Town of Clayton
Town of Clayton Planning Board Agenda
Monday, September 24, 2018 @ 6:00 PM
Town Council Chambers

1. CALL TO ORDER

2. ROLL CALL

3. ADJUSTMENT OF THE AGENDA

4. APPROVAL OF MINUTES

a. Clayton Planning Board - 27 Aug 2018 - DRAFT Minutes

5. REPORTS AND COMMENTS

6. OLD BUSINESS

7. NEW BUSINESS

a. 2018-163-CUP Rising Tide Contractor's Office - (Quasi-Judicial)
NC PIN: 165911-66-9594
Tag: 05G01014C
Location: 1218 W. Main St.
Application - 2018-163-CUP - Rising Tide Contractor's Office
Newspaper Ad -2018-163-CUP - Rising Tide Contractor Office CUP
Adjacent Property Letter - 2018-163-CUP - Rising Tide CUP
Neighborhood Meeting Materials - 2018-163-CUP - Rising Tide Contractor's Office
Site Plan - 2018-162-SPM - Rising Tide Contractor's Office
Staff Report 2018-163-CUP - Rising Tide Contractor's Office
Staff Report Maps - 2018-163-CUP - Rising Tide Contractor's Office

b. 2018-157-VAR Vinson's Pub Variance (Quasi-Judicial)
NC PIN: 166806-29-8767
Tag: 05008071
Location: 800 E. Main St.
Application - 2018-157-VAR - Vinson's Pub Variance
Newspaper Ad - 2018-157-VAR - Vinson's Pub Variance
Adjacent Property Letter 2018-157-VAR - Vinson Variance
Site Plan - 2018-157-VAR - Vinson's Pub Variance
Approved Site Plan - 2017-169-SPM - Vinson's Pub Variance
Staff Report - 2018-157-VAR - Vinson's Pub Variance
Staff Report Maps - 2018-157-VAR - Vinson's Pub Variance
TRC Response 2017-169-SPM Vnson's Pub Variance

c. 2018-65-SUP Spinning Mill Apartments Special Use Permit

NC PIN: 166918-30-2104 / 166918-30-5328 / 166918-30-8385 / 166918-30-4740 / 166806-48-6538 / 166918-40-2748
Tag: 05037009T / 05037008V / 05037009W / 05037009U / 5037011 / 05H03197H
Location: 300 Mill Street
Application - 2018-65-SUP - Spinning Mill Lofts at East Village
Neighborhood Meeting Materials - 2018-64-SP - Spinning Mill Lofts Major Site Plan
Site Plan - 2018-64-SP - Spinning Mill Lofts at East Village
Staff Report - 2018-65-SUP - Spinning Mill Special Use Permit
Staff Report Map 2018-64-SP and 2018-65-SUP Spinning Mill Lofts at East Village
Wastewater Allocation Request - 2018-64-SP - Spinning Mill Lofts at East Village
NCDOT Comments & Review - 2018-64-SP - Spinning Mill Lofts at East Village SP
Full TIA- 2018-64-SP and 2018-65-SUP - Spinning Mill SP and SUP

d. 2018-64-SP Spinning Mill Apartments Major Site Plan
NC PIN: 166918-30-2104 / 166918-30-5328 / 166918-30-8385 / 166918-30-4740 / 166806-48-6538 / 166918-40-2748
Tag: 05037009T / 05037008V / 05037009W / 05037009U / 5037011 / 05H03197H
Location: 300 Mill Street
Application - 2018-64-SP - Spinning Mill Lofts at East Village
Neighborhood Meeting Materials - 2018-64-SP - Spinning Mill Lofts at East Village Major Site Plan
Site Plan - 2018-64-SP - Spinning Mill Lofts at East Village
Staff Report - 2018-64-SP - Spinning Mill Lofts at East Village Major Site Plan
Staff Report Map - 2018-64-SP and 2018-65-SUP Spinning Mill Lofts at East Village
Wastewater Allocation Request - 2018-64-SP - Spinning Mill Lofts at East Village
NCDOT Comments & Review - 2018-64-SP - Spinning Mill Lofts at East Village SP
Full TIA- 2018-64-SP and 2018-65-SUP - Spinning Mill SP and SUP

e. 2018-120-SD Ashcroft Ph. 6 & 7 Preliminary Plat Major Modification
NC PIN: 16690-76-7638 / 16690-75-4535
Tag: 05H02200B / 05H02015A
Location: Atwood Drive
Application - 2018-120-SD - Ashcroft Ph. 6 & 7
Neighborhood Meeting Materials - 2018-120-SD - Ashcroft Ph 6 & 7 Major Modification
Site Plan - 2018-120-SD - Ashcroft Ph. 6 & 7
Staff Report - 2018-120-SD - Ashcroft Ph. 6 & 7 Major Modification (preliminary plat)
Staff Report Map - 2018-120-SD - Ashcroft Phase 6 & 7 Modification
Trip Generation Letter - 2018-120-SD - Ashcroft Ph 6 & 7 Major Modification

f. 2018-119-PDD Ashcroft Ph. 6 & 7 Planned Development Rezoning
NC PIN: 166900-76-7638 / 166900-75-4535

Tag: 05H02200B / 05H02015A
Location: Atwood Drive
Application - 2018-119-PDD - Ashcroft Phase 6 & 7
Neighborhood Meeting Materials - 2018-120-SD - Ashcroft Ph 6 & 7 Major Modification
Staff Report - 2018-119-PDD - Ashcroft Phase 6 & 7 Rezoning
Staff Report Map - 2018-119-PD - Ashcroft Phase 6 & 7 Rezoning

g. 2018-121-SUP The Village at Parkview Ph. 9-16 Special Use Permit
NC PIN: 166909-06-4838 / 166909-06-1495 / 166909-06-1265
Tag: 05H02020 / 05H02199C / 05H02198
Location: City Road, south of Legend Park and east of Parkview Subdivision
Application - 2018-121-SUP - Villages at Parkview Ph. 9-16 SUP (major modification)
Neighborhood Meeting Materials - 2018-121-SUP - Villages at Parkview SUP (major modification)
Staff Report - 2018-121-SUP- Villages at Parkview SUP Modification
Staff Report Maps - 2018-121-SUP - Villages at Parkview Special Use (major modification)
Site Plan - 2018-121-SUP- The Village at Parkview Ph 9-16

h. 2018-122-SD The Village at Parkview Ph. 9-16 Preliminary Plat Major Modification
NC PIN: 166909-06-4838 / 166909-06-1495 / 166909-06-1265
Tag: 05H02020 / 05H02199C / 05H02198
Location: City Road, south of Legend Park and east of Parkview Subdivision

Application - 2018-122-SD - Villages at Parkview SD
Neighborhood Meeting Materials - 2018-122-SD - Villages at Parkview SD (major modification)
Site Plan - 2018-122-SD - The Village at Parkview Ph 9-16
Staff Report - 2018-122-SD - Villages at Parkview Preliminary Plat (major modification)
Staff Report Maps - 2018-122-SD - Villages at Parkview SD (major modification)
Stormwater Statement - 2018-122-SD The Village at Parkview Ph 9-16
Traffic Letter - 2018-122-SD - Villages at Parkview SD

i. 2018-62-SD Kyli Knolls
NC PIN: 165803-23-2656
Tag: 05G03009A
Location: Amelia Church Road
Application - 2018-62-SD - Kyli Knolls
Neighborhood Meeting Materials - 2018-62-SD - Kyli Knolls
Site Plan - 2018-62-SD - Kyli Knolls Subdivision
Staff Report- 2018-62-SD- Kyli Knolls
Staff ReportMap - 2018-62-SD - Kyli Knolls

j. 2018-160-SP Stephenson Mixed Use Major Site Plan
NC PIN: 166917-21-0311
Tag: 05011043
Location: West corner of Main Street and Smith Street
Application - 2018-160-SP - Stephenson Mixed-Use Building

Neighborhood Meeting Materials - 2018-160-SP - Stephenson Mixed Use Building
Site Plan - 2018-160-SP - Stephenson Mixed Use
Staff Report - 2018-160-SP - Stephenson Mixed Use Major Site Plan
Staff Report Map - 2018-160-SP - Stephenson Mixed Use Major Site Plan

8. INFORMAL DISCUSSION AND PUBLIC COMMENT

9. ADJOURN

The Town of Clayton
Clayton Planning Board Minutes
Monday August 27, 2018 @ 6:00 PM
Town Council Chambers

BOARD MEMBERS PRESENT:

Andria Merritt
Ross Benson
Stephen Powers
James Lipscomb
Marty Bizzell
Frank Price
Sarah Brooks
George "Bucky" Coats

STAFF PRESENT:

David DeYoung, Economic & Community Development Director
Samantha Wullenwaber, Planning Director
Haley Hogg, Planner
Damiere Powell, Planner
Chrissy Dunn, Clerk to the Board
Michael Grannis, Mayor Pro-Tem
Merrick Parrott, Town Attorney

MEMBERS ABSENT:

Bob Ahlert

1 CALL TO ORDER

a) Marty Bizzell called the meeting to order at 6:07 p.m.

2 ROLL CALL

3 ADJUSTMENT OF THE AGENDA

a) 2018-62-SD Kyli Knolls Preliminary Plat has been removed from the agenda to be continued into the September 24, 2018 Planning Board Meeting.

Motion: Board Member Benson
Second: Board Member Brooks
Vote: Unanimous

4 APPROVAL OF MINUTES

a) July 23, 2018 Draft Minutes

ACTION: Motion to Approve Minutes
Motion: Board Member Powers
Second: Board Member Brooks
Vote: Unanimous

5 REPORTS AND COMMENTS

6 OLD BUSINESS

7 NEW BUSINESS

a) 2018-156-RZ Avalon Center Rezoning
NC PIN: 166800-84-0769
Tag: 05I04017
Location: 9257 US Hwy 70 Bus W, adjacent to Hardee Lane. It is the site of the former Ashley Furniture Store.

David DeYoung presented this project. The applicant is requesting to rezone 8.07 acres from Highway-Business (B-3) to Industrial Light (I-1). This property is currently occupied by an existing building which was the old Ashley Building, and currently is utilized for warehousing and indoor entertainment. The applicant is requesting the rezoning in order to market the property and attract future tenants to occupy the building that remains partially vacant at this time. This request is consistent with Comprehensive Plan 2040 and also consistent with surrounding land uses. Staff recommends approval to rezone the property from Highway-Business (B-3) to Industrial Light (I-1). There were no questions for staff.

The applicant was present to answer any questions. The applicant gave a brief description of what will they would like the use of the building to be. There is some parking issues that applicant will like to address and correct. Converting this property to Industrial Light (I-1) will help with the parking issues. The change of zoning will also allow landlord to lease building as light industrial users to permitted uses and get the building filled up with tenants. He explained that the current uses for this building are not useful and the building is sitting mostly vacant. There were no questions for the applicant.

ACTION: Recommended Approval 2018-156-RZ to Town Council

Motion: Board Member Brooks
Second: Board Member Price
Vote: Unanimous

b) 2018-61-SUP Camel Street Townhomes Special Use
NC PIN: 166914-23-5178
Tag: 05E99012C
Location: 312 Camel Street

Board Member James Lipscomb requested to recuse himself from this project.

Samantha Wullenwaber presented this project. The applicant is requesting approval to develop the use of townhomes on a portion of the subject property, zoned Residential-8 (R-8). A Preliminary Plat application (2018-59-SD) is running concurrently with this Special Use Permit application. The proposed use is to develop 66 townhome units on 7.84 acres. The proposed impervious surface will be a maximum of 75% per lot. Proposed parking will be 2 spaces per unit with a total of 132 spaces. The location of the townhomes are at the

corner of Camel Street and Mial and will have one access point off Camel Street. The remainder of the units will have on access point off of Camel Street. The townhomes will be supplied with Town of Clayton utilities, electric, water and sewer. Dumpsters will be provided within both the eastern and western portion of the development. The property is currently vacant and is heavily wooded. A portion of the development is located within the Watershed Protection Overlay. Cooper Elementary School is located on the North side of the property with mostly single family dwellings on the other side. There is also a parcel that splits the property, which is centered in the middle with frontage on Camel Street, dividing it into two developed areas. The property is designated as Downtown Residential and is within the Comprehensive Plan 2040 Future Land Use Map. The proposed development is consistent with the Unified Development Code (UDC) with approval of the Special Use Permit. Considerations from staff for approval is subject to the approval of the Special Use Permit, (2018-61-SUP). If approved staff recommends the following conditions be applied to this application

- Following board approvals, three copies of the final preliminary subdivision plan meeting the conditions of approval to be submitted to the Planning Department for final approval. The conditions of approval shall be recorded on the plans before final approval is granted.

- Johnston County will review and approve the proposed on-site storm water features. If these features are not deemed adequate, the project will be limited to 24% impervious surface coverage for the portion within the watershed protection overlay. The dimensional standards for this development are set via the Special Use Permit process including setbacks. The applicant does not provide additional parking to serve guests. Handicap spaces are only proposed at one building for the eastern portion the development and may not be easily accessible. The buildings along Camel Street are proposed to face internally rather than front along Camel Street. The architectural elevations only consist of vinyl siding. Additional materials may enhance the overall appearance of these buildings.

- The applicant will pay fee-in-lieu for recreation; no on-site recreation facilities/open space are proposed. Staff recommends approval with conditions.

The applicant, Stephen Sanderson was present for questions. He explained that each townhome will be a Single Family Attached Home and each homeowner will own the house and the land underneath. Mr. Sanderson explained that the proposed impervious areas that were mentioned previously was incorrect information. The lot sizes of the townhomes will differ because the end lots will have different widths than interior lots. On the smallest lot, the impervious surface will be a maximum of 80% and for entire site, the impervious surface will be less than 30%. With the Special Use Permit, the applicant or builder has no objections to the conditions listed. The Preliminary Plat has the same impervious conditions that staff recommends. The applicant stated that item #7 in staff condition needed clarification. Porches were not

included in the previous plans and he wanted to specify lots 1-16 and lots 53-58 have the rear facing Camel Street, and one is a side facing on Camel Street that cannot change (lot 59). The frontage will be turned around to face Camel Street, except for the side. The next item, #8, Mr. Sanderson spoke with builder about the decorative features on the buildings. The builder has no problem with providing a decorative feature but he would like to do different decorative masonry features so the homeowner can select what they would like when building their home. Board Member Sarah Brooks had questions about the parking and if they would increase it? Mr. Sanderson stated that the handicap parking is ADA approved, however the parking spaces for each resident are maxed out. If there is room for additional parking they will find a way. Handicap parking will be moved to different parts of the site, but handicap parking can be no more than a 2% slope to the parking space. Board Member Frank Price asked if the parking area would be maintained by the HOA. Mr. Sanderson stated it will be maintained by the HOA as well as the rest of the property.

Resident Emily Beddingfield spoke of some concerns towards this project. She stated the parking is an issue on Camel Street and stated that most residents have two vehicles per household and the site plan should be modified to create more parking. Another concern with the parking is to have more space for emergency vehicles to get through. Ms. Beddingfield suggested a pause in the continuing of this project to get items of concern fixed. Ms. Penny Sicotto, owner of the property, stated she is more than willing to work with staff to make this a workable project.

Board Members suggested to send this project back to the Technical Review Committee, submit the revisions, return to the Planning Board within 90 days and remove this from upcoming Town Council Agenda.

ACTION: Recommendation for 2018-61-SUP Camel Street Townhomes Special Use Permit to be sent back to the Technical Review Committee.

Motion: Board Member Benson
Second: Board Member Powers
Vote: Unanimous

c) 2018-59-SD Camel Street Townhomes Preliminary Plat
NC PIN: 166914-23-5178
Tag: 05E99012C
Location: 312 Camel Street

This project runs concurrent with 2018-61-SUP Camel Street Townhomes Special Use.

ACTION: Recommendation for 2018-59-SD Camel Street Townhomes Preliminary Plat to be sent back to the Technical Review Committee.

Motion: Board Member Benson
Second: Board Member Powers

Vote: Unanimous

d) **2018-133-RZ Tew Court Rezoning**
NC PIN: 165909-16-2635
Tag: 05G02002Z
Location: The property is located off Tew Court with frontage along US Hwy 70 Bus.

Haley Hogg presented this project. The applicant is requesting to rezone 1.55 acres from Highway-Business Special Use (B-3 SUD) to Highway Business (B-3). This request is consistent with the Comprehensive Plan 2040, and also consistent with the Surrounding Land Uses. The applicant has addressed the approved criteria. Staff is recommending approval of the subject parcel from B-3 SUD to B-3. There were no questions for staff.

The applicant Alsey Gilbert was present for questions. He stated at the Neighborhood Meeting everyone was in agreement. There were no questions for applicant.

ACTION: **Recommendation of Approval of 2018-133-RZ to Town Council.**

Motion: Board Member Brooks
Second: Board Member Lipscomb
Vote: Unanimous

e) **2018-125-SD Warrick Park Preliminary Plat - Major Modification**
NC PIN: 175000-30-9566/175000-30-6174
Tag: 05G01016H/05G01020K
Location: North of Old US 70 Hwy W and east of Fieldstone Drive.

Board Member James Lipscomb requested to recuse himself from this project.

