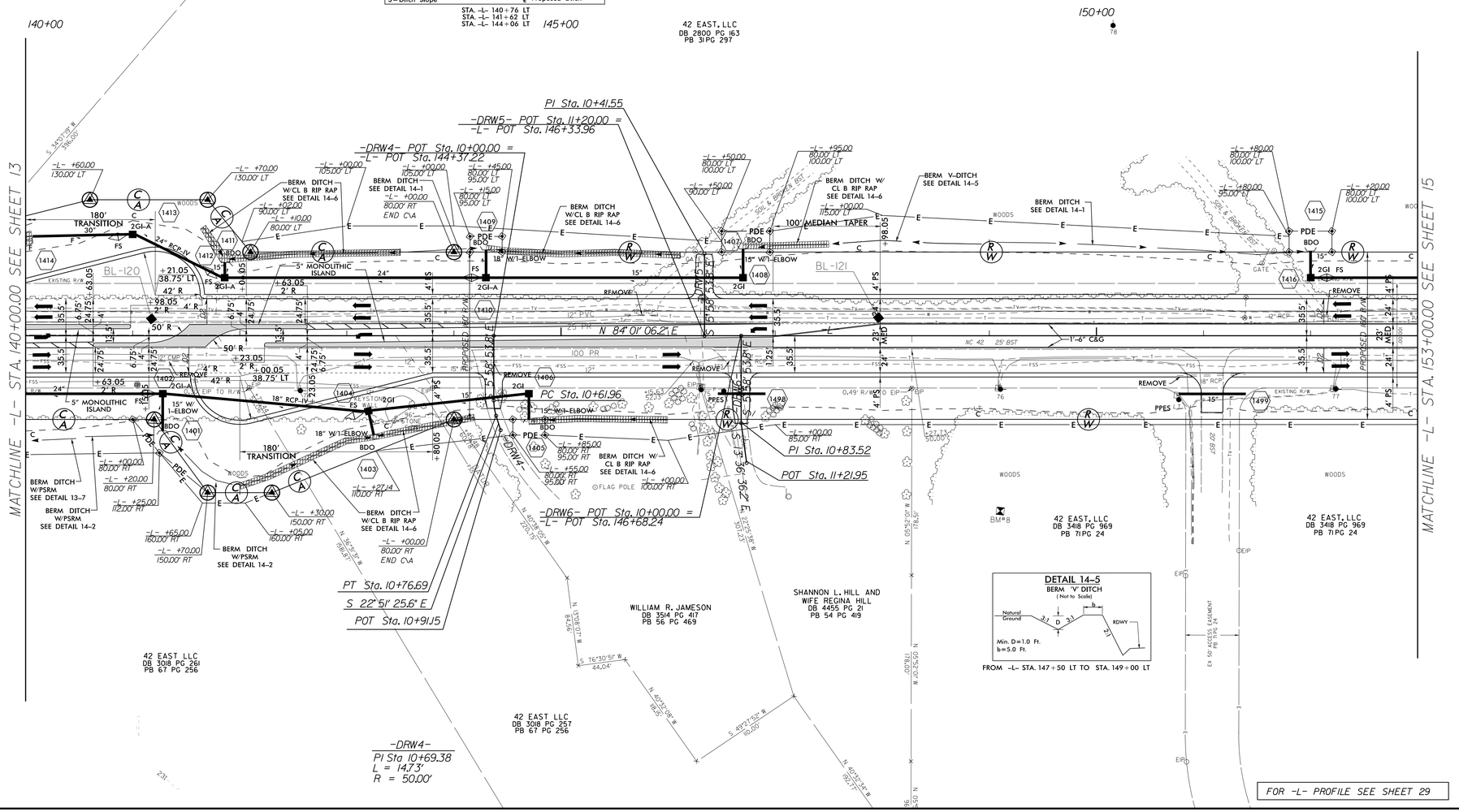
Type of Liner= PSRM

FROM –L– STA. 140+50 RT TO STA. 142+00 RT

DETAIL 14–4
FALSE SUMP
(Not to Scale)



STA. –L– 140+76 LT
STA. –L– 141+62 LT
STA. –L– 144+06 LT



DETAIL 14–5
BERM 'V' DITCH
(Not to Scale)

FROM –L– STA. 147+50 LT TO STA. 149+00 LT

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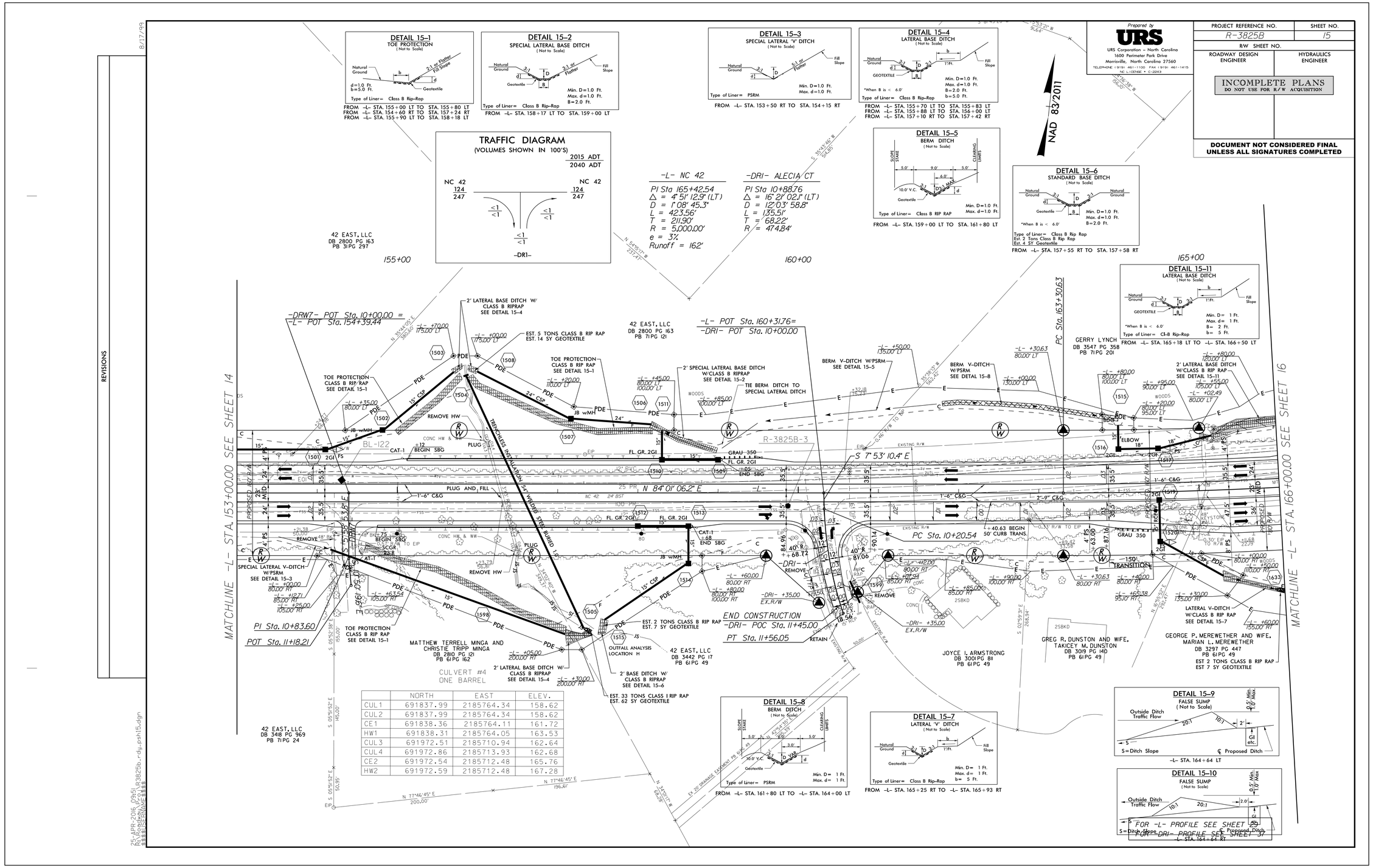

	NORTH	EAST	ELEV.
CUL1	691837.99	2185764.34	158.62
CUL2	691837.99	2185764.34	158.62
CE1	691838.36	2185764.11	161.72
HW1	691838.31	2185764.05	163.53
CUL3	691972.51	2185710.94	162.64
CUL4	691972.86	2185713.93	162.68
CE2	691972.54	2185712.48	165.76
HW2	691972.59	2185712.48	167.28

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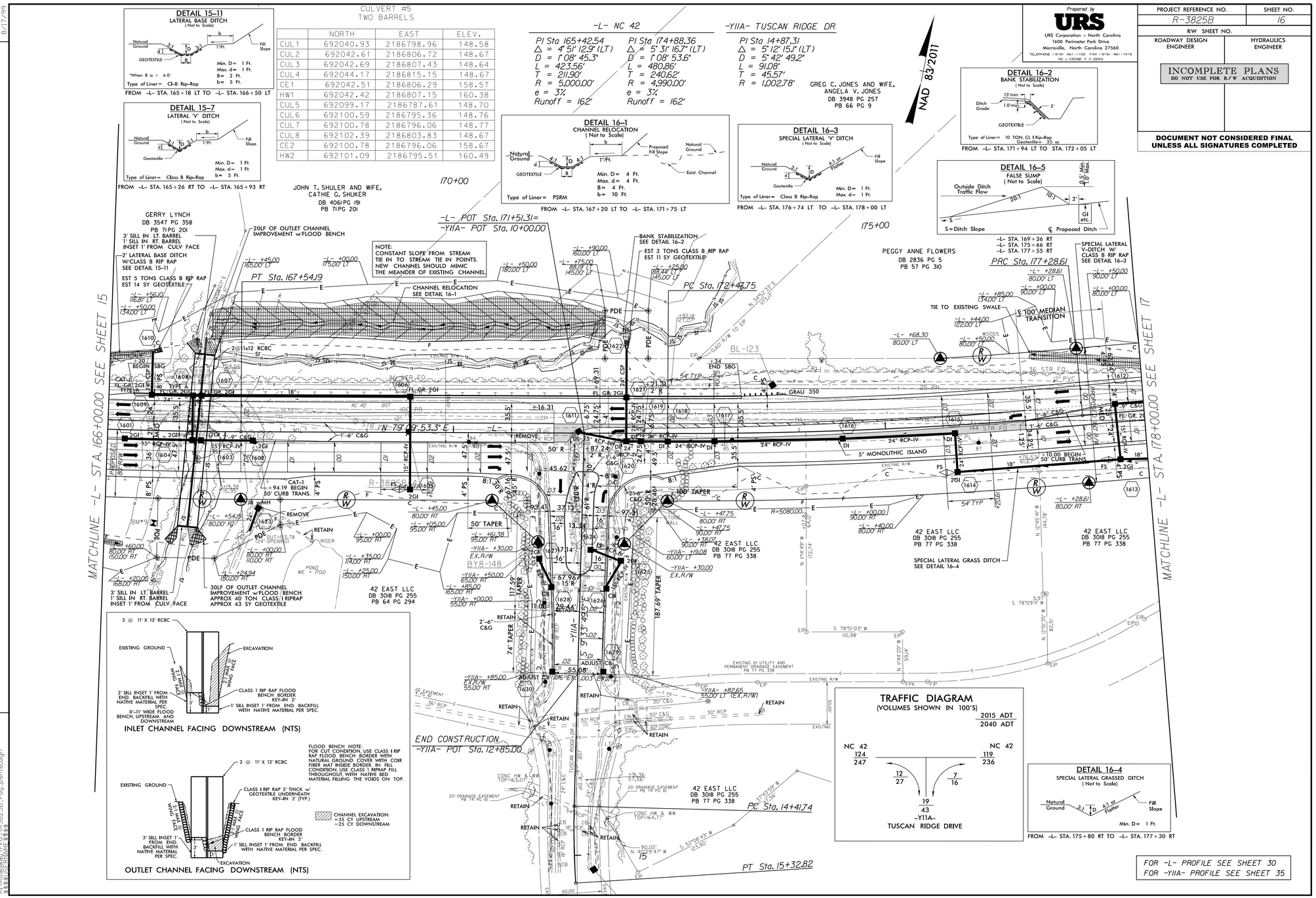

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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URS Corporation – North Carolina
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TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-2243

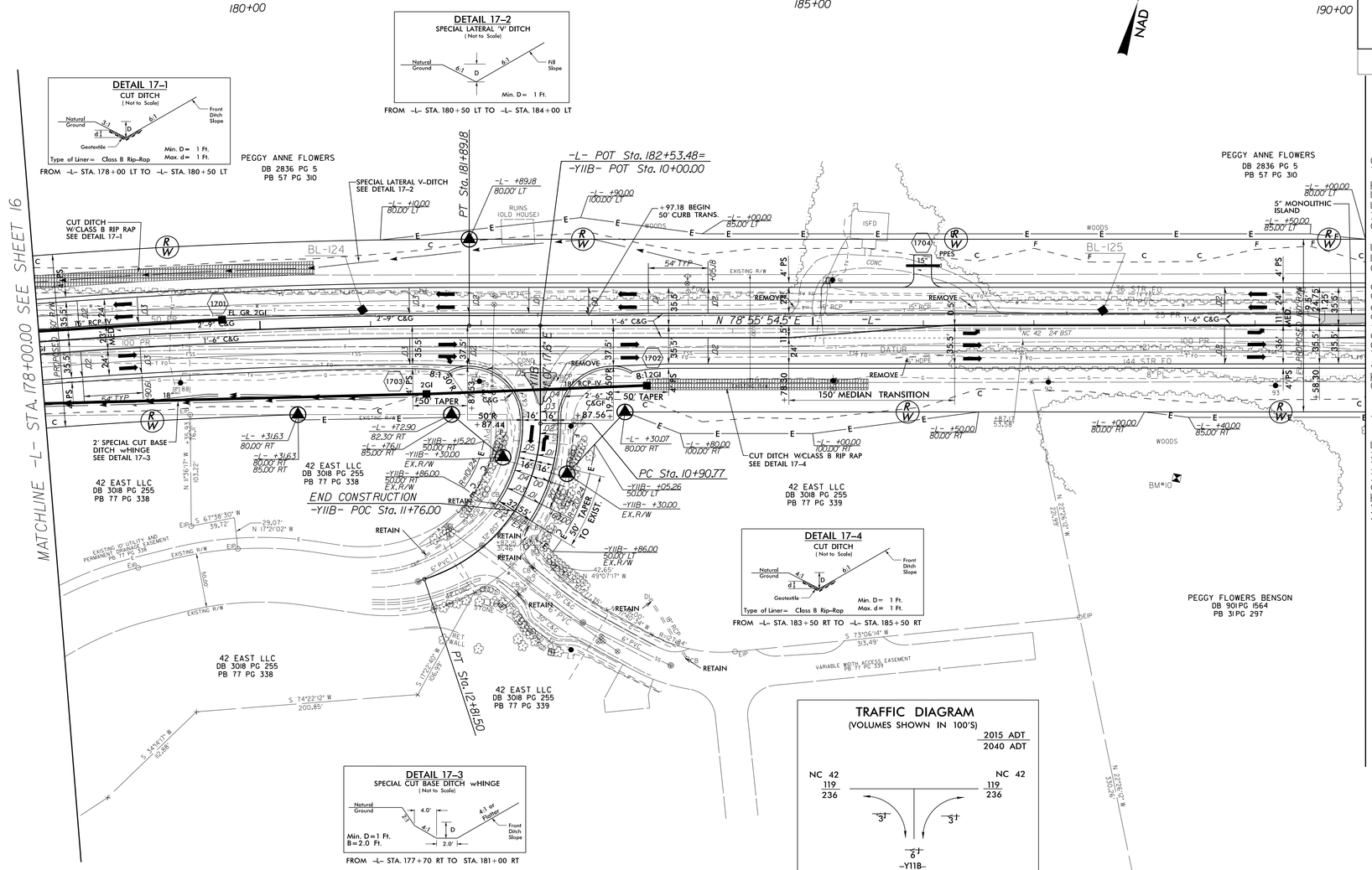
-L- NC 42

PI Sta 179+59.06
△ = 5° 17' 17.9" (RT)
D = 1° 08' 53.6"
L = 460.57'
T = 230.45'
R = 4,990.00'
e = 3%
Runoff = 162'

-Y11B- VERONA DR

PI Sta 12+01.17
△ = 72° 15' 26.8" (RT)
D = 37° 53' 05.4"
L = 190.73'
T = 110.40'
R = 151.24'

NAD 83/2011



DETAIL 17-1
CUT DITCH
(Not to Scale)
Natural Ground, 3:1, 6:1, d, D, Front Ditch Slope, Geotextile
Type of Liner= Class B Rip-Rap
Min. D= 1 Ft.
Max. d= 1 Ft.
FROM -L- STA. 178+00 LT TO -L- STA. 180+50 LT

DETAIL 17-2
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 6:1, 6:1, D, Fill Slope
Min. D= 1 Ft.
FROM -L- STA. 180+50 LT TO -L- STA. 184+00 LT

DETAIL 17-3
SPECIAL CUT BASE DITCH w/HINGE
(Not to Scale)
Natural Ground, 2:1, 4:1, 4.0', D, 2.0', 4:1 or Flatter, Front Ditch Slope
Min. D=1 Ft.
B=2.0 Ft.
FROM -L- STA. 177+70 RT TO STA. 181+00 RT

DETAIL 17-4
CUT DITCH
(Not to Scale)
Natural Ground, 4:1, 6:1, D, Front Ditch Slope, Geotextile
Type of Liner= Class B Rip-Rap
Min. D= 1 Ft.
Max. d= 1 Ft.
FROM -L- STA. 183+50 RT TO -L- STA. 185+50 RT

TRAFFIC DIAGRAM
(VOLUMES SHOWN IN 100'S)

	2015 ADT / 2040 ADT
NC 42	119 / 236
NC 42	119 / 236
-Y11B- VERONA DRIVE	6

FOR -L- PROFILE SEE SHEET 30
FOR -Y11B- PROFILE SEE SHEET 35

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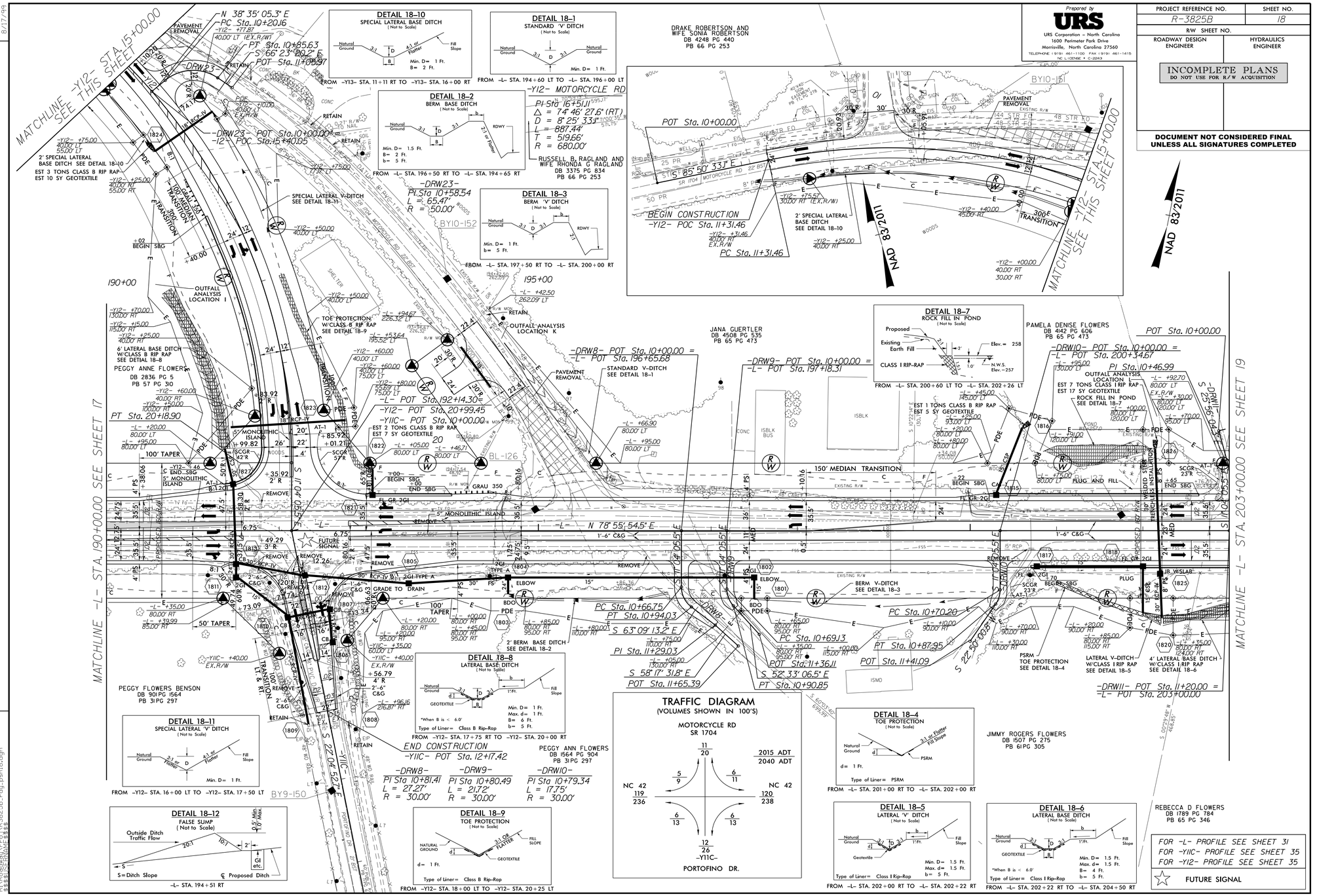

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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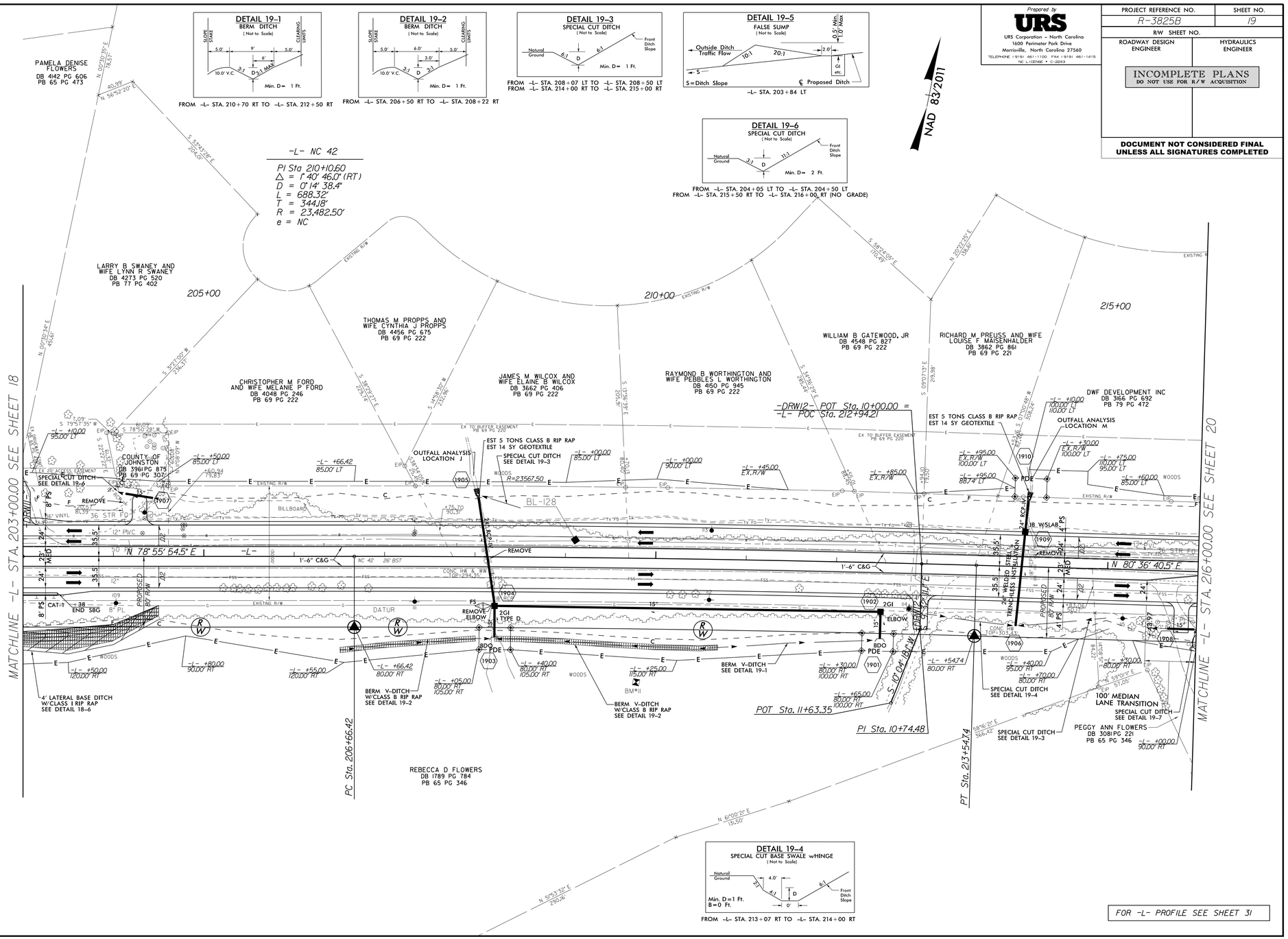
REVISIONS



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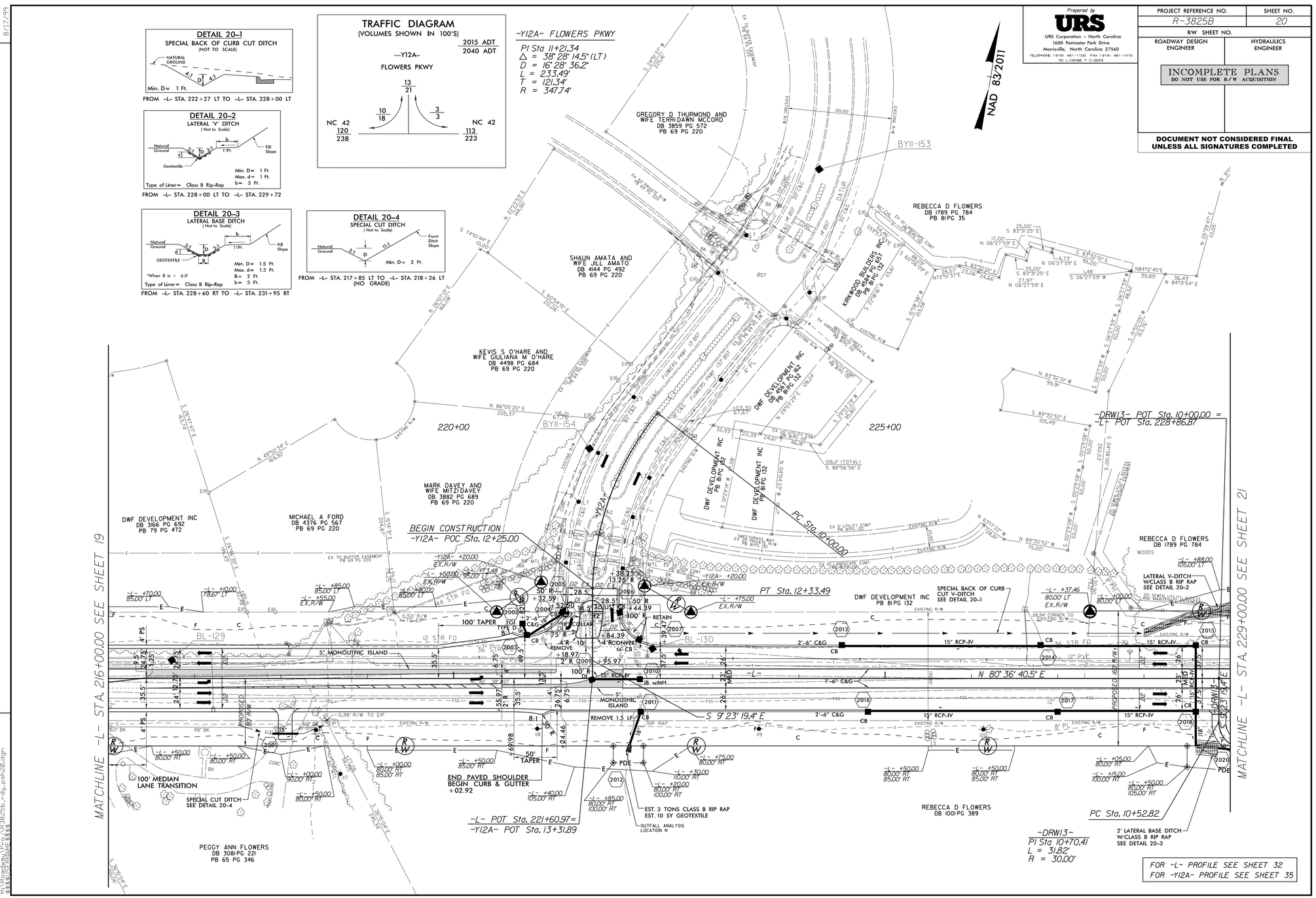

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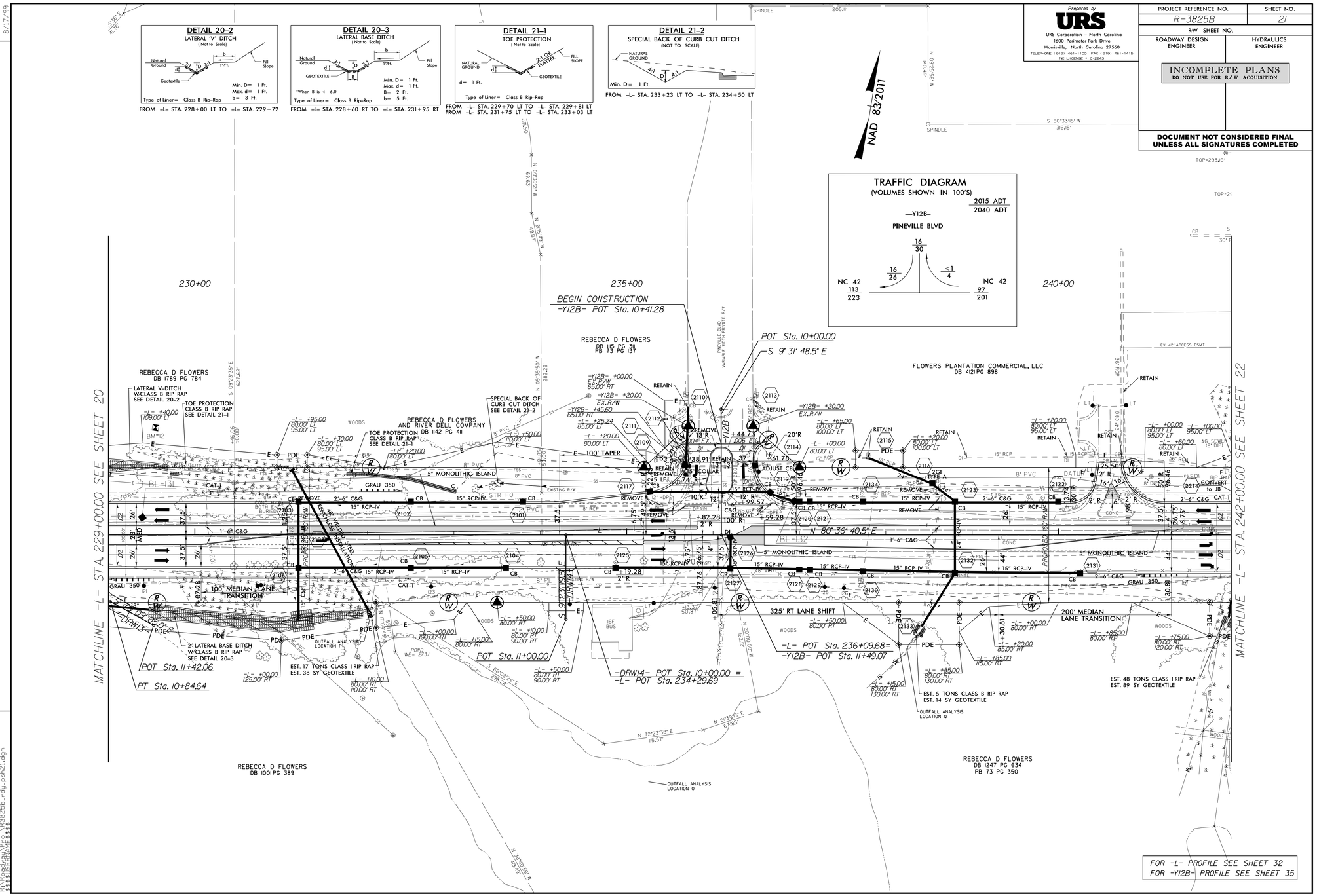