Samantha Wullenwaber presented this project. The applicant is requesting a waiver from sidewalk construction and fee-in-lieu as required within the original approval (2016-163-SD). The original approval the applicant received waivers from the Town's requirements to build curb, gutter but no waiver for the sidewalk on one side and fee-in-lieu for the other side. The applicant met with the Planning Department to discuss the sidewalk that was put in. The sidewalk is located on the other side of the ditch section and the connection to the sidewalk has no ramps due to that ditch section. This has created a safety issue. The sidewalk has been removed by the builder.

Staff supported the waiver request from sidewalk however, staff does not support request from fee-in-lieu and recommended that fee-in-lieu still be required. If approved the original conditions of approval were recommended to be applied. The fee-in-lieu suggested to be paid prior to the final Certificate of Occupancy is issued, was a newly added condition. Board Member Frank Price asked if the Town would take over maintenance of the streets. The streets are Town of Clayton streets, therefore yes, the Town would maintain the streets.

The applicant, James Lipscomb was present. He asked for pay-in-lieu for only one side of the street for sidewalks as the original condition. There were no questions for the applicant.

Board Member Stephen Powers had a question for staff about the fee-in-lieu. He asked what is the reason the applicant is being charged for both sides of the sidewalk when initially with original approval, there was going to be only one side charged fee-in-lieu and one side sidewalk. Planning Director Samantha Wullenwaber replied that staff recommends fee-in-lieu for both sides, but this choice is at the discretion of the Planning Board recommendation and ultimately, Town Council.

ACTION: Recommendation of Approval of 2018-125-SD with conditions presented by staff to Town Council.

Motion: Board Member Coats
Second: Board Member Benson
Vote: Unanimous

f) 2018-167-OA Dumpster's (service areas) Ordinance Amendment

Samantha Wullenwaber presented this project. The request is to require non-conforming service areas to come into compliance with the screening requirements of the Unified Development Code for all dumpsters (service areas) within our jurisdiction. The request is to have a three year amortization period and be completed by October 1st, 2021. This would require all service areas with dumpsters to be fully enclosed by opaque walls, gates, and /or fences at least eight feet in height, constructed of the same materials as the primary building on site. Also, the service areas would be required to meet specific location and landscaping requirements. Staff is recommending approval of the ordinance amendment.

Board Member James Lipscomb went over the costly expense of the request to build dumpsters. He stated he would be costly for some businesses to meet town standards. He suggested to take into consideration a different method. Samantha Wullenwaber stated that we needed to be consistent throughout the entire town. Board Member Stephen Powers asked if we could approach the Town Council with help with the expenses for the residents and business owners. Board Member James Lipscomb suggested to waive permit fees if the dumpster owner got this process completed in a quicker amount of time and to make a standardized building plan. Board Member Marty Bizzell stated there are a lot of requirements in this ordinance and many properties could not meet the request. He would like staff to look at it and come back with some different ideas due to this will affect a lot of the citizens.

Town Council Member and resident Bobby Bunn showed some pictures of a dumpster that was taken this morning with debris all around it. He stated this is a safety issue. He would like to take some considerations and make some recommendations towards the enclosures for the dumpsters.

Town Council Member Michael Grannis stated he would like staff to bring back some recommendations and that this can be a hardship on businesses, and is something that needs to be addressed. He feels the Town can't put the entire burden on residents.

Board Member James Lipscomb asked about getting roll out carts instead of dumpsters. Samantha explained that only some dumpsters are maintained by All Star and most Multi-Family units have dumpsters. She would need to speak to Director of Customer Service for this recommendation. Samantha suggested she could get prices together and share the permit fees at the next meeting.

ACTION: Recommendation of Approval 2018-167-OA to be continued for further staff review.

Motion: Board Member Price
Second: Board Member Coats
Vote: Unanimous

8 INFORMAL DISCUSSION AND PUBLIC COMMENT

9 ADJOURN

a) With there being nothing further the meeting was adjourned at 8:13 p.m.

ACTION: Motion to Adjourn

Motion: Board Member Bizzell
Second: Board Member Lipscomb
Vote: Unanimous

_____
Bob Ahlert, Chair

ATTEST:

_____
Chrissy Dunn, Clerk to the Board

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

CONDITIONAL USE APPLICATION

Pursuant to Article 7, Section 155.710 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Board of Adjustment to allow a Conditional Use. Conditional Uses are uses that may be appropriate in a particular district, but has the potential to create incompatibilities with adjacent uses.

Application Fee: $400.00.
Advertisement Fee: $100.00.
All fees are due when the application is submitted.

APPLICATION TYPE

☒ **New Conditional Use Permit**

☐ **Major Modification to an approved CUP**
Permit Modified: _____

SITE INFORMATION

Name of Project: Rising Tide Contractor Office **Acreage of Property:** 0.57 AC

County Tag #: 05G01014C **NC PIN:** 165911-66-9594

Address/Location: 1218 W. Main St., Clayton, NC 27520

Existing Use: Vacant Building **Proposed Use:** Contractor Office

Is project within a Planned Development? ☒ **No** ☐ **Yes**

Planned Development District (if applicable): _____

Is project within an Overlay District?: ☒ **No** ☐ **Yes**

Overlay District (if applicable): _____

Is a site plan being concurrently submitted? ☐ **No** ☒ **Yes**

OFFICE USE ONLY

RECEIVED
AUG 01 2018
TOWN OF CLAYTON
PLANNING DEPARTMENT

Date Received: AUG 01 2018

Amount Paid: $500 CK#1753
owes 100 CK 1754

File Number: 2018-163-CUP

PROPERTY OWNER INFORMATION

Name: Dwight and Wanda Adams

Mailing Address: 417 Lond Needle Dr., Clayton, NC 27527

Phone Number: 919-868-0129 **Fax:** N/A

Email Address: risingtidebuilders@gmail.com

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

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

Phone Number: 919-763-7278 **Fax:** N/A

Contact Person: Donnie Adams

Email Address: donnie@adamsandhodge.com

REQUIRED INFORMATION (*to be submitted with the application*)

Please fill out the following checklist. The following items must accompany a Conditional Use Permit (CUP) application.

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: 05/16/18	☑				
2. Review Fee ($400) and Advertisement Fee ($100)	☑				
3. Completed application	☑				
4. Owner's Consent Form	☑	☐			
5. Adjacent property owners list	☑				
6. Wastewater allocation request OR verification of wastewater allocation	☐	☑			
7. Signed and sealed traffic impact analysis (2 copies) *Required for projects generating at least 100 vehicle trips at peak hour. See§155.708 of the UDC.*	☐	☑			
8. Neighborhood meeting notice letter (1 copy) *See sample letter and meeting requirements included in this packet*	☑	WILL SUBMIT WHEN REQ'D			
9. Set of stamped, addressed envelopes with no return address, using the adjacent property owners list (One set) *To be used for Town's public noticing of the Board of Adjustment hearing.*	☑	WILL SUBMIT WHEN REQ'D			
10. Neighborhood meeting summary form (1 copy) *Form is included in this packet*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Board of Adjustment meeting.				

Note: More information may be requested by the Planning Department depending on the project

EXPLANATION OF PROJECT

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

The applicant proposes to use the current vacant building as a contractor office. Being one of the first structures seen when entering the Town from the west, the applicant proposes artwork which will be in the form of a mural on the west facing facade of the building that will represent the Town name. The proposed mural will incorporate a good design, which will enhance the appearance and first impressions of the Town of Clayton.

REQUIRED FINDINGS OF FACT

Section 155.710(G) of the Unified Land Development Code requires applications for a Conditional 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 ultimately developed according to the plans as submitted.

   The proposed plan will not materially endanger the public health or safety if located where proposed and ultimately developed according to the submitted plans. The applicant proposes to clean up the current site and enhance the first impressions of the Town of Clayton by incorporating build improvements, landscaping, and artwork (mural).

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.

   The proposed plan includes modifications to the existing building and site based on input from Town staff. The appropriate number of parking spaces are provided including an ADA space. The landscaping plan meets or exceeds Town standards.

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 applicant will not substantially injure the value of adjoining or abutting property, and will not be detrimental to the use or development of adjacent properties of the surrounding area. The applicant will improve the community by remodeling the facade of the vacant existing building and by making it more appealing to the community and the Town of Clayton.

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 applicant proposes to add public artwork which will promote the adopted plans and policies of the Town and add to the existing standards for the surrounding area.

APPLICANT AFFIDAVIT

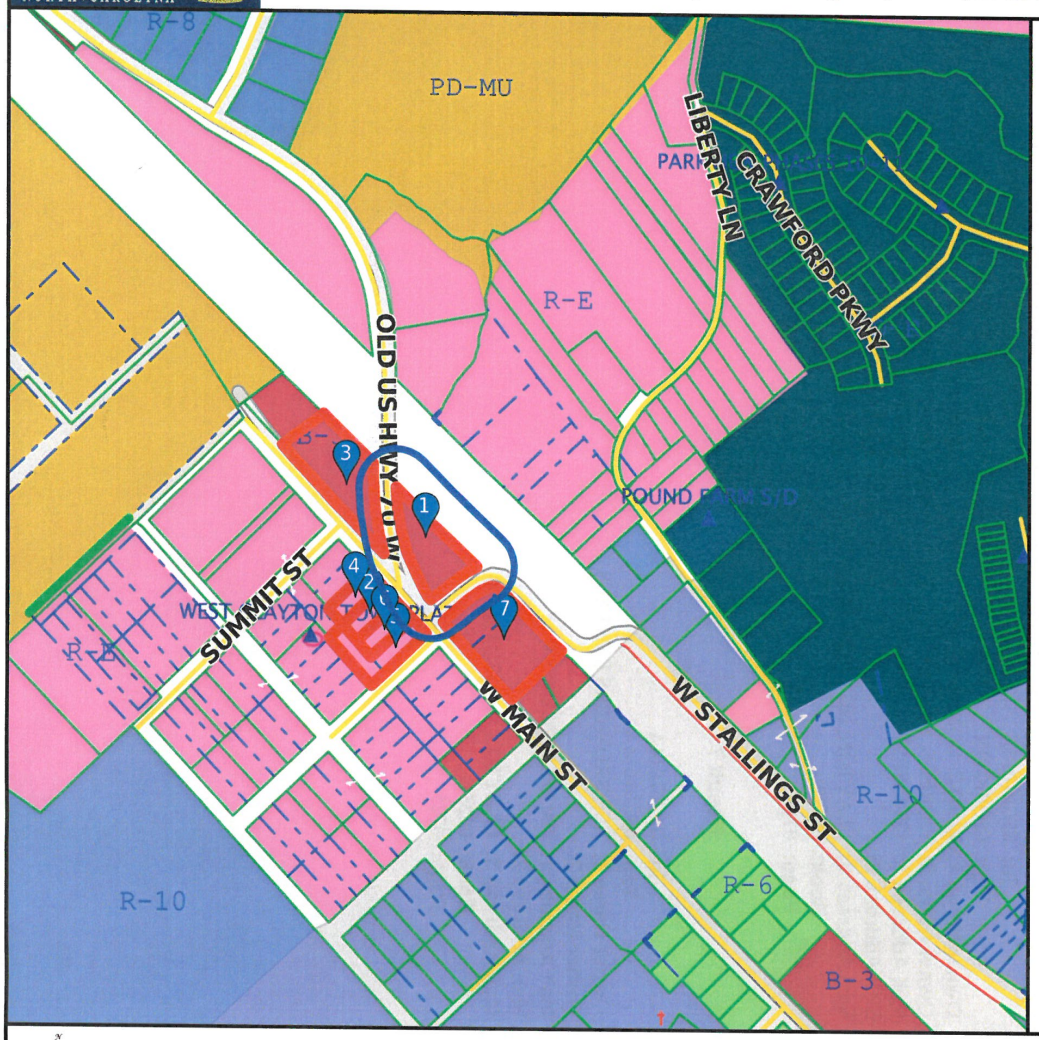
I/We, the undersigned, do hereby make application and petition to the Board of Adjustment of the Town of Clayton to approve the subject Conditional Use. I hereby certify that I have full legal right to request such action and that the statements or information made in any paper or plans submitted herewith 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.

ADAMS & HODGE		08/01/18
Print Name	*Signature of Applicant*	*Date*

JOHNSTON COUNTY NORTH • CAROLINA

*** DISCLAIMER ***

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



Result 1

id: 05G01014C
Tag: 05G01014C
Owner Name 1: 1218 PROPERTIES, LLC
Owner Name 2:
Mail Address 1: 510 FONTANA DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27527-7306
Book: 05195
Page: 0465

Result 2

id: 05E99007E
Tag: 05E99007E
Owner Name 1: FERRANTE, JOHN JOSEPH
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 1056
Mail Address 3: CLAYTON, NC 27528-1056
Book: 04343
Page: 0502

Scale: 1:5030 - 1 in. = 419.16 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
September 7, 2018

JOHNSTON COUNTY NORTH•CAROLINA

***** DISCLAIMER *****

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

Result 3

id: 05G01199L
Tag: 05G01199L
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716

Result 4

id: 05G01198H
Tag: 05G01198H
Owner Name 1: RIPELLINO, NICOLE
Owner Name 2:
Mail Address 1: 1219 W MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-1626
Book: 02781
Page: 0926

Result 5

id: 05G01014X
Tag: 05G01014X
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716

Result 6

id: 05H02199M
Tag: 05H02199M
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716

Result 7

id: 05G01014A
Tag: 05G01014A
Owner Name 1: LEE BROTHERS RENTALS
Owner Name 2:
Mail Address 1: 400 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02251
Page: 0725

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

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: Rising Tide Site **Address or PIN #:** 165911-66-9594

AGENT/APPLICANT INFORMATION:

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

314 E. 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 below)***:

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 my agent or me 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:

Wanda B Adams
(Name - type, print clearly)

417 Long Needle Dr.
(Address)

Wanda B Adams
(Owner's Signature)

Clayton, NC 27520
(City, State, Zip)

STATE OF North Carolina **COUNTY OF** Wake

Sworn and subscribed before me, Lynn A Watkins, a Notary Public for the above State and County, this the 1 day of August, 20 18.

Lynn A Watkins
Notary Public

SEAL

LYNN A. WATKINS NOTARY PUBLIC WAKE COUNTY, NC

My Commission Expires: 12-7-2021

Public Notice

In accordance with NC GS 160A-364, the Clayton Planning Board will conduct the following evidentiary hearings on Monday, September 24, 2018, at 6 PM in the Town Council Chambers in Town Hall located at 111 East Second Street:

- **2018-163-CUP Rising Tide Contractor Office Conditional Use Permit; request to allow the use of a contractor office on property zoned Highway-Business (B-3). The property is located at 1218 W Main Street and is .57 acres; TAG # 05G01014C. According to the Unified Development Code, a Conditional Use Permit is required to operate a contractor office in the B-3 zoning district.**
- **2018-157-VAR Vinson's Pub Variance; request for a variance from sections 155.203(K)(2), 155.204(D)(12)(C), 155.402(G)(4)(a), and 155.402(G)(4)(b) of the Unified Development Code. This variance request pertains to an addition to the primary structure and unscreened mechanical equipment. The property is zoned Central Business (B-1) and is .19 acres; TAG # 05008071.**

During an evidentiary hearing, the Planning Board 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 interested persons are invited to attend.

Haley Hogg, Planner
919-553-5002

_____

Clayton News- Star

Please advertise on the following dates:
September 14, 2018
September 21, 2018

Dates are the two Fridays prior to the hearing

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

September 7, 2018

NOTICE

SUBJECT: **Project:** 2018-163-CUP Rising Tide Contractor Office Conditional Use Permit

Address: 1218 W Main Street

PIN #: 165911-66-9594

Applicant: Adams & Hodge Engineering, PC

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Planning Board will hold an evidentiary hearing on ***Monday, September, 24, 2018 at 6:00 PM*** at Town Hall, 111 E Second Street, to consider the above referenced Conditional Use Permit application. The applicant is requesting issuance of a Conditional Use Permit to operate the use of a contractor office on the subject property. Per the Unified Development Code, the use of a contractor office is only permitted in the Highway-Business (B-3) zoning district through the issuance of a Conditional Use Permit. Please see the map on the back of this letter.

Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this request. You are invited to attend this meeting. During an evidentiary hearing, the Planning Board 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 interested persons are invited to attend.

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, CZO
Planner

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Conditional Use Permit Date of Mailing: September 7

Date of Meeting: Wed. Sept. 19, 2018 Time of Meeting: 7:00 pm

Location of Meeting: 314 E. Main St. Clayton, NC 27527

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: Holland Adams Signature: Holland Adams

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.*

Donnie Adams with Adams & Hodge Engineering, PC had all materials ready to present for Rising Tide. He waited until 7:30pm and noone shawed up.

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

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Rising Tide

Application: Conditional Use Permit

Location/Date: 314 E. Main St. Clayton, NC 27520 Sept. 19, 2018

	NAME	ADDRESS
1	Donnie Adams	404 Swann Tr. Clayton 27527
2	Holland Adams	404 Swann Tr. Clayton 27527
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

ADAMS & HODGE ENGINEERING, PC

September 6, 2018

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: **Wednesday, September 19, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **314 E. Main Street (Adams & Hodge Engineering)**
Clayton, NC 27520

Type of Application: **Conditional Use**

Project/proposal property address: 1218 W.Main Street, Clayton, NC 27520

Description of project/proposal: **The project includes updating an existing building for the use of a Contractor Office.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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

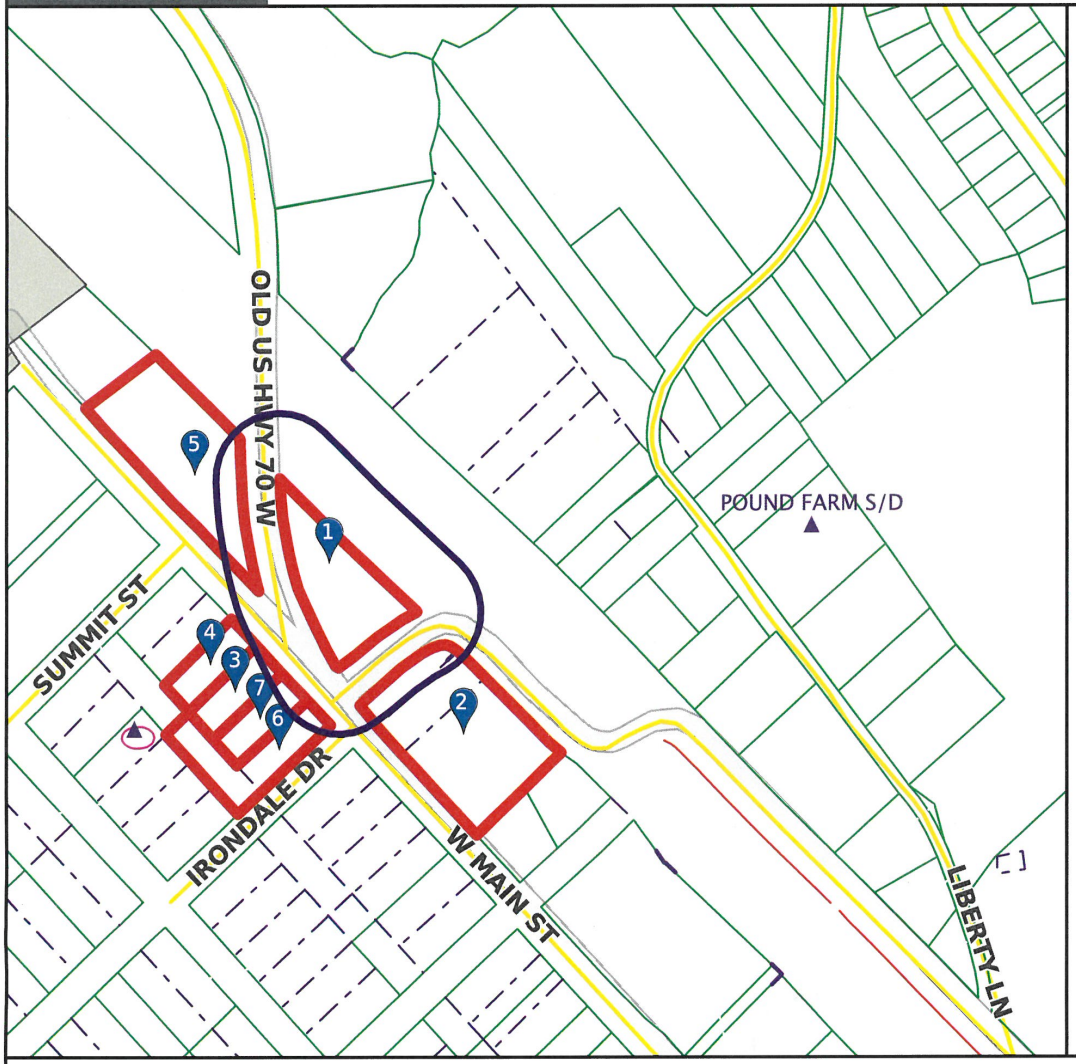
NORTH CAROLINA PROFESSIONAL SEAL 25459 ENGINEER DONALD C. ADAMS, JR.

Cc: Town of Clayton Planning Dept.

JOHNSTON COUNTY
NORTH • CAROLINA

*** DISCLAIMER ***

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



Result 1

id: 05G01014C
Tag: 05G01014C
Owner Name 1: 1218 PROPERTIES, LLC
Owner Name 2:
Mail Address 1: 510 FONTANA DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27527-7306
Book: 05195
Page: 0465

Result 2

id: 05G01014A
Tag: 05G01014A
Owner Name 1: LEE BROTHERS RENTALS
Owner Name 2:
Mail Address 1: 400 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02251
Page: 0725

Scale: 1:3065 - 1 in. = 255.42 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
September 6, 2018

JOHNSTON COUNTY NORTH CAROLINA

*** DISCLAIMER ***

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

Result 3

id: 05E99007E
Tag: 05E99007E
Owner Name 1: FERRANTE, JOHN JOSEPH
Owner Name 2:
Mail Address 1:
Mail Address 2: PO BOX 1056
Mail Address 3: CLAYTON, NC 27528-1056
Book: 04343
Page: 0502

Result 4

id: 05G01198H
Tag: 05G01198H
Owner Name 1: RIPELLINO, NICOLE
Owner Name 2:
Mail Address 1: 1219 W MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-1626
Book: 02781
Page: 0926

Result 5

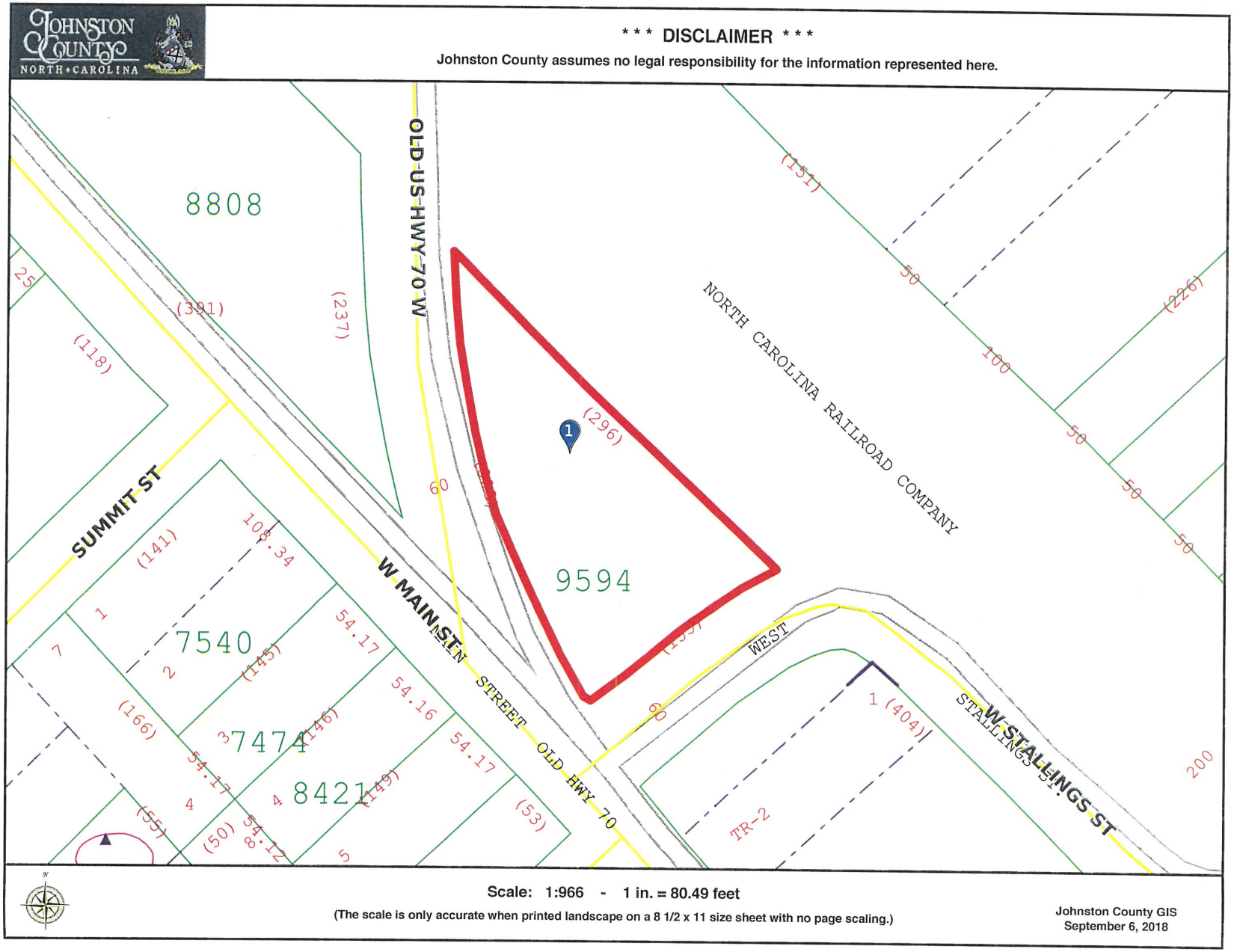
id: 05G01199L
Tag: 05G01199L
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716

Result 6

id: 05G01014X
Tag: 05G01014X
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716

Result 7

id: 05H02199M
Tag: 05H02199M
Owner Name 1: WHITE, DONNA M
Owner Name 2: WORLDS, SYLVIA L
Mail Address 1: 1330 WEST MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02779
Page: 0716


JOHNSTON COUNTY
NORTH CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
8808
9594
7540
7474
8421
OLD US HWY 70 W
W MAIN ST
OLD HWY 70 WEST
NORTH CAROLINA RAILROAD COMPANY
SUMMIT ST
W STALLINGS ST
STALLINGS ST
TR-2
Scale: 1:966 - 1 in. = 80.49 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
September 6, 2018

MINOR SITE PLAN

CONDITIONAL USE

FOR

RISING TIDE CONTRACTOR OFFICE

IN

CLAYTON, NORTH CAROLINA

SITE VICINITY MAP

NOT TO SCALE

DEVELOPER/APPLICANT:

1218 Properties, LLC.
510 Fontana Drive
Clayton, NC 27527

CONTACT/AGENT: DONNIE C. ADAMS
919 763-7278

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

SHEET INDEX

SHEET TITLE	SHEET No.
BOUNDARY SURVEY	SP1
EXISTING CONDITIONS	SP2
SITE PLAN FOR CONTRACTOR OFFICE	SP3
LANDSCAPE PLAN	SP4
PROPOSED ARCHITECTUAL PLAN	A-1
EXISTING ARCHITECTUAL PLAN	A-2

Received by Town of Clayton
8/24/2018

PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15469 DONALD C. ADAMS, JR.

REVISED
1:06 pm, Aug 24, 2018

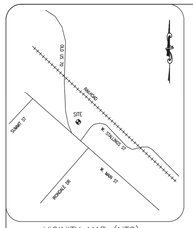
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
919-243-1332 donnie@adamsandhodge.com
F#Bd # C-4187

RISING TIDE SITE

CLAYTON, NORTH CAROLINA

AUGUST 1, 2018
** AUGUST 24, 2018 TOWN COMMENTS*

PROJECT 2018-162-SPM



VICINITY MAP (NTS)

Note 'A'
This property is located in Zone 'X' (minimal flood risk) and is not within a Special Flood Hazard Area.
FIRM # 3720165900K
Effective Date: 06/20/2018

Note 'B'
This property is currently Zoned 'B-3'

Note 'C'
All distances are horizontal ground unless otherwise stated

Note 'D'
All areas computed by coordinate method

Note 'E'
The parcel(s) shown hereon are subject to any and all easements, rights of way and restrictions of record

Note 'F'
No grid monuments recovered within 2000' of property

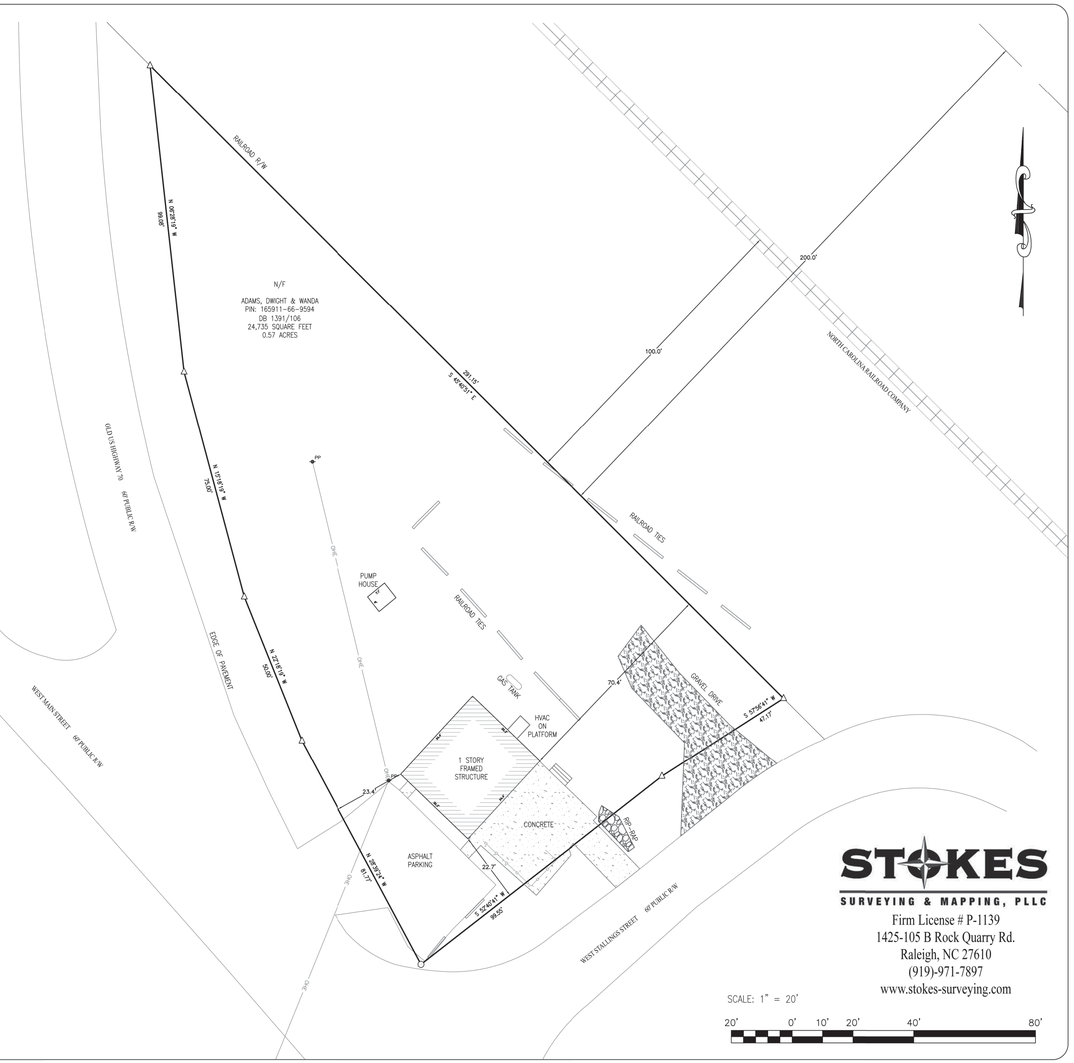
Note 'G'
Underground utilities were not considered on this survey

Survey for:
Joshua Davis
of:
The Property Described in Deed Book 1391 Page 106
Johnston County Registry
Clayton TWSP, Johnston County, North Carolina
Being the Property Located at:
1218 West Main Street, Clayton

I, Michael S. Stokes, Professional Land Surveyor certify that this survey complies with the North Carolina Standards of Practice for Surveying Section 1600; that this is a class A survey, meeting the criteria of precision greater than 1:10,000; that RTN field procedure with GNSS reciever utilizing correction factors broadcast by NCGS from base station was utilized; that all units are U.S. Survey Feet unless otherwise stated; that all distances are ground distances unless otherwise stated. Any Easements, gaps, lappages, or encroachments are shown on this survey; that all areas were computed by coordinate method. This survey is not to be recorded without written permission from the surveyor. This map remains the property of the surveyor and is to be used only for conveyance of this lot by the person(s) shown on this map.

Witness my original signature, registration number and seal this 21st day of June, A.D. 2018.
Surveyor: Michael S Stokes
License # L-4996

NORTH CAROLINA PROFESSIONAL SEAL L-4996 LAND SURVEYOR MICHAEL S. STOKES



STOKES
SURVEYING & MAPPING, PLLC
Firm License # P-1139
1425-105 B Rock Quarry Rd.
Raleigh, NC 27610
(919)-971-7897
www.stokes-surveying.com

SCALE: 1" = 20'
20' 0' 10' 20' 40' 80'

REVISIONS:

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

A&H ADAMS & HODGE ENGINEERING, PC

RISING TIDE CONTRACTOR OFFICE
TOWN OF CLAYTON, NC 27520

BOUNDARY SURVEY

DESIGN
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 05/11/2018
JOB NO. AH-
SHEET SP1

PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25469 DONALD C. ADAMS, JR.