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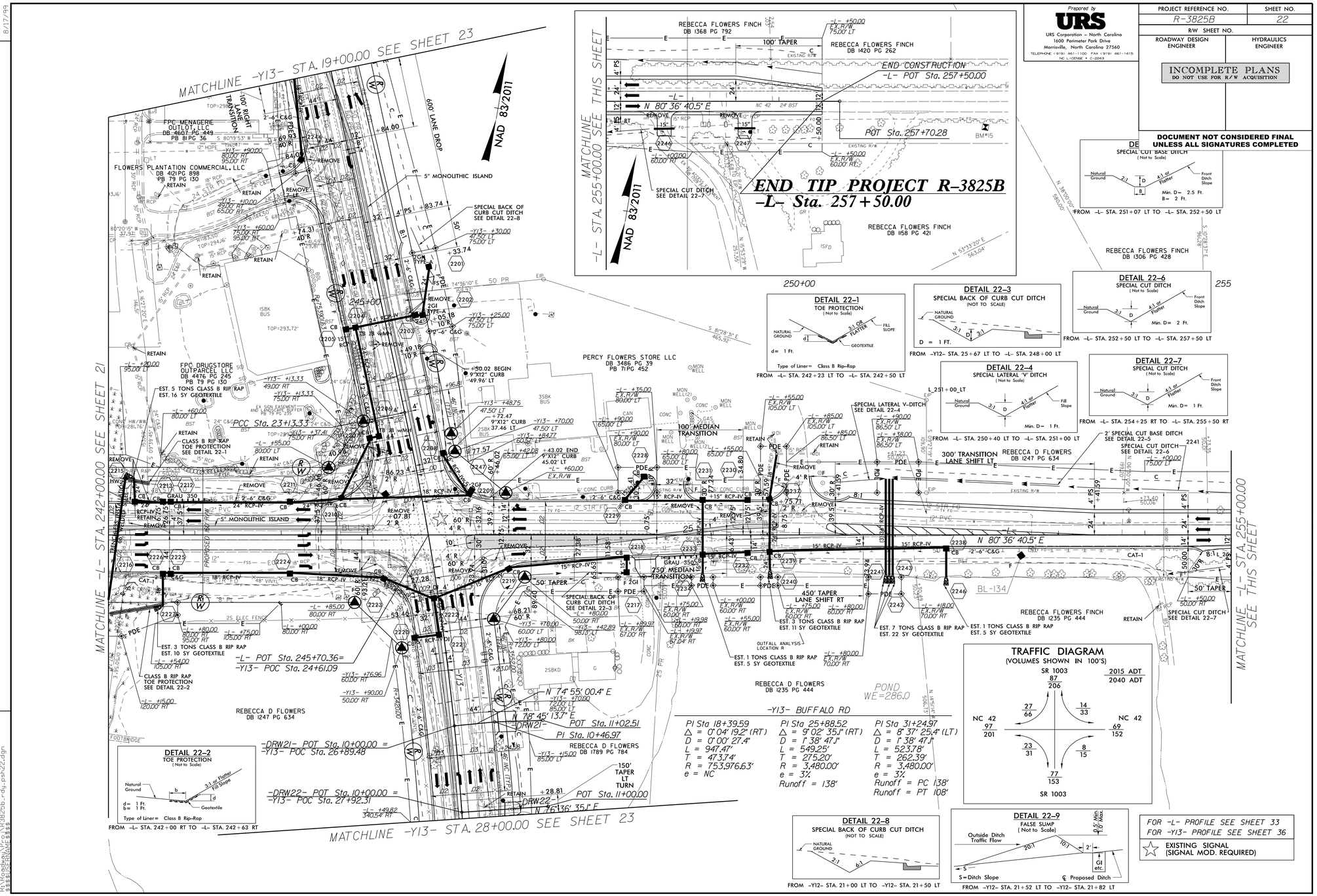

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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PROJECT REFERENCE NO.	SHEET NO.
R-3825B	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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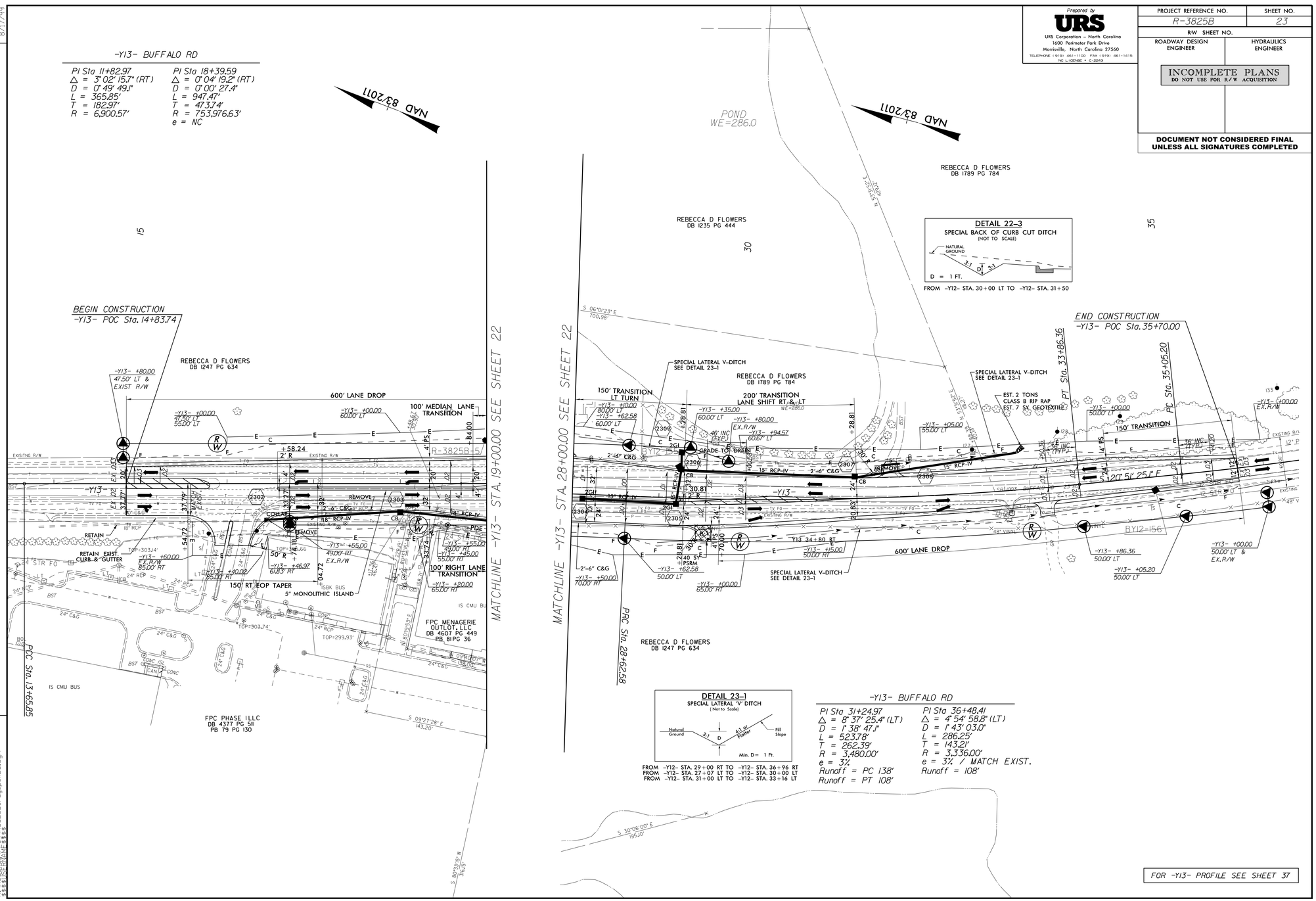
REVISIONS 8/17/99

-Y13- BUFFALO RD

PI Sta 11+82.97	PI Sta 18+39.59
△ = 3° 02' 15.7" (RT)	△ = 0° 04' 19.2" (RT)
D = 0° 49' 49.1"	D = 0° 00' 27.4"
L = 365.85'	L = 947.47'
T = 182.97'	T = 473.74'
R = 6,900.57'	R = 753,976.63'
	e = NC



DETAIL 22-3
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

NATURAL GROUND, 3:1, D, 3:1
D = 1 FT.

FROM -Y12- STA. 30+00 LT TO -Y12- STA. 31+50

DETAIL 23-1
SPECIAL LATERAL "V" DITCH
(Not to Scale)

Natural Ground, 3:1, D, 4:1 or Flatter, Fill Slope
Min. D = 1 Ft.

FROM -Y12- STA. 29+00 RT TO -Y12- STA. 36+96 RT
FROM -Y12- STA. 27+07 LT TO -Y12- STA. 30+00 LT
FROM -Y12- STA. 31+00 LT TO -Y12- STA. 33+16 LT

-Y13- BUFFALO RD

PI Sta 31+24.97	PI Sta 36+48.41
△ = 8° 37' 25.4" (LT)	△ = 4° 54' 58.8" (LT)
D = 1° 38' 47.1"	D = 1° 43' 03.0"
L = 523.78'	L = 286.25'
T = 262.39'	T = 143.21'
R = 3,480.00'	R = 3,336.00'
e = 3%	e = 3% / MATCH EXIST.
Runoff = PC 138'	Runoff = 108'
Runoff = PT 108'	

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APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

US 70 BUSINESS

&

NC 42

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	19	4	163	28	1119	19	1000	92	434	697	52
Future Volume (vph)	53	19	4	163	28	1119	19	1000	92	434	697	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.966		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1709	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.966		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1709	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	59	21	4	181	31	1243	21	1111	102	482	774	58
Shared Lane Traffic (%)				42%								
Lane Group Flow (vph)	59	21	4	105	107	1243	21	1111	102	482	774	58
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.5	27.0		13.3	27.0	13.3
Total Split (s)	17.0	17.0		24.0	24.0		14.0	71.0		38.0	95.0	17.0
Total Split (%)	11.3%	11.3%		16.0%	16.0%		9.3%	47.3%		25.3%	63.3%	11.3%
Maximum Green (s)	10.7	10.7		17.5	17.5		7.6	65.2		31.7	89.1	10.7
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	11.0	11.0	40.6	15.9	15.9	150.0	28.4	76.3	150.0	26.8	80.0	93.0
Actuated g/C Ratio	0.07	0.07	0.27	0.11	0.11	1.00	0.19	0.51	1.00	0.18	0.53	0.62
v/c Ratio	0.45	0.15	0.01	0.59	0.59	0.79	0.06	0.62	0.06	0.79	0.41	0.06
Control Delay	77.2	66.3	27.0	79.4	79.2	15.4	41.7	30.0	0.1	68.4	28.1	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.2	66.3	27.0	79.4	79.2	15.4	41.7	30.0	0.1	68.4	28.1	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	E	C	E	E	B	D	C	A	E	C	B
Approach Delay		72.1			24.7			27.8			42.1	
Approach LOS		E			C			C			D	
Queue Length 50th (ft)	57	20	3	113	115	570	16	401	0	235	285	18
Queue Length 95th (ft)	104	48	10	182	185	951	37	571	0	286	417	40
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	148	157	448	215	219	1583	338	1817	1583	755	2350	998
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.13	0.01	0.49	0.49	0.79	0.06	0.61	0.06	0.64	0.33	0.06

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 64 (43%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 32.2 Intersection LOS: C
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: US 70 Business & Rose Street/NC 42

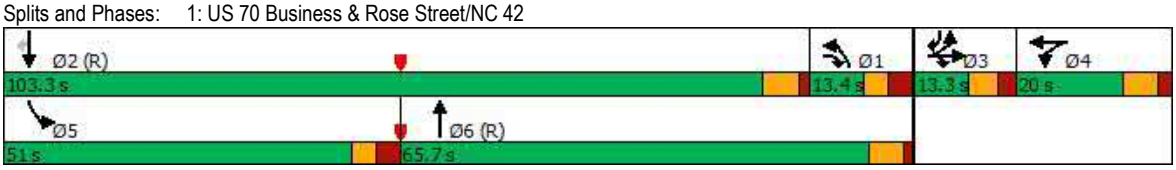
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	31	4	190	20	1075	25	1094	164	812	939	46
Future Volume (vph)	38	31	4	190	20	1075	25	1094	164	812	939	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.961		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1701	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.961		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1701	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	34	4	211	22	1194	28	1216	182	902	1043	51
Shared Lane Traffic (%)				45%								
Lane Group Flow (vph)	42	34	4	116	117	1194	28	1216	182	902	1043	51
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.4	26.5		13.3	26.5	13.3
Total Split (s)	13.3	13.3		20.0	20.0		13.4	65.7		51.0	103.3	13.3
Total Split (%)	8.9%	8.9%		13.3%	13.3%		8.9%	43.8%		34.0%	68.9%	8.9%
Maximum Green (s)	7.0	7.0		13.5	13.5		7.0	59.9		44.7	97.4	7.0
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	8.5	8.5	41.7	14.8	14.8	150.0	30.2	65.9	150.0	43.4	84.5	95.0
Actuated g/C Ratio	0.06	0.06	0.28	0.10	0.10	1.00	0.20	0.44	1.00	0.29	0.56	0.63
v/c Ratio	0.42	0.32	0.01	0.70	0.70	0.75	0.08	0.78	0.11	0.91	0.52	0.05
Control Delay	81.7	76.6	29.5	76.6	76.1	13.8	41.9	41.9	0.1	64.7	28.0	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	76.6	29.5	76.6	76.1	13.8	41.9	41.9	0.1	64.7	28.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	E	E	B	D	D	A	E	C	B
Approach Delay		76.9			24.0			36.6			44.1	
Approach LOS		E			C			D			D	
Queue Length 50th (ft)	40	32	2	120	121	419	19	582	0	432	478	19
Queue Length 95th (ft)	84	72	12	#208	#208	1051	48	662	0	515	494	32
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	99	105	440	173	175	1583	357	1568	1583	1052	2525	1002
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.32	0.01	0.67	0.67	0.75	0.08	0.78	0.11	0.86	0.41	0.05

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 119 (79%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 36.7 Intersection LOS: D
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	21	4	178	31	1223	21	1093	101	474	762	57
Future Volume (vph)	58	21	4	178	31	1223	21	1093	101	474	762	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.966		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1709	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.966		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1709	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	23	4	198	34	1359	23	1214	112	527	847	63
Shared Lane Traffic (%)				42%								
Lane Group Flow (vph)	64	23	4	115	117	1359	23	1214	112	527	847	63
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.5	27.0		13.3	27.0	13.3
Total Split (s)	17.0	17.0		24.0	24.0		14.0	71.0		38.0	95.0	17.0
Total Split (%)	11.3%	11.3%		16.0%	16.0%		9.3%	47.3%		25.3%	63.3%	11.3%
Maximum Green (s)	10.7	10.7		17.5	17.5		7.6	65.2		31.7	89.1	10.7
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	10.7	10.7	41.5	16.3	16.3	150.0	29.6	74.7	150.0	28.3	78.8	91.5
Actuated g/C Ratio	0.07	0.07	0.28	0.11	0.11	1.00	0.20	0.50	1.00	0.19	0.53	0.61
v/c Ratio	0.51	0.17	0.01	0.63	0.63	0.86	0.07	0.69	0.07	0.81	0.46	0.07
Control Delay	81.0	67.8	27.0	78.4	78.2	20.0	41.1	32.8	0.1	68.8	29.6	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	67.8	27.0	78.4	78.2	20.0	41.1	32.8	0.1	68.8	29.6	11.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	E	E	C	D	C	A	E	C	B
Approach Delay		75.3			28.5			30.2			43.1	
Approach LOS		E			C			C			D	
Queue Length 50th (ft)	61	22	2	125	127	511	17	478	0	256	339	21
Queue Length 95th (ft)	113	53	10	194	196	1171	40	619	0	312	445	42
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	143	151	455	213	217	1583	352	1762	1583	755	2343	981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.15	0.01	0.54	0.54	0.86	0.07	0.69	0.07	0.70	0.36	0.06

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 64 (43%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: US 70 Business & Rose Street/NC 42

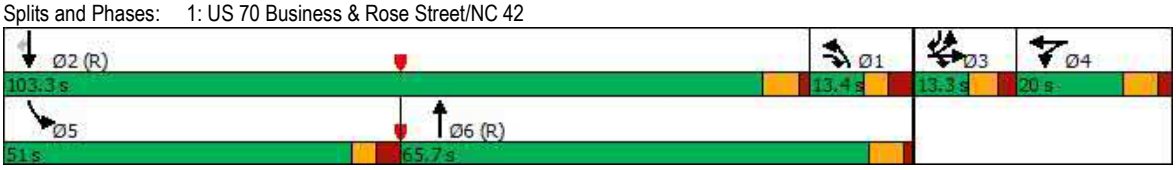
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	34	4	208	22	1175	27	1195	179	887	1026	50
Future Volume (vph)	42	34	4	208	22	1175	27	1195	179	887	1026	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.961		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1701	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.961		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1701	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	38	4	231	24	1306	30	1328	199	986	1140	56
Shared Lane Traffic (%)				45%								
Lane Group Flow (vph)	47	38	4	127	128	1306	30	1328	199	986	1140	56
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.4	26.5		13.3	26.5	13.3
Total Split (s)	13.3	13.3		20.0	20.0		13.4	65.7		51.0	103.3	13.3
Total Split (%)	8.9%	8.9%		13.3%	13.3%		8.9%	43.8%		34.0%	68.9%	8.9%
Maximum Green (s)	7.0	7.0		13.5	13.5		7.0	59.9		44.7	97.4	7.0
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	8.3	8.3	38.4	14.7	14.7	150.0	27.1	64.4	150.0	45.3	87.9	98.2
Actuated g/C Ratio	0.06	0.06	0.26	0.10	0.10	1.00	0.18	0.43	1.00	0.30	0.59	0.65
v/c Ratio	0.48	0.37	0.01	0.77	0.77	0.83	0.09	0.87	0.13	0.95	0.55	0.05
Control Delay	85.8	78.9	34.0	81.8	81.3	19.3	46.4	47.7	0.2	69.7	25.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	78.9	34.0	81.8	81.3	19.3	46.4	47.7	0.2	69.7	25.6	9.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	F	F	B	D	D	A	E	C	A
Approach Delay		80.5			29.5			41.6			45.1	
Approach LOS		F			C			D			D	
Queue Length 50th (ft)	46	37	2	130	131	944	21	647	0	485	512	20
Queue Length 95th (ft)	91	78	13	#240	#240	1327	54	#794	0	#615	498	27
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	97	103	405	170	172	1583	320	1524	1583	1052	2516	1036
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.37	0.01	0.75	0.74	0.83	0.09	0.87	0.13	0.94	0.45	0.05

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 119 (79%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 83.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



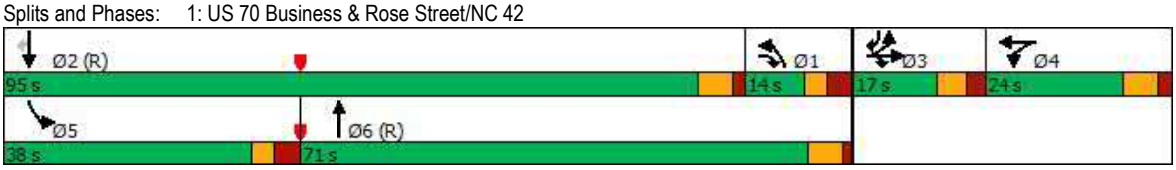
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	21	4	226	31	1315	21	1093	138	556	762	57
Future Volume (vph)	58	21	4	226	31	1315	21	1093	138	556	762	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1704	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1704	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	23	4	251	34	1461	23	1214	153	618	847	63
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	64	23	4	141	144	1461	23	1214	153	618	847	63
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.5	27.0		13.3	27.0	13.3
Total Split (s)	17.0	17.0		24.0	24.0		14.0	71.0		38.0	95.0	17.0
Total Split (%)	11.3%	11.3%		16.0%	16.0%		9.3%	47.3%		25.3%	63.3%	11.3%
Maximum Green (s)	10.7	10.7		17.5	17.5		7.6	65.2		31.7	89.1	10.7
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	10.7	10.7	42.8	18.1	18.1	150.0	30.9	70.2	150.0	31.0	75.6	88.4
Actuated g/C Ratio	0.07	0.07	0.29	0.12	0.12	1.00	0.21	0.47	1.00	0.21	0.50	0.59
v/c Ratio	0.51	0.17	0.01	0.70	0.71	0.92	0.06	0.73	0.10	0.87	0.47	0.07
Control Delay	81.0	67.8	26.0	79.6	79.9	26.9	39.9	36.7	0.1	71.4	32.0	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	67.8	26.0	79.6	79.9	26.9	39.9	36.7	0.1	71.4	32.0	12.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	E	E	C	D	D	A	E	C	B
Approach Delay		75.2			35.6			32.8			47.1	
Approach LOS		E			D			C			D	
Queue Length 50th (ft)	61	22	2	153	156	1116	16	522	0	300	361	22
Queue Length 95th (ft)	113	53	10	#212	#217	#1509	40	619	0	372	445	42
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	143	151	470	220	223	1583	368	1675	1583	755	2324	948
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.15	0.01	0.64	0.65	0.92	0.06	0.72	0.10	0.82	0.36	0.07

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 64 (43%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 39.2 Intersection LOS: D
Intersection Capacity Utilization 72.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	34	4	263	22	1293	27	1195	240	1013	1026	50
Future Volume (vph)	42	34	4	263	22	1293	27	1195	240	1013	1026	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.959		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1697	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.959		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1697	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	38	4	292	24	1437	30	1328	267	1126	1140	56
Shared Lane Traffic (%)				46%								
Lane Group Flow (vph)	47	38	4	158	158	1437	30	1328	267	1126	1140	56
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.4	26.5		13.3	26.5	13.3
Total Split (s)	13.3	13.3		20.0	20.0		13.4	65.7		51.0	103.3	13.3
Total Split (%)	8.9%	8.9%		13.3%	13.3%		8.9%	43.8%		34.0%	68.9%	8.9%
Maximum Green (s)	7.0	7.0		13.5	13.5		7.0	59.9		44.7	97.4	7.0
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	8.3	8.3	38.4	15.7	15.7	150.0	27.1	59.3	150.0	49.4	86.9	97.2
Actuated g/C Ratio	0.06	0.06	0.26	0.10	0.10	1.00	0.18	0.40	1.00	0.33	0.58	0.65
v/c Ratio	0.48	0.37	0.01	0.90	0.89	0.91	0.09	0.95	0.17	1.00	0.56	0.05
Control Delay	85.8	78.9	34.0	94.5	93.5	27.4	46.4	58.4	0.2	76.0	25.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	78.9	34.0	94.5	93.5	27.4	46.4	58.4	0.2	76.0	25.8	9.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	F	F	C	D	E	A	E	C	A
Approach Delay		80.5			39.4			48.6			49.8	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	46	37	2	156	155	1163	21	647	0	~626	512	20
Queue Length 95th (ft)	91	78	13	#315	#313	805	54	#794	0	#762	498	27
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	97	103	405	176	177	1583	320	1432	1583	1129	2492	1026
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.37	0.01	0.90	0.89	0.91	0.09	0.93	0.17	1.00	0.46	0.05

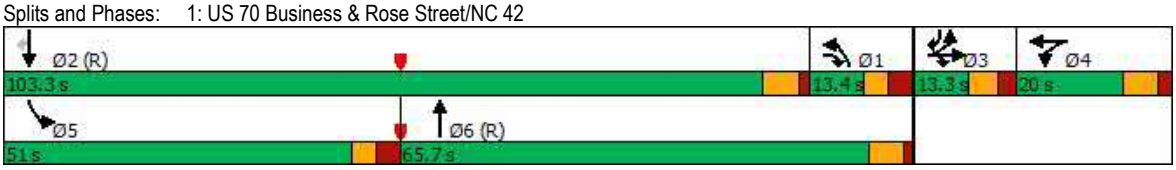
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 119 (79%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 46.8 Intersection LOS: D
Intersection Capacity Utilization 89.0% ICU Level of Service E
Analysis Period (min) 15

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

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

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

NC 42

&

EAST FRONT STREET

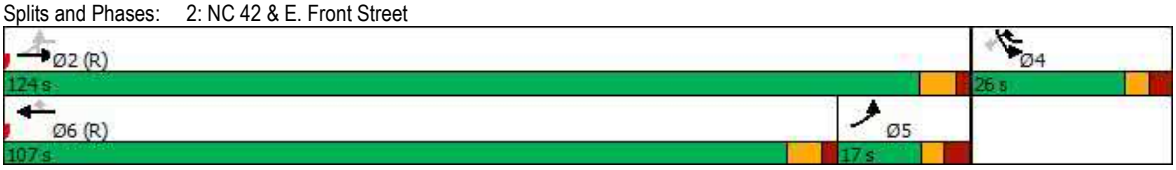
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	44	593	4	1142	263	145	55
Future Volume (vph)	44	593	4	1142	263	145	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.190		0.400			0.950	
Satd. Flow (perm)	354	3539	745	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	659	4	1269	292	161	61
Shared Lane Traffic (%)							
Lane Group Flow (vph)	49	659	4	1269	292	161	61
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	17.0	124.0	124.0	107.0	26.0	26.0	26.0
Total Split (%)	11.3%	82.7%	82.7%	71.3%	17.3%	17.3%	17.3%
Maximum Green (s)	10.6	117.5	117.5	100.5	19.8	19.8	19.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	128.8	127.1	127.1	115.9	134.8	12.9	12.9
Actuated g/C Ratio	0.86	0.85	0.85	0.77	0.90	0.09	0.09
v/c Ratio	0.13	0.22	0.01	0.46	0.21	0.55	0.45
Control Delay	4.6	2.8	3.8	8.8	1.5	72.4	75.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	2.8	3.8	8.8	1.5	72.4	75.0

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	A	A	A	A	A	E	E
Approach Delay		2.9		7.4		73.1	
Approach LOS		A		A		E	
Queue Length 50th (ft)	2	12	0	114	18	79	58
Queue Length 95th (ft)	m29	148	m2	444	19	115	106
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	424	2999	631	2734	1420	480	221
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.22	0.01	0.46	0.21	0.34	0.28

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 7 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 50.7% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



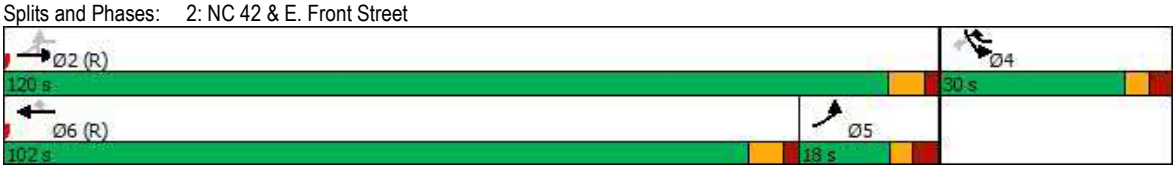
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	87	939	4	1192	239	222	62
Future Volume (vph)	87	939	4	1192	239	222	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.167		0.260			0.950	
Satd. Flow (perm)	311	3539	484	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	1043	4	1324	266	247	69
Shared Lane Traffic (%)							
Lane Group Flow (vph)	97	1043	4	1324	266	247	69
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	120.0	120.0	102.0	30.0	30.0	30.0
Total Split (%)	12.0%	80.0%	80.0%	68.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	113.5	113.5	95.5	23.8	23.8	23.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	123.2	123.2	123.2	107.5	129.3	16.8	16.8
Actuated g/C Ratio	0.82	0.82	0.82	0.72	0.86	0.11	0.11
v/c Ratio	0.27	0.36	0.01	0.52	0.20	0.64	0.39
Control Delay	10.9	6.5	4.5	12.4	1.8	71.2	67.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	6.5	4.5	12.4	1.8	71.2	67.4

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	B	A	A	B	A	E	E
Approach Delay		6.9		10.6		70.4	
Approach LOS		A		B		E	
Queue Length 50th (ft)	3	15	1	296	32	121	64
Queue Length 95th (ft)	m40	562	m3	545	37	163	112
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	390	2906	397	2535	1360	572	263
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.36	0.01	0.52	0.20	0.43	0.26

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 5 (3%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 57.6% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



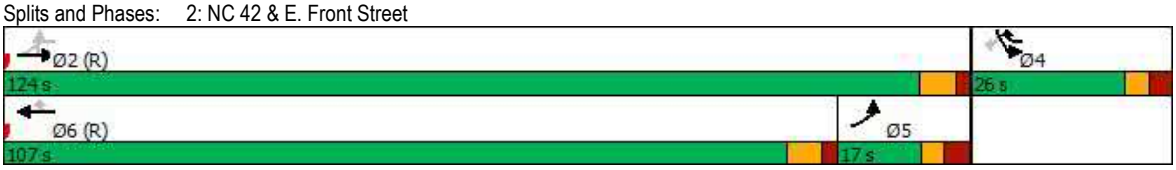
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	48	648	4	1248	287	158	60
Future Volume (vph)	48	648	4	1248	287	158	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.162		0.374			0.950	
Satd. Flow (perm)	302	3539	697	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	720	4	1387	319	176	67
Shared Lane Traffic (%)							
Lane Group Flow (vph)	53	720	4	1387	319	176	67
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	17.0	124.0	124.0	107.0	26.0	26.0	26.0
Total Split (%)	11.3%	82.7%	82.7%	71.3%	17.3%	17.3%	17.3%
Maximum Green (s)	10.6	117.5	117.5	100.5	19.8	19.8	19.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	127.9	126.2	126.2	114.8	134.5	13.8	13.8
Actuated g/C Ratio	0.85	0.84	0.84	0.77	0.90	0.09	0.09
v/c Ratio	0.15	0.24	0.01	0.51	0.22	0.56	0.46
Control Delay	4.3	2.6	3.8	8.8	1.2	71.7	74.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	2.6	3.8	8.8	1.2	71.7	74.3

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	A	A	A	A	A	E	E
Approach Delay		2.7		7.4		72.4	
Approach LOS		A		A		E	
Queue Length 50th (ft)	2	14	0	212	50	86	64
Queue Length 95th (ft)	m16	91	m1	493	0	124	114
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	380	2978	586	2707	1415	480	221
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.24	0.01	0.51	0.23	0.37	0.30

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 7 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



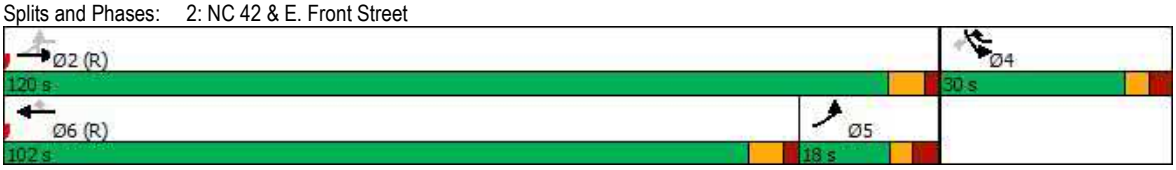
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	95	1026	4	1303	261	243	68
Future Volume (vph)	95	1026	4	1303	261	243	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.136		0.231			0.950	
Satd. Flow (perm)	253	3539	430	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	1140	4	1448	290	270	76
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	1140	4	1448	290	270	76
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	120.0	120.0	102.0	30.0	30.0	30.0
Total Split (%)	12.0%	80.0%	80.0%	68.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	113.5	113.5	95.5	23.8	23.8	23.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	121.8	121.8	121.8	105.0	128.2	18.2	18.2
Actuated g/C Ratio	0.81	0.81	0.81	0.70	0.85	0.12	0.12
v/c Ratio	0.33	0.40	0.01	0.58	0.21	0.65	0.40
Control Delay	22.7	10.9	6.0	15.3	2.2	70.0	66.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	10.9	6.0	15.3	2.2	70.0	66.0

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	C	B	A	B	A	E	E
Approach Delay		11.9		13.1		69.1	
Approach LOS		B		B		E	
Queue Length 50th (ft)	18	17	1	373	18	131	70
Queue Length 95th (ft)	m77	m592	m4	570	74	174	120
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	348	2874	349	2488	1344	572	263
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.40	0.01	0.58	0.22	0.47	0.29

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 5 (3%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



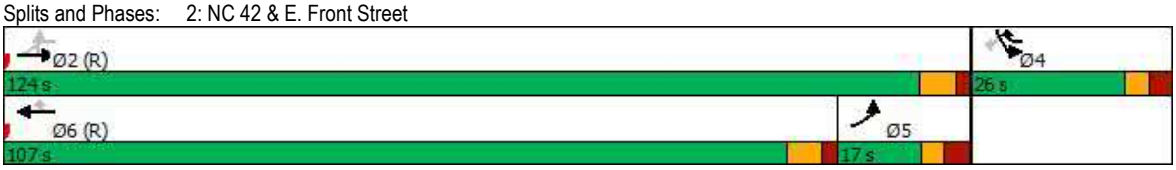
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	48	767	4	1388	311	185	60
Future Volume (vph)	48	767	4	1388	311	185	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.129		0.323			0.950	
Satd. Flow (perm)	240	3539	602	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	852	4	1542	346	206	67
Shared Lane Traffic (%)							
Lane Group Flow (vph)	53	852	4	1542	346	206	67
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	17.0	124.0	124.0	107.0	26.0	26.0	26.0
Total Split (%)	11.3%	82.7%	82.7%	71.3%	17.3%	17.3%	17.3%
Maximum Green (s)	10.6	117.5	117.5	100.5	19.8	19.8	19.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	126.5	124.8	124.8	113.3	134.5	15.2	15.2
Actuated g/C Ratio	0.84	0.83	0.83	0.76	0.90	0.10	0.10
v/c Ratio	0.18	0.29	0.01	0.58	0.24	0.59	0.42
Control Delay	4.2	2.2	4.5	11.5	1.6	71.1	70.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	2.2	4.5	11.5	1.6	71.1	70.2

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	A	A	A	B	A	E	E
Approach Delay		2.3		9.7		70.9	
Approach LOS		A		A		E	
Queue Length 50th (ft)	3	28	1	361	83	101	63
Queue Length 95th (ft)	m4	27	m2	570	20	140	112
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	329	2944	500	2672	1407	480	221
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.29	0.01	0.58	0.25	0.43	0.30

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 7 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