REVISED
1:08 pm, Aug 24, 2018

NAD 83

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

REVISIONS:

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

RISING TIDE CONTRACTOR OFFICE
TOWN OF CLAYTON, NC 27520

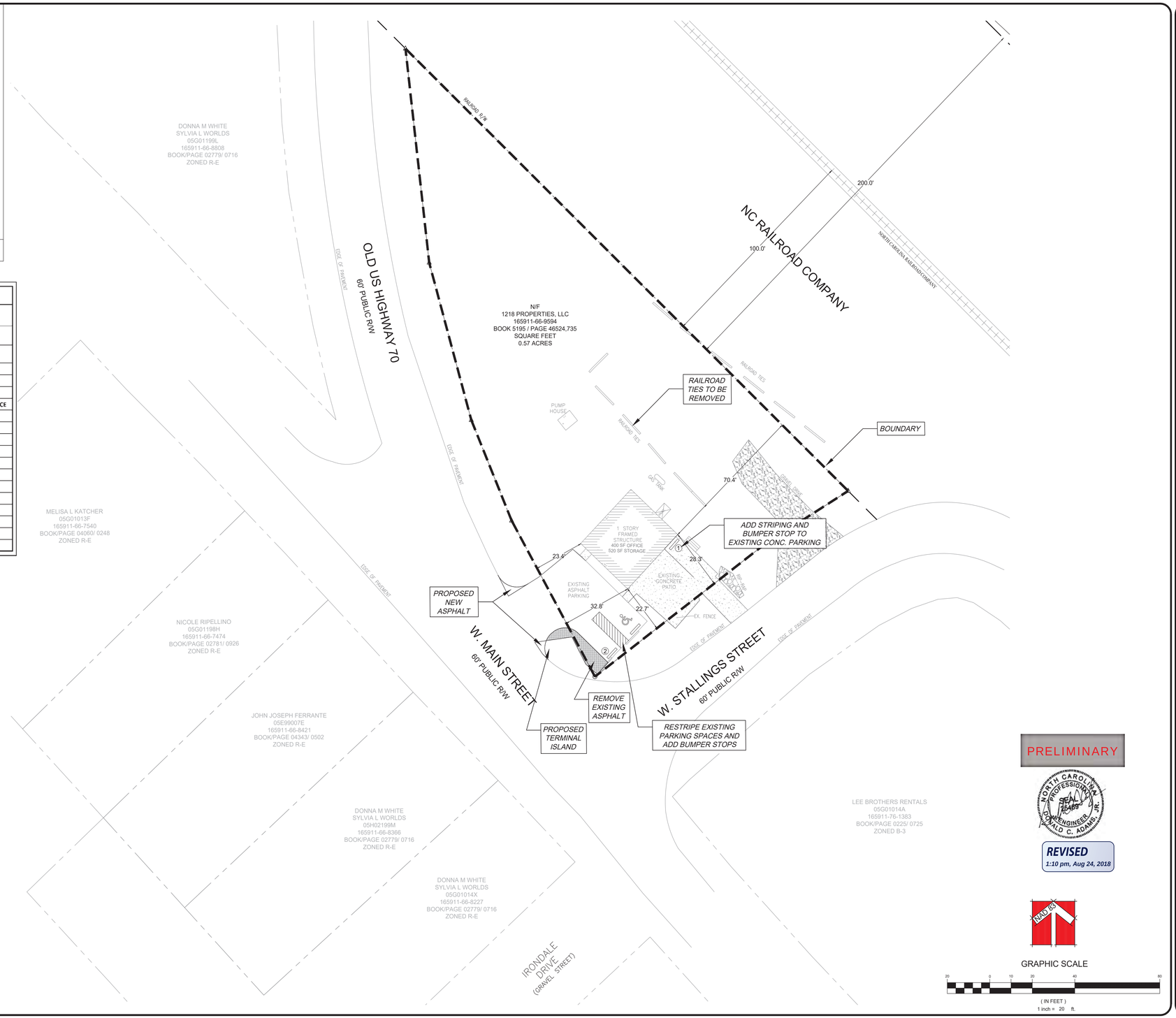
EXISTING CONDITIONS

DESIGN	
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	05/11/2018
JOB NO.	AH–
SHEET	SP2

VICINITY MAP (NOT TO SCALE)

RISING TIDE SITE DATA CHART	
PARCEL OWNER	1218 PROPOERTIES, LLC
PARCEL OWNER ADDRESS	510 FONTANA DR, CLAYTON, NC 27527
PARCEL IDENTIFICATION	165911-66-9594
PROPERTY SIZE (SF) TOTAL	25,009 SF/0.57 ACS
PROPERTY LOCATION	TOWN OF CLAYTON ETJ
EXISTING/PROPOSED ZONING	B-3 / B-3
EXISTING USE / PROPOSED USE	VACANT BUILDING / CONTRACTOR OFFICE
EXISTING DENSITY	1 UNIT / .57AC
EXISITING INTENSITY (GROSS FLOOR AREA IN SF)	920 SF
BUILDING COVERAGE (AS % OF TOTAL SITE)	4%
PERVIOUS SURFACE AREA	86%
IMPERVIOUS SURFACE AREA	14%
BUILDING HEIGHT (NUMBER OF STORIES & FEET)	19'-4"
ELECTRIC PROVIDER	TOWN OF CLAYTON
WATER PROVIDER	WELL
SEWER PROVIDER	PRIVATE SEPTIC
REQUIRED FRONT BUILDING SETBACKS / ACTUAL	25' / 32.8' & 23.4'
REQUIRED SIDE STREET BUILDING SETBACKS / ACTUAL	30' / 28.3' & 22.7'
REQUIRED REAR SETBACKS / ACTUAL	30' / 70.4'

PARKING CALCULATIONS:
OFFICE = (1 SPACE / 200 SF) 400 SF / 200 SF = 2 PARKING SPACES
STORAGE (WAREHOUSE) = (1 SPACE / 1,000 SF) 520 SF / 1,000 SF = 1 PARKING SPACE
1 ADA SPACE / 25 SPACES FOR ADA = 1 ADA PARKING SPACE
REQUIRED PARKING SPACES = 3 SPACES INCLUDING 1 ADA SPACE
EXISTING PARKING SPACES = 3 SPACES INCLUDING 2 ADA SPACES
PROPOSED PARKING SPACES = 3 SPACES INCLUDING 1 ADA SPACE (RESTRIPE EXISTING SPACES)



REVISIONS:

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-241-1332
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

RISING TIDE CONTRACTOR OFFICE
TOWN OF CLAYTON, NC 27520

PRELIMINARY SITE PLAN

DESIGN
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 05/11/2018
JOB NO. AH--
SHEET SP3

Plant List

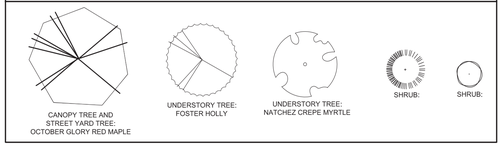
PLANT LIST

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	WIDTH	ROOT
AROG	8	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"	-	10'-12' MIN.	B&B
Aj	42	JUNIPERUS HORIZONTALIS 'YOUNGSTOWN'	ANDORRA JUNIPER			15'-18' MIN.	3GAL
Ch	11	ILEX CORNUTA 'CARRISSA'	CARRISSA HOLLY			15'-18' MIN.	5GAL
Fh	3	ILEX ATTENUATA 'FOSTERII'	FOSTER HOLLY	2"	6'-8' MIN.	-	B&B
Hh	5	ILEX ARENATA 'HELLERI'	HELLER HOLLY			15'-16' MIN.	3GAL
Jh	12	ILEX ARENATA 'COMPACTA'	COMPACT JAPANESE HOLLY			18'-24' MIN.	5GAL
Vl	117	LIRIOPE MUSCARI 'VARIEGATA'	VARIGATED LIRIOPE				2-3BIBS

1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY
2. 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
3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY BUFFER PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

NOTES:
1. ALL ROOF, GROUND, AND WALL MOUNTED MECHANICAL EQUIPMENT SHALL BE COMPLETELY SCREENED FORM VIEW. 155.402(G)(2).
2. 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).
3. ALL LANDSCAPED AREA SHALL BE MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED IN A TIMELY FASHION.

Plant Symbol Key



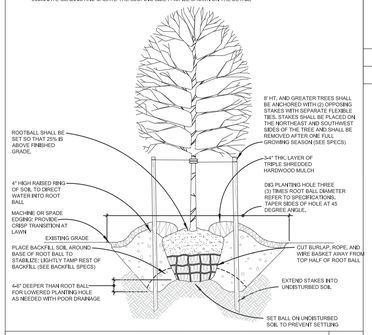
Landscape Data

LANDSCAPE REQUIREMENTS

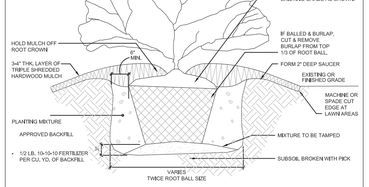
TOTAL AREA OF LOT:	24,829.2 SQ.FT.		
20% OF LOT AREA:	4,965.84 SQ.FT.		
PLANTINGS REQUIRED:	5 CANOPY TREES	PLANTINGS PROVIDED:	13 CANOPY TREES
	5 UNDERSTORY TREES		6 UNDERSTORY TREES
	10 SHRUBS		20 SHRUBS

NOTES

1. THE PLANTING PROCES IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
2. FOR SINGLE STEM TREES, DO NOT SUPPLY TREES WITH MULTIPLE LEADERS, ONLY PROVIDE TREES WITH A SINGLE LEADER, DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS AND TO INSURE COMPLIANCE WITH SIGHT DISTANCE STANDARDS.
3. MARK THE NORTH SIDE OF THE TREE AT THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.
4. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4" TO 6" OVER THE ENTIRE BED AREA.
5. FOR CONTAINER-GROWN TREES, SET THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
6. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
7. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER, BREAKING DOWN THE SIDES WITH A SHOVEL TO ELIMINATE GLAZING AND CREATE THE SLOPING SIDE PROFILE SHOWN ON THE DETAIL.

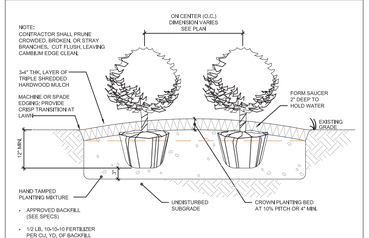


TYPICAL TREE INSTALLATION — SCALE: NTS — 4

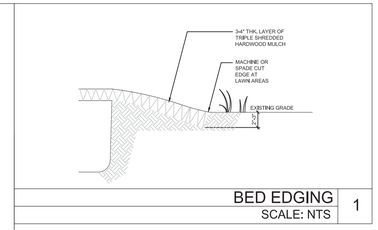


*FOR BOTH CONTAINER OR B&B SHRUBS

*TYPICAL SHRUB INSTALLATION — SCALE: NTS — 3



MASSING PLANT INSTALLATION — SCALE: NTS — 2



BED EDGING — SCALE: NTS — 1

Landscape Notes

GENERAL LANDSCAPE NOTES

1. ALL PLANT MATERIALS AND PLANTING BEDS SHALL BE LOCATED BY SCALED DIMENSIONS FROM BUILDINGS, CURBS, PAVEMENTS, ETC. LOCATION OF ALL PLANTS SHALL BE REVIEWED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE FOR REVIEW.

2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR PLANTING AND SHALL BE RESPONSIBLE FOR THEIR REPAIR OR PAY FOR ALL DAMAGES MADE TO UNDERGROUND UTILITIES.

3. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES.

4. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY PROPOSED PLANT SUBSTITUTIONS BY THE LANDSCAPE CONTRACTOR. NO SUBSTITUTIONS SHALL BE MADE UNDER ANY CIRCUMSTANCES WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT.

5. ALL DISTURBED AREAS NOT IDENTIFIED TO EITHER BE SEEDED OR SODDED SHALL BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS.

6. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. ALL PLANTING BEDS, SAUCERS, AND AREAS DESIGNATED TO BE MULCHED SHALL BE MULCHED WITH A MINIMUM OF 3-4 INCHES OF TRIPLE SHREDDED HARDWOOD MULCH.

8. PLANTING BEDS AND SAUCERS SHALL BE EDGED TO PROVIDE A 2" TO 3" DEEP "V" CUT ALONG ITS BORDER WITH SODDED OR SEEDED AREAS.

9. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.

10. GUYING SHALL BE REMOVED AFTER ONE FULL GROWING SEASON.

11. THE LANDSCAPE CONTRACTOR SHALL INSTALL ALL LANDSCAPING IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS SHOWN AND ENUMERATED ON THIS SHEET UNLESS ALTERNATIVE METHODS OR PRACTICES ARE REVIEWED AND ACCEPTED BY THE LANDSCAPE ARCHITECT.

12. AT INSTALLATION AND CONTINUOUSLY DURING THE MAINTENANCE CONTRACT, ALL PROPOSED SHRUBS THAT ARE SQUARE IN SHAPE AND ARRANGED IN ROWS SHOULD BE PRUNED INTO BOXED AND CLIPPED HEDGEROWS.

13. 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

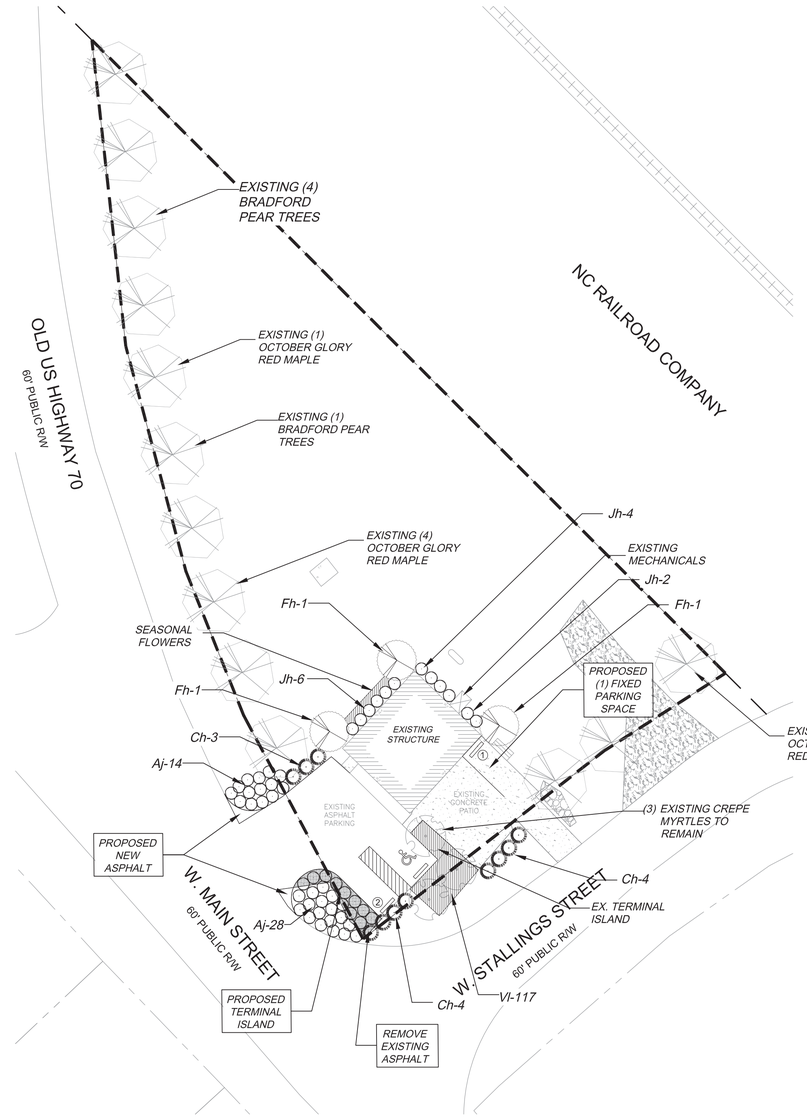
14. ALL LANDSCAPED AREAS SHALL BE PROVIDED WITH AN AUTOMATICALLY OPERATED IRRIGATION SYSTEM THAT WILL ADEQUATELY COVER ALL LIVING PLANT MATERIAL, SUCH SYSTEM SHALL INCLUDE A RAIN SENSOR.

15. ALL HVAC AND MECHANICAL EQUIPMENT WILL BE SCREENED WITH LANDSCAPING OR DECORATIVE FENCING

STREET YARD TREES

1. STREET YARD TREES SHALL BE REQUIRED ALONG ALL RIGHTS OF WAY AT THE RATE OF 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 IN THE TREE STRIP NO LESS THAN FIVE FT. OR MORE THAN 15 FT. FROM THE BACK OF THE SIDEWALK.



NAD 83

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

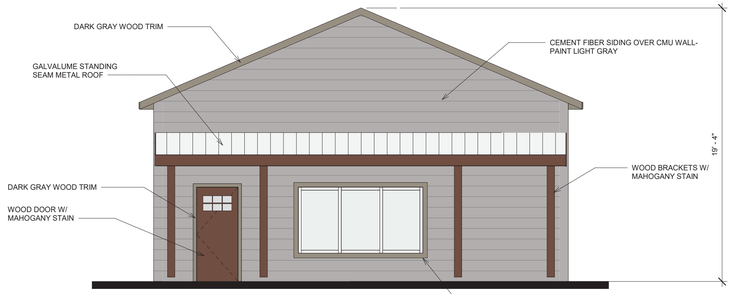
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamsandhodge.com
919-553-1717
FIRM # C-4187

REVISIONS:

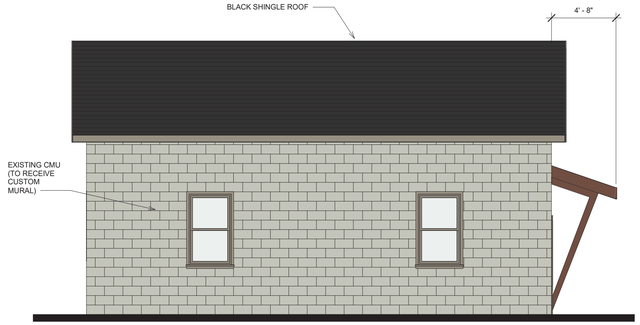
RISING TIDE CONTRACTOR OFFICE
TOWN OF CLAYTON, NC 27520

LANDSCAPE PLAN

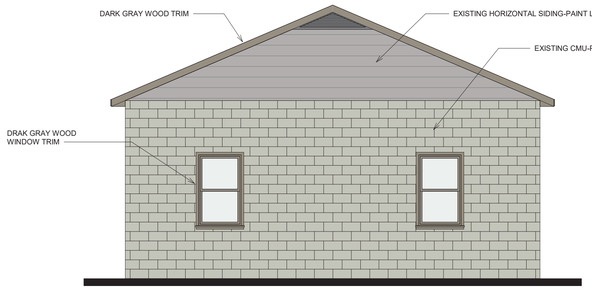
DESIGN
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 05/11/2018
JOB NO. AH-
SHEET SP4



1 SOUTH- MAIN STREET ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"



3 NORTH ELEVATION
1/4" = 1'-0"

4 EAST ELEVATION
1/4" = 1'-0"

1218 PROPERTIES MURAL CONCEPT RENDERING V.2

PROJECT: 1218 PROPERTIES MURAL
CLIENT: JOSH DAVIS
DESIGN BY CLARK NIPOLITO

TONY LEE JOHNSON ARCHITECT P.A. 51220 CLAYTON, NC
TONY LEE JOHNSON REGISTERED ARCHITECT 4296 SOUTH CAROLINA CLAYTON, NC

(PROPOSED)

1218 W. MAIN STREET
CLAYTON, NC

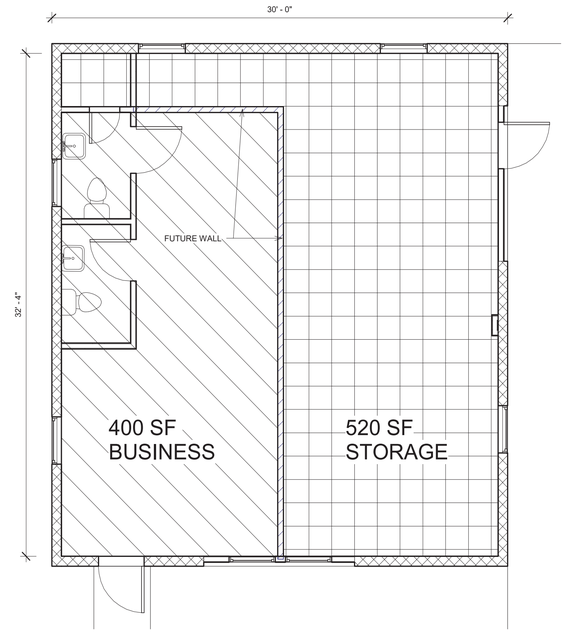
REVISIONS

TONY JOHNSON ARCHITECT
919-550-7717
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

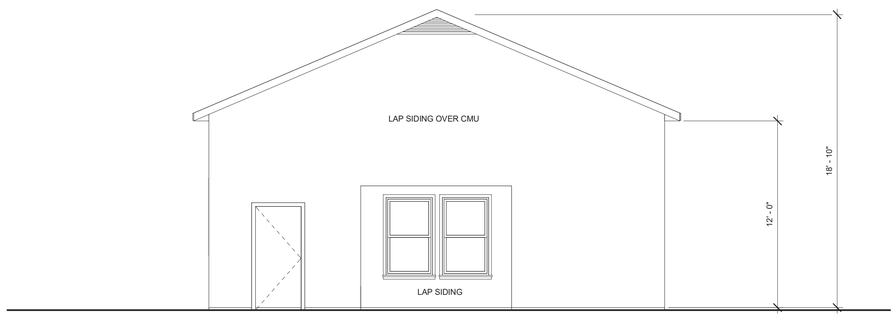
DATE 8-22-2018

SHEET A-1

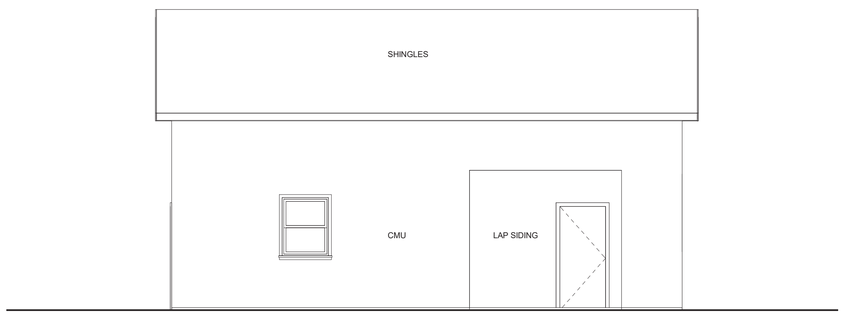
PRELIMINARY-NOT FOR CONSTRUCTION



1 FLOOR PLAN
1/4" = 1'-0"



2 FRONT - W. MAIN STREET ELEVATION
1/4" = 1'-0"



4 SIDE - W. STALLINGS STREET ELEVATION
1/4" = 1'-0"

(EXISTING)

REVISIONS

RISING TIDE OFFICE
1218 W. MAIN STREET
CLAYTON, NC

TONY JOHNSON ARCHITECT
919-550-7717
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

DATE 5-10-2018

SHEET A-2

PRELIMINARY

Town of Clayton
Planning Department
111 E. Second Street, Clayton, NC 27520
P.O. Box 879, Clayton, NC 27528
Phone: 919-553-1545
Fax: 919-553-1720

Planning Board
September 24, 2018

STAFF REPORT

Application:	2018-163-CUP
Project Name:	Rising Tide Contractor's Office Conditional Use Permit
NC PIN/Tag:	165911-66-9594 / 05G01014C
Town Limits/ETJ:	Town Limits
Applicant:	Adams & Hodge Engineering
Owners:	1218 Properties, LLC
Project Location:	1218 W Main Street; with frontage on Old US HWY 70 W, W Main Street, and W Stallings Street
Neighborhood Meeting:	September 19, 2018
Public Noticing:	Property posted prior to September 14, 2018 Letters mailed September 7, 2018 Newspaper Ad published September 14, 2018 and September 21, 2018

REQUEST: The applicant is requesting a Conditional Use Permit to operate a contractor's office on the subject property, which is zoned Highway-Business (B-3).

SITE DATA:

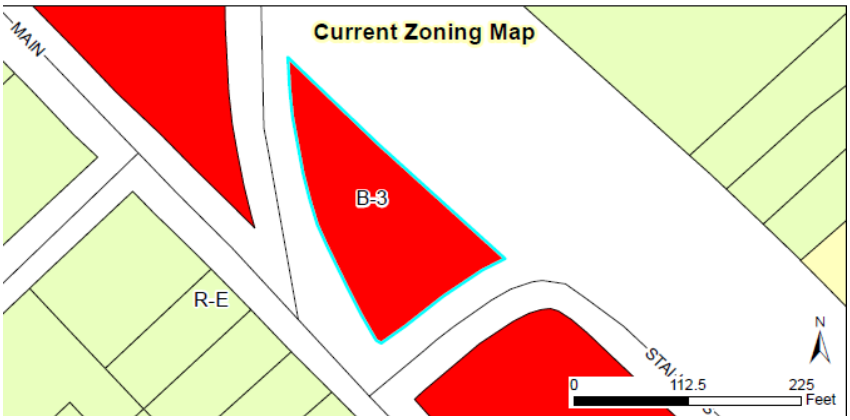
Acreage:	.57 acres
Present Zoning:	Highway-Business (B-3)
Existing Use:	No existing use; existing building previously used as a church

DEVELOPMENT DATA:

Proposed Uses:	Contractor's Office
Square footage:	1000 Square Feet (400 SF of office space, 600 SF of storage space)
Proposed Parking:	3 spaces, including one handicap space
Required Parking:	3 spaces, including one handicap space
Access/Streets:	Two access points; one off W Main Street and one off W Stallings Street

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-Estate (R-E)	Single-family Residential & Railroad
South	Residential-Estate (R-E)	Single-family Residential
East	Residential-Estate (R-E)	Single-family Residential & Railroad
West	Highway-Business (B-3)	Single-family Residential



STAFF ANALYSIS AND COMMENTARY:

Overview

The applicant is requesting a Conditional Use Permit to operate the use of a contractor's office on the subject property within an existing building. Per UDC requirements, the use of a contractor's office is only permitted in this zoning district (B-3) via issuance of a Conditional Use Permit.

The property is located off West Main Street and is .57 acres in size. It is primarily surrounded by single-family residential in all directions, with the railroad located directly to the north and east. The lot is served by well and septic and the applicant does not intend to extend public water or sewer services to the property. The existing building is 1000 square feet in size, and the applicant is proposing 400 square feet to be utilized as office space and 600 square feet to be utilized as storage space (warehousing). The building is currently vacant but has most recently been utilized as a Church. When utilized as a church, grass parking was permitted by the UDC because it was a use that occurred less than five days per week. Since the applicant is proposing to change the use, grass parking will no longer be permitted. Instead, parking is proposed to be located upon paved portions of the property, as depicted in the associated site plan. Handicap parking will be provided in the front of the building along W Main Street.

No outdoor storage is proposed as a part of this application. Any addition of outdoor storage would be subject to further review and approval in accordance with the requirements of the Unified Development Code (see recommended condition of approval).

It is worth noting that the existing building on the property is considered a legal non-conforming structure, as it does not meet current setback requirements of the Unified Development Code. Specifically, the front and street side setbacks are less than what is permitted in the current code. Please see the table below.

Setbacks: Existing vs. Proposed		
	Existing	**Required**
Front	**23.4'**	**25'**
Street Side	**22.7'**	**30'**

A non-conforming structure is a structure that was lawfully established on a property prior to the current code requirements and does not conform to the current requirements in some form. Per UDC requirements, legal non-conforming structures may be utilized but cannot be changed in a way that will increase the nonconformity. In this situation, any future changes to the structure that involve an expansion or intensification shall not be permitted as required by the UDC due to the structure's non-conforming status (see recommended condition of approval).

Access

The property has two existing access points; one is located off W. Main Street and one is located off W. Stallings Street. The applicant is proposing to utilize both of these access points to enter the site's parking areas. Handicap parking and one regular space is proposed in the front of the building off W. Main Street, while the remaining spaces will be accessed off W. Stallings Street.

Staff does have some safety concerns with the parking located off W. Main Street regarding visibility due to the bend that is located there. For that reason, staff requires that the entrance into the property on W. Main Street

have a more defined entrance with landscaping and appropriate radiuses to help assist with traffic flow. This area was utilized for parking previously by the church. NCDOT has reviewed the application and is comfortable with the existing parking as proposed. However, NCDOT has stated that the removal of parking along W. Main Street will be required if parking is ever established in the rear of the building off W. Stallings Street (see recommended condition of approval).

Landscaping
The applicant is proposing to utilize existing street trees along W. Main Street, and will be adding additional street trees along W. Stallings Street as a part of this application. All existing mechanical equipment will be screened from view completely as required within the UDC. The applicant is also proposing additional landscaping within the interior of the site to meet the code's minimum landscape requirements.

Signs
No signs are proposed at this time. Any signs proposed by the applicant will be required to obtain a sign permit in accordance with the requirements of the Unified Development Code.

Site Pictures/Design
W. Stallings Street Elevations

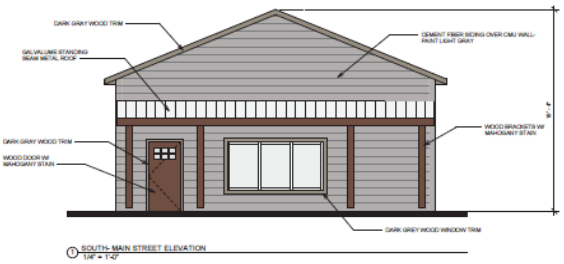
Current

Proposed

W. Main Street Elevations

Current

Proposed



Findings of Fact
The applicant has addressed the Findings of Fact, which are included as a part of the application.

Consistency with the Unified Development Code
The proposed use and associated site plan is generally consistent with and meets the applicable requirements of the Unified Development Code (UDC). As stated previously, the existing structure on the site is legal non-conforming but the applicant is not proposing to expand this structure and increase the nonconformity. The overall site is non-conforming, but the applicant is updating the site for screening and landscaping which will overall bring the site closer to conformity.

Compatibility with Surrounding Land Uses
The use is generally compatible with the surrounding land uses. The land uses across W. Main Street and Old US HWY 70 W are single-family residential. The property across W. Stallings Street is vacant, and while the properties to the north and east are single-family residential the railroad ROW is located between them, which provides some separation. While this use is not residential, staff feels that the use is compatible since office uses are generally less intensive and all operations will occur within the building. It's also worth noting that the property has historically been utilized for non-residential uses.

CONSIDERATIONS:

- The Planning Board reviews and makes a final decision regarding Conditional Use Permits.

FINDINGS:

When considering a Conditional Use Permit application, The Planning Board shall consider specific Findings of Fact. A Conditional Use failing to meet any of these Findings shall be deemed adverse to the public interest and shall not be approved. The applicant has addressed the Findings expressly established by Chapter 155.710 (G) of the UDC. The applicant's Findings of Fact are incorporated into the record as an attachment to the Staff Report.

CONDITIONS:

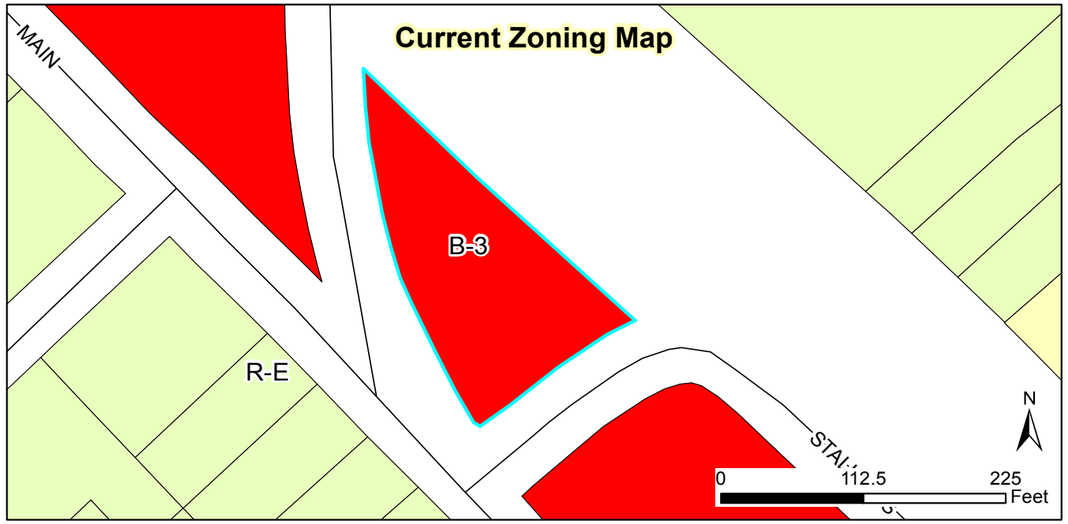
Staff recommends that if the Planning Board reaches positive conclusions on the required Findings of Fact, the approval of the petition be subject to the following conditions:

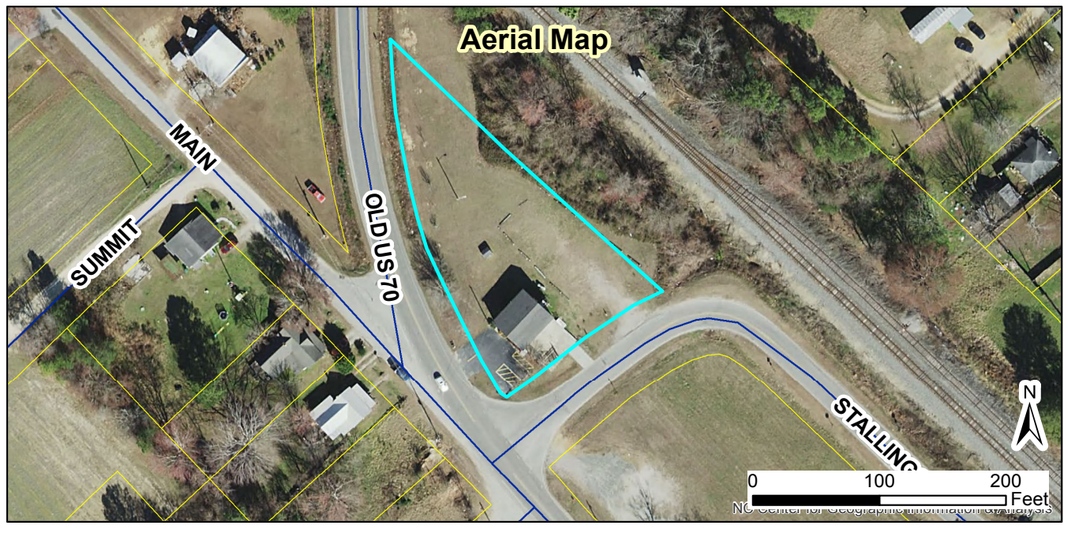
1. No outdoor storage shall be permitted as a part of this permit. Any future proposed outdoor storage shall be subject to further review in accordance with the requirements of the Unified Development Code.
2. No changes or expansion of the existing legal non-conforming structure shall be permitted, unless such changes bring the structure closer into conformity with the current requirements of the Unified Development Code. Any modification to the site plan shall be subject to further review in accordance with the requirements of the Unified Development Code.