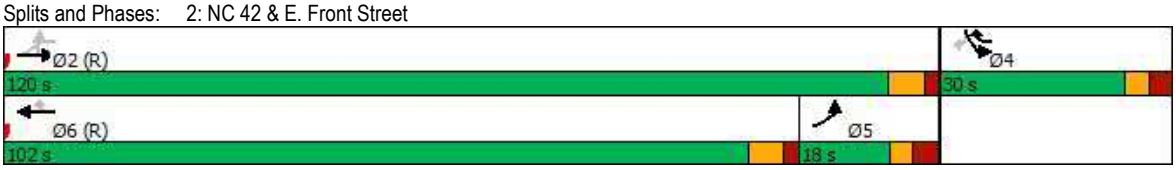
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	95	1213	4	1476	299	280	68
Future Volume (vph)	95	1213	4	1476	299	280	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1770	3539	1583	3433	1583
Flt Permitted	0.097		0.178			0.950	
Satd. Flow (perm)	181	3539	332	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	1348	4	1640	332	311	76
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	1348	4	1640	332	311	76
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	120.0	120.0	102.0	30.0	30.0	30.0
Total Split (%)	12.0%	80.0%	80.0%	68.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	113.5	113.5	95.5	23.8	23.8	23.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	120.1	120.1	120.1	102.8	127.7	19.9	19.9
Actuated g/C Ratio	0.80	0.80	0.80	0.69	0.85	0.13	0.13
v/c Ratio	0.39	0.48	0.02	0.68	0.25	0.68	0.36
Control Delay	34.6	15.9	6.5	19.6	3.5	69.6	63.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	15.9	6.5	19.6	3.5	69.6	63.0

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	C	B	A	B	A	E	E
Approach Delay		17.3		16.9		68.3	
Approach LOS		B		B		E	
Queue Length 50th (ft)	51	645	1	447	20	151	69
Queue Length 95th (ft)	m78	m517	m3	571	m171	195	117
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250		100		200	575	200
Base Capacity (vph)	296	2836	266	2448	1342	575	265
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.48	0.02	0.67	0.25	0.54	0.29

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 5 (3%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 22.2 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

NC 42

&

GLEN LAUREL ROAD

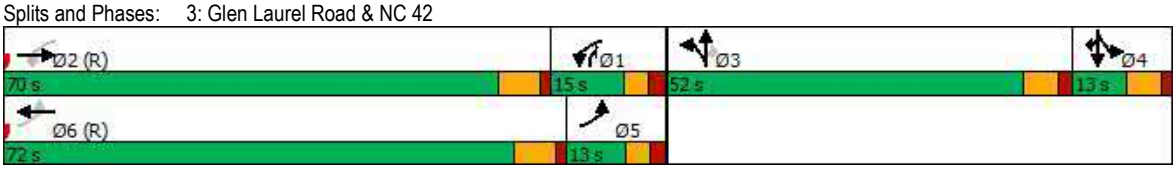
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	362	145	148	946	15	552	8	130	4	4	4
Future Volume (vph)	28	362	145	148	946	15	552	8	130	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		75	75		0
Storage Lanes	1		1	1		0	1		2	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.954			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3532	0	1681	1688	1583	0	1818	1583
Flt Permitted	0.196			0.471			0.950	0.954			0.976	
Satd. Flow (perm)	365	3539	1583	877	3532	0	1681	1688	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			300			1697	
Travel Time (s)		33.4			6.1			4.5			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	402	161	164	1051	17	613	9	144	4	4	4
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	31	402	161	164	1068	0	313	309	144	0	8	4
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.3	20.6	20.6	12.6	20.6		13.3	13.3	12.6	13.0	13.0	13.0
Total Split (s)	13.0	70.0	70.0	15.0	72.0		52.0	52.0	15.0	13.0	13.0	13.0
Total Split (%)	8.7%	46.7%	46.7%	10.0%	48.0%		34.7%	34.7%	10.0%	8.7%	8.7%	8.7%
Maximum Green (s)	7.7	63.4	63.4	9.4	65.4		45.7	45.7	9.4	7.0	7.0	7.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	99.0	74.5	74.5	95.8	93.4		34.0	34.0	60.3		8.0	8.0
Actuated g/C Ratio	0.66	0.50	0.50	0.64	0.62		0.23	0.23	0.40		0.05	0.05
v/c Ratio	0.10	0.23	0.20	0.24	0.49		0.82	0.81	0.23		0.08	0.05
Control Delay	8.6	9.7	10.7	13.9	19.5		72.2	70.8	27.7		69.6	68.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	8.6	9.7	10.7	13.9	19.5		72.2	70.8	27.7		69.6	68.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A	B	B	B		E	E	C		E	E
Approach Delay		9.9			18.7			63.3			69.3	
Approach LOS		A			B			E			E	
Queue Length 50th (ft)	3	28	22	48	282		309	304	91		8	4
Queue Length 95th (ft)	23	141	126	117	482		397	392	108		27	17
Internal Link Dist (ft)		2372			369			220			1617	
Turn Bay Length (ft)	400		475	150					75			
Base Capacity (vph)	317	1895	847	687	2200		526	528	636		96	84
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.10	0.21	0.19	0.24	0.49		0.60	0.59	0.23		0.08	0.05

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 30.1 Intersection LOS: C
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Glen Laurel Road & NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	790	490	201	725	14	393	4	164	4	4	57
Future Volume (vph)	4	790	490	201	725	14	393	4	164	4	4	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		75	75		0
Storage Lanes	1		1	1		0	1		2	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.953			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1681	1686	1583	0	1818	1583
Flt Permitted	0.285			0.232			0.950	0.953			0.976	
Satd. Flow (perm)	531	3539	1583	432	3529	0	1681	1686	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			1724			1697	
Travel Time (s)		33.4			6.1			26.1			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	878	544	223	806	16	437	4	182	4	4	63
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	4	878	544	223	822	0	218	223	182	0	8	63
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.6	20.6	13.3	20.6		13.3	13.3	13.3	13.0	13.0	13.0
Total Split (s)	13.0	77.0	77.0	22.0	86.0		35.0	35.0	22.0	16.0	16.0	16.0
Total Split (%)	8.7%	51.3%	51.3%	14.7%	57.3%		23.3%	23.3%	14.7%	10.7%	10.7%	10.7%
Maximum Green (s)	7.7	70.4	70.4	16.4	79.4		28.7	28.7	16.4	10.0	10.0	10.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	101.2	80.3	80.3	97.2	94.1		24.8	24.8	46.6		10.7	10.7
Actuated g/C Ratio	0.67	0.54	0.54	0.65	0.63		0.17	0.17	0.31		0.07	0.07
v/c Ratio	0.01	0.46	0.64	0.52	0.37		0.79	0.80	0.37		0.06	0.56
Control Delay	3.2	6.3	9.8	26.5	18.7		79.5	81.0	41.3		65.3	86.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	3.2	6.3	9.8	26.5	18.7		79.5	81.0	41.3		65.3	86.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A	A	C	B		E	F	D		E	F
Approach Delay		7.6			20.4			68.9			83.9	
Approach LOS		A			C			E			F	
Queue Length 50th (ft)	0	65	92	81	180		216	223	136		7	60
Queue Length 95th (ft)	m1	116	212	130	428		308	315	201		26	113
Internal Link Dist (ft)		2372			369			1644			1617	
Turn Bay Length (ft)	400		475	150					75			
Base Capacity (vph)	469	1918	857	443	2342		336	337	483		140	122
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.01	0.46	0.63	0.50	0.35		0.65	0.66	0.38		0.06	0.52

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 25.6 Intersection LOS: C
Intersection Capacity Utilization 63.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Glen Laurel Road & NC 42

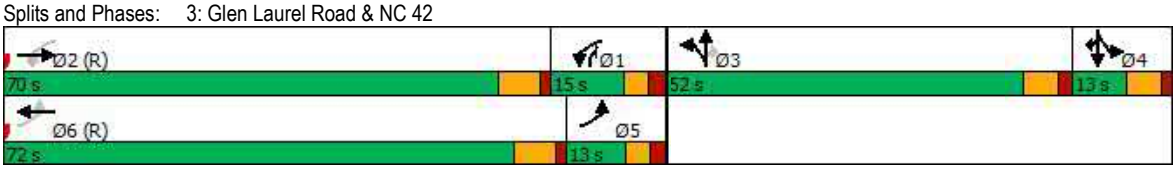
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	396	158	162	1034	16	603	9	142	4	4	4
Future Volume (vph)	31	396	158	162	1034	16	603	9	142	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		75	75		0
Storage Lanes	1		1	1		0	1		2	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.954			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3532	0	1681	1688	1583	0	1818	1583
Flt Permitted	0.156			0.433			0.950	0.954			0.976	
Satd. Flow (perm)	291	3539	1583	807	3532	0	1681	1688	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			300			1697	
Travel Time (s)		33.4			6.1			4.5			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	440	176	180	1149	18	670	10	158	4	4	4
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	34	440	176	180	1167	0	342	338	158	0	8	4
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.3	20.6	20.6	12.6	20.6		13.3	13.3	12.6	13.0	13.0	13.0
Total Split (s)	13.0	70.0	70.0	15.0	72.0		52.0	52.0	15.0	13.0	13.0	13.0
Total Split (%)	8.7%	46.7%	46.7%	10.0%	48.0%		34.7%	34.7%	10.0%	8.7%	8.7%	8.7%
Maximum Green (s)	7.7	63.4	63.4	9.4	65.4		45.7	45.7	9.4	7.0	7.0	7.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	95.1	67.4	67.4	93.3	88.5		36.5	36.5	67.4		8.0	8.0
Actuated g/C Ratio	0.63	0.45	0.45	0.62	0.59		0.24	0.24	0.45		0.05	0.05
v/c Ratio	0.13	0.28	0.25	0.27	0.56		0.84	0.82	0.22		0.08	0.05
Control Delay	13.9	12.8	14.1	16.0	23.3		71.3	69.8	23.5		69.6	68.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	13.9	12.8	14.1	16.0	23.3		71.3	69.8	23.5		69.6	68.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	B	B	C		E	E	C		E	E
Approach Delay		13.2			22.3			61.7			69.3	
Approach LOS		B			C			E			E	
Queue Length 50th (ft)	3	33	25	57	337		336	331	96		8	4
Queue Length 95th (ft)	42	244	217	133	567		428	421	102		27	17
Internal Link Dist (ft)		2372			369			220			1617	
Turn Bay Length (ft)	400		475	150					75			
Base Capacity (vph)	264	1802	805	668	2082		526	528	711		96	84
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.13	0.24	0.22	0.27	0.56		0.65	0.64	0.22		0.08	0.05

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 32.0 Intersection LOS: C
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Glen Laurel Road & NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	863	535	220	792	15	429	4	179	4	4	62
Future Volume (vph)	3	863	535	220	792	15	429	4	179	4	4	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		75	75		0
Storage Lanes	1		1	1		0	1		2	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.953			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1681	1686	1583	0	1818	1583
Flt Permitted	0.253			0.193			0.950	0.953			0.976	
Satd. Flow (perm)	471	3539	1583	360	3529	0	1681	1686	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			1909			1697	
Travel Time (s)		33.4			6.1			28.9			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	959	594	244	880	17	477	4	199	4	4	69
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	3	959	594	244	897	0	238	243	199	0	8	69
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.6	20.6	13.3	20.6		13.3	13.3	13.3	13.0	13.0	13.0
Total Split (s)	13.0	77.0	77.0	22.0	86.0		35.0	35.0	22.0	16.0	16.0	16.0
Total Split (%)	8.7%	51.3%	51.3%	14.7%	57.3%		23.3%	23.3%	14.7%	10.7%	10.7%	10.7%
Maximum Green (s)	7.7	70.4	70.4	16.4	79.4		28.7	28.7	16.4	10.0	10.0	10.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	97.5	76.6	76.6	93.5	91.2		26.0	26.0	48.0		10.5	10.5
Actuated g/C Ratio	0.65	0.51	0.51	0.62	0.61		0.17	0.17	0.32		0.07	0.07
v/c Ratio	0.01	0.53	0.74	0.64	0.42		0.82	0.83	0.39		0.06	0.63
Control Delay	3.0	11.0	17.0	37.4	19.4		81.4	83.0	41.3		65.9	92.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	3.0	11.0	17.0	37.4	19.4		81.4	83.0	41.3		65.9	92.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B	B	D	B		F	F	D		E	F
Approach Delay		13.3			23.3			70.2			89.3	
Approach LOS		B			C			E			F	
Queue Length 50th (ft)	0	71	149	95	213		236	242	146		7	66
Queue Length 95th (ft)	m1	216	378	142	456		336	344	219		26	#130
Internal Link Dist (ft)		2372			369			1829			1617	
Turn Bay Length (ft)	400		475	150					75			
Base Capacity (vph)	416	1816	812	393	2257		336	337	493		136	118
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.01	0.53	0.73	0.62	0.40		0.71	0.72	0.40		0.06	0.58

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 67.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Glen Laurel Road & NC 42

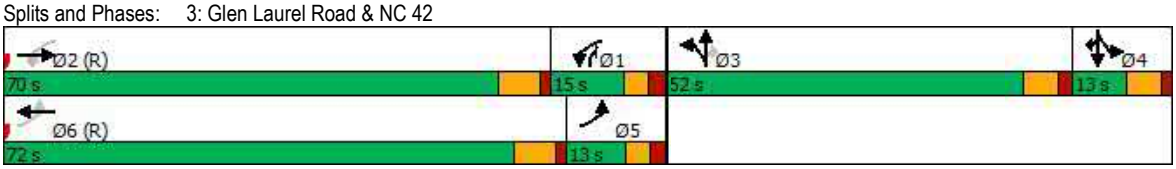
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	527	173	162	1121	16	680	9	142	4	4	4
Future Volume (vph)	31	527	173	162	1121	16	680	9	142	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		0	75		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.954			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3532	0	1681	1688	1583	0	1818	1583
Flt Permitted	0.121			0.333			0.950	0.954			0.976	
Satd. Flow (perm)	225	3539	1583	620	3532	0	1681	1688	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			300			1697	
Travel Time (s)		33.4			6.1			4.5			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	586	192	180	1246	18	756	10	158	4	4	4
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	34	586	192	180	1264	0	386	380	158	0	8	4
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.3	20.6	20.6	12.6	20.6		13.3	13.3	12.6	13.0	13.0	13.0
Total Split (s)	13.0	70.0	70.0	15.0	72.0		52.0	52.0	15.0	13.0	13.0	13.0
Total Split (%)	8.7%	46.7%	46.7%	10.0%	48.0%		34.7%	34.7%	10.0%	8.7%	8.7%	8.7%
Maximum Green (s)	7.7	63.4	63.4	9.4	65.4		45.7	45.7	9.4	7.0	7.0	7.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	92.6	65.1	65.1	90.1	85.3		39.7	39.7	69.7		8.0	8.0
Actuated g/C Ratio	0.62	0.43	0.43	0.60	0.57		0.26	0.26	0.46		0.05	0.05
v/c Ratio	0.16	0.38	0.28	0.32	0.63		0.87	0.85	0.21		0.08	0.05
Control Delay	19.0	16.1	16.5	23.7	33.0		72.1	69.9	22.3		69.6	68.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	19.0	16.1	16.5	23.7	33.0		72.1	69.9	22.3		69.6	68.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	B	C	C		E	E	C		E	E
Approach Delay		16.4			31.8			62.7			69.3	
Approach LOS		B			C			E			E	
Queue Length 50th (ft)	3	51	29	79	466		378	371	91		8	4
Queue Length 95th (ft)	47	361	262	146	708		487	476	106		27	17
Internal Link Dist (ft)		2372			369			220			1617	
Turn Bay Length (ft)	400		475	150								
Base Capacity (vph)	222	1759	786	564	2007		528	530	735		96	84
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.15	0.33	0.24	0.32	0.63		0.73	0.72	0.21		0.08	0.05

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 75.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Glen Laurel Road & NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1065	557	220	885	15	547	4	179	4	4	62
Future Volume (vph)	3	1065	557	220	885	15	547	4	179	4	4	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		0	75		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.953			0.976	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1681	1686	1583	0	1818	1583
Flt Permitted	0.211			0.106			0.950	0.953			0.976	
Satd. Flow (perm)	393	3539	1583	197	3529	0	1681	1686	1583	0	1818	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			419			1697	
Travel Time (s)		33.4			6.1			6.3			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	1183	619	244	983	17	608	4	199	4	4	69
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	3	1183	619	244	1000	0	304	308	199	0	8	69
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.6	20.6	13.3	20.6		13.3	13.3	13.3	13.0	13.0	13.0
Total Split (s)	13.0	77.0	77.0	22.0	86.0		35.0	35.0	22.0	16.0	16.0	16.0
Total Split (%)	8.7%	51.3%	51.3%	14.7%	57.3%		23.3%	23.3%	14.7%	10.7%	10.7%	10.7%
Maximum Green (s)	7.7	70.4	70.4	16.4	79.4		28.7	28.7	16.4	10.0	10.0	10.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	93.9	73.3	73.3	89.9	88.7		29.9	29.9	51.4		10.2	10.2
Actuated g/C Ratio	0.63	0.49	0.49	0.60	0.59		0.20	0.20	0.34		0.07	0.07
v/c Ratio	0.01	0.68	0.80	0.84	0.48		0.91	0.92	0.37		0.06	0.64
Control Delay	6.7	20.5	28.5	71.6	21.2		89.0	90.5	39.1		66.1	93.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	6.7	20.5	28.5	71.6	21.2		89.0	90.5	39.1		66.1	93.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	C	C	E	C		F	F	D		E	F
Approach Delay		23.2			31.1			77.3			90.9	
Approach LOS		C			C			E			F	
Queue Length 50th (ft)	0	226	229	140	302		306	310	141		7	67
Queue Length 95th (ft)	m2	507	632	#279	511		#496	#503	219		26	#130
Internal Link Dist (ft)		2372			369			339			1617	
Turn Bay Length (ft)	400		475	150								
Base Capacity (vph)	352	1745	780	301	2171		343	344	530		133	116
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.01	0.68	0.79	0.81	0.46		0.89	0.90	0.38		0.06	0.59

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 38.2 Intersection LOS: D
Intersection Capacity Utilization 76.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Glen Laurel Road & NC 42

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

GLEN LAUREL ROAD

&

SITE DRIVE 1

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	721	14	0	338
Future Vol, veh/h	0	48	721	14	0	338
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	50	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	801	16	0	376

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	401	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.13	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.919	-	-	-	-
Pot Cap-1 Maneuver	0	512	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	512	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	512	-
HCM Lane V/C Ratio	-	-	0.104	-
HCM Control Delay (s)	-	-	12.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↑↑↑	↱		↑
Traffic Vol, veh/h	0	101	570	41	0	769
Future Vol, veh/h	0	101	570	41	0	769
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	50	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	112	633	46	0	854

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	317	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.13	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.919	-	-	-	-
Pot Cap-1 Maneuver	0	580	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	580	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	580	-
HCM Lane V/C Ratio	-	-	0.193	-
HCM Control Delay (s)	-	-	12.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.7	-

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

NC 42

&

SITE DRIVE 2 (BEECH LANDING)

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	705	59	0	1268	0	42
Future Vol, veh/h	705	59	0	1268	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	783	66	0	1409	0	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	607
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	607	-	-	-
HCM Lane V/C Ratio	0.077	-	-	-
HCM Control Delay (s)	11.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1189	100	0	1155	0	49
Future Vol, veh/h	1189	100	0	1155	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1321	111	0	1283	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	661
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	405
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	405
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	405	-	-	-
HCM Lane V/C Ratio	0.134	-	-	-
HCM Control Delay (s)	15.3	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

GLEN LAUREL ROAD

&

SITE DRIVE 3

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	30	705	30	18	320
Future Vol, veh/h	42	30	705	30	18	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	33	783	33	20	356

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1196	800	0	0	816	0
Stage 1	800	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	206	385	-	-	812	-
Stage 1	442	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	201	385	-	-	812	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	201	385	812	-
HCM Lane V/C Ratio	-	-	0.232	0.087	0.025	-
HCM Control Delay (s)	-	-	28.2	15.2	9.5	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.3	0.1	-

Intersection						
Int Delay, s/veh	4.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	42	569	43	34	735
Future Vol, veh/h	71	42	569	43	34	735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	47	632	48	38	817

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1549	656	0	0	680	0
Stage 1	656	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	125	465	-	-	912	-
Stage 1	516	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	120	465	-	-	912	-
Mov Cap-2 Maneuver	120	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	55.1	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	120	465	912	-
HCM Lane V/C Ratio	-	-	0.657	0.1	0.041	-
HCM Control Delay (s)	-	-	79.6	13.6	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3.4	0.3	0.1	-

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

NC 42

&

SITE DRIVE 4

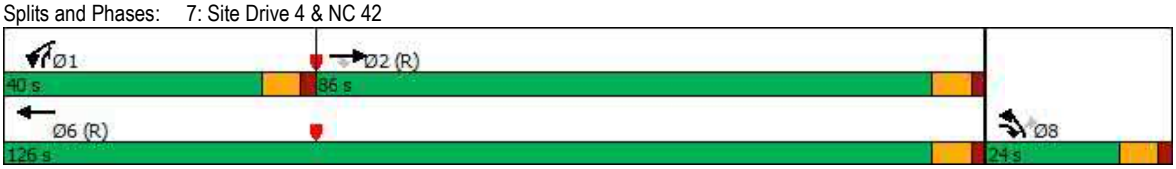
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	613	50	113	1155	91	38
Future Volume (vph)	613	50	113	1155	91	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		200	0
Storage Lanes		1	1		2	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	55			55	25	
Link Distance (ft)	625			649	1205	
Travel Time (s)	7.7			8.0	32.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	681	56	126	1283	101	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	681	56	126	1283	101	42
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	14.0	7.0	7.0	14.0	7.0	7.0
Minimum Split (s)	21.0	14.0	14.0	21.0	14.0	14.0
Total Split (s)	86.0	24.0	40.0	126.0	24.0	40.0
Total Split (%)	57.3%	16.0%	26.7%	84.0%	16.0%	26.7%
Maximum Green (s)	79.0	17.0	33.0	119.0	17.0	33.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	105.2	122.0	18.0	128.2	11.8	34.8
Actuated g/C Ratio	0.70	0.81	0.12	0.85	0.08	0.23
v/c Ratio	0.27	0.04	0.59	0.42	0.37	0.11
Control Delay	13.6	2.7	73.4	3.0	69.1	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	2.7	73.4	3.0	69.1	43.6
LOS	B	A	E	A	E	D
Approach Delay	12.8			9.3	61.6	
Approach LOS	B			A	E	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Length 50th (ft)	78	8	119	116	49	33
Queue Length 95th (ft)	292	17	182	159	79	63
Internal Link Dist (ft)	545			569	1125	
Turn Bay Length (ft)			250		200	
Base Capacity (vph)	2481	1363	413	3024	434	546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.04	0.31	0.42	0.23	0.08

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 46.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Site Drive 4 & NC 42



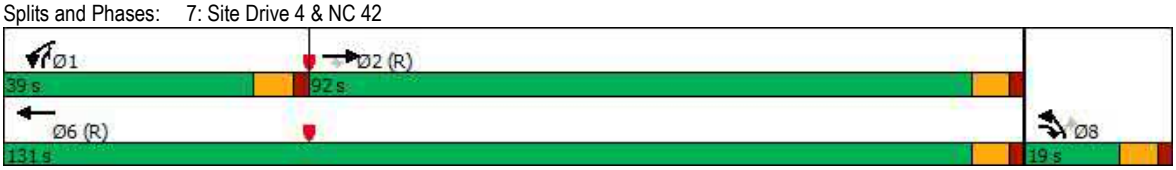
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1144	107	174	981	118	104
Future Volume (vph)	1144	107	174	981	118	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		200	0
Storage Lanes		1	1		2	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	55			55	25	
Link Distance (ft)	569			706	1193	
Travel Time (s)	7.1			8.8	32.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1271	119	193	1090	131	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1271	119	193	1090	131	116
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	14.0	7.0	7.0	14.0	7.0	7.0
Minimum Split (s)	21.0	14.0	14.0	21.0	14.0	14.0
Total Split (s)	92.0	19.0	39.0	131.0	19.0	39.0
Total Split (%)	61.3%	12.7%	26.0%	87.3%	12.7%	26.0%
Maximum Green (s)	85.0	12.0	32.0	124.0	12.0	32.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	98.4	116.4	23.6	126.9	13.1	41.6
Actuated g/C Ratio	0.66	0.78	0.16	0.85	0.09	0.28
v/c Ratio	0.55	0.10	0.69	0.36	0.44	0.26
Control Delay	6.5	1.2	72.5	3.0	69.2	42.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	1.2	72.5	3.0	69.2	42.1
LOS	A	A	E	A	E	D
Approach Delay	6.0			13.5	56.5	
Approach LOS	A			B	E	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Length 50th (ft)	136	8	181	98	63	89
Queue Length 95th (ft)	93	m6	256	137	97	132
Internal Link Dist (ft)	489			626	1113	
Turn Bay Length (ft)			250		200	
Base Capacity (vph)	2320	1243	401	3006	331	549
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.10	0.48	0.36	0.40	0.21

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 39 (26%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 59.6% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Site Drive 4 & NC 42



APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

NC 42

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SITE DRIVE 5

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	642	28	0	1246	0	21
Future Vol, veh/h	642	28	0	1246	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	713	31	0	1384	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	357
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	639
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	639
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	639	-	-	-
HCM Lane V/C Ratio	0.037	-	-	-
HCM Control Delay (s)	10.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1192	56	0	1099	0	59
Future Vol, veh/h	1192	56	0	1099	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1324	62	0	1221	0	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	662
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	404
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	404
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	404	-	-	-
HCM Lane V/C Ratio	0.162	-	-	-
HCM Control Delay (s)	15.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-

RAMEY KEMP ASSOCIATES
Moving forward.

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June 23, 2020

Received By TOC
July 17, 2020

Samantha Wullenwaber, MPA
Town of Clayton
111 East Second Street
Clayton, NC 27520
swullenwaber@townofclaytonnc.org

Subject: **Traffic Impact Analysis Addendum**
Glen Laurel Mixed Use
Clayton, North Carolina

Dear Mrs. Wullenwaber:

This letter provides the findings of the Addendum to the Traffic Impact Analysis (TIA) prepared by Ramey Kemp & Associates, Inc. (RKA) for the proposed Glen Laurel Mixed Use development in the southeast quadrant of the intersection of NC 42 and Glen Laurel Road in Clayton, North Carolina. This Addendum was prepared to accompany the TIA Addendum dated April 2020 for the subject development. After submittal of the April 2020 TIA Addendum for the Glen Laurel Mixed Use development, the North Carolina Department of Transportation (NCDOT) and City of Clayton (City) review staff requested an updated trip generation. Based on the updated trip generation, this addendum will provide revised capacity analysis results for the study intersections under build (2022) conditions.

This addendum includes updated analysis/discussion of the operations at the intersections below:

- US 70 Business and NC 42
- NC 42 and East Front Street
- NC 42 and Glen Laurel Road
- Glen Laurel Road and Site Drive 1
- NC 42 and Site Drive 2 (Beech Landing)
- Glen Laurel Road and Site Drive 3
- NC 42 and Site Drive 4
- NC 42 and Site Drive 5

The intersections above will likely be impacted by the change in site trip distribution.

Existing and No-Build Peak Hour Conditions

Existing and no-build peak hour traffic volumes were determined according to the methodology and rationale contained within the Glen Laurel Mixed Use TIA Addendum dated April 2020.

Trip Generation

The trip generation has been revised to include the following changes: low-rise multi-family units increases from 360 to 366 and congregate care facility increases from from 77 to 80 units. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Table 1 provides a summary of the trip generation potential for the site.

Table 1: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multi-Family (Low-Rise) Housing (220)	366 dwellings	2,800	38	126	119	68
Bank (912)	10,000 sq. ft.	1,000	55	40	102	103
Shopping Center (820)	75,000 sq. ft.	5,000	117	72	211	228
Day Care (565)	14,000 sq. ft.	670	82	72	73	83
Mini-Warehouse (151)	120,900 sq. ft.	190	7	5	10	11
Congregate Care Facility (253)	80 units	170	4	2	8	8
Assisted Living (254)	66 beds	180	8	4	10	12
Total Trips		**10,010**	**311**	**321**	**533**	**513**
Internal Capture (1% AM, 2% PM)			*-3*	*-3*	*-10*	*-10*
Total External Trips			**308**	**318**	**523**	**503**
Pass-By Trips: Shopping Center (34% PM)			--	--	*-74*	*-74*
Pass-By Trips: Drive-In Bank (29% AM, 35% PM)			*-14*	*-14*	*-35*	*-35*
Total Primary Trips			**294**	**304**	**414**	**394**

It is estimated that the proposed development will generate approximately 10,010 total site trips on the roadway network during a typical 24-hour weekday period. The updated trip generation produces approximately 590 less daily trips from the previous one submitted in April 2020. Of the daily traffic volume, it is anticipated that 598 trips (294 entering and 304 exiting) will occur during the AM peak hour and 808 (414 entering and 394 exiting) will occur during the PM peak hour. The updated trip generation produces 3 more

trips in the AM peak hour and 2 more trips in the PM peak hour than the previous one submitted in April 2020. Refer to the attached figure for the updated site plan.

Trip Distribution

Trip distribution percentages for the proposed development were determined according to similar methodology contained in the TIA dated April 2020. The residential and non-residential distributions are as follows:

- 20% to/from the north via NC 42
- 10% to/from the east via Glen Laurel Road
- 5% to/from the west via East Front Street
- 40% to/from the west via US 70 Business
- 25% to/from east via US 70 Business

Residential

- 40% to/from the north via NC 42
- 15% to/from the east via Glen Laurel Road
- 10% to/from the west via East Front Street
- 25% to/from the west via US 70 Business
- 10% to/from east via US 70 Business

Non-Residential

Refer to the attached figures for the updated site trip distribution and assignment for the proposed development.

Build (2022) Traffic

To estimate the build (2022) traffic conditions with the site fully built-out, the total site trips were added to the no-build (2022) traffic volumes. Refer to the attached figures for the updated build (2022) peak hour traffic volumes.

Capacity Analysis

The build (2022) weekday AM and weekday PM peak hour traffic volumes were analyzed to determine the levels of service at the study intersections under future roadway conditions. Refer to Tables 2-9 for a summary of the analysis results. It should be noted that the intersections included in this Addendum are expected to experience an impact by the proposed changes to trip distribution. The Synchro capacity analysis reports are attached to this report.

Table 2: Analysis Summary of US 70 Business and NC 42

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB	1 LT, 1 TH, 1 RT	E	C (32)	E	D (37)
	WB	1 LT, 1 LT-TH, 1 RT	C		C	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	
Background (2022) Conditions	EB	1 LT, 1 TH, 1 RT	E	C (35)	F	D (40)
	WB	1 LT, 1 LT-TH, 1 RT	C		C	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	
Combined (2022) Conditions	EB	1 LT, 1 TH, 1 RT	E	D (39)	F	D (46)
	WB	1 LT, 1 LT-TH, 1 RT	D		D	
	NB	1 LT, 2 TH, 1 RT	C		D	
	SB	2 LT, 2 TH, 1 RT	D		D	

Capacity analysis of existing (2019), background (2022), and combined (2022) traffic conditions indicates the intersection of US 70 Business and NC 42 is expected to operate at an overall LOS D or better during both weekday AM and PM peak hours. The eastbound approach is expected to operate at LOS F in the weekday PM peak hour of the future scenarios; however, the eastbound approach delay is not expected to increase significantly. No improvements by the developer are recommended.

Table 3: Analysis Summary of NC 42 and East Front Street

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (12)	A B E	B (15)
Background (2022) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (12)	B B E	B (18)
Combined (2022) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A B E	B (13)	B B E	C (22)

Capacity analysis of existing (2019) and background (2022) traffic conditions indicate the intersection of NC 42 and East Front Street are expected to operate at an overall LOS B during both weekday AM and PM peak hours. Under combined (2022) traffic conditions, the intersection is expected to operate at an overall LOS B during the weekday AM peak hour and LOS C during the weekday PM peak hour. The southbound approach is expected to operate at LOS E in the future scenarios; however, the southbound approach delay is not expected to increase significantly. No improvements by the developer are recommended.

Table 4: Analysis Summary of NC 42 and Glen Laurel Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB NB SB	1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH, 1 RT	A B E E	C (30)	A C E F	C (27)
Background (2022) Conditions	EB WB NB SB	1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH, 1 RT	B C E E	C (32)	B C E F	C (30)
Combined (2022) Conditions	EB WB NB SB	1 LT, 2 TH, 1 RT 1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH, 1 RT	B C E E	C (35)	C C E F	D (38)

Capacity analysis of existing (2019) and background (2022) traffic conditions indicates the intersection of NC 42 and Glen Laurel Road is expected to operate at an overall LOS C during both weekday AM and PM peak hours. Under combined (2022) traffic conditions, the intersection is expected to operate at an overall LOS D during the weekday PM peak hour. There is a LOS degradation from C to D in the weekday PM peak hour between the background (2022) conditions and the combined (2022) conditions. No delay or queue impacts were identified. No improvements by the developer are recommended.

Table 5: Analysis Summary of Glen Laurel and Site Drive 1

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	WB NB SB	**1 RT** 3 TH, **1 RT** 1 TH	B[1] -- --	N/A	B[1] -- --	N/A

1. Level of service for minor-street approach.
Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of Glen Laurel Road and Site Drive 1 are expected to operate at LOS B during both the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the northbound approach.