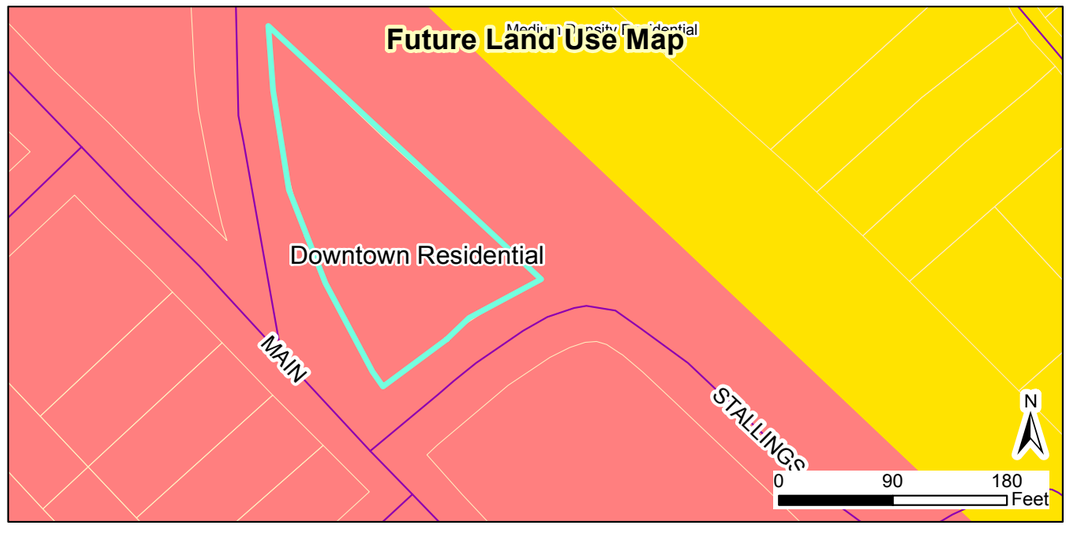
3. Grass parking shall not be permitted for this use; all parking shall occur only on paved surfaces as designated on the associated site plan. Any future parking expansions shall be subject to site plan approval.
4. The parking lot located off of W. Main Street shall be modified to include clear directional travel ways for vehicular traffic. This should include but not be limited to: radiuses in the asphalt at the entrance and appropriate landscaping. The landscaping in the safe sight triangle shall be kept as low growing shrubbery to prevent any sight distance issues.
5. If parking is established in the rear of the building, the existing parking and access point along W Main Street shall be removed.

ATTACHMENTS:

1) Application
2) Maps
3) Neighborhood Meeting Materials
4) Site Plan
5) Adjacent Property Letter- Public Notice
6) Newspaper Ad- Public Notice







2018-163-CUP Rising Tide Contractor Office Conditional Use Permit
Request: operate the use of a contractor's office on the property

Applicant: Adams & Hodge Engineering, PC
Property Owners: Wanda and Dwight Adams
Parcel ID: 165911-66-9594
Tag #: 05G01014C

Staff Report Map

08/29/2018

Produced by: TOC Planning

Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\CONDITIONAL USE\2018\2018-163-CUP Rising Tide Contractor Office\Maps\Staff Report Maps - 2018-163-CUP - Rising Tide CUP.mxd

Legend

- 100-yr Flood Zone
- Thoroughfare Overlay
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

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

VARIANCE APPLICATION

Pursuant to Article 7, Section 155.716 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Board of Adjustment to allow a Variance. Variances must not be contrary to the public interest and must meet four findings of fact as outlined in Section 155.716 and addressed by the applicant in this application.

Application Fee: $250.00 (please note if a variance is sought "after the fact" the fee is $500.00)
Advertisement Fee: ~~$100.00~~ $200
All fees are due when the application is submitted.

SITE INFORMATION

Name of Project: Vinson's Pub Variance **Acreage of Property:** .19
County Tag #: 05008071 **NC PIN:** 166806-29-8767
Address/Location: 800 E. Main Street

Existing Use: Restaurant **Proposed Use:** Restaurant
Zoning District: B-1
Is project within a Planned Development? ☑ No ☐ Yes (list): _____
Is project within an Overlay District? ☐ No ☑ Yes (list): Downtown Overlay

Variance(s) Requested: *List each requested variance. Attach additional pages if necessary.*
Code Section: _____
Code Requirement: _____
Variance Sought (*describe specific request*): See Attached

FOR OFFICE USE ONLY

Date Received: RECEIVED AUG 01 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: $350 CK#1291 $150 Permit Number: 2018-157-VAR

PROPERTY OWNER INFORMATION

Name: Lipscomb, LLC

Mailing Address: 3407 Barber Mill Road, Clayton, NC 27520

Phone Number: (919) 422-4704 **Fax:**

Email Address: James@myHTR.com

APPLICANT INFORMATION

Applicant: James Lipscomb

Mailing Address: 3407 Barber Mill Road, Clayton, NC 27520

Phone Number: (919) 422-4704 **Fax:**

Contact Person: same as applicant information above

Email Address: James@myHTR.com

REQUIRED INFORMATION *(to be submitted with the application)*

Please fill out the following checklist. The following items must accompany a Variance application.

Applicant: Fill out the checklist below. *Submit 9 copies of all materials unless otherwise noted or directed by staff.*	Yes	N/A	To be completed by staff: Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: _____	☑				
2. Site Plan Review Fee ($250) and Advertisement Fee ($100)	☑				
3. Completed application	☑				
4. Owner's Consent Form *Required if the applicant is not the property owner.*	☐	☑			
5. Survey of the property *(not more than a year old unless approved by the Planning Department)*	☑	☐			
6. Site Plan, architectural elevations, or drawing as applicable showing requested variance. *This document should reference requirements – for example, if the request is for a setback variance, show the required setback and the requested setback.*	☑	☐			
7. Adjacent property owners list *See sheet included as part of this packet with instructions. For questions on how to determine property owners, please speak with Planning staff.*	☑				
8. Stamped, addressed, empty envelopes with no return address for each Adjacent Property Owner (One set) *To be used for Town's public noticing of the Board of Adjustment hearing.*	☑				

Staff may request additional documentation to support the request.

BURDEN OF PROOF / EXPLANATION OF REQUEST

Use this section to describe the request. An applicant seeking a variance has the burden of presenting evidence sufficient to allow the Board of Adjustment to reach conclusions for the Required Findings of Fact. Attach additional sheets/pertinent information as necessary.

See Attached

REQUIRED FINDINGS OF FACT

Section 155.716(F)(2) of the Unified Land Development Code requires applications requesting a Variance 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. Unnecessary hardship would result from the strict application of the ordinance. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.

See Attached

2. The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from person circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance..

See Attached

3. The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship.

See Attached

4. The requested variance is consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.

See Attached

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Board of Adjustment of the Town of Clayton to approve the subject Variance request. 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.

James Lipscomb — *Print Name*

Signature of Applicant

8-1-18 — *Date*

Variance Burden of Proof / Explanation of Request

To: Town of Clayton NC Planning Department

From: James Lipscomb for Lipscomb LLC, owner

Project: Vinson's Pub and Eatery
800 East Main Street
Clayton NC 27520

Date: August 1, 2018

We are requesting variances to the requirement to provide screening of the mechanical units on the roof of the building as per sections: 155.203(K)(2), 155.204(D)(12)(C), 155.402(G)(4)(a) and 155.402(G)(4)(b)

1- Our building plans were approved by the Town of Clayton without mention of a roof top mechanical screening requirement. We were made aware of the screening requirement at the second site visit of the Town Planning Staff for final site plan approval. We have been granted our Certificate of Occupancy (C/O) for building by the Building Code Official but cannot officially receive the C/O until the site plan final inspection is approved.
2- Our building abuts the North Carolina Rail Road Corridor and a wood line the line of site from Front Street which is on the opposite side of the Rail Corridor is obscured by the tree line and will be obscured more in the future as the trees that were planted in the parking lot grow to maturity these trees are Natchez Crypt Myrtles and will have an ultimate height of approximately 20 to 25 foot and a width of up to 20 foot.
3- Our building is over 100 years old and the addition of a screening structure that would require a 3-foot-high and 72-foot-length cannot reasonably be added to the building and meet required wind load engineering.
4- What has become a covered enclosed dry storage area on the back of the building exists mostly on the rail road right of way. Originally this was intended to be a fenced (opaque) area (described as a solid fence using plywood panels such as seen at Disney World around rides that are under construction or repair) as we went through the process of renovating Vinson's after we installed the covered patio area on the side we send photos and emails to the NCRR requesting the ability to install the same type roof structure over the fenced in storage area (Town of Clayton staff was included on these emails) we received permission to install with the express understanding that all structures in the NCRR corridor are temporary in nature and that anything installed in the corridor is not a requirement of any zoning ordinance, we comply with both of these requirements since everything we constructed in the NCRR corridor was voluntary and not a code requirement. The enclosed storage area meets all building code

requirements and has been approved by Building Inspector. This enclosed storage area is much more physically attractive than what had originally been proposed the siding that was installed is a historically accurate material (solid wood German Siding) than the originally proposed T-111 Plywood Panels.

Findings of Fact

1- Unnecessary hardship would result from the strict application of the ordinance. It shall not be necessary to demonstrate that, in absence of the variance, no reasonable use can be made of the property.

Our Building is over 100 years old we cannot reasonable design a screening that will meet wind loads when attach to the building. Also see items 1,2 and 3 above in Burden of Proof section.

The enclosed storage area cannot be built of the same materials of the building because it is considered temporary in nature because of its location within the NCRR Corridor.

2- The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from person circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance.

Our building is sandwiched between the NCDOT right of way for Main Street and the NC Rail Road Corridor the enclosed storage area in the rear is actually on railroad right of way as is most of the parking lot and landscaping, these features are allowed to exist in the Corridor by virtue of our Licensing Agreement with NC Rail Road. We pay a yearly lease fee and we are allowed to have all these features on a temporary basis because if the licensed area of the corridor is needed for new rails I will be required to remove the improvements with 60 days' notice. The installation of the storage area, parking lot and landscaping in the corridor were installed by me at my own desire they were not a requirement of the Town of Clayton Zoning Ordinance. They were installed out of my desire to do as nice a renovation project of the historic building as possible and to provide as much improved parking as possible. Please note the extra effort put into protecting the rail corridor with fencing and the overall extra effort put into the site. In the B1 zoning district the town can only require improvement to the land I own (please see site plan for location of the NCDOT right of way and NC Rail Road corridor.

3- The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship.

My original site plan shows the HVAC compressor units on the ground behind the building behind a solid fence. I choose during construction to move these units onto the roof where they joined the other new mechanical units on the roof which are all the components of the commercial restaurant hood system, make up air vents required by the commercial HVAC units, Satellite Dish, and multiple plumbing vents, all these mechanical features had always been planned to be roof mounted and are shown on my approved building plans. I was never made aware of the screening requirement in any of the numerous meeting and approvals with Town of Clayton staff prior to the completion of my project and request for C/O.

4- The requested variance(s) are consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.

There are no public safety issues associated with these Variance Requests. I contend that Substantial Justice will be served by granting the Variances due to the fact that the requirement was not mentioned to me during the review and approval process of my building plans and site plan by Town of Clayton officials. Further to require screening on historic buildings may not always be reasonable or structurally feasible. Also, the fact I have to comply with the additional rules imposed by NCRR in their license agreement for the section of the site plan that exist in the NCRR corridor.

Public Notice

In accordance with NC GS 160A-364, the Clayton Planning Board will conduct the following evidentiary hearings on Monday, September 24, 2018, at 6 PM in the Town Council Chambers in Town Hall located at 111 East Second Street:

- **2018-163-CUP Rising Tide Contractor Office Conditional Use Permit; request to allow the use of a contractor office on property zoned Highway-Business (B-3). The property is located at 1218 W Main Street and is .57 acres; TAG # 05G01014C. According to the Unified Development Code, a Conditional Use Permit is required to operate a contractor office in the B-3 zoning district.**
- **2018-157-VAR Vinson's Pub Variance; request for a variance from sections 155.203(K)(2), 155.204(D)(12)(C), 155.402(G)(4)(a), and 155.402(G)(4)(b) of the Unified Development Code. This variance request pertains to an addition to the primary structure and unscreened mechanical equipment. The property is zoned Central Business (B-1) and is .19 acres; TAG # 05008071.**

During an evidentiary hearing, the Planning Board 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 interested persons are invited to attend.

Haley Hogg, Planner
919-553-5002

_____

Clayton News- Star

Please advertise on the following dates:
September 14, 2018
September 21, 2018

Dates are the two Fridays prior to the hearing

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

September 7, 2018

NOTICE

SUBJECT: **Project** 2018-157-VAR – Request for a variance for an addition on the rear of the building and unscreened mechanical equipment.

Address: 800 E. Main Street, Parcel # 05008071, NC PIN# 166806-29-8767

Applicant: James Lipscomb

Dear Clayton Area Property Owner:

Notice is hereby given that the Clayton Planning Board will hold an evidentiary hearing on **Monday, September 24, 2018 at 6:00pm** at Town Hall, 111 E. Second Street, to consider the variance application described above. Please see the map on the back of this letter showing the property.

According to Section 155.719(C)(1) of the Town of Clayton Unified Development Code, the Planning Board is authorized to approve a variance to certain standards of the Unified Development Code if they will not be contrary to the public interest.

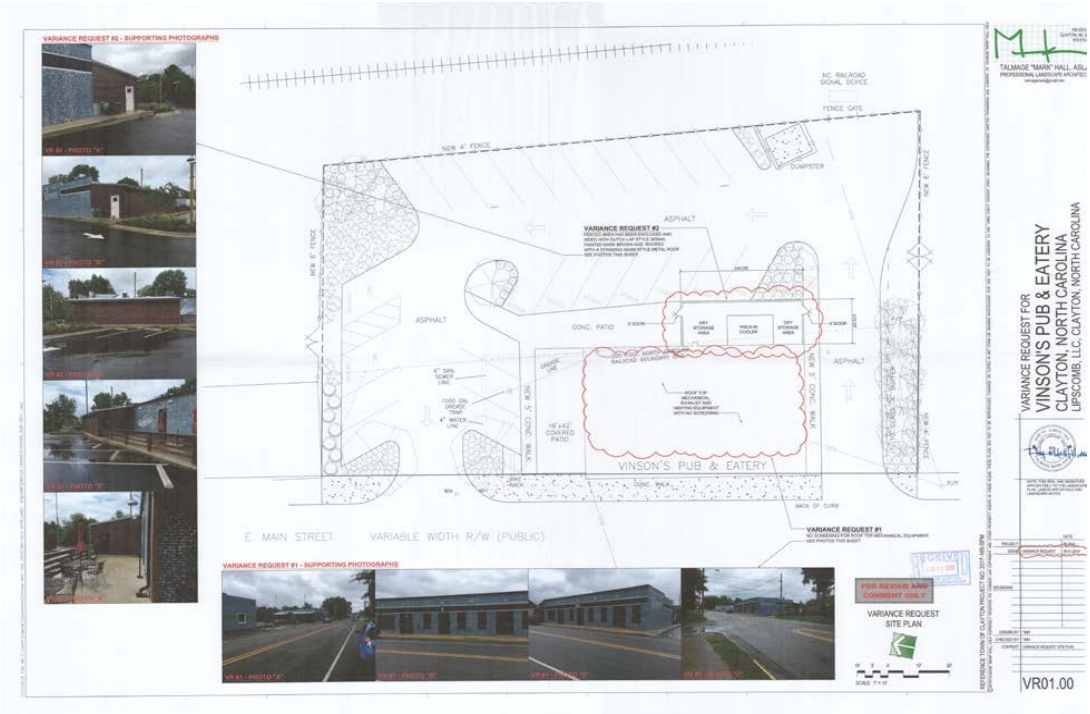
Based upon records in the Johnston County Tax Office, you are the owner of property that is within 100 feet of this request. You are invited to attend this meeting. During an evidentiary hearing, the Planning Board must make findings of fact based upon sworn testimony and other credible evidence. Citizens may give testimony in an evidentiary hearing after they have taken an oath. This is an open meeting and interested persons are invited to attend.

If you should need additional assistance or information, please contact Haley Hogg in the Planning Department at (919) 553-5002 or hhogg@townofclaytonnc.org.

Sincerely,

Samantha L. Wullenwaber
Planning Director

cc: File folder 2018-157-VAR


VARIANCE REQUEST #2 - SUPPORTING PHOTOGRAPHS
VR #2 - PHOTO "A"
VR #2 - PHOTO "B"
VR #2 - PHOTO "C"
VR #2 - PHOTO "D"
VR #2 - PHOTO "E"
NC RAILROAD SIGNAL DEVICE
FENCE GATE
NEW 4' FENCE
DUMPSTER
ASPHALT
VARIANCE REQUEST #2
CONC. PATIO
4" SAN. SEWER LINE
1500 GAL. GREASE TRAP
4" WATER LINE
16'-0 X 42' COVERED PATIO
VINSON'S PUB & EATERY
CONC. WALK
BACK OF CURB
E. MAIN STREET
VARIABLE WIDTH R/W (PUBLIC)
VARIANCE REQUEST #1
VARIANCE REQUEST #1 - SUPPORTING PHOTOGRAPHS
VR #1 - PHOTO "A"
VR #1 - PHOTO "B"
VR #1 - PHOTO "C"
VR #1 - PHOTO "D"
FOR REVIEW AND COMMENT ONLY
VARIANCE REQUEST SITE PLAN
SCALE: 1" = 10'
TALMAGE "MARK" HALL, ASLA
PROFESSIONAL LANDSCAPE ARCHITECT
VARIANCE REQUEST FOR
VINSON'S PUB & EATERY
CLAYTON, NORTH CAROLINA
LIPSCOMB, LLC, CLAYTON, NORTH CAROLINA
VR01.00

VARIANCE REQUEST #2 - SUPPORTING PHOTOGRAPHS

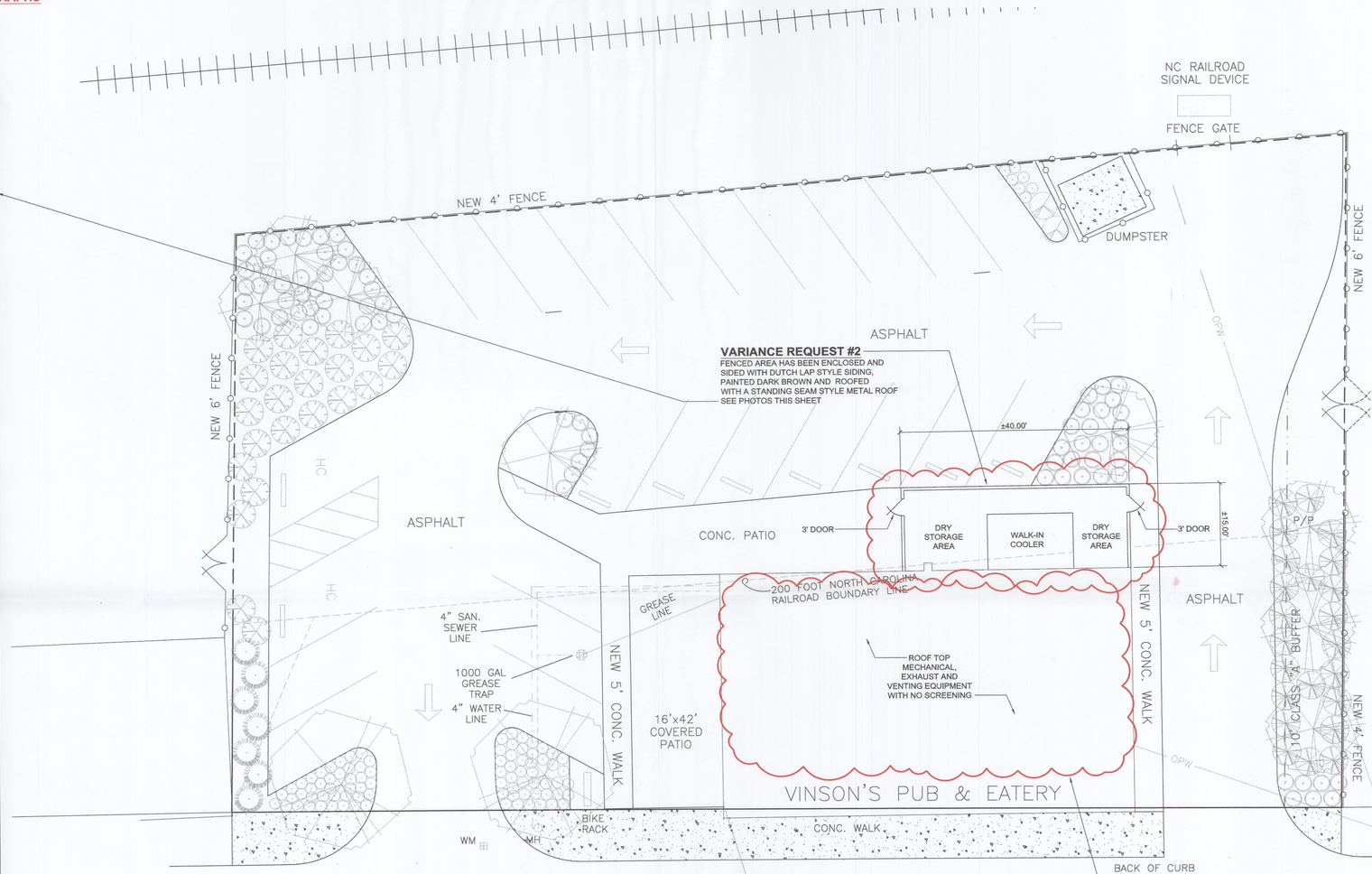
VR #2 - PHOTO "A"

VR #2 - PHOTO "B"

VR #2 - PHOTO "C"

VR #2 - PHOTO "D"

VR #2 - PHOTO "E"



VARIANCE REQUEST #1
NO SCREENING FOR ROOF TOP MECHANICAL EQUIPMENT
SEE PHOTOS THIS SHEET

VARIANCE REQUEST #1 - SUPPORTING PHOTOGRAPHS

VR #1 - PHOTO "A"

VR #1 - PHOTO "B"

VR #1 - PHOTO "C"

VR #1 - PHOTO "D"

RECEIVED
AUG 01 2018
TOWN OF CLAYTON
PLANNING DEPARTMENT

FOR REVIEW AND COMMENT ONLY

VARIANCE REQUEST SITE PLAN

10' 5' 0 10' 20'
SCALE: 1" = 10'

100 DOVE
CLAYTON, NC 2
919.810.
TALMAGE "MARK" HALL, ASLA
PROFESSIONAL LANDSCAPE ARCHITECT
talmagemark@gmail.com

©2018 TALMAGE "MARK" HALL, ASLA, EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF TALMAGE "MARK" HALL, ASLA

REFERENCE TOWN OF CLAYTON PROJECT NO: 2017-169-SPM

VARIANCE REQUEST FOR VINSON'S PUB & EATERY
CLAYTON, NORTH CAROLINA
LIPSCOMB, LLC, CLAYTON, NORTH CAROLINA

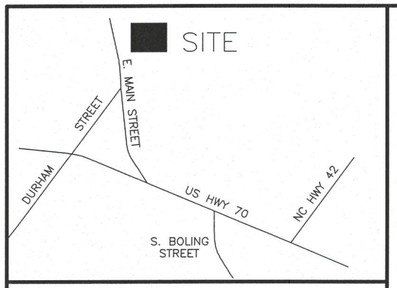
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 871 TALMAGE MARK HALL

NOTE: THIS SEAL AND SIGNATURE APPLIES ONLY TO THE LANDSCAPE PLAN, LANDSCAPE DETAILS AND LANDSCAPE NOTES

		DATE
PROJECT:		08.2018
ISSUE:	VARIANCE REQUEST	08.01.2018
REVISIONS:		
DRAWN BY:	TMH	
CHECKED BY:	TMH	
CONTENT:	VARIANCE REQUEST SITE PLAN	

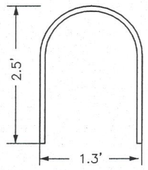
VR01.00

7/31/2018 9:52 AM C:\Users\Engineer\Documents\Talmage Mark Hall, ASLA\TMH-ASLA 2018\JAMES, LIPSCOMB\DWG\09_VINSON'S\VINSON_PUB-VR01-.dwg



VICINITY MAP (NOT TO SCALE)

"U" SHAPED BICYCLE RACK DETAIL



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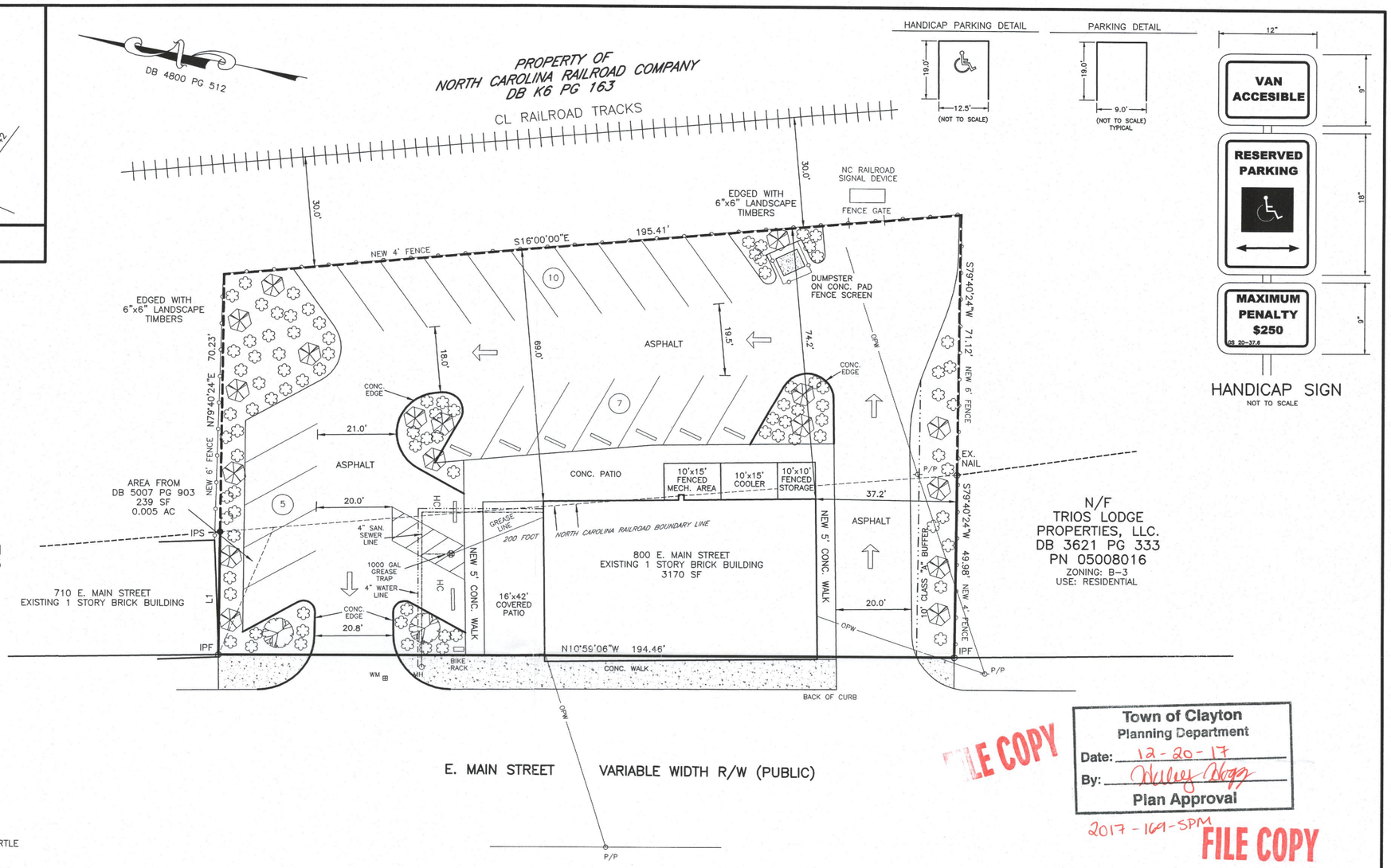


HANDICAP PARKING DETAIL

(NOT TO SCALE)

PARKING DETAIL

(NOT TO SCALE) TYPICAL

HANDICAP SIGN
NOT TO SCALE

CANOPY TREES REQUIRED	2
CANOPY TREES PROVIDED	2
UNDERSTORY TREES REQUIRED	17
UNDERSTORY TREES PROVIDED	17
SHRUBS REQUIRED	88
SHRUBS PROVIDED	88

CANOPY TREE – SUNSET RED MAPLE
MINIMUM HEIGHT OF 6 FEET
WITH 2.5 IN CALIPER

UNDERSTORY TREE – NATCHEZ CREPE MYRTLE
15' APART WITH A MINIMUM HEIGHT
OF 4 FEET WITH 1.5 IN CALIPER

SHRUB – FIREPOWER NANDINA
WITH A MIMIMUM HEIGHT OF 12 INCHES

SITE DATA

AREA IN TRACT	7910 SF	0.182 AC
AREA WITHIN NC RAILROAD CORRIDOR (LICENSED AREA)	13737 SF	0.315 AC
AREA IN PAVEMENT	13379 SF	0.307 AC
AREA IN LANDSCAPE BUFFER	3462 SF	0.080 AC

POWER SUPPLIED BY TOWN OF CLAYTON
WATER & SEWER SUPPLIED BY TOWN OF CLAYTON
TRASH BY ON-SITE DUMPSTER
ZONING: B-1
SETBACKS – (F) 0', (S) 0' 30' ABUTTING RESIDENTIAL, (R) 0'
PARKING SPACES REQUIRED.....0
PARKING SPACES PROVIDED.....22 REGULAR, 2 HANDICAP
PARCEL NO. 05008071
OWNER: LIPSCOMB, LLC.
3407 BARBER MILL RD
CLAYTON, N.C. 27520
EXISTING USE: VACANT
PROPOSED USE: RESTAURANT
NUMBER OF SEATS PROPOSED: 130
PROPOSED IMPERVIOUS SURFACE AREA: 46.384% (DOES NOT INCLUDE RAILROAD AREA)
PARKING CALCULATION: N/A
ENGINEER OF RECORD: KILLIAN ENGINEERING

NOTE: ALL MECHANICAL EQUIPMENT SHALL BE SCREENED ENTIRELY FROM VIEW, AS REQUIRED WITHIN THE UDC.

SITE PLAN
OF

800 EAST MAIN STREET

FOR

LIPSCOMB, LLC.

CLAYTON TOWNSHIP, JOHNSTON COUNTY
NORTH CAROLINA
OCTOBER 9, 2017

0 20 40 60
SCALE: 1" = 20'

LINE	BEARING	DISTANCE
L1	N79°40'24"E	33.79'

DURHAM STREET
30' R/W
(PUBLIC)