Table 6: Analysis Summary of NC 42 and Site Drive 2 (Beech Landing)

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** 2 TH **1 RT**	-- -- B[1]	N/A	-- -- C[1]	N/A

1. Level of service for minor-street approach.
Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of NC 42 and Site Drive 2 (Beech Landing) is expected to operate at LOS C or better during the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the eastbound approach.

Table 7: Analysis Summary of Glen Laurel Road and Site Drive 3

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	WB NB SB	**1 LT, 1 RT** 1 TH-**RT** **1 LT**, 1 TH	C[1] -- A[2]	N/A	E[1] -- A[2]	N/A

1. Level of service for minor-street approach.
2. Level of service for major-street left-turn movement.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of Glen Laurel Road and Site Drive 3 is expected to operate at LOS C during the weekday AM peak hour and LOS E during the weekday PM peak hour. The major-street left-turn movement at the intersection is expected to operate at LOS A during both the weekday AM and PM peak hours. It should be noted that the signal at the intersection of NC 42 and Glen Laurel Road is expected to provide some gaps in the southbound traffic, which may allow fewer delays for exiting traffic than shown in the analysis reports.

Right and left-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. A right-turn lane is recommended at the westbound approach. A left-turn lane is recommended at the southbound approach.

Table 8: Analysis Summary of Glen Laurel Road and Site Drive 4

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** **1 LT**, 2 TH **2 LT, 1 RT**	B A E	B (13)	A B E	B (13)

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the intersection of NC 42 and Site Drive 4 is expected to operate at an overall LOS B during the weekday AM and PM peak hours.

Right and left-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. A right-turn lane is recommended at the eastbound approach. A left-turn lane is recommended at the westbound approach.

Table 9: Analysis Summary of Glen Laurel Road and Site Drive 5

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2022) Conditions	EB WB NB	2 TH, **1 RT** 2 TH **1 RT**	-- -- B[1]	N/A	-- -- C[1]	N/A

1. Level of service for minor-street approach.

Improvements to lane configurations are shown in bold.

Capacity analysis of combined (2022) traffic conditions indicates the minor-street approach at the intersection of NC 42 and Site Drive 5 expected to operate at LOS C or better during the weekday AM and PM peak hours.

Right-turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are recommended at the eastbound approach.

Conclusions and Recommendations

This Traffic Impact Analysis Addendum was conducted to determine the potential impacts for the proposed Glen Laurel Mixed Used with a modified trip generation under build (2022) conditions. Based on the findings of this study, the recommended improvements from the previous TIA, Hunt Property, suffice and no additional improvements are necessary.

TIP R-3825 Improvements

NC 42 through Study Area

- Provide two through lanes on the eastbound and westbound approaches of NC 42 with a median.

Recommended Improvements by Developer

Glen Laurel Road and Site Drive 1

- Construct right-in/right-out westbound approach with one ingress and one egress lane.
- Provide an exclusive northbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for westbound approach.

NC 42 and Site Drive 2 (Beech Landing)

- Construct right-in/right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.

Glen Laurel Road and Site Drive 3

- Construct westbound approach with one ingress and two egress lanes striped as one left-turn lane with 100 feet of storage and one right-turn lane.
- Provide an exclusive southbound left-turn lane with at least 100 feet of storage and appropriate deceleration and taper.
- Provide stop-control for westbound approach.

NC 42 and Site Drive 4

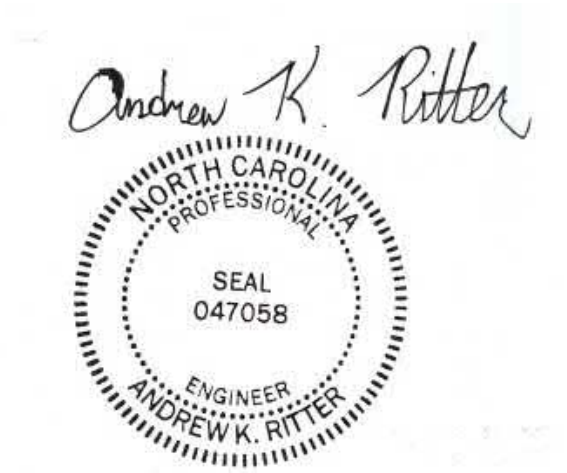
- Construct northbound approach with one ingress and three egress lanes striped as two left-turn lanes, each with 200 feet of storage, and one right-turn lane.
- Provide an exclusive westbound left-turn lane with at least 250 feet of storage and appropriate deceleration and taper.
- Provide an exclusive eastbound right-turn lane that extends to Site Drive 5.
- Install a traffic signal at the intersection when warranted or prior to the opening of the development. Coordinate the signal with the existing signal at the intersection of Glen Laurel Road and NC 42.

NC 42 and Site Drive 5

- Construct a right-in/right-out northbound approach with one ingress and one egress lane.
- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate deceleration and taper.
- Provide stop-control for northbound approach.

If you should have any questions, please feel free to contact me at (704) 220-1941.

Sincerely,



06/23/2020

Drew Ritter, P.E.
Traffic Engineering Project Manager
Ramey Kemp & Associates, Inc.

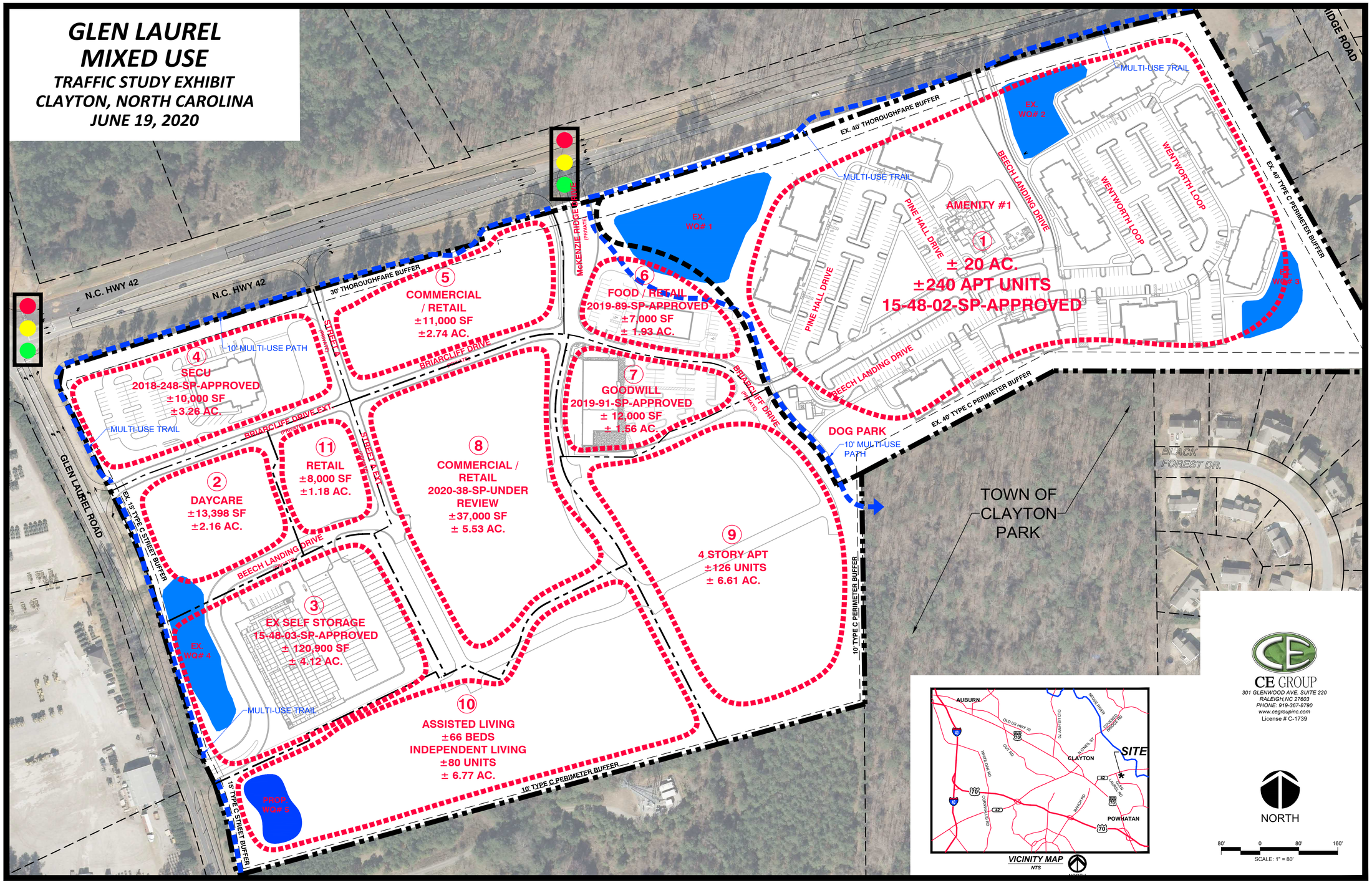
NC Corporate License # C-0910

Attachments: Figures
Synchro Analysis Reports

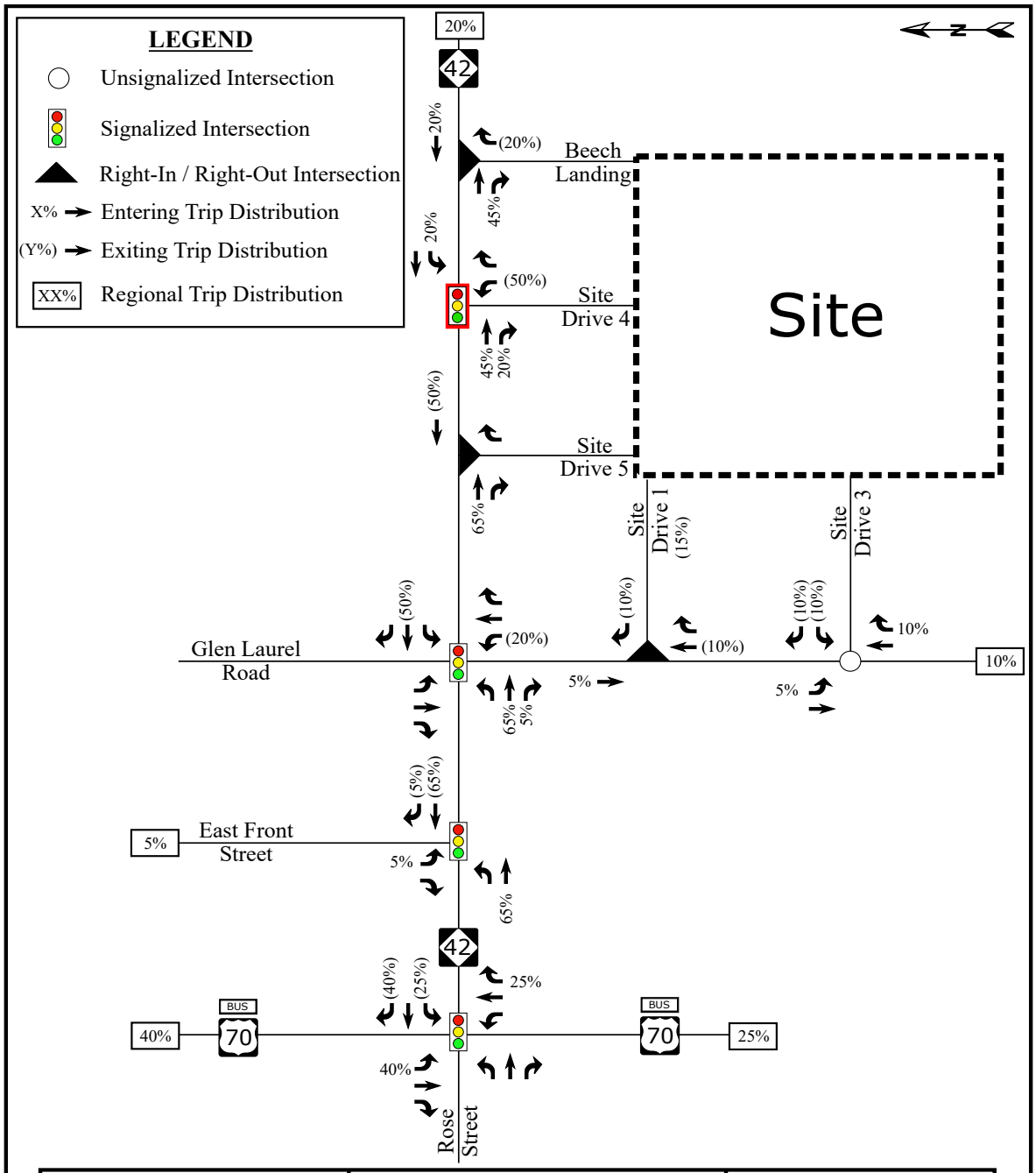
FIGURES

GLEN LAUREL MIXED USE

TRAFFIC STUDY EXHIBIT
CLAYTON, NORTH CAROLINA
JUNE 19, 2020



CE GROUP
301 GLENWOOD AVE. SUITE 220
RALEIGH,NC 27603
PHONE: 919-367-8790
www.cegroupinc.com
License # C-1739



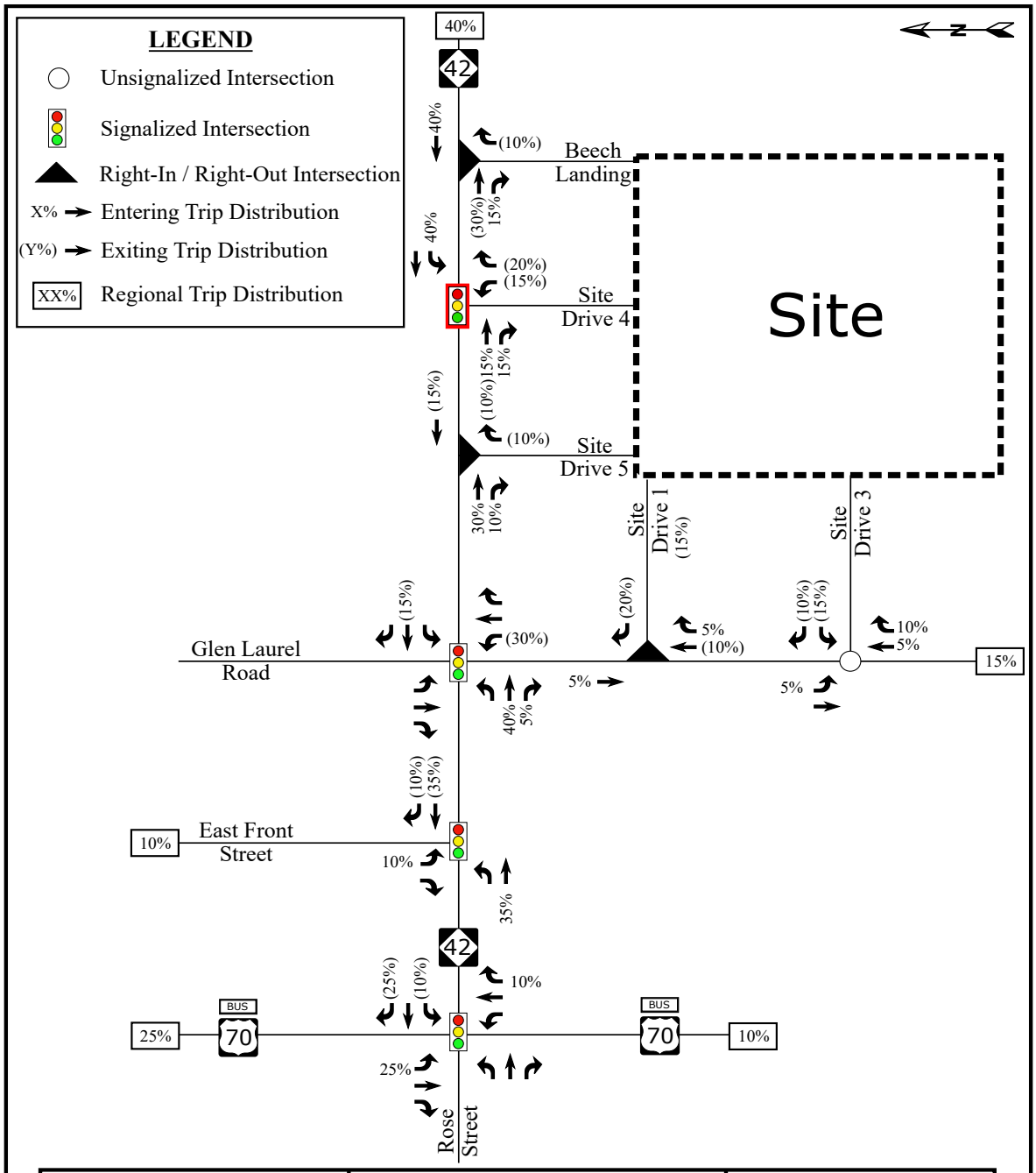
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Residential
Site Trip Distribution

Scale: Not to Scale

Figure 6a



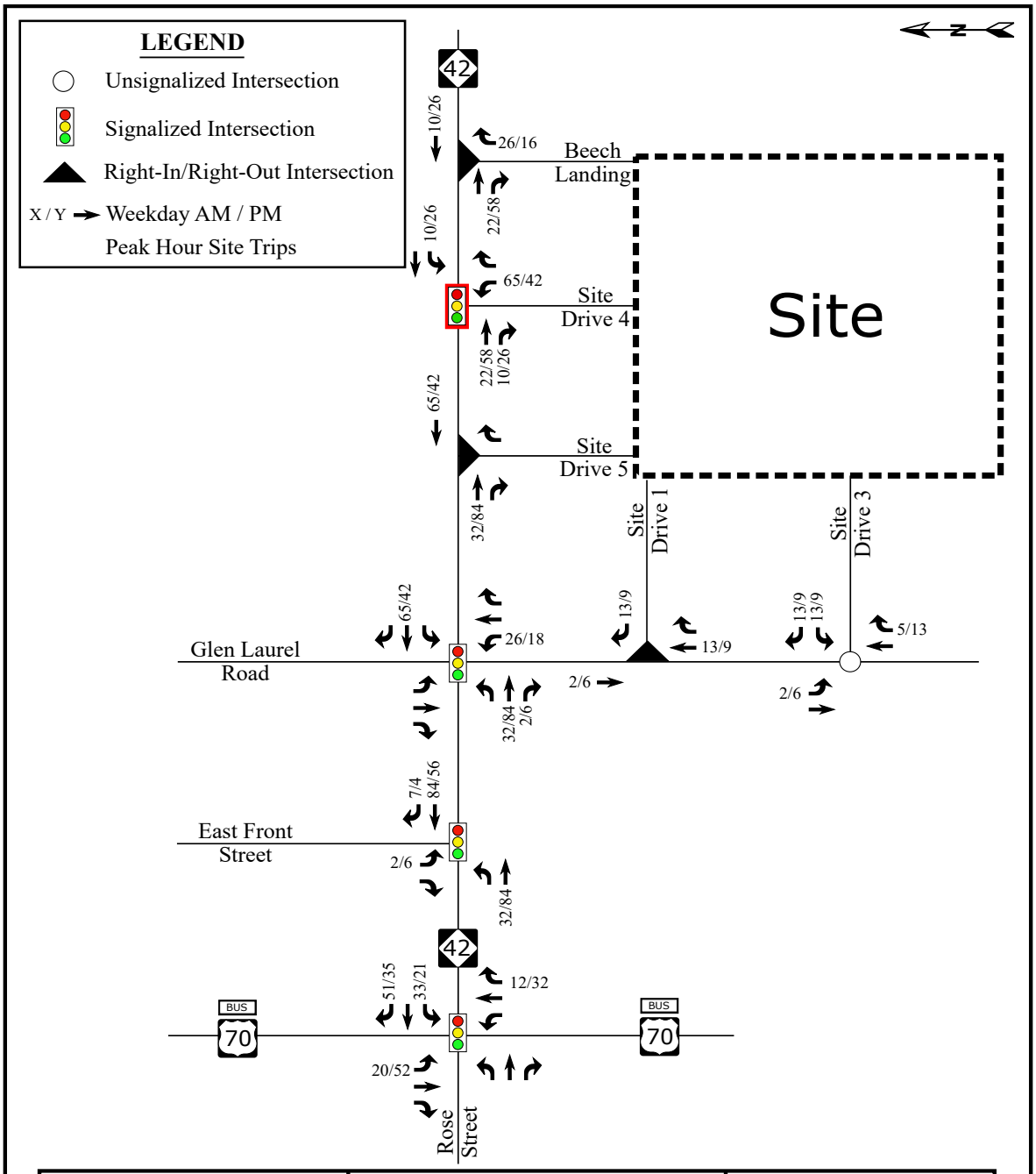
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Non-Residential
Site Trip Distribution

Scale: Not to Scale

Figure 6b



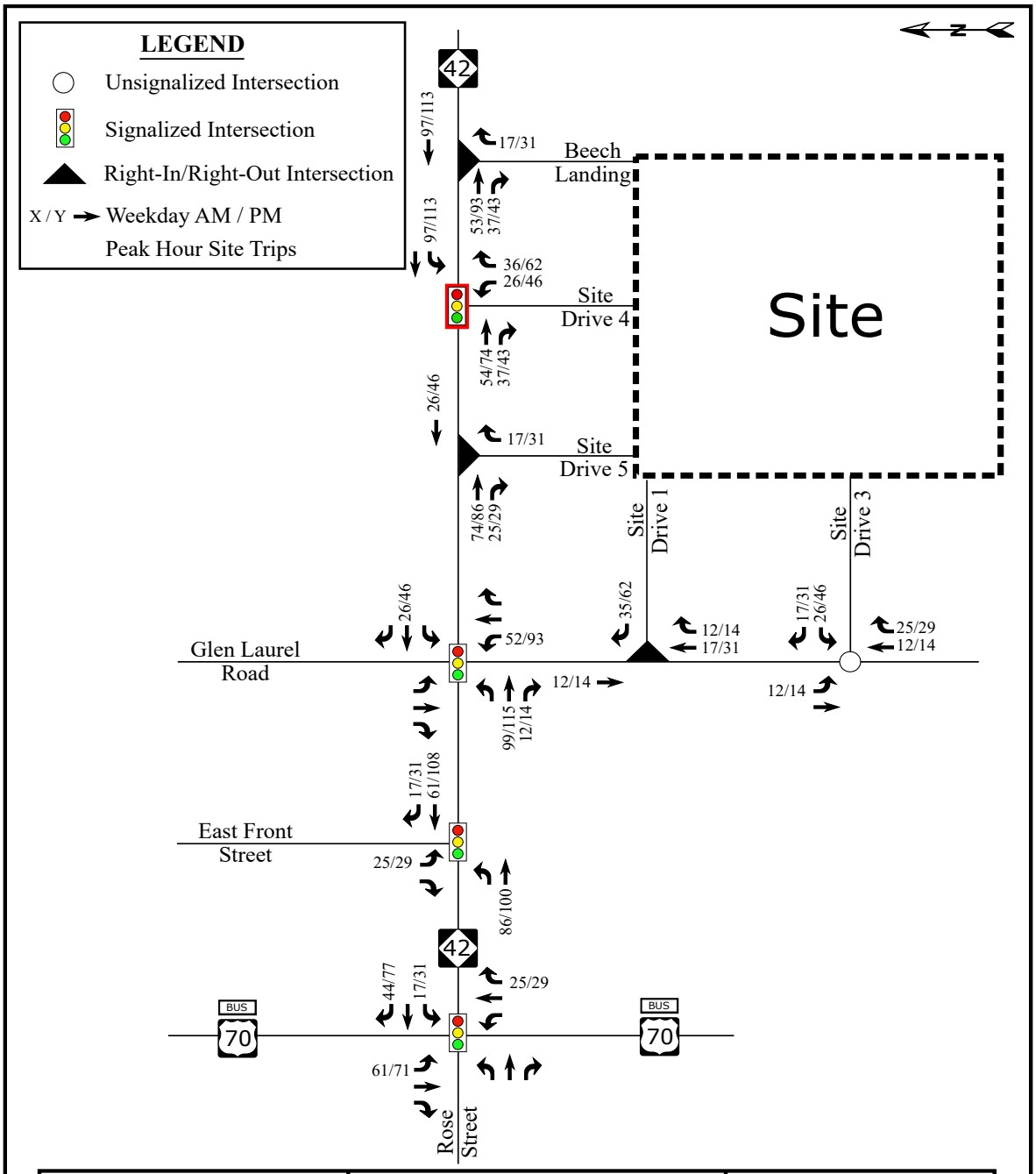
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Residential
Site Trip Assignment

Scale: Not to Scale

Figure 7a



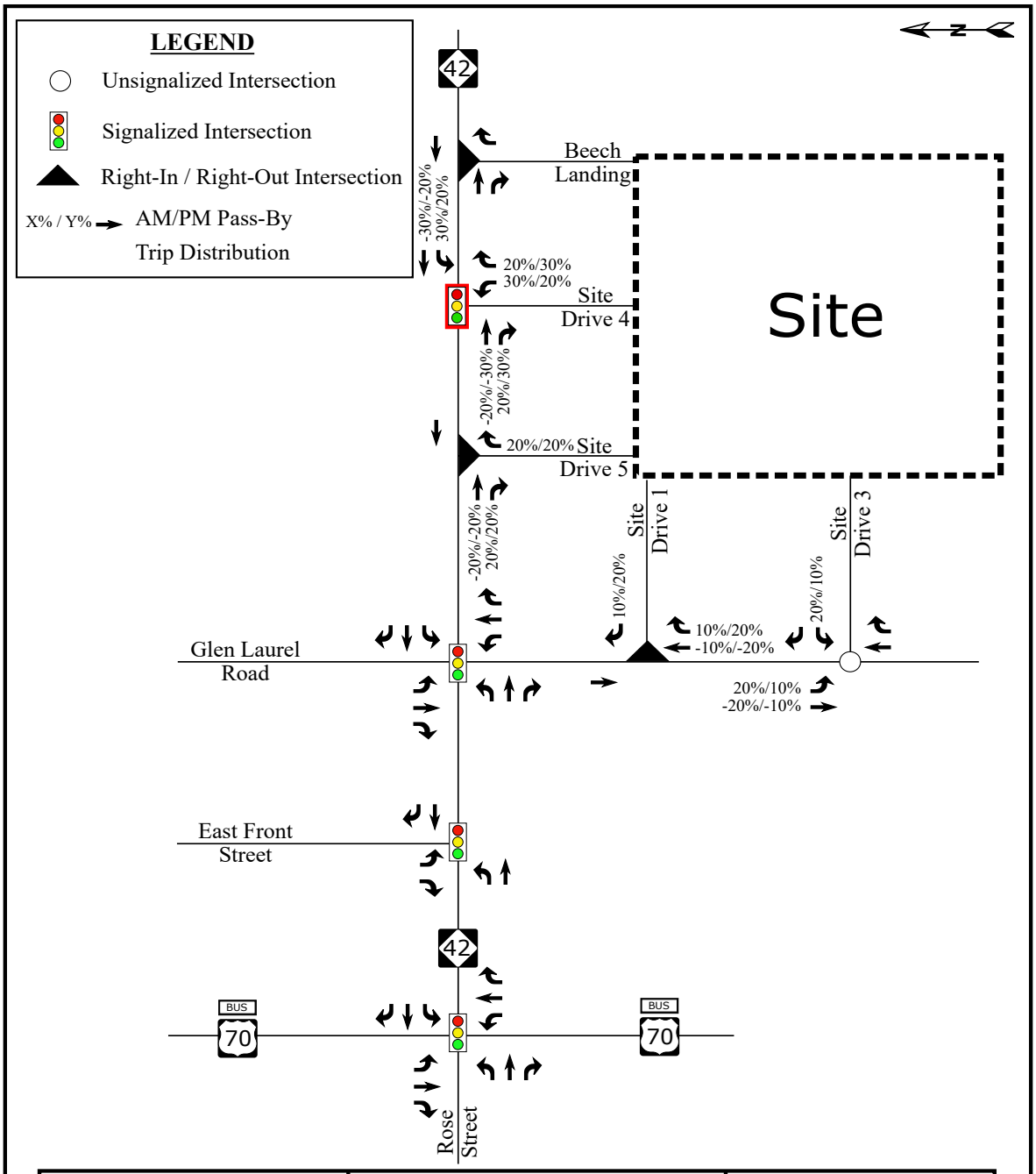
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Non-Residential
Site Trip Assignment

Scale: Not to Scale

Figure 7b



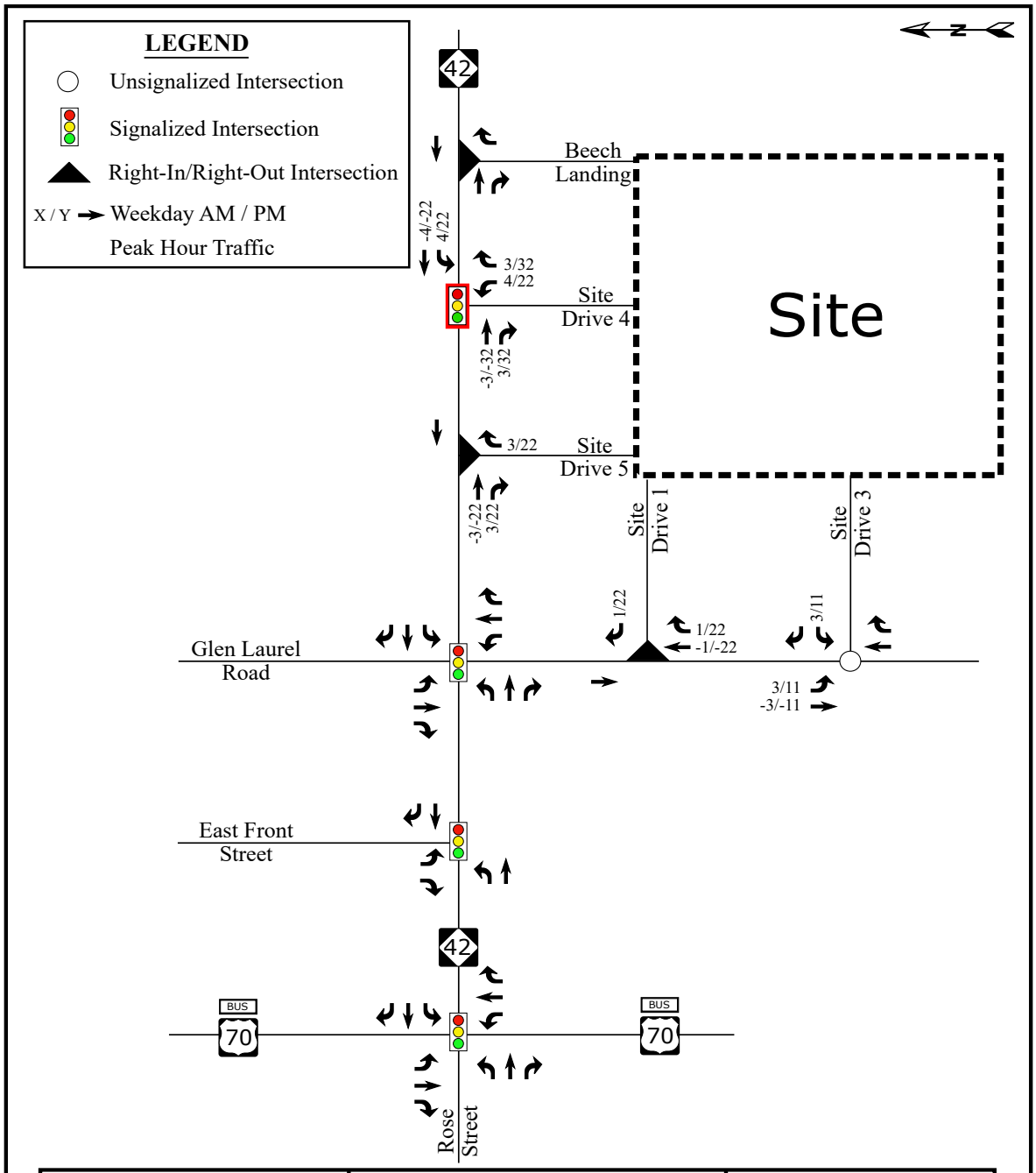
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Pass-By
Trip Distribution

Scale: Not to Scale

Figure 8



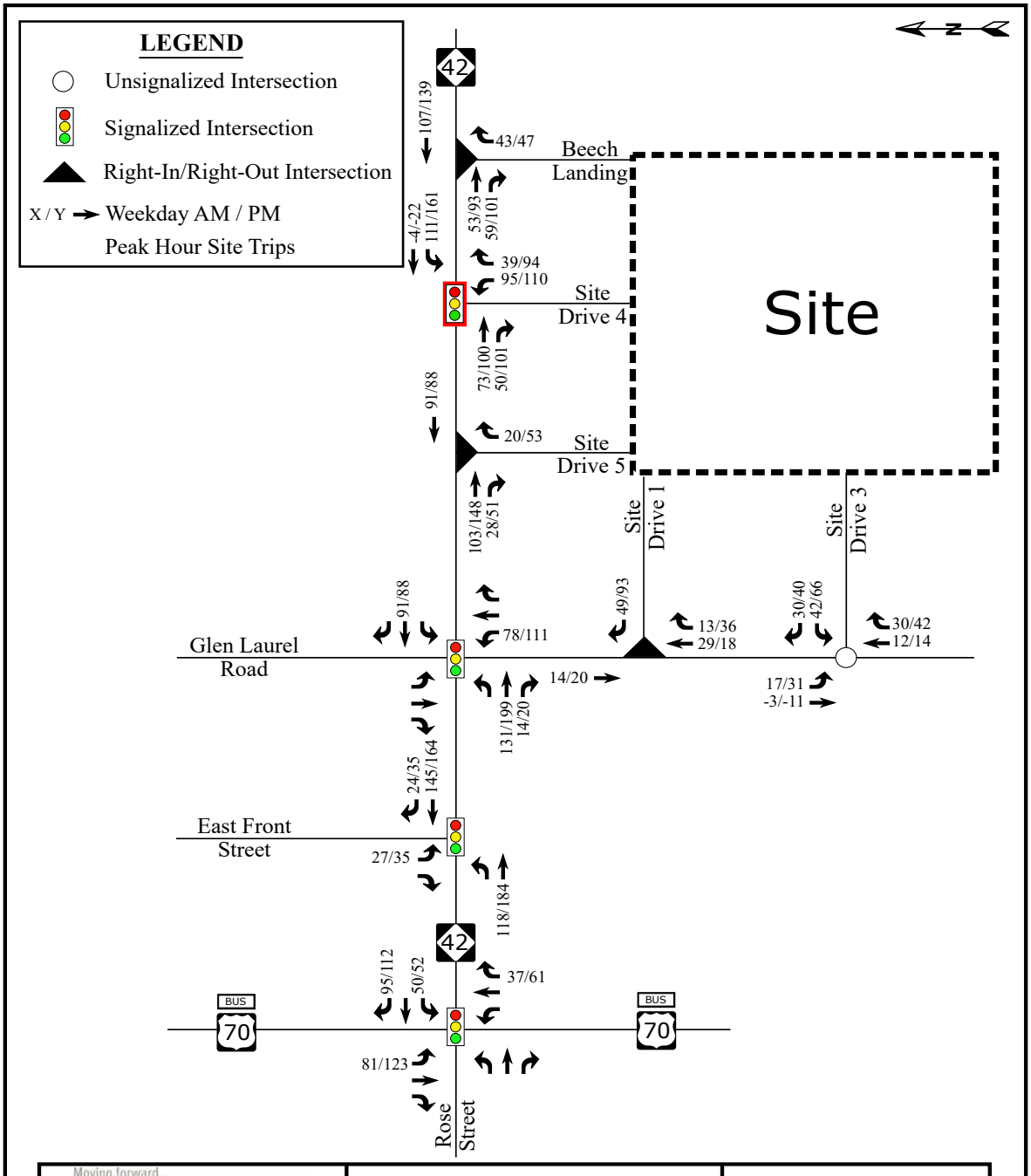
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Pass-By
Trip Assignment

Scale: Not to Scale

Figure 9



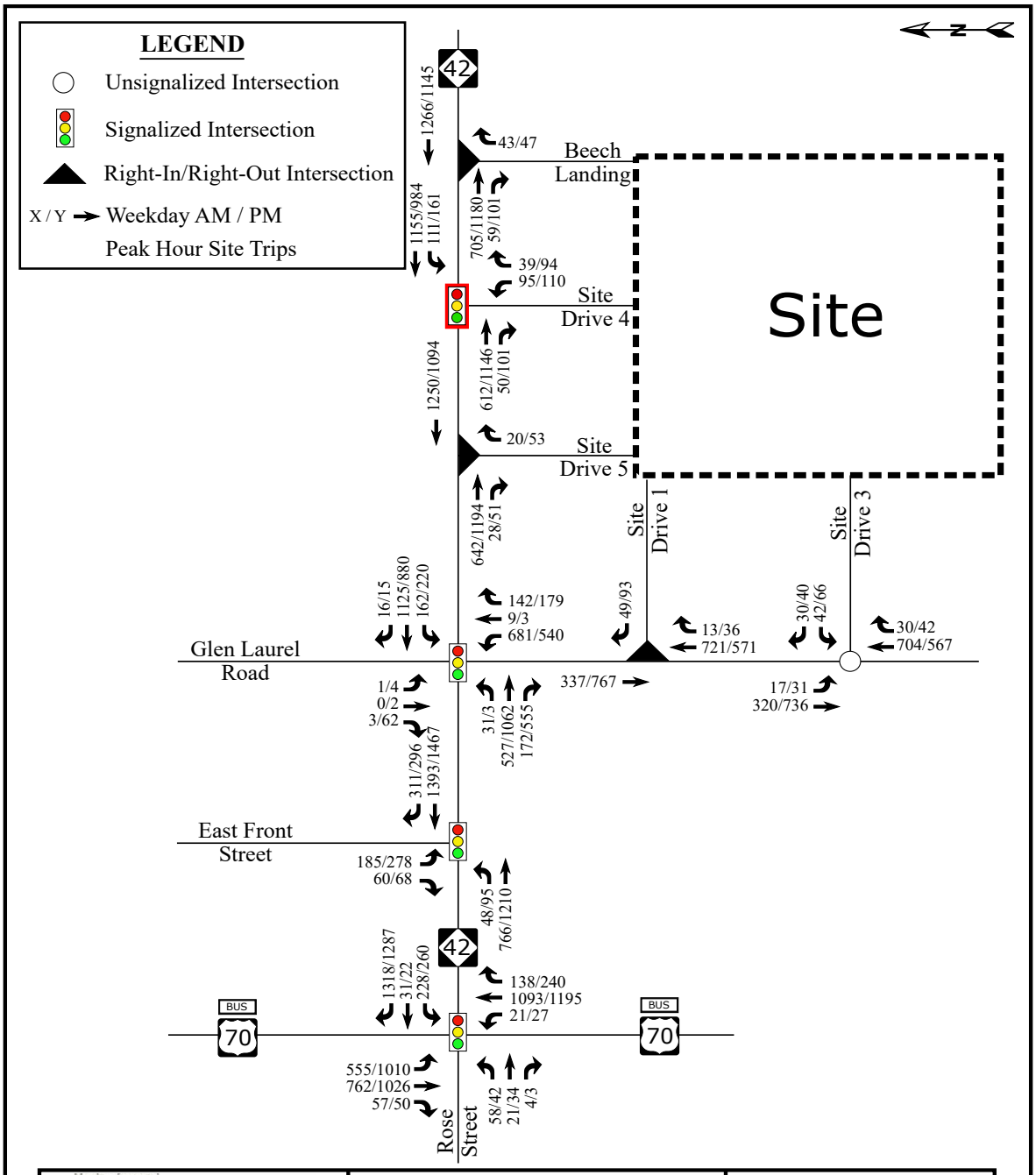
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Total Site Trip Assignment

Scale: Not to Scale

Figure 10



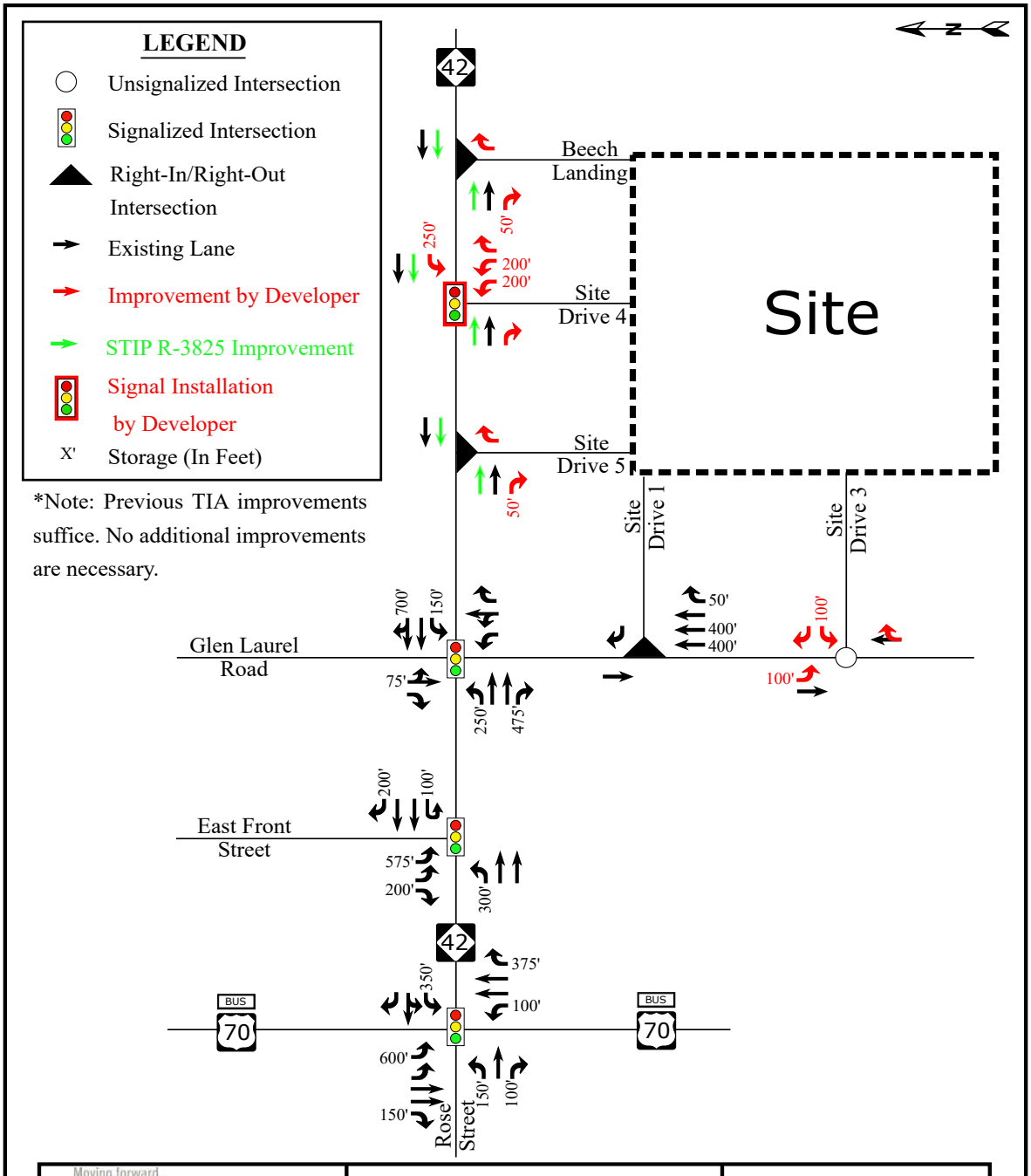
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Combined (2022)
Peak Hour Traffic

Scale: Not to Scale

Figure 11



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Glen Laurel
Mixed Use Update
Clayton, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure 12

SYNCHRO ANALYSIS REPORTS

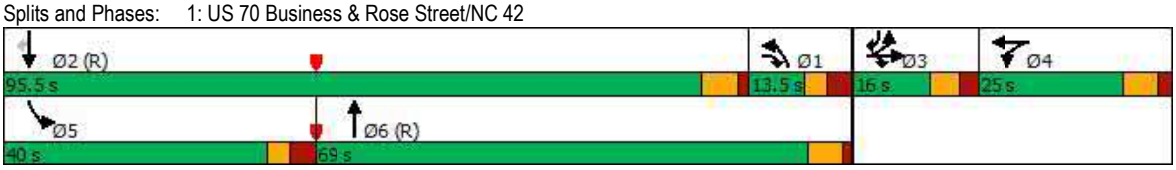
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	21	4	228	31	1318	21	1093	138	555	762	57
Future Volume (vph)	58	21	4	228	31	1318	21	1093	138	555	762	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1704	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.963		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1704	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	23	4	253	34	1464	23	1214	153	617	847	63
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	64	23	4	142	145	1464	23	1214	153	617	847	63
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.5	27.0		13.3	27.0	13.3
Total Split (s)	16.0	16.0		25.0	25.0		13.5	69.0		40.0	95.5	16.0
Total Split (%)	10.7%	10.7%		16.7%	16.7%		9.0%	46.0%		26.7%	63.7%	10.7%
Maximum Green (s)	9.7	9.7		18.5	18.5		7.1	63.2		33.7	89.6	9.7
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	10.5	10.5	42.8	18.0	18.0	150.0	31.1	69.8	150.0	31.7	75.8	88.3
Actuated g/C Ratio	0.07	0.07	0.29	0.12	0.12	1.00	0.21	0.47	1.00	0.21	0.51	0.59
v/c Ratio	0.52	0.18	0.01	0.71	0.71	0.92	0.06	0.74	0.10	0.85	0.47	0.07
Control Delay	82.1	68.3	26.2	82.6	82.7	26.6	39.8	37.3	0.1	68.8	31.9	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.1	68.3	26.2	82.6	82.7	26.6	39.8	37.3	0.1	68.8	31.9	12.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	F	F	C	D	D	A	E	C	B
Approach Delay		76.1			35.8			33.3			46.0	
Approach LOS		E			D			C			D	
Queue Length 50th (ft)	61	22	2	154	157	1120	16	521	0	300	364	22
Queue Length 95th (ft)	114	53	11	209	213	#1520	40	635	0	364	445	42
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	134	141	461	225	228	1583	367	1659	1583	801	2332	941
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.16	0.01	0.63	0.64	0.92	0.06	0.73	0.10	0.77	0.36	0.07

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 64 (43%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 39.1 Intersection LOS: D
Intersection Capacity Utilization 72.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	34	3	260	22	1287	27	1195	240	1010	1026	50
Future Volume (vph)	42	34	3	260	22	1287	27	1195	240	1010	1026	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	350		0	100		375	600		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950	0.959		0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1681	1697	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950	0.959		0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1681	1697	1583	1770	3539	1583	3433	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1128			1419			2991			2508	
Travel Time (s)		30.8			21.5			45.3			38.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	38	3	289	24	1430	30	1328	267	1122	1140	56
Shared Lane Traffic (%)				46%								
Lane Group Flow (vph)	47	38	3	156	157	1430	30	1328	267	1122	1140	56
Turn Type	Split	NA	pt+ov	Split	NA	Free	Prot	NA	Free	Prot	NA	pm+ov
Protected Phases	3	3	3 1	4	4		1	6		5	2	3
Permitted Phases						Free			Free			2
Detector Phase	3	3	3 1	4	4		1	6		5	2	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		7.0	20.0	7.0
Minimum Split (s)	13.3	13.3		13.5	13.5		13.4	26.5		13.3	26.5	13.3
Total Split (s)	13.3	13.3		20.0	20.0		13.4	65.7		51.0	103.3	13.3
Total Split (%)	8.9%	8.9%		13.3%	13.3%		8.9%	43.8%		34.0%	68.9%	8.9%
Maximum Green (s)	7.0	7.0		13.5	13.5		7.0	59.9		44.7	97.4	7.0
Yellow Time (s)	3.8	3.8		4.5	4.5		3.0	4.5		3.0	4.5	3.8
All-Red Time (s)	2.5	2.5		2.0	2.0		3.4	1.3		3.3	1.4	2.5
Lost Time Adjust (s)	-1.3	-1.3		-1.5	-1.5		-1.4	-0.8		-1.3	-0.9	-1.3
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	6.0		2.0	6.0	2.0
Minimum Gap (s)	0.2	0.2		0.2	0.2		0.2	3.0		0.2	3.0	0.2
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	30.0		0.0	30.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	45.0		0.0	45.0	0.0
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	None
Act Effct Green (s)	8.3	8.3	38.4	15.6	15.6	150.0	27.1	59.3	150.0	49.4	87.0	97.3
Actuated g/C Ratio	0.06	0.06	0.26	0.10	0.10	1.00	0.18	0.40	1.00	0.33	0.58	0.65
v/c Ratio	0.48	0.37	0.01	0.89	0.89	0.90	0.09	0.95	0.17	0.99	0.56	0.05
Control Delay	85.8	78.9	34.0	94.0	93.6	26.8	46.4	58.4	0.2	74.7	25.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.8	78.9	34.0	94.0	93.6	26.8	46.4	58.4	0.2	74.7	25.8	9.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	E	C	F	F	C	D	E	A	E	C	A
Approach Delay		81.0			38.8			48.6			49.1	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	46	37	2	153	154	1149	21	647	0	~622	512	20
Queue Length 95th (ft)	91	78	10	#310	#311	793	54	#794	0	#759	498	27
Internal Link Dist (ft)		1048			1339			2911			2428	
Turn Bay Length (ft)	150		100	350			100		375	600		150
Base Capacity (vph)	97	103	405	175	176	1583	320	1432	1583	1131	2494	1026
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.37	0.01	0.89	0.89	0.90	0.09	0.93	0.17	0.99	0.46	0.05

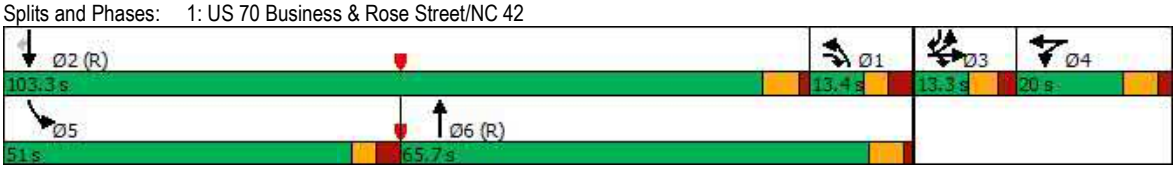
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 119 (79%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 46.4 Intersection LOS: D
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15

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

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

Splits and Phases: 1: US 70 Business & Rose Street/NC 42



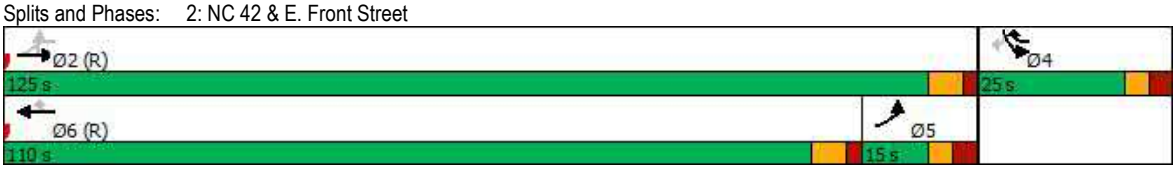
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	48	766	0	1393	311	185	60
Future Volume (vph)	48	766	0	1393	311	185	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	25		25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1770	3539	1863	3539	1583	3433	1583
Flt Permitted	0.128					0.950	
Satd. Flow (perm)	238	3539	1863	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2680		2256	
Travel Time (s)		21.5		40.6		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	851	0	1548	346	206	67
Shared Lane Traffic (%)							
Lane Group Flow (vph)	53	851	0	1548	346	206	67
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	15.0	125.0	125.0	110.0	25.0	25.0	25.0
Total Split (%)	10.0%	83.3%	83.3%	73.3%	16.7%	16.7%	16.7%
Maximum Green (s)	8.6	118.5	118.5	103.5	18.8	18.8	18.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	126.5	124.8		113.3	134.5	15.2	15.2
Actuated g/C Ratio	0.84	0.83		0.76	0.90	0.10	0.10
v/c Ratio	0.18	0.29		0.58	0.24	0.59	0.42
Control Delay	4.0	1.9		12.1	2.3	71.1	70.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	4.0	1.9		12.1	2.3	71.1	70.2

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	A	A		B	A	E	E
Approach Delay		2.0		10.3		70.9	
Approach LOS		A		B		E	
Queue Length 50th (ft)	3	27		360	83	101	63
Queue Length 95th (ft)	m4	27		573	24	140	112
Internal Link Dist (ft)		1339		2600		2176	
Turn Bay Length (ft)	250				200	575	200
Base Capacity (vph)	306	2945		2680	1415	458	212
Starvation Cap Reductn	0	0		0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0
Reduced v/c Ratio	0.17	0.29		0.58	0.24	0.45	0.32

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 7 (5%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



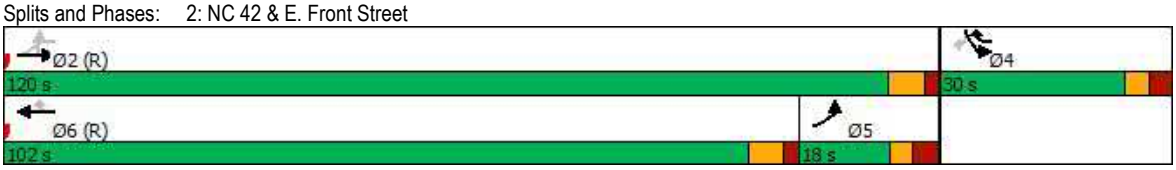
Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	95	1210	0	1467	296	278	68
Future Volume (vph)	95	1210	0	1467	296	278	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		100		200	575	200
Storage Lanes	1		1		1	1	1
Taper Length (ft)	100		100			100	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.97	1.00
Frt					0.850		0.850
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1770	3539	1863	3539	1583	3433	1583
Flt Permitted	0.099					0.950	
Satd. Flow (perm)	184	3539	1863	3539	1583	3433	1583
Right Turn on Red					No		No
Satd. Flow (RTOR)							
Link Speed (mph)		45		45		35	
Link Distance (ft)		1419		2689		2256	
Travel Time (s)		21.5		40.7		43.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	1344	0	1630	329	309	76
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	1344	0	1630	329	309	76
Turn Type	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases	5	2		6	4	4	
Permitted Phases	2		2		6		4
Detector Phase	5	2	2	6	4	4	4
Switch Phase							
Minimum Initial (s)	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	120.0	120.0	102.0	30.0	30.0	30.0
Total Split (%)	12.0%	80.0%	80.0%	68.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	113.5	113.5	95.5	23.8	23.8	23.8
Yellow Time (s)	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	2.0	2.0	2.0	3.2	3.2	3.2
Lost Time Adjust (s)	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag			Lead			
Lead-Lag Optimize?	Yes			Yes			
Vehicle Extension (s)	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.0	3.0	3.0	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	120.2	120.2		102.9	127.7	19.8	19.8
Actuated g/C Ratio	0.80	0.80		0.69	0.85	0.13	0.13
v/c Ratio	0.38	0.47		0.67	0.24	0.68	0.36
Control Delay	34.1	15.7		19.2	3.5	69.6	63.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	34.1	15.7		19.2	3.5	69.6	63.2

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS	C	B		B	A	E	E
Approach Delay		17.1		16.6		68.3	
Approach LOS		B		B		E	
Queue Length 50th (ft)	50	642		445	20	150	69
Queue Length 95th (ft)	m81	m533		581	m172	195	118
Internal Link Dist (ft)		1339		2609		2176	
Turn Bay Length (ft)	250				200	575	200
Base Capacity (vph)	298	2838		2449	1343	575	264
Starvation Cap Reductn	0	0		0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0
Reduced v/c Ratio	0.36	0.47		0.67	0.24	0.54	0.29

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 5 (3%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 22.0 Intersection LOS: C
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NC 42 & E. Front Street



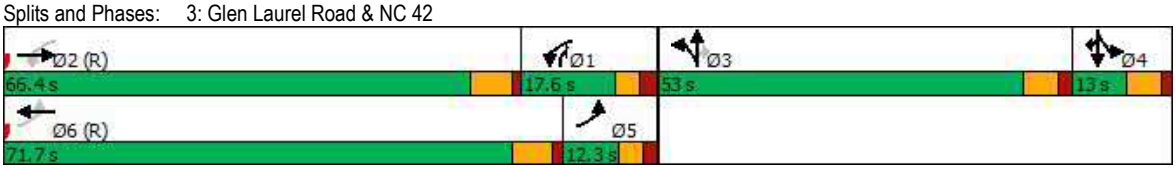
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	527	172	162	1125	16	681	9	142	1	0	3
Future Volume (vph)	31	527	172	162	1125	16	681	9	142	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		0	75		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.954			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3532	0	1681	1688	1583	0	1770	1583
Flt Permitted	0.124			0.340			0.950	0.954			0.950	
Satd. Flow (perm)	231	3539	1583	633	3532	0	1681	1688	1583	0	1770	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			300			1697	
Travel Time (s)		33.4			6.1			4.5			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	586	191	180	1250	18	757	10	158	1	0	3
Shared Lane Traffic (%)							49%					
Lane Group Flow (vph)	34	586	191	180	1268	0	386	381	158	0	1	3
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	12.3	20.6	20.6	12.6	20.6		13.3	13.3	12.6	13.0	13.0	13.0
Total Split (s)	12.3	66.4	66.4	17.6	71.7		53.0	53.0	17.6	13.0	13.0	13.0
Total Split (%)	8.2%	44.3%	44.3%	11.7%	47.8%		35.3%	35.3%	11.7%	8.7%	8.7%	8.7%
Maximum Green (s)	7.0	59.8	59.8	12.0	65.1		46.7	46.7	12.0	7.0	7.0	7.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	95.1	68.6	68.6	92.6	87.8		39.8	39.8	68.8		8.0	8.0
Actuated g/C Ratio	0.63	0.46	0.46	0.62	0.59		0.27	0.27	0.46		0.05	0.05
v/c Ratio	0.15	0.36	0.26	0.31	0.61		0.87	0.85	0.22		0.01	0.04
Control Delay	15.6	13.6	14.1	23.1	29.2		71.7	69.8	22.9		68.0	68.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	15.6	13.6	14.1	23.1	29.2		71.7	69.8	22.9		68.0	68.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	B	C	C		E	E	C		E	E
Approach Delay		13.8			28.4			62.6			68.3	
Approach LOS		B			C			E			E	
Queue Length 50th (ft)	3	60	28	79	470		378	372	90		1	3
Queue Length 95th (ft)	49	360	258	149	707		485	476	106		8	14
Internal Link Dist (ft)		2372			369			220			1617	
Turn Bay Length (ft)	400		475	150								
Base Capacity (vph)	221	1725	771	578	2066		537	540	720		94	84
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.15	0.34	0.25	0.31	0.61		0.72	0.71	0.22		0.01	0.04

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Glen Laurel Road & NC 42



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1062	555	220	880	15	540	3	179	4	2	62
Future Volume (vph)	3	1062	555	220	880	15	540	3	179	4	2	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		475	150		0	0		0	75		0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.953			0.968	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1681	1686	1583	0	1803	1583
Flt Permitted	0.213			0.108			0.950	0.953			0.968	
Satd. Flow (perm)	397	3539	1583	201	3529	0	1681	1686	1583	0	1803	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		2452			449			302			1697	
Travel Time (s)		33.4			6.1			4.6			25.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	1180	617	244	978	17	600	3	199	4	2	69
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	3	1180	617	244	995	0	300	303	199	0	6	69
Turn Type	D.P+P	NA	Perm	D.P+P	NA		Split	NA	pm+ov	Split	NA	Prot
Protected Phases	5	2		1	6		3	3	1	4	4	4
Permitted Phases	6		2	2					3			
Detector Phase	5	2	2	1	6		3	3	1	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.6	20.6	13.3	20.6		13.3	13.3	13.3	13.0	13.0	13.0
Total Split (s)	13.0	77.0	77.0	22.0	86.0		35.0	35.0	22.0	16.0	16.0	16.0
Total Split (%)	8.7%	51.3%	51.3%	14.7%	57.3%		23.3%	23.3%	14.7%	10.7%	10.7%	10.7%
Maximum Green (s)	7.7	70.4	70.4	16.4	79.4		28.7	28.7	16.4	10.0	10.0	10.0
Yellow Time (s)	3.2	5.3	5.3	3.1	5.3		4.6	4.6	3.1	4.4	4.4	4.4
All-Red Time (s)	2.1	1.3	1.3	2.5	1.3		1.7	1.7	2.5	1.6	1.6	1.6
Lost Time Adjust (s)	-0.3	-1.6	-1.6	-0.6	-1.6		-1.3	-1.3	-0.6		-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead		Lead	Lead	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0		2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap (s)	0.2	3.4	3.4	0.2	3.4		0.2	0.2	0.2	0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	94.2	73.6	73.6	90.2	88.9		29.6	29.6	51.2		10.2	10.2
Actuated g/C Ratio	0.63	0.49	0.49	0.60	0.59		0.20	0.20	0.34		0.07	0.07
v/c Ratio	0.01	0.68	0.80	0.83	0.48		0.91	0.91	0.37		0.05	0.64
Control Delay	6.7	20.1	27.9	69.9	21.0		88.7	89.7	39.2		65.8	93.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay	6.7	20.1	27.9	69.9	21.0		88.7	89.7	39.2		65.8	93.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	C	C	E	C		F	F	D		E	F
Approach Delay		22.8			30.6			76.8			91.6	
Approach LOS		C			C			E			F	
Queue Length 50th (ft)	0	223	225	138	298		300	304	140		6	67
Queue Length 95th (ft)	m2	501	618	#275	508		#486	#491	219		22	#130
Internal Link Dist (ft)		2372			369			222			1617	
Turn Bay Length (ft)	400		475	150								
Base Capacity (vph)	356	1751	783	303	2177		342	343	527		132	116
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	0
Reduced v/c Ratio	0.01	0.67	0.79	0.81	0.46		0.88	0.88	0.38		0.05	0.59

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 37.6 Intersection LOS: D
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Glen Laurel Road & NC 42

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	49	721	13	0	337
Future Vol, veh/h	0	49	721	13	0	337
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	50	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	801	14	0	374

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	401	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.13	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.919	-	-	-	-
Pot Cap-1 Maneuver	0	512	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	512	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	512	-
HCM Lane V/C Ratio	-	-	0.106	-
HCM Control Delay (s)	-	-	12.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	93	571	36	0	767
Future Vol, veh/h	0	93	571	36	0	767
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	50	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	634	40	0	852

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	317	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.13	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.919	-	-	-	-
Pot Cap-1 Maneuver	0	580	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	580	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	580	-
HCM Lane V/C Ratio	-	-	0.178	-
HCM Control Delay (s)	-	-	12.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.6	-

Intersection						
Int Delay, s/veh	0.2					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	705	59	0	1266	0	43
Future Vol, veh/h	705	59	0	1266	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	783	66	0	1407	0	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	607
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	607	-	-	-
HCM Lane V/C Ratio	0.079	-	-	-
HCM Control Delay (s)	11.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1180	101	0	1145	0	47
Future Vol, veh/h	1180	101	0	1145	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1311	112	0	1272	0	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	656
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	408
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	408
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	408	-	-	-
HCM Lane V/C Ratio	0.128	-	-	-
HCM Control Delay (s)	15.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	30	704	30	17	320
Future Vol, veh/h	42	30	704	30	17	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	33	782	33	19	356

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1193	799	0	0	815	0
Stage 1	799	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	206	386	-	-	812	-
Stage 1	443	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	201	386	-	-	812	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	443	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	201	386	812	-
HCM Lane V/C Ratio	-	-	0.232	0.086	0.023	-
HCM Control Delay (s)	-	-	28.2	15.2	9.5	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.3	0.1	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	66	40	567	42	31	736
Future Vol, veh/h	66	40	567	42	31	736
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	44	630	47	34	818

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1540	654	0	0	677	0
Stage 1	654	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	127	467	-	-	915	-
Stage 1	517	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	122	467	-	-	915	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	49.6	0	0.4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	122	467	915	-
HCM Lane V/C Ratio	-	-	0.601	0.095	0.038	-
HCM Control Delay (s)	-	-	71.4	13.5	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3	0.3	0.1	-

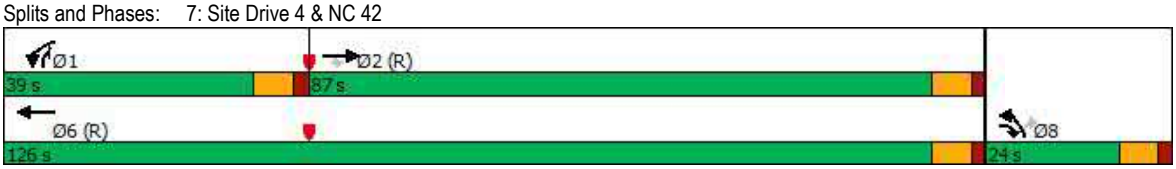
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	612	50	111	1155	95	39
Future Volume (vph)	612	50	111	1155	95	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		200	0
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	55			55	25	
Link Distance (ft)	625			649	1205	
Travel Time (s)	7.7			8.0	32.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	680	56	123	1283	106	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	680	56	123	1283	106	43
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	14.0	7.0	7.0	14.0	7.0	7.0
Minimum Split (s)	21.0	14.0	14.0	21.0	14.0	14.0
Total Split (s)	87.0	24.0	39.0	126.0	24.0	39.0
Total Split (%)	58.0%	16.0%	26.0%	84.0%	16.0%	26.0%
Maximum Green (s)	80.0	17.0	32.0	119.0	17.0	32.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	105.2	122.2	17.8	128.0	12.0	34.8
Actuated g/C Ratio	0.70	0.81	0.12	0.85	0.08	0.23
v/c Ratio	0.27	0.04	0.59	0.42	0.39	0.12
Control Delay	11.7	2.5	73.4	3.1	69.2	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	2.5	73.4	3.1	69.2	43.7
LOS	B	A	E	A	E	D
Approach Delay	11.0			9.3	61.8	
Approach LOS	B			A	E	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Length 50th (ft)	76	8	116	117	51	34
Queue Length 95th (ft)	291	17	179	162	82	64
Internal Link Dist (ft)	545			569	1125	
Turn Bay Length (ft)			250		200	
Base Capacity (vph)	2483	1363	401	3019	434	538
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.04	0.31	0.42	0.24	0.08

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 13.2 Intersection LOS: B
Intersection Capacity Utilization 46.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Site Drive 4 & NC 42



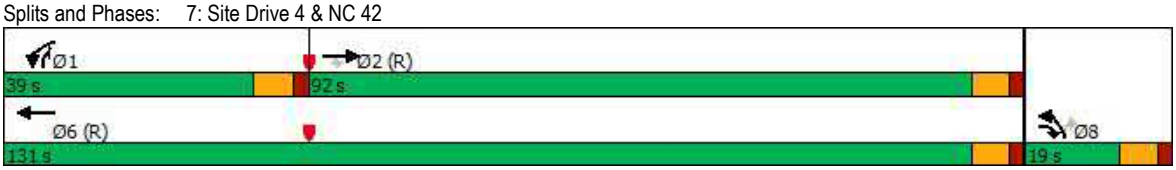
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1146	101	161	984	110	94
Future Volume (vph)	1146	101	161	984	110	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		200	0
Storage Lanes		1	1		2	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	55			55	25	
Link Distance (ft)	625			649	1204	
Travel Time (s)	7.7			8.0	32.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1273	112	179	1093	122	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1273	112	179	1093	122	104
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	14.0	7.0	7.0	14.0	7.0	7.0
Minimum Split (s)	21.0	14.0	14.0	21.0	14.0	14.0
Total Split (s)	92.0	19.0	39.0	131.0	19.0	39.0
Total Split (%)	61.3%	12.7%	26.0%	87.3%	12.7%	26.0%
Maximum Green (s)	85.0	12.0	32.0	124.0	12.0	32.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	99.9	117.6	22.4	127.3	12.7	40.1
Actuated g/C Ratio	0.67	0.78	0.15	0.85	0.08	0.27
v/c Ratio	0.54	0.09	0.68	0.36	0.42	0.25
Control Delay	6.4	1.3	72.7	2.9	69.2	42.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	1.3	72.7	2.9	69.2	42.8
LOS	A	A	E	A	E	D
Approach Delay	6.0			12.8	57.0	
Approach LOS	A			B	E	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Length 50th (ft)	142	9	168	96	59	80
Queue Length 95th (ft)	100	m6	240	134	92	122
Internal Link Dist (ft)	545			569	1124	
Turn Bay Length (ft)			250		200	
Base Capacity (vph)	2356	1258	401	3011	327	545
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.09	0.45	0.36	0.37	0.19

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 39 (26%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 58.9% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Site Drive 4 & NC 42



Intersection						
Int Delay, s/veh	0.1					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	642	28	0	1250	0	20
Future Vol, veh/h	642	28	0	1250	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	713	31	0	1389	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	357
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	639
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	639
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	639	-	-	-
HCM Lane V/C Ratio	0.035	-	-	-
HCM Control Delay (s)	10.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1194	51	0	1094	0	53
Future Vol, veh/h	1194	51	0	1094	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1327	57	0	1216	0	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	664
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	403
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	403
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	403	-	-	-
HCM Lane V/C Ratio	0.146	-	-	-
HCM Control Delay (s)	15.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

DELIVERY VIA EMAIL

March 12, 2020

Samantha L. Wullenwaber, MPA
Planning Director - Town of Clayton
PO Box 879
Clayton, NC 27528

COUNTY: Johnston

SUBJECT: **TIA Review of Proposed Glen Laurel Mix Use**

Dear Ms. Wullenwaber,

Highway Division Four (Division) has reviewed the Traffic Impact Analysis (TIA) for the subject development. Please accept this letter as concurrence with the TIA and the attached TIA Review Report performed by the Congestion Management Section of the Transportation Mobility and Safety Division of NCDOT. This review should not be mistaken for approval of the driveway permit, design/construction plans, or final plat. A driveway permit must be obtained prior to construction. All design aspects of any submitted plans shall comply with current NCDOT Standard Specifications for Roads and Structures and Policy on Street and Driveway Access to North Carolina Highways.

Any roadway improvements and right-of-way dedication necessary to accommodate the road construction shall be the responsibility of the owner/developers. These conditions are based on current traffic volumes and projected growth for the study area. Should the timelines presented for project build-out dates not be met and traffic conditions change due to growth in adjacent areas, these recommendations may not be applicable. Feel free to contact me if you have any additional questions or concerns.

Sincerely,

Sam Lawhorn

Sam Lawhorn, PE
District Engineer

cc: Kevin Bowen, PE - Division Engineer
Andy Brown, PE - Division Traffic Engineer
Jim Dunlop, PE – Congestion Management Engineer
Drew Ritter, PE – RKA
Driveway Permit File

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS | DIV. 4 DIST. 3
2671 US 70 WEST
GOLDSBORO, NC 27530

Telephone: (919) 739-5300
Fax: (919) 731-2017
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
2671 US 70 WEST
GOLDSBORO, NC 26730

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

DEPARTMENT OF TRANSPORTATION

TRANSPORTATION MOBILITY AND SAFETY DIVISION
TRAFFIC MANAGEMENT UNIT
CONGESTION MANAGEMENT SECTION

March 9, 2020

Traffic Impact Analysis Review Report

Glen Laurel Mixed Use

TIA Project: SC-2015-122R1
Division: 4
County: Johnston
Description: Glen Laurel Mixed Use on NC 42

NORTH CAROLINA PROFESSIONAL SEAL 18080 ENGINEER JAMES H. DUNLOP

9 March 2020

James H. Dunlop, P. E.
Congestion Management Engineer

Charles Sorrell
Congestion Management Project Design Engineer

MAILING ADDRESS:
1561 Mail Service Center
Raleigh, North Carolina 27699-1561

Telephone: 919-814-5000

LOCATION:
750 North Greenfield Parkway
Garner, North Carolina 27529

Website: WWW.NCDOT.ORG/DOH/Preconstruct/Traffic/Congestion/CM/

State of North Carolina
Department of Transportation

Glen Laurel Mixed Use TIA

SC-2015-122R1 **Johnston County**

Per your request, the Congestion Management Section (CMS) of the Transportation Mobility and Safety Division has completed a review of the subject site. The comments and recommendations contained in this review are based on data for background conditions presented in the sealed Traffic Impact Analysis (TIA) and are subject to the approval of the local District Engineer's Office and appropriate local authorities.

Key Dates	
Initially Received by CMS	3/2/20
Complete Information Received by CMS	3/6/20
Date of Preliminary Review Accepting TIA for Review	3/9/20
Sealed TIA Prepared by Ramey Kemp	2/28/20
Site Plan Prepared by CE Group	6/13/19

Proposed Development

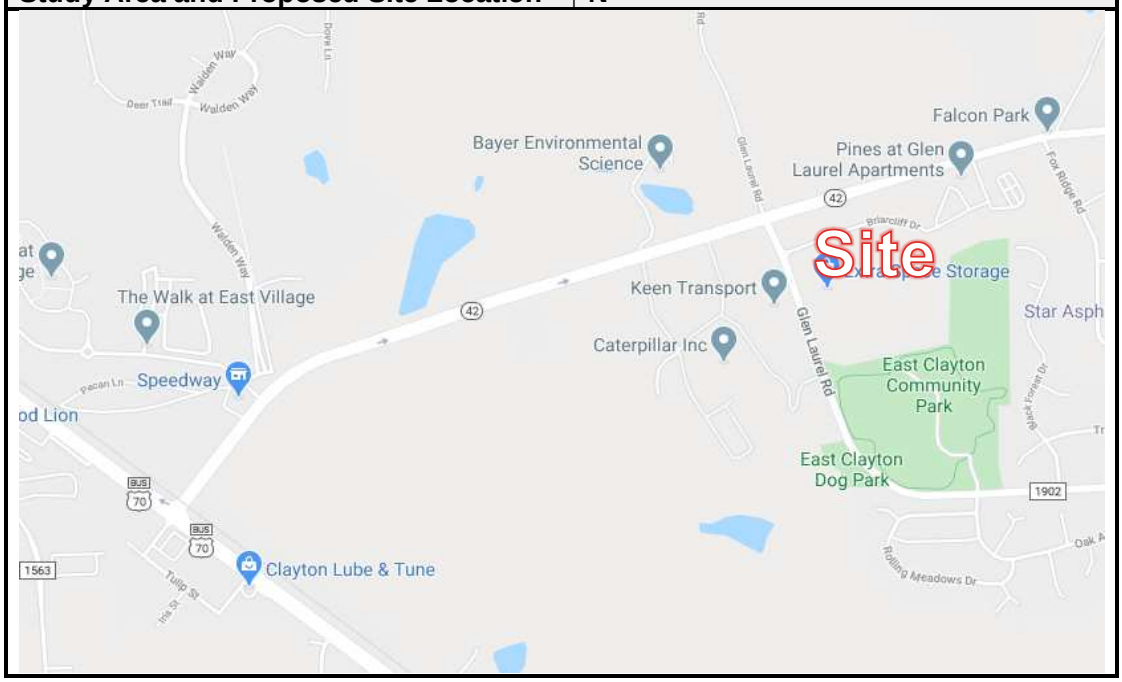
According to the TIA, the proposed Glen Laurel Mixed Use development is to be located on NC 42 in Johnston County. The TIA states the development is to be constructed by 2022 and is to consist of the following:

Land Use	Land Use Code	Size
Multi-Family (Low-Rise) Housing	220	336 units
Bank	912	10,000 sf
Shopping Center	820	96,000 sf
Day Care	565	10,000 sf
Mini-Warehouse	151	120,900 sf
Congregate Care Facility	253	77 units
Assisted Living	254	66 beds

Trip Generation - Unadjusted Volumes During a Typical Weekday Based on appropriate methodology outlined in the *ITE Trip Generation Manual, 10th Ed.*			
	IN	OUT	TOTAL
AM Peak Hour	315	315	630
PM Peak Hour	566	555	1121
Daily Trips			10,600

Study Area

Study Area and Proposed Site Location - ↑ N



TIP Projects in Study Area			
Project	Description	Let Date	Completion
R-3825B	NC 42 from east of SR 1902 (Glen Laurel Rd) to SR 1003 (Buffaloe Road) widen to multi-lanes	10/2/18	unknown

TIA Comments

The following items vary from our recommended practices:

- No-build Synchro does not match Recommended Lane Configuration Diagram.
- Some Development improvements were shown as existing.

General Reference

For reference to various documents applicable to this review please reference the following links: https://connect.ncdot.gov/resources/safety/Pages/Congestion-Management.aspx and https://connect.ncdot.gov/resources/safety/Teppl/Pages/Teppl-Topic.aspx?Topic_List=C37.

Once the driveway permit has been approved and issued, a copy of the final driveway permit requirements should be forwarded to this office. If we can provide further assistance, please contact the Congestion Management Section at (919) 814-5000.

Recommendations

Legend	
❶	Improvement by Developer. Congestion Management concurs with recommendation.
❷	Improvement by Developer. Additional or modified recommendation.
❸	Committed improvement by TIP Project R-3825

Improvements By Others

The analysis includes background improvements by others. If these improvements are not in place at the time of construction, the site should provide these improvements or analysis demonstrating mitigation is not necessary.

NC 42 and Bus. US 70

No improvements are recommended for site traffic.

NC 42 and East Front Street

No improvements are recommended for site traffic.

NC 42 and Glen Laurel Road

- **NB Glen Laurel Road**
  - Full Left-Turn Lane ❶
  - Full Left/Thru Lane ❶
  - Restripe Existing Thru/Right Lane to Right-Turn Lane ❶

Glen Laurel Road and Site Drive 1

- **NB Glen Laurel Road**
  - Dual 100' Thru Lanes ❶
  - 50' Right-Turn Lane ❶

- **WB Site Drive 1**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Right-Turn Lane ❶
  - 100' Internal Protected Stem ❷

Glen Laurel Road and Site Drive 3

- **SB Glen Laurel Road**
  - 100' Left-Turn Lane ❶

- **WB Site Drive 3**
  - Three-lane cross-section: one ingress, two egress ❶
  - Egress: Left-turn Lane and Right-Turn Lane ❶
  - 100' Internal Protected Stem ❷

NC 42 and Site Drive 5

- **EB NC 42**
  - 50' Right-Turn Lane ❶
  - Dual Full Thru Lanes (One existing) ❸
- **WB NC 42**
  - Dual Full Thru Lanes (One existing) ❸

- **NB Site Drive 5**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Right-Turn Lane ❶
  - 100' Internal Protected Stem ❷

NC 42 and Site Drive 4

New Signal❶

- **EB NC 42**
  - Full Right-Turn Lane ❶
  - Dual Full Thru Lanes (One existing) ❸

- **WB NC 42**
  - 250’ Left-Turn Lane ❶
  - Dual Full Thru Lanes (One existing) ❸

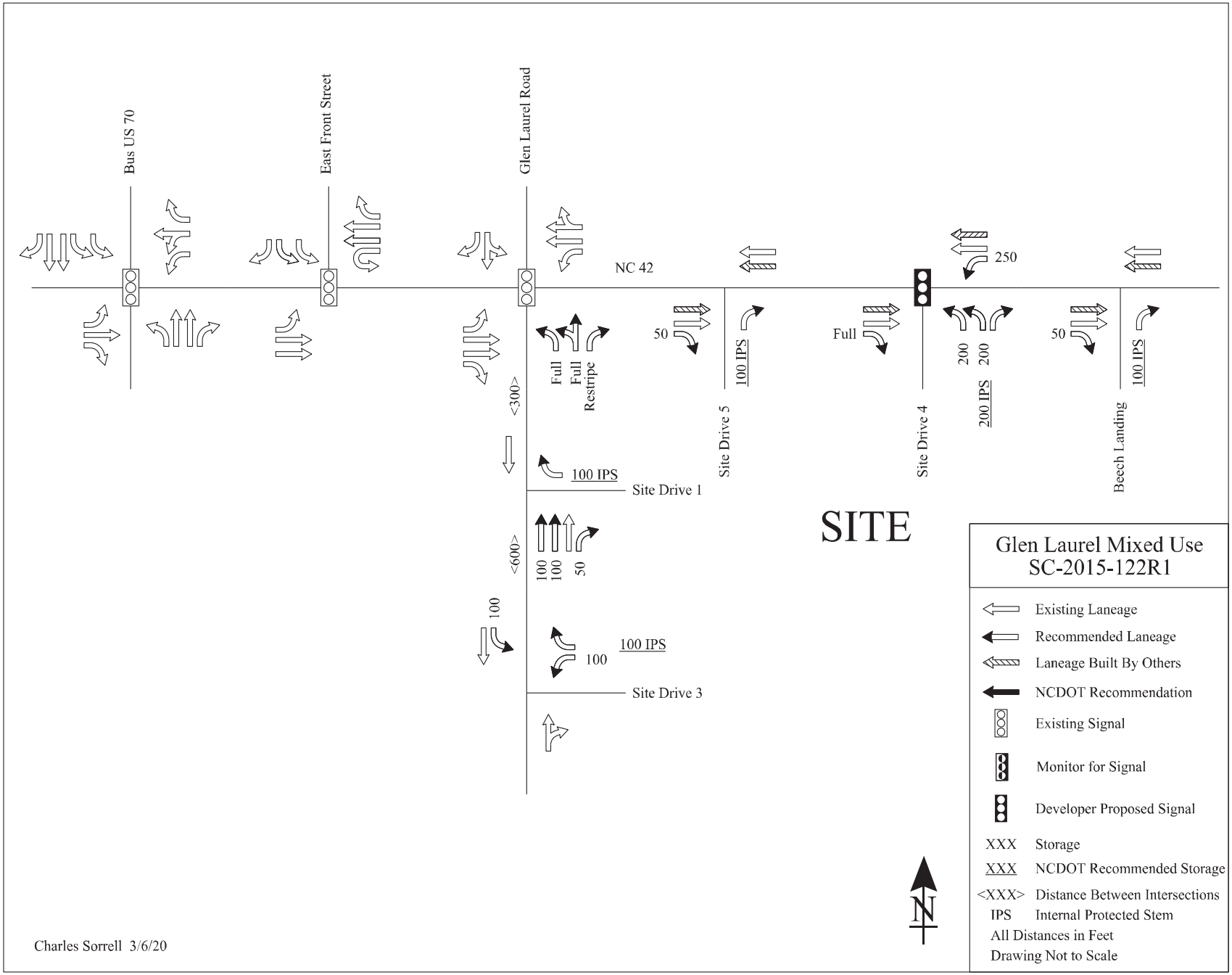
- **NB Site Drive 4**
  - Four-lane cross-section: one ingress, three egress ❶
  - Egress: 200’ Dual Left-turn Lanes and Right-Turn Lane ❶
  - 200’ Internal Protected Stem ❷

NC 42 and Beech Landing

- **EB NC 42**
  - 50’ Right-Turn Lane ❶
  - Dual Full Thru Lanes (One existing) ❸

- **WB NC 42**
  - Dual Full Thru Lanes (One existing) ❸

- **NB Beech Land**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Right-Turn Lane ❶
  - 100’ Internal Protected Stem ❷


Bus US 70
East Front Street
Glen Laurel Road
NC 42
Site Drive 5
Site Drive 4
Beech Landing
Site Drive 1
Site Drive 3
SITE
<300>
<600>
Full
Full
Restripe
50
100 IPS
Full
250
200
200
200 IPS
50
100 IPS
100
100
50
100
100
100 IPS
Glen Laurel Mixed Use
SC-2015-122R1
Existing Laneage
Recommended Laneage
Laneage Built By Others
NCDOT Recommendation
Existing Signal
Monitor for Signal
Developer Proposed Signal
XXX Storage
XXX NCDOT Recommended Storage
<XXX> Distance Between Intersections
IPS Internal Protected Stem
All Distances in Feet
Drawing Not to Scale
N
Charles Sorrell 3/6/20

UPDATED STORMWATER MANAGEMENT STATEMENT

"SHOPPES at GLEN LAUREL MAJOR SUBDIVISION MODIFICATION"

TOWN OF CLAYTON

APRIL 3, 2020

4/3/20

NORTH CAROLINA PROFESSIONAL SEAL 18894 ENGINEER MARK P. HAYNESS

2020-39-SD

Stormwater Management Statement:

Project Name: Shoppes at Glen Laurel
Project Address: McKenzie Ridge Drive
Clayton, NC 27527

Developer: Shoppes at Glen Laurel, LLC
1004 Wake Forest Road
Raleigh, NC 27604-1358
919 872-5702
kate@commprop.net

Existing Site:
The project includes a +/- 45.2 AC master planned project previously approved (15-48-01-PDD) and a proposed addition of +/- 10.5 AC (Tag # 05I04016E). The site adjoins NC 42 and Glen Laurel Road. The existing project has been annexed and the new 10.5 AC addition is pending annexation. Additional information below:

Watershed: Part of Neuse River Watershed. The site is located in a protected watershed.

Flood: Not in a flood zone per FEMA map 3720167800 K, June 2018

Soils: Predominately Cecil with some Wedowee Soils

Land Use: The 45 AC PD-MU site is under construction. The 10 AC site has also been cleared and grubbed. The current improvements include:

- 240 Apartments with Amenity
- +/- 120,000 SF Mini Storage Facility
- (4) WQ Ponds
- +/- 10,000 SF Bank (Under Construction)
- +/- 7,000 SF Mixed Use Retail
- +/- 12,000 SF Goodwill Foundation
- Associated Private Roads

Proposed Development:
With the addition of the 10.5 AC the total site will include:

- 360 Apartments with (2) Amenities
- 66 Assisted Living Bed Facility
- 77 Independent Living Units
- +/- 120,000 SF Mini Storage Facility
- 99,000 SF of Mixed Use (includes Bank and Goodwill Fdn)
- (5) WQ Ponds
- Associated Private Roads

The proposed project will utilize Town of Clayton Utilities. All roads within the project are private.

Impervious Project Existing:

The existing 45.2 AC project has an approved SI area allowing for up to 70 impervious coverage. This equates to just over 31.6 AC of permitted impervious coverage.

Impervious Project Proposed:

With the existing permitted and constructed areas, we now have good information on the end uses and ultimate impervious coverage anticipated. The ultimate impervious coverage will not exceed 60% for the entire project. Therefore with the addition of the 10.5 AC the overall impervious coverage is slightly increased to 33.4 AC. (1.8 AC) See below for specific breakdown:

IMPERVIOUS ALLOCATION	
LOCATION OF BOUNDARY	AREA (±S.F.)
LOT 1	401,275
LOT 2	50,933
LOT 3	106,109
LOT 4	105,655
LOT 5	78,689
LOT 6	48,328
LOT 7	55,027
LOT 8	181,953
LOT 9	191,544
LOT 10	72,752
LOT 11	95,690
LOT 12	66,647
TOTAL IMPERVIOUS AREA (SF)=	1,454,602
(AC)	33.39
TOTAL SITE AREA=	2,428,470.00
PERCENT IMPERVIOUS=	59.90%

Proposed Stormwater Management Facility:

(4) Existing WQ Ponds and (1) New WQ Pond is proposed. All will meet 85% TSS. Since each WQ Pond reduces TN by 30% no diffuse flow is proposed.
A new stormwater submission will be made for the new WQ Pond and WQ Ponds 1 and 4 based upon the site modifications. WQ Ponds 2 and 3 are unchanged given that they serve the existing built apartment area and no further changes are proposed for this developed area.

The downstream culvert under NC 42 (below WQ Pond 1) has been upgraded to a 54" RCP during the offsite roadway improvements project. A well defined channel exists below the culvert conveying water to the 100 YR floodplain.

For WQ Ponds 1 & 4 and new WQ Pond 5 (south of WQ Pond 4 on Glen Laurel Road); the outlet control structure will be designed to control the peak runoff for the 1 YR (24) HR storm to below predevelopment conditions. The outlets control from the WQ Ponds will also reduce the peak discharge condition to below the pre-development condition for the 2, 5. and 10 YR storm events. Since no increase in peak discharge is anticipated for the above-mentioned storms, a downstream impact is not anticipated.

With the reduction of overall impervious area for the original project; we will be able to reduce nitrogen levels by 30%. The further reduction of Nitrogen will be accomplished by off-set payment.

The BMP are designed such that if dam breaks occur, water flows to natural drainage systems or adjacent roadway drainage systems (recently upgraded). No adjacent homes are impacted.

The BMP system and all other drainage points from the modified project do not encroach onto other properties with new development or grading operations. All work is contained within the proposed project.

Costs for Stormwater Management Facility:

Construction Cost	
(4) Existing BMP Structures (WQ Ponds)	Already accounted for
(1) New BMP Structure (WQ Pond)	$53,000.00
O&M Cost	
Standard Maintenance	$1500.00 /YR
Annual Inspection	$500.00 /YR
Total Annual Estimate	**$2,000.00 /YR**

Cost excludes maintenance of collection systems directing stormwater to the SCM's

TOWN OF CLAYTON
Engineering & Inspections Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

WASTEWATER ALLOCATION REQUEST

The Town of Clayton, in an effort to manage and maintain the sewer and water capacity for the Town, requires that this application be completed and submitted to the Town for consideration of a utility allocation. Review fee is due upon submittal of request.

Wastewater Allocation Request Review Fee: $50

Application MUST be completed and sealed by a registered engineer unless otherwise approved by staff.

SITE INFORMATION

Name of Project: Shoppes at Glen Laurel **Acreage of Property:** 55.75 Ac.

County Tag Number: 05I04003Y,05I04003W,05I04016E **NC PIN:** 167900-20-3003,167800-29-3634,167800-29-5295

Address/Location: Glen Laurel Road

Zoning District: PD-MU* Pending Annexation and Rezoning Approval

Town Limits / ETJ: ☒ Town Limits ☐ ETJ (Extra-Territorial Jurisdiction)

APPLICANT INFORMATION – Applicant must be a registered engineer unless otherwise approved by Town Engineer

Applicant: Mark P. Ashness, PE CE Group, Inc.

Mailing Address: 301 Glenwood Avenue Suite 220 Raleigh NC 27603

Phone Number: 919-367-8790 ext 101 **Fax:** 919-322-0032

Contact Person: Mark Ashness, PE

Email Address: Mark@CEGroupInc.com

PROPERTY OWNER INFORMATION

Name: Shoppes at Glen Laurel, LLC

Mailing Address: McKenzie Ridge Drive, Clayton, NC 27527

Phone Number: 919-872-5702 **Fax:** _____

Email Address: kate@commprop.net

FOR OFFICE USE ONLY

Date Received: _____ File Number: _____ Associated Project Number: _____

PROJECT INFORMATION

Use: ☐ New ☒ Expanded ☐ Change **Use Type:** ☒ Residential ☒ Non-Residential

Proposed Use(s): Comm. / Retail / Daycare / Apartment / Indep. & Assis. Living **Existing Use(s):** Approved PD-MU

Invoice shall be mailed to the following:

Developer Name: Shoppes at Glen Laurel, LLC

Mailing Address: McKenzie Ridge Drive, Clayton, NC 27527

Phone Number: 919-872-5702 **Fax Number:**

Email Address: kate@Commprop.net

ALLOCATION REQUEST

The following is required:

- **For non-residential construction, submit a floor plan of proposed building.**
- **Use additional sheets if necessary.**
- **Provide any documentation supporting/justifying the request as an attachment (using a comparable use is recommended).**
- **If a phasing / take-down schedule is proposed, include as an attachment.**

Residential:

Gross Acreage: 13.31 Ac. (ENTIRE PROJECT EXISTING & PROPOSED)

Single Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units			
3 Bedroom Units			
>3 Bedroom Units			
Total		------	

Multi-Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units	See Attached Letter		
3 Bedroom Units			
>3 Bedroom Units			
Total		------	55,200 GPD

Non-Residential: ***(Design Flow Guideline provided as Appendix A)****

**If design flow deviates from the flow rates presented in Appendix A, provide supporting documentation/justification as an attachment in the form of 12 months of water bills demonstrating gallons per day utilized.*

Gross Acreage: 42.44 Ac. (ENTIRE PROJECT EXISTING & PROPOSED)

Use	Measurement Unit	# of Units	GPD per Unit	Total Requested GPD
See Attached Letter				
Total			------	13,815 GPD

TOTAL REQUESTED GALLONS PER DAY: 69,015 GPD

NOTE TO APPLICANT:

Invoicing:
Invoices are generated on the following schedule:

Non-Residential:
Generated with the application for a Zoning Compliance Permit.

Residential:
Multi-Family / Apartments:
Generated with the application for a Zoning Compliance Permit.

Subdivision / Subdivided Lots:
Generated at Final Plat submittal.

Fee Development:
Development Fees are calculated and invoiced based on the Town of Clayton adopted Comprehensive List of Fees and Charges. Invoiced fees include acreage fees, capacity fees, nutrient offset fees, recreation fees, fees-in-lieu, and electric department lot deposit. Please speak with Town staff with questions.

Approval:
Requests over 10,000 GPD are approved by the Town Council, by resolution. All other requests are approved by the Town Manager.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Town of Clayton to approve the subject Wastewater Allocation. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith are true and correct to the best of my knowledge. I understand this application, related material and all attachments become official records of the Planning Department of the Town of Clayton, North Carolina, and will not be returned.

Mark P. Ashness		4/3/20
Print Name	*Signature of Applicant*	*Date*

Engineer Seal:

TOWN OF CLAYTON OFFICE USE ONLY:

Approved by: ☐ Town Manager

☐ Town Council (*requests of 10,000 GPD or more require Council approval by resolution)*

The **Town Manager / Town Council (circle one)** has authorized the allocation of _____

gallons per day for project # _____.

Date of Approval: _____

Signed:

_____

Town Manager

If approved by Town Council:
Attach a copy of the resolution and any associated documentation.

REVISED MASTER PLAN - SHOPPES @ GLEN LAUREL

WATER & WASTEWATER ALLOCATION CRITERIA

TOTAL POINTS = 65 *MINIMUM 50 POINTS REQUIRED*

	Category	Points	Calc.	Notes
DEVELOPMENT TYPE[1] (Choose 1 from this category)	Government/Public Admin./Public Safety	50		
	Non-residential (Commercial) - Retail & Restaurant	30		
	Non-residential (Commercial) - Office	20		
	Non-residential (Commercial) - Warehouse	15		
	Non-residential (Commercial) - Medical	25		
	Non-residential (Commercial) - Hotel/Motel	35		
	Industrial/Manufacturing	30		
	Institutional	15		
	Residential Existing Lot- Single Family Detached	40		Individual Existing Lot construction
	Residential Subdivision - Single Family Detached (> 0.25 Acre Lots)	20		Single Family Homes on Individual Lots greater than 0.25 acres
	Residential Subdivision - Single Family Detached (< 0.25 Acre Lots)	15		Single Family Homes on Individual Lots less than 0.25 Acres
	Residential Subd.- Single Family Attached (> 1,500 SF Heated Space)	10		Townhomes with heated square-footage greater than 1,500 SF
	Residential Subd.- Single Family Attached (< 1,500 SF Heated Space)	5		Townhomes with heated square-footage less than 1,500 SF
	Residential - Multifamily (Apartments)	10		
	Mixed-Residential	25		Mix of various lot sizes of Single-family, Townhomes, and Apartments
	Mixed-Use Commercial & Residential	30	30	Mix of Residential and Non-residential (Commercial) uses
	Downtown Redevelopment	30		
	Infill Development	25		Utilities already exist within 300 Feet of property
FUTURE TAX STATUS (Choose 1 from this category)	Exempt	0		
	Residential	5		
	Non-residential	10	10	
	Industrial	10		
COMMUNITY BENEFIT BONUS POINTS (Choose All that apply from this category)	Cultural Arts/Entertainment for Public	10		
	Sports/Recreation for Public	10		
	Town Electric Customer	20		
	Expansion of existing non-residential use	10		
	Re-development of an existing property	5		Must result in increased property value
	Residential Subdivision - Additional amenities included	5 - 15		Pool, Clubhouse, sports courts, etc. - 5 pts per, max 15 pts
	Job Creation - 10 to 25 new jobs	5		
	Job Creation - 26 to 100 new jobs	10		
	Job Creation - 100+ new jobs	15	15	
	Job creation - Jobs created will have salaries at or above median income	5		Must be greater than 50% of jobs added with documentation to confirm
	Residential - Multiple-Car Garages provided	5		
	Residential - Overflow Parking provided	5		Subject to Planning and Engineering support
	Masonry Elements included in Building Construction	10		
	Sustainable/High Efficiency Products and appliances used	5 - 15		5 pts per, max 15 pts
	Private trail connection to Public Greenway	10	10	
COMMUNITY IMPACT DEDUCT POINTS (Choose All that apply from this category)	Pump Station Improvements required[2]	-10		Subject to Town policy and standards
	New Pump Station Required[2]	-20		Subject to Town policy and standards
	Out-of Town Status (After construction)	-10		
	Outside Fire District	-5		
	Inconsistent with Comp Plan	-5		

CLARIFICATIONS

1. Any Development Type Category not listed is subject to Town Council discretion with staff recommendation.
2. The Town Engineer may waive these deductions if the improvments are consistent with Future utility service plans, replace/offline an aging station, or are in the best interest of the Town.

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

TRC CERTIFICATION

July 27, 2020

Mark Ashness
301 Glenwood Ave. Suite 220
Raleigh, NC 27603
mark@cegroupinc.com

Re: 2020-39-SD - The Shoppes at Glen Laurel

Mr. Ashness,

The project listed above has received certification from the Technical Review Committee on July 24, 2020. The project will now proceed to the following meeting:

Town Council: Monday August 17, 2020 at 6:00pm

Please let me know if you have any questions or need further assistance.

Thank you,

Lori Bryant
Development Services Coordinator
Lbryant@townofclaytonnc.org
(919) 359-9337

Staff Approval:

Project Manger's Approval	7/28/2020 Date
Department of Engineering Approval	7/30/2020 Date
Fire Inspector's Approval	07-28-2020 Date

Updated February 2019

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-5002
Fax: 919-553-1720

July 27, 2020

Mark Ashness
CE Group
301 Glenwood Ave, Suite 220
Raleigh, NC 27603
mark@cegroupinc.com

Re: 2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan

To Whom It May Concern,

The Town of Clayton Planning staff is recommending to the Town Council that conditions of approval be placed upon the above referenced application, which proceeds to Town Council on Monday, August 17, 2020. These recommended conditions of approval are outlined on the back of this letter.

If approved, these conditions will replace those included within the original master plan (15-48-01-PDD). Some conditions recommended below are carried over from the conditions placed upon the first master plan, shown in italics. These are proposed to remain as conditions of approval.

Please read through these potential conditions of approval, and sign below if you are in agreement with the conditions as proposed. If you are not in agreement please respond accordingly in writing. This will be included within the agenda packet for Council review.

Thank you.

Sincerely,

Haley Hogg

Haley Hogg, AICP, CZO
Senior Planner

Recommend Conditions of Approval (2020-39-SD Shoppes at Glen Laurel Preliminary Plat Master Plan):

1. This Master Plan shall replace the previously approved Master Plan for Shoppes at Glen Laurel (formerly NC 42 East Master Plan, 15-48-01-PDD). All Conditions of Approval included in the original master plan shall be struck and replaced by those outlined herein.
2. *Following Board approvals, three copies of this master plan meeting the requirements of the Conditions of Approval shall be submitted to the Planning Department for final approval.*
3. As required within the Unified Development Code a copy of the approved master plan shall be recorded with the Johnston County Register of Deeds.
4. Permitted uses and dimensional standard are limited to those outlined within the approved master plan. Any modification to these uses or dimensional standards will be reviewed in accordance to the requirements outlined in the Unified Development Code.
5. Each phase of the master plan shall be required to obtain Site Plan approval, in accordance with the requirements of the Unified Development Code.
6. *Outparcels with frontage on NC HWY 42 E shall have no more than one bay of parking between the highway and buildings.*
7. *All right-of-way necessary for the widening of NC HWY 42 E and Glen Laurel Road shall be dedicated prior to the issuance of a certificate of occupancy.*
8. *All off-site roadway improvements recommended by the TIA, NCDOT, and the Town shall be installed or bonded prior to issuance of a certificate of occupancy for the portion of the development that generates the roadway improvement.*
9. *A 10' greenway shall be constructed by the developer along NC HWY 42 E for the entire project frontage to ensure pedestrian connectivity in the area.*
10. *A 10' greenway shall be extended from the main entrance on NC HWY 42 E through the project to common property line between the development and East Clayton Community Park.*
11. Prior to issuance of building permits, an annexation petition shall be submitted for any portion of the development not currently in the Town Limits.
12. *All roof mounted and at ground mounted mechanical equipment shall be completely screened from view.*
13. The design of all buildings shall adhere to the architectural standards outlined in the master plan. Buildings are still subject to the standards within the Unified Development Code as well.

APPLICANT AFFIDAVIT

I/We, the undersigned, do herby certify that I have reviewed the recommended conditions of approval and am in agreement with the conditions as they are outlined within this letter.

Eric V. Brownlee	Eric V Brownlee	8/3/2020
Print Name	***Signature of Applicant***	***Date***

Town of Clayton
Town Council
Preliminary Subdivision Plat Motion Sheet

After considering the competent, material, and substantial evidence presented, including the application and materials of record, I move to **(PICK ONE)**:

- ■ Approve
- ■ Deny
- ■ Approve with Conditions

Preliminary Subdivision Plat Application Number_**2020-39-SD – Shoppes at Glen Laurel**

This motion is based on the following findings:

1. The preliminary subdivision plat **IS** consistent with the adopted plans and policies of the town.

OR

The preliminary subdivision plat **IS NOT** consistent with the adopted plans and policies of the town. (State evidence supporting finding.)

****

2. The subdivision **MEETS** all required specifications of the Town of Clayton Unified Development Code.

OR

The subdivision **DOES NOT MEET** all required specifications of the Town of Clayton Unified Development Code. (State evidence supporting finding.)

****

3. The subdivision **WILL NOT** be detrimental to the use or orderly development of other properties in the surrounding area and **WILL NOT** violate the character of existing standards for development of properties in the surrounding area.

OR

MOTION FORM
Item 7d
2020-39-SD
Shoppes at Glen Laurel - Preliminary Plat

The subdivision **WILL** be detrimental to the use or orderly development of other properties in the surrounding area and **WILL** violate the character of existing standards for development of properties in the surrounding area. (State evidence supporting finding).

****

4. The subdivision design **WILL** provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, **WILL** provide for the unified and orderly use of or extension of public infrastructure, and **WILL NOT** materially endanger the environment, public health, safety, or the general welfare.

OR

The subdivision design **WILL NOT** provide for the distribution of traffic in a manner that will avoid or mitigate congestion within the immediate area, **WILL NOT** provide for the unified and orderly use of or extension of public infrastructure, and **WILL** materially endanger the environment, public health, safety, or the general welfare. (State evidence supporting finding).

****

[If approved with conditions] The applicant meets this finding subject to the following conditions:

MOTION FORM
Item 7d
2020-39-SD
Shoppes at Glen Laurel - Preliminary Plat

Resolution #2020-28

TOWN OF CLAYTON
RESOLUTION GRANTING WASTEWATER TREATMENT CAPACITY
FOR SHOPPES AT GLEN LAUREL

WHEREAS, the Town of Clayton operates a wastewater treatment plant known and permitted as the "Little Creek Water Reclamation Facility"; and,

WHEREAS, said facility is permitted to treat a maximum average of 2.5 million gallons daily; and,

WHEREAS, the Town of Clayton holds several interlocal agreements which secure additional wastewater treatment capacity from other available sources; and,

WHEREAS, the North Carolina Department of Environment and Natural Resources (NCDENR) regulates, reviews, and permits flow tributary to newly extended or installed wastewater treatment collection facilities tributary to the Town of Clayton system; and,

WHEREAS, flow from sanitary sewer customers tributary to existing lines owned and operated as part of the Town of Clayton is bound to abide by the permitted average daily flow at the Little Creek Water Reclamation Facility in conjunction with other available sources and consistent with interlocal agreements regarding wastewater treatment.

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE TOWN COUNCIL FOR THE TOWN OF CLAYTON that the following is found:

1. The Town of Clayton has, according to the most recent accounting, sufficient excess and unallocated treatment capacity to approve additional allocation.

2. Such available capacity may be made available to users in accordance with regulatory and legal parameters established to ensure satisfactory treatment plant operation.

3. An allocation for wastewater treatment capacity is granted in the amount of 69,015 GPD to Shoppes at Glen Laurel as outlined in allocation request from CE Group Inc,.; **herewith attached**.

4. Said allocation is approved subject to and conditioned upon review and approval of all required regulatory processes.

5. Said allocation is non transferable, non assignable, and made for the projects as described and for the noted location unless explicitly approved by the Town of Clayton.

6. Said allocation may be revoked or reclaimed in accordance with the policies of the Town of Clayton as adopted or amended now or in the future. No property right is conferred with the granting of an allocation except as otherwise explicitly allowed by policy, ordinance, or action of the Town of Clayton.

7. Said allocation is subject to payment of applicable fees in accordance with adopted ordinances, policies, and fee schedules of the Town of Clayton.

Duly resolved by the Clayton Town Council this 17th day of August, 2020 while in regular session

_____
Jody L. McLeod
Mayor

ATTEST:

_____
Kimberly A. Moffett, CMC, NCCMC
Town Clerk

Town Council Agenda Cover Sheet

Meeting Date
August 17, 2020

Agenda Location
Administrative

Item Title

Soil Remediation Services Agreement – Firing Range

Presenter

Rich Cappola

Summary/Description

Contaminant Control Inc. (CCI) has been selected through a competitive bidding process to provide soil remediation services at the old firing range site on Atwood Drive. As this is for services, the Town was not required to hold a competitive process but Staff wanted to ensure there was competition. Seven (7) responsive bids were received.

CCI was the lowest bidder at $129,962.50. This is a unit price contract. Staff will encumber $150,000 to Contract Sum and any potential any change orders. CCI is anticipated to mobilize the end of August and begin work in earnest the first week of September. The scope of work is expected to take 5-6 weeks.

Requested Action

Other – Staff requests the Council authorize the Town manager to execute the soil remediation services agreement substantially in the form provided in the agenda packet, with the following parameters: the Contract Sum is not to exceed $129,962.50 and Substation Completion is to be no later than October 15, 2020.

Funding Source (If Applicable):

The anticipated expenditures fall within the amount previously budgeted in the capital improvement planning.

Cost: **N/A** **Yes** ☒ **No** ☐

Additional Documents to be Included in Agenda Packet

Additional Documents: Form Soil Remediation Services Agreement

Meeting Timeline

Click or tap here to enter text.

PPAB 5780071v1

SITE REMEDIATION AGREEMENT BETWEEN

OWNER and CONTRACTOR

This Agreement is made this ____ day of _____, 2020

between "Owner": Town of Clayton

_____

_____

and the "Contractor": _____

_____

_____

Owner and the Contractor agree as set forth below.

THIS Agreement between Owner and Contractor (the "Contract") is the final written integration of the agreement between __Town of Clayton_____ (the "**Owner**"**)** and _____ (the "**Contractor**").

1. Recitals:

The Owner desires to avail itself of the services of the Contractor in connection with certain environmental remediation work for _Small Arms Firing Range Site Remediation__in Clayton, North Carolina (the "**Project**"), and the Contractor desires to provide such services. Owner's Representative for this Project will be ___Rich Cappola, P.E. Public Services Director_____("Owner's Representative") and the engineer for the Project is ____WithersRavenel_____("Engineer').

In consideration of the premises set forth above, the parties hereto agree as follows:

SCOPE OF WORK; PAYMENTS TO OTHERS

2. Scope of Work:

2.1 The "Work" includes all labor, services, supervisions, sampling, disposal, materials, equipment, facilities, skills, instrumentalities and costs required, reasonably inferable from or necessary for the proper, complete, prompt and efficient performance the Scope of Work established by Exhibit A in accordance with the Contract Documents. The total Work under Exhibit A and this Agreement shall be the "Project" and the location of such Work shall be the "Site".

2.2 Contract Documents. The "Contract Documents" for this Contract consist of this Contract and all exhibits hereto all of which are hereby incorporated herein by this reference and are hereby acknowledged by Contractor as being in the possession of, or available to, Contractor and any modifications issued after execution of the Contract in accordance herewith. Contractor agrees to be bound by all of the Contract Documents.

2.3 The Contractor agrees to furnish all labor, services, competent supervision, materials, equipment, facilities, skill, and instrumentalities used in, or in connection with, the full performance of all Work in accordance with the terms of this Contract, all Laws and the plans and specifications set forth in Exhibit A and otherwise in the Contract Documents. The Contractor agrees to prosecute the Work diligently and continuously; and agrees to achieve Substantial Completion (as defined in Section 4.3 of this Contract) of the Work no later than _____,___ 2020 ("Contract Time"). TIME IS OF THE ESSENCE FOR CONTRACTOR'S PERFORMANCE WITH RESPECT TO EACH AND EVERY TIME LIMIT ESTABLISHED BY THIS CONTRACT.

2.4 Contractor shall commence the Work on the date set forth in the notice to proceed or purchase order issued by Owner ("the "Commencement Date").

2.5 Within ten (10) days of execution of the Contract, Contractor shall prepare and provide to Owner and Owner's Representative a critical path schedule establishing the most efficient and effective path for sequencing the Work (the "Schedule") in accordance with the Contract Documents. This Schedule shall provide for coordination of all trades for each and every portion of the Work, including all submittals relating to the Work. Contractor shall continuously monitor the Schedule and update on the status and progress of the Work according to the Schedule on a regular basis as may be reasonably required by Owner's Representative and/or otherwise required in the Contract Documents, showing the amount of Work constructed and comparing the Work in place to the progress required on the Schedule. Contractor shall inform Owner and Owner's Representative in writing if, at any time, the progress of the Work is such that the Contractor will not be able to complete the Work within the Contract Time. In such case, Contractor shall also present a recovery Schedule and plan for such overtime work or other measures that may be required to recover the Schedule and complete the Work within the Contract Time.

2.6 Contractor shall remain solely and exclusively responsible for initiating, maintaining and supervising all necessary safety precautions and programs in connection with all Work. The Contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules, regulations, orders, and other legal requirements (collectively, "**Laws**") of public authorities related to the Work or the safety of persons or properties for protection of such persons or properties.

2.7 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Owner's Representative and shall not proceed with that portion of the Work without further written instructions from the Owner.

2.8 The Contractor agrees that it is an independent contractor and that its employees are not employees of the Owner.

3. Payments to Others:

The Contractor agrees to:

3.1 Pay for all expenses, including, but not limited to, materials, skills, labor, services, supervisions, facilities, equipment and instrumentalities used in, or in connection with, the performance of the Work and any other claims arising out of the Work, when and as bills or claims therefor properly become due, and to save and protect the property and the Owner and the Owner's Representative from all manner of claims, including without limitation, mechanics' liens on account thereof that arise out of or result from the Work, and to furnish satisfactory evidence to the Owner and Owner's Representative, when and if required, that it has complied with the above requirements;

3.2 Keep the Project and the lands upon which it is situated free from all mechanics' liens and all other liens and claims by reason of the Work or any labor, materials or other things used therein. Contractor agrees to satisfy and discharge any claims, or transfer to bond with good and sufficient surety reasonably acceptable to Owner, any liens filed (prior to or after Final Payment) by its subcontractors, suppliers, sub-subcontractors, or their materialmen of any tier against the Project or the Site or any funds related thereto within ten (10) days of such claim having been made or lien noticed, filed or recorded. If within such ten (10) day period, Contractor shall not have removed, satisfied, or discharged any lien claim as Owner or Owner's Representative may reasonably request, Owner may, at its option, pay such claims or remove or bond such lien and then set off and deduct from any payments due or to become due to Contractor all reasonable costs and expenses, including, but not limited to, reasonable attorneys' fees, of removing, bonding, or satisfying such liens or other claims. If the balance due on this Contract or any agreement between the Owner and Contractor is not sufficient to cover such costs and fees, Contractor shall pay such outstanding amount to Owner within five (5) days of a request by Owner or Owner's Representative for such payment; and

3.3 Indemnify, defend, and hold harmless the Indemnified Parties (as defined in Section 14.1) for any reasonable costs, including attorneys' fees, incurred as a result of liens or claims

against Owner or otherwise in connection with the Project filed by its subcontractors, suppliers, sub-subcontractors, or their materialmen. Nothing in this Section 3 is intended to be or shall be construed as a waiver by any party of the right to claim a valid lien under applicable Laws.

3.4 Contractor shall not be responsible to provide a bond, effect a discharge or refund any payments to Owner arising out of a lien or claim filed due to Owner's failure to pay amounts due to Contractor (not including any amounts Owner is entitled to withhold) pursuant to this Contract or Owner's agreement with Contractor to withhold payment to a specific subcontractor or subcontractors.

PAYMENTS

4. Partial Payments - Final Payment - Release:

4.1 Contract Sum:

The price to be paid to Contractor by the Owner as full consideration for complete, timely, proper performance of the Work accepted by the Owner under this Contract is _____ dollars and _____ ($_____) (the "Contract Sum"). The Contract Sum, which is not to be exceeded without prior written authorization from Owner or Owner's Representative in accordance with this Contract, includes (i) all materials, equipment, labor, delivery, installation, overhead, costs of insurance, and profit, (ii) taxes, insurance premiums, licenses and permits (except as otherwise specifically set forth in the Contract Documents) required in connection with performance and (iii) any other costs or expenses in connection with, or incidental to, the performance of the Work.

Payment shall be made to the Contractor based upon Applications for Payment for Work properly performed. Such Applications for Payment shall be submitted to Owner on a monthly basis. Contractor shall be paid based upon Owner's approval of the amounts due pursuant to such Applications for Payment. Owner shall issue payment for the approved amounts minus retainage in the amount of 10% within thirty (30) days of a properly submitted Application for Payment. Owner, at its sole discretion, may elect to reduce the amount of retainage withheld from future Applications for Payment when the Work is at least fifty percent (50%) complete. Any reduction or release of retainage or a portion thereof, shall not be a waiver of: (i) any right to withhold retainage in connection with other payments to Contractor, or (ii) any other right or remedy the Owner may have under the. Contract

4.2 Conditions Precedent to Payment:

In addition to any other terms for payment set forth in the Contract Documents, as a condition precedent to Contractor's right to receive any payment Contractor shall:

4.2.1 Deliver to Owner and Owner's Representative an application for payment in a form reasonably requested by Owner with all backup documentation reasonably requested by Owner ("Application for Payment")

4.2.2 Deliver to Owner and Owner's Representative from Contractor and its subcontractors, materialmen, laborers and suppliers (i) fully executed, notarized conditional lien releases or certifications, in a form acceptable to Owner and Owner's Representative covering all wages, materials, and equipment for which a lien could be filed, corresponding with the Work for which payment is sought and in the amount of the payment sought and (ii) fully executed notarized unconditional lien releases covering all wages, materials, and equipment for which a lien could be filed. The truthful and complete preparation of lien releases duly executed and notarized by Contractor in the form acceptable to Owner and Owner's Representative shall be an express condition precedent to Owner's duty to make any payments to Contractor under this Contract.

4.2.3 Contractor shall have provided proof of insurance of Contractor and its subcontractors, evidencing coverage in effect and that the same is compliant with the requirements of Exhibit B hereto.

4.2.4 Contractor shall have obtained all necessary approvals of the completed portion of the Work for which payment is sought from the Owner, all municipal and regulatory authorities, as well as anyone else whose approval therefor is required under the Contract Documents or applicable Laws.

4.3 Substantial Completion:

4.3.1 "Substantial Completion" shall be the time at which the Work has reached a state of progress where, in Owner's opinion, the Work is sufficiently complete, in accordance with the Contract Documents, to be suitable for use for the purposes for which it is intended. When Contractor considers the entire Work to be nearing Substantial Completion, Contractor shall inform the Owner and Owner's Representative in writing and shall prepare and submit to the Owner and Owner's Representative a comprehensive list of items to be completed or corrected prior to Substantial Completion ("Punch List").

4.3.2 In addition to any other requirements provided for in the Contract Documents, the Work shall not be Substantially Complete or eligible for consideration therefor unless:

4.3.2.1 Contractor has obtained approval of all applicable governmental authorities and submitted an affidavit to Owner and Owner's Representative stating that all of the Work requiring inspection by governmental authorities or third party utility companies has been appropriately and fully approved and accepted by such governmental authorities. In the event that Contractor cannot obtain an acceptance from the appropriate governmental authorities due to acts or omissions which are the responsibility of the Owner, then Contractor shall provide Owner and Owner's Representative with documentation from the appropriate governmental authority setting forth all unapproved items or such other documentation as may be

acceptable to Owner and Owner's Representative, copies of which shall be submitted with its Final Application for Payment;

4.3.2.2 Contractor shall have completed the Work to Owner and Owner's Representative's satisfaction and any and all other Work in accordance with the Contract Documents and obtained the approval and acceptance of the Work by Owner, Owner's Representative and such other representatives and/or consultants of Owner as Owner may designate for such purposes;

4.3.2.3 Contractor has delivered to Owner's Representative satisfactory evidence that all claims, including taxes incurred with respect to the Work, and all labor and material account incurred by Contractor in connection with the Work, have either been paid in full or satisfactory provision has been made for payment in full upon receipt by Contractor of final payment;

4.3.2.4 Contractor has furnished to Owner's Representative a complete and final release of all liens and claims in a form acceptable to Owner and Owner's Representative from all persons, firms and corporations who have performed Work or supplied materials in connection with a Project. Such lien releases may be conditional on receipt of final payment, in which case a notarized unconditional lien release shall be delivered contemporaneously with receipt of final payment (all lien releases shall be in a form reasonable acceptable to Owner);

4.3.2.5 Contractor has delivered to Owner's Representative proof of insurance, evidencing coverage in effect and that the same is compliant with the requirements of Exhibit B hereto; and

4.3.2.6 Contractor has delivered to Owner's Representative the consent of the surety, if any, to final payment; and

4.3.2.7 Contractor has delivered to Owner's Representative all supporting documentation as may be otherwise reasonably requested by Owner.

4.3.3 All Work performed and all materials and workmanship furnished by Contractor shall be subject to final inspection, tests and acceptance by Owner and Owner's Representative, as well as any authorities having jurisdiction. Failure to include an item on the Punch List shall not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. All Punch List items shall be finished within 30 calendar days.

4.3.4 Upon Substantial Completion. Owner shall release all remaining retainage to Contractor, except that Owner may withhold 200% of the value of any remaining Punch List Work.

4.4 Final Payment:

Once Contractor has achieved Substantial Completion the Work and completed all Punch List Work, Contractor shall submit a Final Application for Payment to Owner and Owner's Representative for the outstanding balance of the Contract Sum and approved Change Orders; provided, however, that Final Payment shall not become due unless and until the conditions precedents outlined in Section above and elsewhere in the Contract Documents have been satisfied. Once satisfied, Final Payment will be due within ten (10) days of approval by Owner and Owner's Representative.

4.5 No payment shall be a representation that the Owner or Owner's Representative has made exhaustive or continuous on-site inspections to check the quality of the Work and no payment to Contractor, whether a progress or final, shall be deemed to constitute, or be construed as, acceptance of Contractor's Work or any portion thereof.

4.6 Final Payment to the Contractor shall in no way relieve the Contractor of liability for any obligations assumed under this Contract, or for faulty or defective work discovered before or after Final Payment.

4.7 Acceptance of Final Payment by Contractor shall constitute a full waiver and release by Contractor of all claims, of any nature whatsoever, against Owner or Owner's Representative arising out of or relating to this Contract.

5. Deductions:

In addition to the rights enumerated elsewhere herein:

5.1 The Owner may withhold from any amounts due or to become due to Contractor sums equal to indebtedness owed by Contractor to Owner, or regarding matters for which Owner or Owner's Representative has received notice and for which Owner is or may possibly become liable due to the acts or omissions of Contractor or any of its subcontractors or suppliers of any tier, or on account of which Owner has incurred any indebtedness due to the acts or omissions of Contractor or any of its subcontractors or suppliers of any tier, including without limitation failure of Contractor to make payments properly to its subcontractors, suppliers, materialmen or laborers, a reasonable doubt that the required Work hereunder can be completed for the balance then unpaid, damage to Owner or the Owner's separate contractors, defective work not remedied, failure to otherwise carry out the Work in accordance with the Contract Documents, or non-compliance with insurance requirements. In the event of any breach by Contractor of any provision or obligation of this Contract, Owner shall have the right to retain out of and deduct from any payments due or to become due to Contractor an amount sufficient to completely protect Owner from any and all loss, damage, or expenses therefrom until the breach, cause, or claim which prompted the withholding has been satisfactorily remedied or adjusted by Contractor. If the payments due or to become due to Contractor are not sufficient to cover such amounts, Owner shall be entitled to payment of such amounts from Contractor. The rights of the Owner under this Section shall not be exclusive of any other rights of the Owner herein or provided by Laws.

CHANGES IN THE WORK

6. Change Orders and Construction Change Directives:

The Work to be performed under this Contract may be modified by changes authorized by Owner or Owner's Representative in writing ("Change Order") provided that the Contract Sum or Contract Time set forth in this Contract may only be adjusted by written Change Order issued and executed in accordance with the terms of this Contract.

6.1 Contractor shall not make any change in the Work, deviate from the Contract Documents or seek compensation for extra work unless Contractor receives a written Change Order signed by the Owner or Owner's Representative accordance with this Section 6 prior to performing such Work. Every Change Order initiated by Contractor shall be preceded by a written Change Order proposal from the Contractor which shall describe the physical nature of the proposed change and the proposed amount of the adjustment to the, if any, in the Contract Sum and/or Contract Time (any adjustment to Contract Sum shall be itemized). When the Owner or Owner's Representative requests a proposal for a Change Order, the Contractor shall submit such a proposal within five (5) days of Owner's request. The Owner or Owner's Representative will then, within ten (10) days of receiving the Change Order proposal, either approve, deny or approve with conditions the Change Order proposal submitted by the Contractor. If Contractor performs any change in the Work without following the requirements of this paragraph, then Contractor waives the right to seek or receive any additional compensation or time related to such Work.

6.2 Contractor specifically acknowledges and agrees that Owner has a strict policy with respect to the payment for extra work, which requires that to be eligible for payment there must be a valid and effective Change Order signed by Owner or Owner's Representative.

6.3 In the event that the Owner or Owner's Representative issues a Change Order to Contractor as provided above, Contractor shall perform such extra work that is not covered by unit prices from the audited cost of the work plus 15 %. Ay work performed pursuant to a Change Order shall be deemed to be part of the Work and carried out promptly and expeditiously. If the Change Order is issued or is to be issued on a basis other than a mutually agreed upon lump sum or unit price, or if a Construction Change Directive is issued by Owner, the price for the Work authorized or to be authorized thereby shall be, to the extent applicable, determined by the lump sum or unit prices stipulated in the Contract Documents, if any, and deemed to include (i) all materials, equipment, labor, delivery, installation, overhead, and profit, and (ii) any other costs or expenses in connection with, or incidental to, the performance of the Work. If no such lump sums or unit prices are available, the Change Order or Construction Change Directive shall be issued on a time and materials basis, and to the extent applicable the rates and fees shall be those listed in the Rate Schedule included in Exhibit A, which rates and fees represent the maximum respective rates and fees allowed under this Contract unless otherwise agreed upon in writing. Charges for time and materials must be supported by records checked and approved by Owner.

6.4 Contractor shall promptly provide Owner or Owner's Representative with any information reasonably requested by Owner nor Owner's Representative to substantiate the cost of any change in the Work.

6.5 No changes in the Work shall affect the Contract Time unless the Contract Time is specifically extended pursuant to the terms of the applicable Change Order. In the case of such an extension pursuant to a Change Order, all costs associated with such extension must be included as part of the cost of the Change Order; any costs not included in the Change Order shall not be subject to reimbursement.

6.6 Owner reserves the right to delete any portion of the Work, which deletion shall be effected by written notice from Owner or Owner's Representative to Contractor. Upon such notice, Owner shall issue deductive Change Order for the value of the portion of the Work deleted, including any profit and overhead applicable to such deleted portion of the Work accounted for in the original pricing thereof.

PERFORMANCE

7. Prosecution of Work:

7.1 Contractor shall comply with written instructions given by Owner or Owner's Representative to suspend, delay or accelerate the Work, provided that Contractor may be eligible to receive an appropriate adjustment, if any, of the Contract Sum and/or Contract Time as otherwise provided herein. Such instructions shall not relieve the Contractor of any of its obligations under the Contract Documents.

7.2 Contractor shall reasonably cooperate with the Owner, Owner's Representative and other contractors and shall participate in the preparation of coordinated work schedules as reasonably required by Owner or Owner's Representative, specifically noting and advising the Owner's Representative of any interference or potential interference by others.

7.3 Except as otherwise provided in the Contract Documents, Contractor shall give adequate notices pertaining to the Work to the proper authorities, and shall secure and pay for all necessary licenses and permits as part of the cost of the Work to carry on the Work, a copy to be provided to Owner's Representative by Contractor prior to the start of the Work.

7.4 Contractor shall review the Contract Documents, including all applicable construction documents, drawings, specifications, reports, studies and standards, including without limitation, subsurface, soils and geological reports, before commencement of the Work and shall inform Owner's Representative in writing of any Work, material or design it considers unsuitable for the Project.

7.5 Contractor represents that Contractor has visited the Site, become familiar with all existing conditions under which the Work is to be performed. Such conditions include without limitation equipment transportation routes, site access, mobilization area, staging area, appurtenances, sub-surface conditions or any other site related conditions that might affect the Work. Prior to the commencement of the Work, Contractor shall be responsible to check all areas that might be impacted by the Work and to bring to the attention of Owner's Representative any matter related to the Work that conflicts with or might affect Contractor's performance of the Work. By commencing performance of

Work in an area, Contractor shall be deemed to have determined that such area(s) are in suitable condition to perform the Work.

7.6 Should the Contractor fall behind in its progress of the Work (taking into account extensions of the Contract Time approved in accordance with the Contract) or otherwise fail to timely progress the Work to meet Owner's reasonable expectations, Contractor shall, without being entitled to any additional compensation or extension of the Contract Time, work overtime, increase its forces, or take other such action as may be necessary or appropriate to complete the activity within the Contract Time, provided that such lack of progress is caused by Contractor or its subcontractors or material suppliers and such lack of progress is not caused by Owner, its employees, agents, or any licensed design professionals hired by Owner.

8. Coordination with Others:

8.1 Contractor agrees to perform and coordinate its Work with that of the Owner and other contractors, if any, in the best interests of the Project as a whole, as reasonably determined by the Owner.

9. Protection of Work:

9.1 Contractor agrees to adequately and properly protect the Work (including all staking and surveying work with regard to the Project) and the safety of the public, including by erecting and maintaining suitable and sufficient lights, barricades, barriers, supports, signs, guards, and any other necessary devices or means, so as to avoid injury or damage to persons or property. Traffic lanes closed to traffic shall be protected by effective barricades which shall be lighted during hours of darkness, and suitable warning signs shall be provided to control and direct traffic and to warn pedestrians. Upon completion of the Work (or, if applicable, portion of the Work), all barricades, signs, and the like shall be removed by Contractor. Contractor agrees to be directly responsible for damages to persons and property occasioned by its failure to comply with the foregoing requirements and for any negligence in the performance of the Work, that it shall be responsible for the repair costs of others' work which Contractor damages or fails to protect, and that it shall indemnify and hold harmless the Indemnified Parties from all losses, costs, and expenses as set forth more fully in Section 14.2 arising from or relating to Contractor's failure to comply with this Section 9.1.

9.2 Contractor acknowledges that utility conflicts or interferences might not be shown in the plans and specifications or might not be complete, and the existence and location of underground utilities will be investigated and verified in the field by the Contractor before starting the Work. Contractor is responsible for coordinating with the utility companies any relocation, adjustment, or replacement of utility facilities. Excavation in the vicinity of existing structures and utilities shall be carefully done by hand. Contractor shall take all necessary precautions to protect in place all overhead, underground and surface improvements, including but not necessarily limited to pole lines, pipe lines, conduits, cabling, subsurface facilities, sewer lines, water lines, service and meters, valves, hydrants, irrigation facilities and any other improvements located within or adjacent to

the Project. Contractor shall be responsible for any damage to and for maintenance and protection of existing utilities and structures.

10. Claims:

10.1 Contractor shall provide prompt, written notice to Owner and Owner's Representative of any claims, including claims for additional time or compensation for which the Owner's Representative is or may be liable within five (5) days of the occurrence of the event for which such claim is to be made or Contractor's first knowledge of the event. Failure to strictly comply with the notice requirements set forth herein shall constitute a waiver of any and all claims for additional time or compensation related to such event.

10.2 Contractor hereby waives any and all claims for consequential damages against the Owner, including damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except profit on Work actually and properly performed by Contractor in accordance with this Contract and included in the Contract Sum.

10.3 If the Contractor is materially delayed in the progress of the Work solely by an act or neglect of the Owner, or of an employee, authorized representative or agent of Owner, then the Contract Time shall be reasonably extended by Change Order to the extent such delay extended the critical path of a Project, and the Contract Sum shall be adjusted by Change Order for any additional costs actually incurred and directly resulting from the delay to the critical path of the Project; provided that adequate supporting documentation is provided by the Contractor. If the Contractor is delayed at any time in the commencement or progress of the Work, for any other reason beyond its or Owner's control, including, but not limited to, labor disputes beyond Contractor's control, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, casualties requiring reconstruction or repair to the Work or Project or any parts thereof, sabotage, vandalism, concealed conditions, or shortage/unavailability of materials, supplies, labor, equipment and systems, then the Contract Time shall be extended by Change Order for each day of resultant delay to the critical path of a Project. However, the Contract Sum shall not be adjusted by Change Order for additional costs or expenses due to such delay, and Contractor waives any right to pursue or recover all such costs, expenses and other delay-related damages from Owner until the cumulative effect of such delays exceeds _30___ days. When the delays due to such force majeure exceed _30__ days, the Contract Sum shall be adjusted by Change Order in the amount of __audited costs of materials increases and extended overhead plus 15%_____ per day for each day of delay to the critical path of the Project beyond the _30th___ day. Notwithstanding the foregoing, in no event shall the Contractor be entitled to receive an extension of the Contract Time or a positive adjustment to the Contract Sum to the extent any event or condition was caused by the negligence or other fault of, or could have been reasonably avoided by, Contractor or any subcontractor or supplier of any tier under Contractor.

10.4 As a precondition to Contractor making a Claim for a delay arising out of abnormal weather conditions, Contractor shall submit (a) data from the National Oceanic and

Atmospheric Administration (NOAA) showing the number of days where precipitation or other inclement weather occurred during the period for which the Claim is made, along with (b) daily weather logs which must be kept at the job site and which must indicate that adverse weather or site conditions. A work day is considered lost due to adverse weather when the Contractor establishes that the adverse weather conditions or the ongoing effects of adverse weather prevented the Work on critical path activities from being performed for five (5) hours or more of an otherwise available and scheduled work day (Abnormal Weather Day) Contractor acknowledges that it has taken typical weather conditions into account in agreeing to meet the Substantial Completion Date under the Contract Documents. Contractor shall be entitled to an extension of time only to the extent (1) it can show that each Abnormal Weather Day specifically affected the critical path of the Work and (2) the number of Abnormal Weather days exceeds the number of weather days built into the schedule as shown on Exhibit C; and (3) Contractor complies with all of the other requirements for such a claim under the Contract Documents.

11. Testing:

11.1 Testing required for the Work shall be provided for by the Contractor, although Owner shall be permitted to have additional testing done at its discretion at any time. Costs associated with additional Owner-initiated testing will be the Owner's responsibility unless testing reveals sub-standard performance of the Work or Work otherwise not in conformance with the Contract Documents. In this case, such Work shall be deemed rejected and Contractor shall be notified accordingly. Contractor shall, at its sole cost and expense, promptly and efficiently correct such Work and be responsible for reimbursement of all Owner's any and all other or additional costs related to the correction of the sub-standard work or otherwise non-conforming or defective, including without limitation the costs of any additional testing or inspections that may be required as result thereof. The failure of Owner, Owner's Representative or Owner's other consultants or inspectors to conduct inspections or tests or to discover defective work, workmanship or materials through the same, shall not prejudice the right of Owner on final inspection and testing. All test reports shall be submitted to owner.

11.2 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Owner, Owner's Representative or Owner's other consultants or designated representative's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

12. Warranty:

12.1 Neither the final payment nor any provision or modification of this Contract, nor any review or approval of the Work by the Owner, Owner's Representative or Owner's other consultants shall relieve Contractor of responsibility for faulty materials or workmanship. Contractor is solely responsible for the accuracy, completeness and sufficiency all Work. In addition to the specific guarantees required by the Contract Documents, the Contractor warrants to the Owner that materials and equipment furnished under this Contract will be of good quality and new, unless otherwise required or permitted by the Contract or in writing by Owner; that the Work will be free from defects; and that the Work will conform

with the requirements of the Contract Documents and all Laws. In addition, Contractor further agrees that it will repair or replace any Work performed or materials furnished pursuant to this Contract against defects in material or workmanship, at its own expense and without cost to the Owner, for a period beginning at Substantial Completion of the Project (or an identified and independent portion of the Project, if applicable), and continuing until one (1) year after Substantial Completion of the Work for the Project or portion thereof. Such one year repair and replacement obligation shall not reduce the duration of any other warranties herein or any applicable common law, state or federal statutory warranties or statutes of limitation or repose related to claims for improper work or materials. Accordingly, Contractor shall, if possible, complete, or commence to complete, all correction, repair and replacement items within five (5) working days from receipt of the original notice. In the event of an emergency, Contractor agrees to respond and repair or replace any defective Work or materials within twenty-four (24) hours from receipt of such notice, if possible.

12.2 In the event Contractor fails to repair or replace any Work or materials after receiving reasonable notice of the Owner's request to repair or replace the same, the Owner may, at its sole option and discretion, elect to repair or replace such Work or materials and hold Contractor liable for such repair or replacement (including any administrative costs incurred by the Owner), and may back-charge or withhold the cost of such repair or replacement from any account then payable to Contractor. Nothing in the foregoing provision shall, in any manner, diminish or defeat any legal right Owner may have to proceed against Contractor, including, but not limited to the right to recover for latent defects.

INSURANCE AND INDEMNITY

13. Insurance:

13.1 Before commencing any Work and as a condition precedent to any payment hereunder, the Contractor shall purchase and maintain, at its sole expense, insurance as set forth in Exhibit B attached hereto and incorporated herein to protect Owner and Owner's Representative from claims in connection with performance of the Work under this Contract whether such Work is provided by the Contractor, its subcontractors or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and shall cause its subcontractors to do the same. Contractor shall maintain said insurance in force at all times during the performance of any Work and thereafter so as to cover claims asserted for the longer of the periods set forth in Exhibit B or otherwise in the Contract Documents.

13.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located. The Contractor agrees to provide performance and payment bonds in the full amount of the Contract Sum and comply with the bonding requirements of N.C.G.S. § 143-128.1 and Article 3 of Chapter 44A of the North Carolina General Statutes. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

14. Hold Harmless - Indemnity:

Contractor agrees to indemnify, defend, and hold harmless Owner from and against any and all third party losses, claims, damages, costs, lawsuits, judgments, settlements and expenses, including attorneys' fees and paraprofessionals' fees arising out of or alleged to have arisen out of any of the following:

i. Breach of contract or negligence by Contractor. If any third party shall make any claim against Owner arising out of or relating to the breach of Contract or negligence of Contractor, in whole or in part, then Contractor shall defend and hold Owner harmless against such claims, even if they be false or fraudulent, provided, however, this provision shall not be construed so as to have the effect of indemnifying and holding harmless Owner from and against such losses, damages, costs, claims, lawsuits, judgments, settlements, and expenses to the extent arising out of the negligent acts, omissions, or willful misconduct of the Owner or anyone acting under Owner's direction or control or its behalf.

ii. Bodily injury to any persons, including death, or damage to any property, whether owned, leased, or used by the Owner, Contractor, or others, including, without limitation, loss of use or services to the extent such bodily injury, death or property damage arises out the negligence or willful misconduct of Contractor or its

Subcontractors. This provision shall not be construed so as to have the effect of indemnifying and holding harmless Owner from and against such losses, damages, costs, claims, lawsuits, judgments, settlements, and expenses to the extent arising out of the negligent acts, omissions, or willful misconduct of the Owner or anyone acting under Owner's direction or control or its behalf; and

iii. Contractor's violation or alleged violation of any federal, state or local laws, rules, regulations, requirements or common law.

DISPUTES

15. Disputes Clause:

15.1 The Owner and the Contractor agree to negotiate in good faith regarding claims, disputes and other matters in question arising out of or relating to this Contract ("Claims").

15.2 In the event a Claim is not wholly resolved through negotiation by the parties, the Owner and the Contractor, unless they agree otherwise, shall endeavor to resolve the Claim through mediation as a condition precedent to the institution of legal or equitable proceedings by either party. Unless otherwise agreed to by the parties, such mediation shall be conducted in accordance with the Construction Industry Mediation Rules of the American Arbitration Association in effect at the time of the dispute. The request for mediation shall be filed in writing with the other party and with the American Arbitration Association. The parties shall share the mediator's fee and any filing files equally, and the mediation shall be held in the state where the Project is located, unless otherwise agreed to by the parties. If mediation is not successful, any disputes may be resolved through litigation in a court of competent jurisdiction.

15.3 Notwithstanding the foregoing, mediation shall not be a condition precedent to a lien or legal or equitable proceedings if: (a) the legal or equitable proceedings concern a temporary restraining order, preliminary injunction, or other emergency relief; or (b) despite good faith efforts, the mediation cannot be completed before the expiration of an applicable lien filing or notice deadline, or before the expiration of an applicable statute of limitations, repose, or other legal time limit.

MISCELLANEOUS

16. Compliance With Laws and Other Requirements:

16.1 The Contractor represents and warrants that it is in compliance with and shall continue to comply with all federal, state and local Laws effective where the Work is to be performed under this Contract, and agrees to pay all fees, permits, taxes, including sales and use taxes, and expenses connected with such compliance, and also to pay all taxes imposed by any federal, state or local Laws for any employment insurance, pensions, old age retirement funds, or any similar purpose. Contractor also represents that it is appropriately licensed and trained and shall maintain all qualifications and professional certifications necessary or appropriate to perform the Work, and shall ensure that each of its employees, subcontractors and any other person on the premises of Owner at the direction of Contractor are appropriately licensed and trained and shall maintain all

qualifications and professional certifications necessary or appropriate to perform the Work.

16.2 If any of the provisions under this Contract are in conflict with any of the above Laws, then such Laws shall control over this Contract. In such case, the Contractor is obligated to inform the Owner in writing of such non-compliance with such Law(s) within three (3) days of the discovery of such non-compliance.

16.3 Any and all provisions of Laws and clauses required by Laws to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then the parties hereby agree to immediately amend the Contract to make such insertion.

16.4 To the extent that any term or provision of this Contract may be deemed void or not in compliance with any applicable Laws or public policy, that term or provision will be void, and where possible, void language shall be modified to the minimum extent necessary to conform to such Law(s). All other terms and provisions of this Contract shall remain in full force and effect.

16.5 Contractor shall comply, and shall cause each of its employees, subcontractors and any other person on the premises of Owner at the direction of Contractor, to comply with all policies, standards, rules, regulations and procedures relating to the operation of Owner's facilities that presently exist or as may from time to time be established by Owner and communicated to Contractor and shall complete and submit to Owner forms and comply with other requirements as Owner may reasonably request.

17. Safety:

As to safety on each Project, Contractor:

17.1 Shall familiarize itself and comply with all prevailing safety Laws; and

17.2 Agrees that it is solely responsible for compliance with all applicable Laws applying to safety, including, but not limited to, the federal Occupational Safety & Health Act ("OSHA") and state counterparts. Without limiting the foregoing, Contractor shall perform the Work using only those employees and/or subcontractors, if any, who are fully trained and certified pursuant to 29 C.F.R. § 1910.120. It shall further assure itself that any tools, equipment, scaffolding, or other items which may be loaned or rented to it by the Owner or others are in good order and in compliance with OSHA standards and any other Laws designed to protect the safety of persons at the job site. To the fullest extent permitted by law, Contractor agrees to defend indemnify and hold the Indemnified Parties (as defined in Section 14.2) harmless with respect to any penalties or fines for violations thereof or for injuries or death resulting from non-compliance with the foregoing requests.

18. Termination or Suspension:

18.1 The Owner may terminate this Contract in whole or in part at any time, if the Contractor shall breach the Contract by one or more of the following:

18.1.1 Refusing or neglecting to supply sufficient, properly skilled workmen or materials or equipment of the proper quality and quantity;

18.1.2 Failing to prosecute the Work with promptness and diligence;

18.1.3 Causing the stoppage or interference with the work of Owner or others unless such action is approved in advance by Owner's Representative in writing;

18.1.4 Failing to properly remedy defective Work;

18.1.5 Failing in the performance of any other material covenant or condition in this Contract, including the Contractor's obligation to meet its debts as they mature and/or pay its subcontractors or material suppliers.

18.2 Upon the occurrence of any event outlined in Section 18.1, Owner may, at its option, terminate this Contract by delivering written notice of termination to Contractor.

18.3 Without limiting the foregoing, upon the failure of Contractor within seven (7) days of written notice from Owner or Owner's Representative to cure a breach (including without limitation Contractor's default or neglect to carry out the Work in accordance with the Contract Documents) or commence and diligently pursue such cure to the reasonable satisfaction of the Owner, Owner may, at its option, without prejudice to any other rights available to Owner hereunder or otherwise at law or in equity, take possession of the Work or portion thereof, and through itself or others provide labor, equipment, and materials to prosecute Contractor's Work on such terms and conditions as shall be deemed necessary, and shall deduct the cost thereof, including all charges, expenses, losses, costs, damages, and attorney's fees, incurred as a result of Contractor's failure to perform or other breach, from any money then due or thereafter to become due to Contractor.

18.4 If Owner terminates this Contract for one of the reasons stated in Section 18.1, Contractor shall not be entitled to any further payments under this Contract until the Work has been completed and accepted by Owner. In the event that the unpaid balance due to Contractor exceeds Owner's cost of completion, the difference shall be paid to Contractor; but if Owner's cost of completion exceeds the balance due to Contractor, Contractor agrees to pay the difference to Owner within ten (10) days of written notice from Owner. Termination of this Contract, or portion thereof, shall not relieve the Contractor of its responsibilities for the completed Work, nor shall it relieve its surety (if any) and indemnity obligation for and concerning any claim arising out of the Work performed. In addition, any termination for cause by Owner that is subsequently found to be without adequate cause, shall be treated as a termination for convenience in accordance with Section 18.5.

18.5 By written notice, without Contractor being at fault and for the Owner's convenience, Owner may require Contractor to immediately stop Work and/or may terminate this Contract for any or no reason and without cause. In such event, Owner shall pay

Contractor, as Contractor's sole and exclusive remedy for termination, for that portion of the Work actually performed in compliance with this Contract an amount proportionate to the fixed price set forth in this Contract,. Under no circumstances shall the Owner nor Owner's Representative be liable to Contractor for any other costs, expenses or damages, including any consequential damages or lost or prospective profits.

18.6 If the Owner fails to make payment for a period of thirty (30) days after such payment is due and owing in accordance with this Contract through no fault of the Contractor, or if the Work is stopped for ninety (90) consecutive days through no fault of Contractor, the Contractor may, upon ten (10) days' written notice to the Owner and Owner's Representative and Owners failure to cure or commence and diligently pursue a cure within such ten (10) days, as Contractor's sole and exclusive remedy for termination, terminate this Contract and recover from the Owner payment for Work executed and for proven direct, out-of-pocket loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on the completed portion of the Work, as well as reasonable cancellation and demobilization costs

18.7 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that assignment is effective only after (1) termination of the Contract by the Owner for cause pursuant to Section 18.1, and (2) the Owner accepts the applicable subcontract by notifying the subcontractor and Contractor in writing of its intent to accept assignment of such Subcontract. When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract as of the date of the assignment. Contractor shall incorporate the foregoing requirements into all subcontracts for the Project.

18.8 All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents and any other provisions in the Contract Documents that would logically survive this Contract, shall survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

19. Entire Agreement:

It is agreed that the terms and conditions of this Contract are fully covered in the Contract Documents and any verbal statements made by either party, or agents claiming to represent either party, are to be considered of no effect whatsoever. The failure of the Owner or Contractor to enforce at any time or for any period of time, any one or more of the provisions of this Contract shall not be construed to be and shall not be a waiver of such provision or provisions or of its right thereafter to enforce each and every such provision.

20. Severability:

If any provision contained in this Contract is held illegal, invalid or unenforceable, the enforceability of the remaining provisions shall not be impaired thereby. The invalid, illegal or unenforceable provision shall be reformed as provided in Section 16.4.

21. Applicable Law:

This Contract shall be construed and enforced in accordance with the Laws of the State of North Carolina, and any lawsuit shall be filed in the appropriate jurisdiction with the State of North Carolina.

22. Construction of this Contract:

It is agreed that the terms and conditions of the Contract shall not be construed in favor of or against either party and that both parties have legal counsel available to review this Contract in connection with this arm's length transaction.

23. Notices:

Except as otherwise provided in this Contract, all communications required or permitted hereunder must be in writing and will be effective only when actually received by the parties. All notices shall be sent to the following individuals as set forth below:

Owner:

Name: _____
Attn: _____
Address: _____
_____
Telephone: _____
e-mail: _____

with a copy to:

Name: _____
Attn: _____
_____
_____
e-mail: _____

Contractor:

Name: _____
Address:_____
_____
_____
Telephone: _____
e-mail: _____

24. Hazardous Substances:

24.1 For purposes of this Contract, the term "Hazardous Substance" or "Hazardous Substances" shall mean any pollutant, flammable, ignitable, explosive or radioactive material, or toxic, hazardous, dangerous or corrosive waste, substance or material, exposure to which is prohibited, limited or regulated by any federal, state and local

environmental, health or safety laws, ordinances, regulations or rules including, without limitation, the following Acts as now or as hereafter amended: the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA"); the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act ("RCRA"); the Hazardous Materials Transportation Act ("HMTA"); the Toxic Substance Control Act of 1976 ("TSCA"); the Oil Pollution Act ("OPA"); the Clean Water Act ("CWA"); the Safe Drinking Water Act ("SDWA"); and the Clean Air Act ("CAA").

24.2 In the performance of the Work, Contractor shall comply, and cause all of its sub-contractors and suppliers to comply, with all applicable environmental laws. Contractor shall take all possible precautions to prevent the spilling, leaking or dumping of any Hazardous Material (collectively, a "Spill") on the Project site or in the performance of the Work. Contractor shall immediately stop Work to the extent necessary or required by reason of any Spill and immediately notify the Owner and Owner's Representative thereof. Upon Owner's approval, Contractor shall promptly execute, at its sole cost and expense, a course of action to remedy the Spill in compliance with and to comply with the requirements of all governmental agencies having jurisdiction. To the fullest extent permitted by Law, the Contractor shall defend, indemnify and hold the Indemnified Parties harmless from and against any and all liability, claims, damages, losses and expenses, including reasonable attorneys' fees and expenses, arising out of the Spill or other introduction of any Hazardous Materials to Site arising from the performance of the Work by Contractor or by any of the Contractor Representatives.

24.3 Unless otherwise requested, test specimens or samples will be disposed of immediately upon completion of tests and analyses. Upon written request, the Contractor will retain samples for a mutually acceptable storage charge and period of time. In the event that samples contain, or may contain, Hazardous Substances, the Contractor shall, after completion of testing, using a manifest signed by the Owner as generator, have such samples transported to a location selected by the Owner for final disposal. The Owner recognizes and agrees that the Contractor is acting as a bailee and at no time assumes title to any sample.

25. EEO Provisions:

During the performance of this Agreement, Contractor agrees that it shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. Contractor shall take affirmative action to insure that applicants are employed and that employees are treated equally during employment, without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap. Contractor shall post in conspicuous places available to employees and applicants for employment, notices setting forth these EEO provisions. Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or handicap.

26. E-Verify:

As a condition of payment for Services rendered under this Agreement, Contractor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statues when required by law. Further, if Contractor provides the Services to the Town utilizing a subconsultant(s), Contractor shall require the subconsultant(s) to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statues as well. Contractor shall verify, by affidavit, compliance of the terms of this section by submitting the affidavit to the Town upon execution of this Agreement.

27. Iran Divestment Act:

Contractor warrants and certifies that as of the Effective Date, Contractor is not identified on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C. Gen. Stat. § 143-6A-4. The person signing this Agreement certifies that he or she is authorized by Contractor to make the foregoing certification. Contractor further agrees that it will not utilize in the performance of this Agreement any subcontractor or subconsultant that is identified on the Final Divestment List.

28. Other Conditions and Provisions:

28.1 Nothing contained in this Contract shall be deemed to create a contractual relationship with or a cause of action in favor of any third party against Contractor or Owner.

28.2 Contractor shall not assign the Contract without the prior, written consent of the Owner. Owner may freely assign this Contract. Contractor recognizes that, in connection with entering into this Contract, or at any time thereafter, Owner may be required to collaterally assign to a construction lender for, or equity investor, in the Project its right and interests under this Contract, without their assuming Owner's rights and obligations hereunder and hereby consents to any such collateral assignment and agrees, upon Owner's request, to execute and deliver to Owner the Contractor's consent to such collateral assignment in a form reasonably required by such construction lender or equity investor. Contractor further hereby consents to the assignment of Owner's rights under this Contract, including without limitation, the right to enforce Contractor's covenants and warranties hereunder, to any purchaser of the Project or a portion thereof from Owner.

28.3 All Contract Documents are the property of their respective owners, who shall retain all common law, statutory and other reserved rights, including copyrights, therein. Neither Contractor nor the Contractor Representatives shall own or claim a copyright in any of the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of any copyrights or other reserved rights in the Contract Documents. Contractor and the Contractor Representatives are authorized to use and reproduce the Contract Documents solely and exclusively for performance of the Work. All copies of the Contract Documents made under this authorization shall bear the copyright notice, if any, shown on thereon. Neither Contractor nor the Contractor Representatives may use the Contract Documents other than in connection with the Work without the specific written consent of Owner and the owner of such documents. To the fullest extent permitted by applicable Laws, Contractor shall defend, indemnify

and hold Owner harmless from and against any unauthorized use of the Contract Documents by Contractor or any of the Contractor Representatives.

28.4 In the event that the Work is damaged and/or destroyed by terrorist acts, then the Contractor shall not be liable for such damages and shall not be obligated to correct the Work that has been damaged by such acts and/or to complete or rebuild the Work if destroyed by such acts, unless the Owner and Contractor execute a mutually acceptable Scope Change that adjusts the Contract Sum and Contract Time accordingly.

28.5 Owner and Contractor agree that the following exhibits are a part of the Contract Documents, are hereby agreed to by Owner and Contractor, and are hereby incorporated herein by this reference:

Exhibit A	Scope of Work
Exhibit B	Insurance Requirements
Exhibit C	Weather Days
Exhibit D	Sales Tax Affidavit

28.6 In the event of a discrepancy or conflict within or between any of the Contract Documents, the following Contract Documents shall take precedence and apply in the following order:

28.6.1 the Contract, including properly executed Change Orders, shall govern over all other Contract Documents;

28.6.2 unless otherwise specifically stated in the specifications or drawings, the drawings (including any notes therein) shall govern over specifications;

28.6.3 drawings of larger scale shall govern over those of smaller scale;

28.6.4 figured dimensions shown on a drawing shall govern even though they differ from dimensions scaled on the drawing;

28.6.5 descriptive writings shall govern over legends indicating material or conditions;

28.6.6 Project-specific specifications shall govern over general specifications from any authority or agency having jurisdiction over the Project; and

28.6.7 the provision or interpretation that results in the greater quantity and quality of Work or materials shall prevail.

[Signatures on Next Page]

IN WITNESS WHEREOF, the Owner and Contractor have hereunto set their hands and seals in duplicate the day and year written below.

OWNER

TOWN OF CLAYTON

Date: _____

By: _____

Printed Name: _____

Title:_____

CONTRACTOR

_____

Date: _____

By: _____

Printed Name: _____

Title:_____

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.

_____
Robert McKie
Finance Director

EXHIBIT A

SCOPE OF WORK

The project consists of site remediation activities for the Town of Clayton small arms firing range. Remediation services will include the removal, treatment, and disposal of approximately 500 cubic yards or approximately 770 tons of lead impacted soil and associated services at the 6,000 square foot site. A full description of the scope of work is included in Section 01 01 00 Summary of Work of the Contract Documents.

EXHIBIT B

MINIMUM INSURANCE REQUIREMENTS

1. Contractor's Liability Insurance

The **Contractor** will provide and maintain the following types and amounts of insurance:

1.1 Commercial General Liability Insurance

Contractor must provide Commercial General Liability insurance (2013 ISO **Occurrence Form** or its equivalent). The Commercial General Liability insurance must include coverage for "Premises-Operations", "Independent Contractors", "Products-Completed Operations", Personal Injury" and "Contractual Liability". The "Contractual Liability" must include coverage for liability assumed under the Contract and the tort liability of another assumed in a business contract. Such coverage shall not exclude or limit coverage for explosion, collapse, or underground (formerly known as the "XCU"). This insurance shall be maintained throughout the performance of the Work and for a minimum of one year after ***FINAL PAYMENT.*** Limits shall be as follows:

Each Occurrence Limit	
Bodily Injury/Property Damage Liability	**$1,000,000**
Personal Injury Liability	**$1,000,000**
General Aggregate Limit	**$2,000,000**
Products/Completed Operations Aggregate Limit	**$2,000,000**

The General Aggregate Limit is to be written on a "per project" basis using Contractor's "Per Project" endorsement: **Amendment-Aggregate Limits of Insurance** (*CG 2503*). The "**Products/Completed Operations" Aggregate Limit** must be at least **$2,000,000**, or written confirmation provided that the Commercial Umbrella coverage affirmatively "follows form" and includes liability coverage arising out of the insured's "Completed Operations". Such coverage shall not exclude or limit coverage for explosion, collapse and underground (f/k/a "XCU") wherever work involving these exposures is undertaken.

Owner, and its Board, officers, employees, as well as authorized agents, and affiliates, are to be named as additional insureds in the Contractor's commercial general liability policy. Verification of additional insured status shall be furnished to Owner by providing a copy of the endorsement or Certificate of Insurance.

This insurance will apply as primary insurance with respect to any other insurance or self-insurance that Owner may have or elect to carry with respect to this Project.

1.2 Business Automobile Liability Insurance

Contractor must provide and maintain business automobile liability insurance for all "owned", "non-owned" and "hired" vehicles on ISO form *CA 00 01 12/90* or equivalent coverage form with the following limits:

Combined Single Limit	**$1,000,000** per accident

Owner, its Board, officers, employees, as well as authorized agents, and affiliates, are to be named as additional insureds on the Business Automobile Liability policy. Verification of additional insured status shall be furnished to Owner by providing a copy of the endorsement or Certificate of Insurance:

This insurance will apply as primary insurance with respect to any other insurance or self-insurance that Owner may have or elect to carry with respect to this Project.

1.3 Workers' Compensation

Contractor shall provide and maintain Workers' Compensation and Employers Liability insurance providing coverage in the state (or states) in which the project is performed. Limits and coverage shall be as follows:

Workers' Compensation Insurance	Statutory Benefits
Employers Liability Insurance	**$1,000,000** each accident **$1,000,000** policy limit **$1,000,000** each employee

The "Workers' Compensation" policy must allow a Waiver of Subrogation and the policy must be endorsed accordingly if the Waiver of Subrogation is not permitted without the insurance company's express consent in writing.

1.4 Umbrella Excess Liability

Contractor shall provide umbrella and/or excess liability insurance on an "occurrence" basis providing "following form" coverage for the underlying coverages outlined above with the following minimum limits:

Each Occurrence Limit	**$25,000,000**
Aggregate Limit	**$25,000,000**

Owner, and its Board, officers, employees, as well as authorized agents, and affiliates, are to be named as additional insureds on the Umbrella/Excess Liability policy. Verification of additional insured status shall be furnished to Owner by providing a Certificate of Insurance.

This insurance will apply as primary insurance with respect to any other insurance or self-insurance that Owner may have or elect to carry with respect to this Project.

1.5 Waiver of Subrogation

Contractor waives all rights of subrogation or recovery of damages against Owner (and Owner's agents, officers, directors, and employees) to the extent such damages are covered by the insurance carried or required to be carried under the Contract. Contractor (and its consultants and subcontractors, or anyone directly or indirectly employed by any of them) shall cause each policy required hereunder to contain provisions allowing waiver

of rights of recovery prior to a loss and waivers of rights of subrogation against Owner on the part of the insurer. Contractor shall cause its consultants, subcontractors and sub-subcontractors, agents and employees to execute similar waivers of subrogation in favor of Owner for all insurance coverage except Worker's Compensation. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damage.

1.6 Evidence of Insurance

Contractor shall furnish Certificates of Insurance to Owner prior to commencement of the Work. The certificate holder (and additional insured) should read as follows:

_____
_____
_____

The Certificate(s) of Insurance shall be signed by a duly authorized representative of each insurance company, showing compliance with the insurance requirements set forth herein. The certificate should expressly state that if there is any material change in coverage (cancellation, expiration, or exclusion of a specifically required coverage such as completed operations) that the Contractor or his agent will make every reasonable effort to notify Owner at least ten (10) days prior to such change by written notice.

1.7 Pollution Liability Insurance

Contractor shall obtain and maintain pollution liability insurance covering bodily injury, property damage and environmental damage resulting from sudden or gradual accidental pollution and related cleanup costs arising out of the work or services to be performed under this Contract, with the following limits:

Combined Single Limit	**$1,000,000 per claim**
Annual Aggregate Limit	**$2,000,000**

1.8 Subcontractors

Contractor shall be responsible for ensuring that Subcontractors maintain insurance in accordance with the typical requirements of the Contractor.

1.9 Builder's Risk

The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the State of North Carolina, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent increases in the Guaranteed Maximum Price and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property

insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in the Contract Documents or until no person or entity other than the Owner has an insurable interest in the property to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Architect, Subcontractors and Sub-subcontractors in the Project. The Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.. If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles. The property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

1.9.1 Contractor shall purchase and maintain boiler and machinery insurance required by the contract documents or by law, covering insured objects during installation and until final acceptance by Owner. In lieu of this separate policy, the Contractor may have the boiler and machinery exclusion removed from the builder's risk policy.

1.10 Miscellaneous

1.10.1 The insurance companies providing coverage must be rated "A-" or better by A. M. Best's and be licensed or otherwise approved in the state where the Project is located. Any exceptions to the requirement of (1) being licensed or approved by the State, or (2) having a Best's "A-" rating or better, must be referred to Owner for prior approval.

1.10.2 If Contractor fails to maintain the required insurance as outlined above, Owner shall have the right, but not the obligation, to purchase said insurance at the Contractor's sole expense. Contractor's failure to maintain insurance as required may result in termination of this contract at Owner's option. However, the failure of Owner to demand Certificates of Insurance or evidence of full compliance with these insurance requirements shall not constitute a waiver of the Contractor's obligation to maintain such insurance.

1.10.3 Contractor agrees to insure (or self-insure) all loss to owned or leased tools and equipment, and further agrees that Owner shall have no responsibility for lost or damaged tools or equipment.

1.10.4 Contractor shall be responsible for ensuring that Subcontractors maintain adequate insurance for the Project.

1.10.5 This insurance will apply as primary insurance with respect to any other insurance or self-insurance that Owner may have or elect to carry with respect to this Project.

1.10.6 Owner and its Board, officers, employees, as well as authorized agents, and affiliates, are to be named as additional insureds in with respect all polies other than worker's compensation and professional liability.

EXHIBIT C

WEATHER DAYS

WEATHER DAYS:

For informational and baseline purposes, Owner and Contractor agree that the "Weather Days" at the project location are as follows:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
_17__	_15__	_5__	_4__	_7__	_4__	_5__	_5__	_5__	_3__	_9__	_10__

The baseline above represents the number of calendar days for each month that construction activity is expected to be suspended due to normal seasonal weather.

Contractor assumes full responsibility for completing the project within the contractual timeframe taking into consideration these Weather Days. To the extent that Contractor contends it is entitled to an extension of the Contract Time for adverse weather, Contractor shall pursue such claim as provided in the Contract.

In addition to precipitation, Weather Days shall also include the following conditions:

1. "Snow Days" - are defined as days where critical path activities cannot proceed due standing snow on the project site in excess of 1.0"

2. "Drying Days" – are defined as days where critical path activities cannot proceed subsequent to the actual "rain day" during the period of critical path site work operations (mass grading, building pad grading, excavations, backfill operations). Drying Days that actually prevent critical path site activities from proceeding for more than 5 hours of a scheduled work day are considered Weather Days.

3. "Windy Days" – are defined as days where critical path activities cannot proceed due to high winds that preclude the ability to utilize a crane for critical path activities because wind speeds in excess of the manufacturer's recommendations.

4. A Weather Day only occurs when 5 hours or more of a scheduled work day is missed due to adverse weather.

July 8, 2020

EXHIBIT D

FORM OF SALES TAX AFFIDAVIT

Contractor's North Carolina Sales and Use Tax Affidavit

To: Town of Clayton

Contractor:

Project

For Period: _____

I certify that all North Carolina Sales and Use Taxes due on purchases of materials used in the above-mentioned project, by _____, have been paid in full according to the attached sales tax statement.

By: _____
Name: _____
Title:_____
Date: _____

_____ County, North Carolina

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she signed the foregoing document:

_____
Name of principal

Date: _____

(Official Seal)

_____
Official Signature of Notary

_____, Notary Public
Notary's printed or typed name
My Commission Expires: _____, 20__

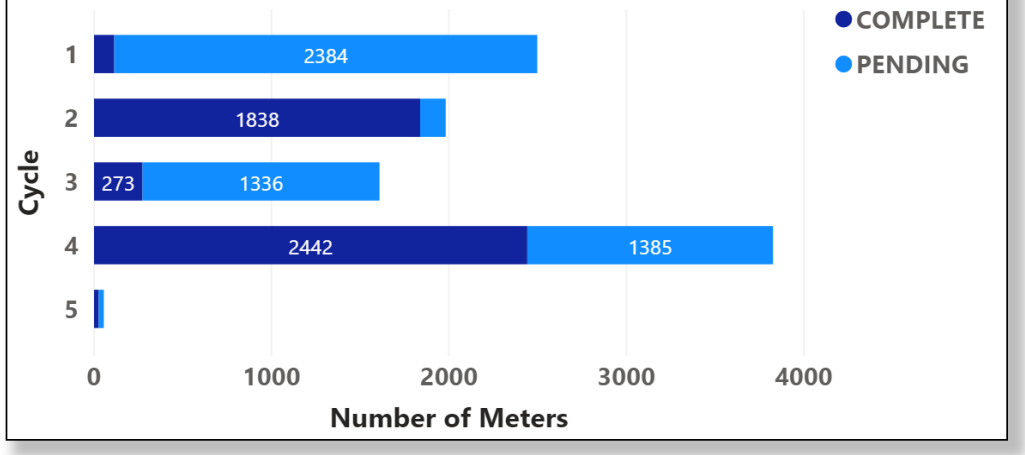
PPAB 5668839v2

Digital Meter Update

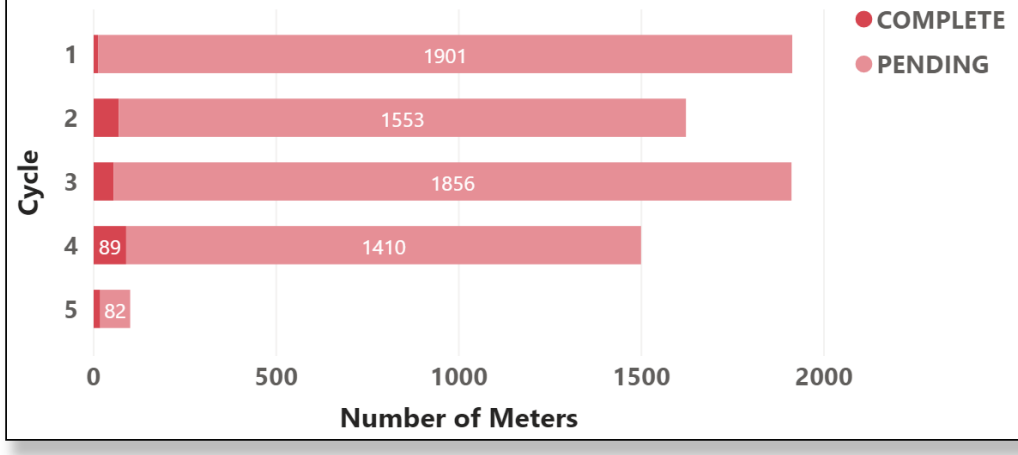
Installation Status - July 31, 2020

INSTALLATIONS COMPLETED BY CYCLE

Meter Installation Status by Cycle, Water Meters, Project-to-Date



Meter Installation Status by Cycle, Electric Meters, Project-to-Date



Total Installations Completed by Cycle, Project-to-Date

CYCLE	WATER	ELECTRIC
1	114	12
2	1838	69
3	273	55
4	2442	89
5	26	18
Total	**4693**	**243**

Total Installations Completed by Cycle, July 2020

CYCLE	WATER	ELECTRIC
1	7	2
2	636	0
3	1	5
4	695	12
5	0	0
Total	**1339**	**19**

INSTALLATIONS COMPLETED BY METER SIZE

Water Meter Installations by Meter Size, Project-to-Date

METER SIZE	INSTALLS COMPLETED
5/8" x 3/4"	4333
1"	149
1.5"	7
2"	187
3"	10
4"	4
6"	1
8"	1
10"	1
Total	**4693**

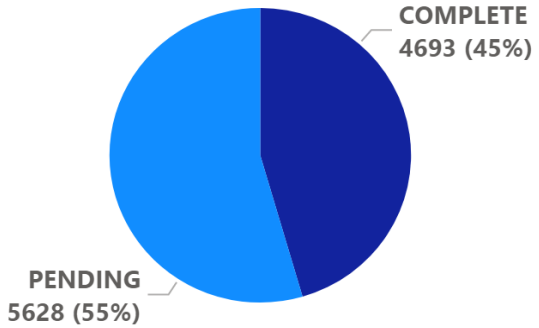
4693

WATER INSTALLS COMPLETE

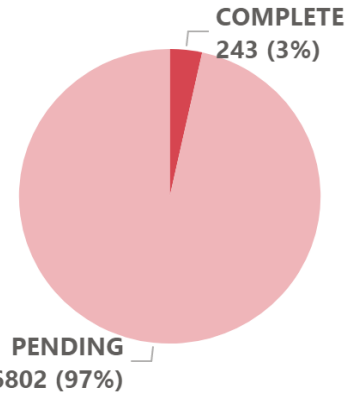
Electric Meter Installations by Meter Type, Project-to-Date

METER SIZE	INSTALLS COMPLETED
Electric Meter	243
Total	**243**

Meter Installation Status, Water Meters, Project-to-Date



243

ELECTRIC INSTALLS COMPLETE

Meter Installation Status, Electric Meters, Project-to-Date