Town of Clayton
Planning Department
Date: 12-20-17
By: Hailey Hogg
Plan Approval

2017-169-SPM

FILE COPY

FILE COPY

RECEIVED
NOV 29 2017
TOWN OF CLAYTON
PLANNING DEPARTMENT

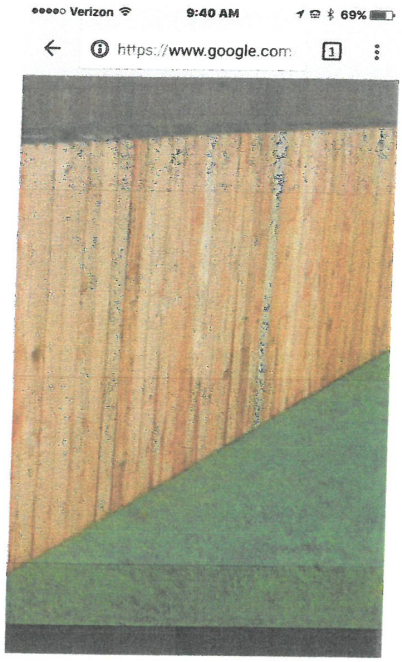
2017-169-SPM

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	
DRAWING NAME:	PHYSICAL2.DWG
SURVEY DATE:	
JOB NO.	522.019

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



6 FOOT PRIVACY FENCE ON EACH SIDE PROPERTY LINE

FILE COPY

Town of Clayton
Planning Department
Date: 12-20-17
By: Julie Hogg
Plan Approval

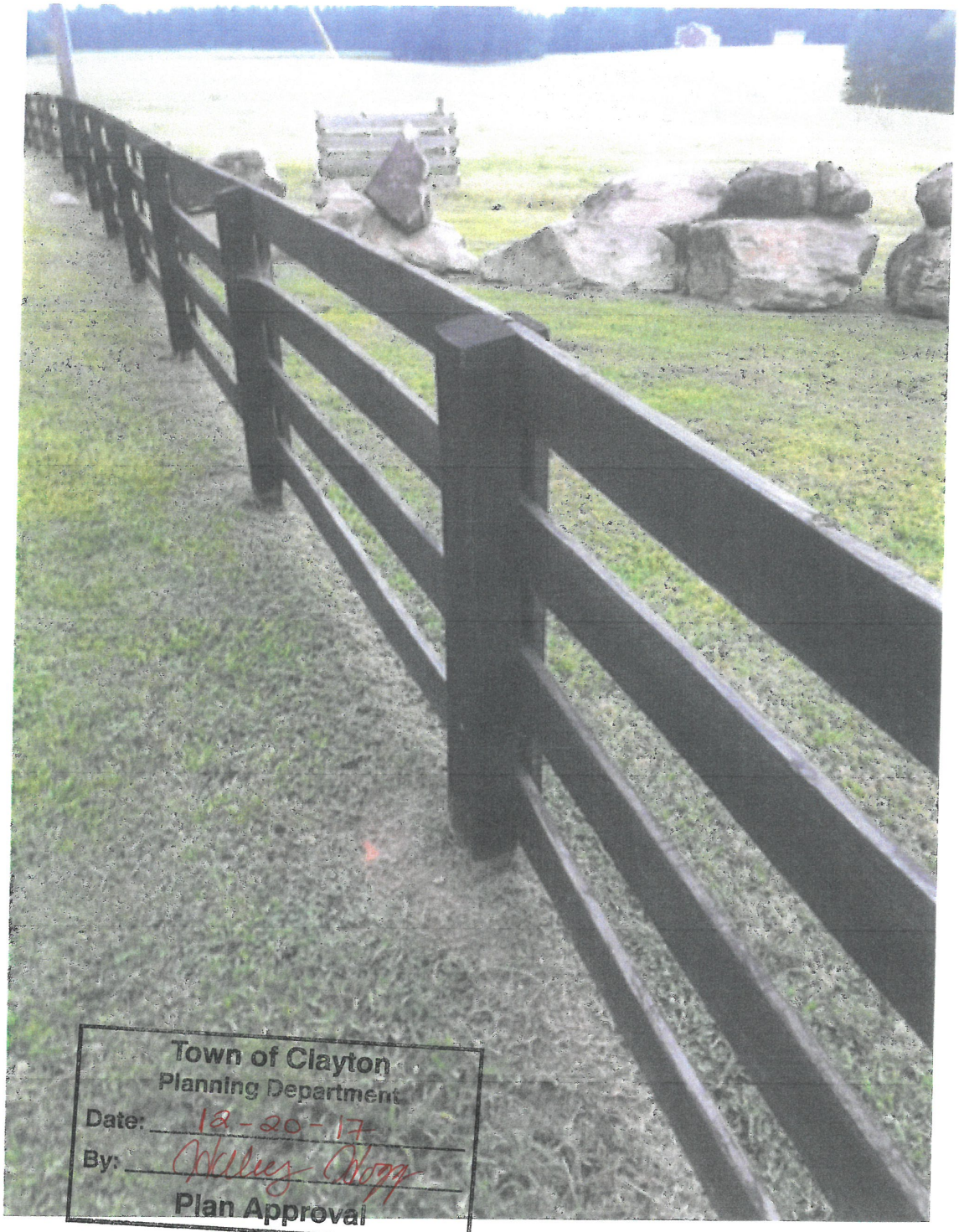
2017-169-SPM

4" FENCE TO RUN PARALLEL TO R.R. TRACK

FILE COPY

Town of Clayton
Planning Department
Date: 12-20-17
By: Hillary Hoyt
Plan Approval
2017-169-SPM

FENCE TO RUN PARALLEL TO R.R. TRACK



Town of Clayton
Planning Department
Date: 12-20-17
By: Ashley Hogg
Plan Approval

2017-169-SPM

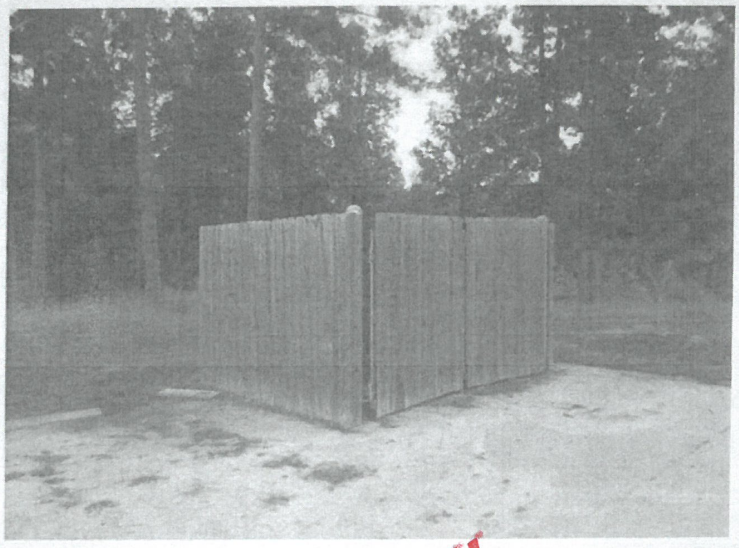
FILE COPY

800 EAST MAIN STREET

DUMPSTER ENCLOSURE

HEIGHT TO BE 8 FOOT

STRUCTURE TO BE PAINTED TO MATCH BUILDING.



FILE COPY

Town of Clayton
Planning Department
Date: 12-20-17
By: Hailey Hogg
Plan Approval

2017-169-SPM

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-157-VAR
Project Name: Vinson's Pub Variance

NC PIN / Tag #: 166806-29-8767 / 05008071
Overlay: Downtown Overlay District & Watershed Protection Overlay
Applicant: James Lipscomb
Owner: Lipscomb, LLC
Location: 800 E Main Street

Public Noticing:

- Sign posted prior to September 14, 2018

REQUEST: The applicant is requesting a variance from the following code sections:

UDC Section	Requirement	Variance Request
155.203(K)(2)	The B-1 zoning district has a setback of 0ft.	The non-permitted addition encroaches into the setback in the NCRR property by 12ft. The variance is for a negative setback requirement of -12ft.
155.204(D)(12)(C) Downtown Overlay- Utilities	All mechanical equipment shall be located on the roof, where practicable, and completely screened from view. The Planning Director may allow the location of mechanical equipment other than as described above, so long as it is completely screened from view or otherwise hidden from view from the public realm.	After-the-fact variance sought to allow unscreened rooftop mechanicals.
155.402(G)(4)(a) Screening- Mechanical Equipment	All roof, ground and wall mounted mechanical equipment including, but not limited to air handling equipment, vents, compressors, duct work, transformers and elevator equipment shall be screened from view.	After-the-fact variance sought to allow unscreened rooftop mechanicals.

155.402(G)(4)(b)	Roof-mounted mechanical equipment shall be shielded from view on all sides. Screening shall consist of materials consistent with the primary building materials, and may include metal screening or louvers which are painted to blend with the primary structure.	After-the-fact variance sought to allow unscreened rooftop mechanicals.

SITE DATA:
Acreage: .19 acres
Existing Use: Restaurant

STAFF ANALYSIS AND COMMENTARY:
The applicant is requesting an after-the-fact variance from the above referenced code sections. Please see below for an analysis of each:

Mechanical Screening
The applicant is requesting a variance from rooftop mechanical screening requirements outlined in sections 155.204(D)(12)(C), 155.402(G)(4)(a), and 155.402(G)(4)(b) due to the installation of unscreened rooftop mechanical units. The Unified Development Code requires that all mechanical equipment, rooftop and ground, be screened entirely from view. The UDC also requires that mechanical equipment within the Downtown Overlay District be roof mounted, where practical. However, this requirement does note that alternative screening locations may be permitted at the discretion of the Planning Director.

When this site plan was originally submitted, staff noted to the applicant during the TRC process that all mechanical equipment would be required to be screened from view (see attachment). As such, the applicant revised the plans accordingly to include a note stating that all mechanical equipment shall be screened entirely from view, as required within the UDC. The approved plan also depicted a 10'x15' fenced mechanical area in the rear of the building, to show where mechanical equipment would be ground mounted. However, when a site inspection was performed prior to issuance of a final Certificate of Occupancy, staff noticed that the mechanical equipment was now located on the rooftop and was unscreened.

While the Downtown Overlay District does typically require mechanical equipment to be located on the rooftop, staff did not require it in this situation as permitted by the UDC, and instead approved the mechanicals to be located in the rear of the building, ground mounted, screened with fencing as shown on the approved plan.

Building Addition
The applicant is also requesting a variance from the setback requirements outlined in 155.203(K)(2) of the Unified Development Code. The property is zoned B-1, and has a minimum building setback of 0'. When the plans were originally submitted and approved by the Town, the applicant showed a fenced mechanical area that encroached into the railroad ROW. Staff was comfortable with this encroachment, as it was not an addition to the primary structure, and was permitted by NCRR. However, when performing a final site inspection staff noticed that the applicant enclosed this area creating a permanent addition to the building. This addition encroaches 12' into the railroad right-of-way, which creates a negative setback and does not meet the requirements of the Unified Development Code. This addition was not reviewed by staff prior to installation, to ensure that it would adhere

with setback requirements. It is also worth noting that had the structure been proposed during the site plan review process, staff would have required the materials utilized to match the primary structure.

Findings of Fact:

1. Unnecessary hardship would result from the strict application of the ordinance. It shall not be necessary to demonstrate that, in absence of the variance, no reasonable use can be made of the property.

    - **Applicant Response:** "Our building is over 100 years old we cannot reasonably design a screening that will meet wind loads when attached to the building. Also see items 1, 2, and 3 above in Burden of Proof Section. The enclosed storage area cannot be built of the same materials of the building because it is considered temporary in nature because of its location within the NCRR Corridor."

    - **Staff Commentary:** Staff does not feel that the applicant has properly demonstrated why this building cannot reasonably design screening that will meet wind loads when attached to the building. No evidence has been presented to staff, from an expert, outlining this hardship. The building is approximately 100 years old and staff feels that if sufficient evidence is presented from an engineer to show that the additional screening is not feasible staff would consider this. Staff also feels that the materials utilized on the addition do not dictate if an addition is temporary vs. permanent.

2. The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance.

    - **Applicant Response:** "Our building is sandwiched between the NCDOT right-of-way for Main Street and the NC Rail Road Corridor. The enclosed storage area in the rear is actually on the railroad right-of-way as is most of the parking lot and landscaping, these features are allowed to exist in the Corridor by virtue of our Licensing Agreement with NC Rail Road. We pay a yearly lease fee and we are allowed to have all these features on a temporary basis because if the licensed area of the corridor is needed for new rails I will be required to remove the improvements within 60 days notice. The installation of the storage area, parking lot and landscaping in the corridor were installed by me at my own desire they were not a requirement of the Town of Clayton Zoning Ordinance. They were installed out of my desire to do a nice renovation project of the historic building as possible and to provide as much improved parking as possible. Please note the extra effort put into protecting the rail corridor with fencing and the overall extra effort put into the site. In the B-1 zoning district the town can only require improvement to the land I own (please see site plan for location of the NCDOT right-of-way and NC rail road corridor).

    - **Staff Commentary:** The applicant does not address the variance requests regarding mechanical equipment in his response to this Finding. Screening of mechanical equipment is a requirement of the general public, including historic structures. Staff feels that this hardship could be unique to the subject property due to the age and condition of the building. The building addition was originally shown on the approved site plan to be a mechanical area with a 6ft privacy fence and then later add a metal roof. A building addition was built instead. The addition façade is inconsistent with the primary structure, although it is consistent with the fencing on the rest of the property.

3. The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship.

    - **Applicant Response:** "My original site plan shows the HVAC compressor units on the ground behind the building behind a solid fence. I chose during construction to move these units onto the roof where they joined the other new mechanical units on the roof which are all components of the commercial restaurant hood system, make up air vents required by the commercial HVAC units, Satellite Dish, and multiple plumbing vents, all these mechanical features had always been planned to be roof mounted and are shown on my approved building plans. I was never made aware of the screening requirement in any of the numerous meeting and approvals with Town of Clayton staff prior to the completion of my project and a request for CO.

    - **Staff Commentary:** The applicant does not address all requested variances in this response. Specifically, the variance request regarding the building addition (155.203(K)(2)) is not addressed. In regards to the mechanical equipment, the approved plans show a fenced mechanical area in the rear of the building. They do not specify what mechanicals are located there, so this was understood by staff to be the location of all outdoor mechanical equipment on-site. No notes are provided on the plan that any mechanical equipment would be located on the rooftop. The applicant states that he chose to move equipment to the rooftop during the construction process. Staff was not notified of this revision and was not aware of this until performing a final site inspection. The applicant states that he was never made aware of the screening requirement in any of the numerous meetings with the Town staff. However, during the first review of the plans staff did include a TRC comment to the applicant requesting that they provide a note on the plan stating that all mechanical equipment shall be screened from view (see attachments). The applicant acknowledged this comment as "noted" in correspondence, and provided a note on the plan stating such. Staff considers this a self-inflicted hardship, as the applicant was made aware of the code requirement and provided a note on the plan stating all mechanical equipment would be screened from view.

4. The requested variances are consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.

    - **Applicant Response:** "There are no public safety issues associated with these Variance requests. I contend that Substantial Justice will be served by granting the Variances due to the fact that the requirement was not mentioned to me during the review and approval process of my building plans and the site plan by Town of Clayton officials. Further to require screening on historic buildings may not always be reasonable or structurally feasible. Also, the fact I have to comply with the additional rules imposed by NCRR in their license agreement for the section of the site plan that exist in the NCRR corridor.

    - **Staff Commentary:** The applicant was made aware of the mechanical screening requirement during the TRC process and noted on the plans that all mechanical equipment would be screened from view. This was understood to include the ground-mounted and rooftop mechanical equipment. The applicant has not provided factual evidence from an expert to demonstrate the feasibility of installing rooftop screening. The building addition is inconsistent with the primary

structure but is consistent with the additional fencing adjacent to the addition and surrounding the property.

CONSIDERATIONS:

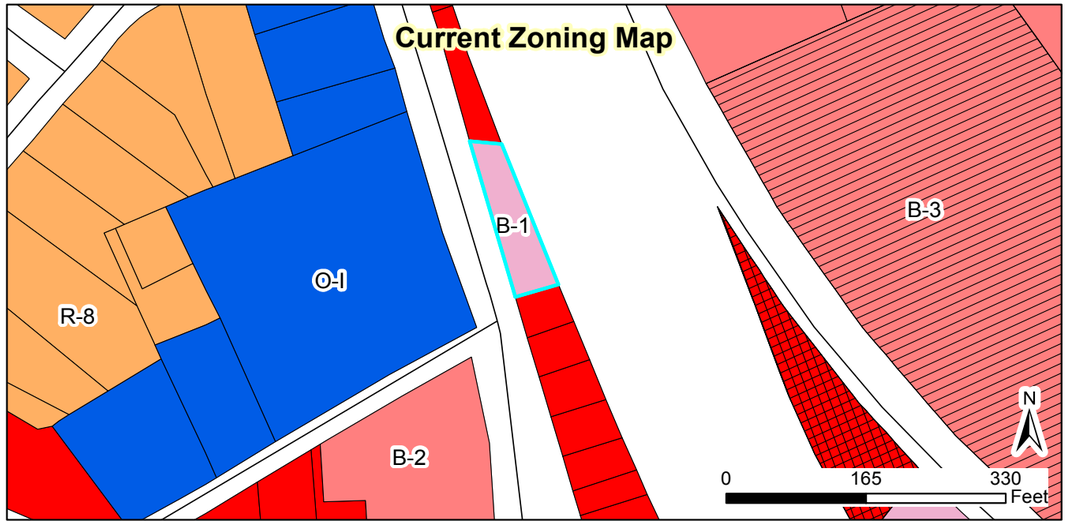
- The Planning Board shall review and make a final decision regarding Variance applications.
- Per UDC requirements, no variance shall be approved unless all of the Findings of Fact are made.

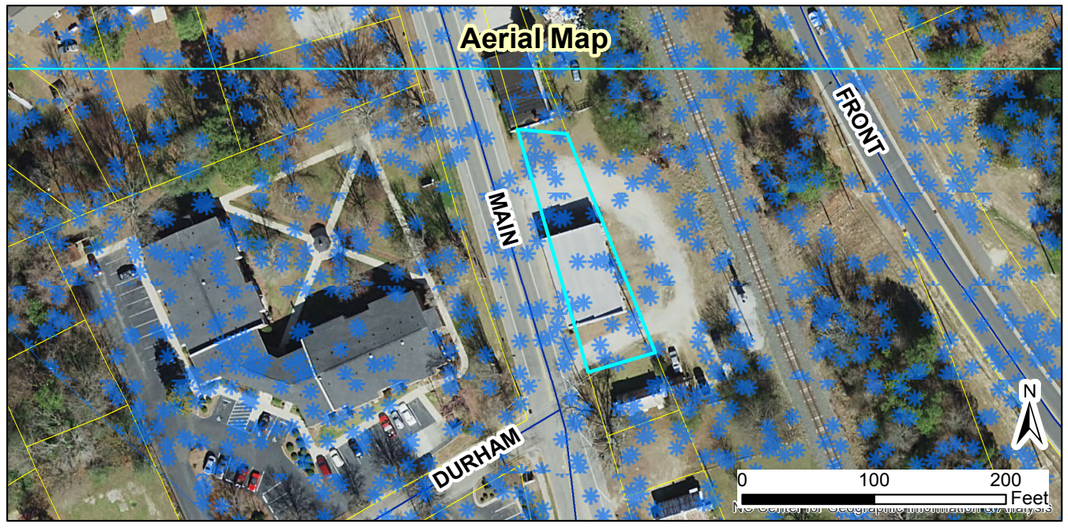
FINDINGS OF FACT:

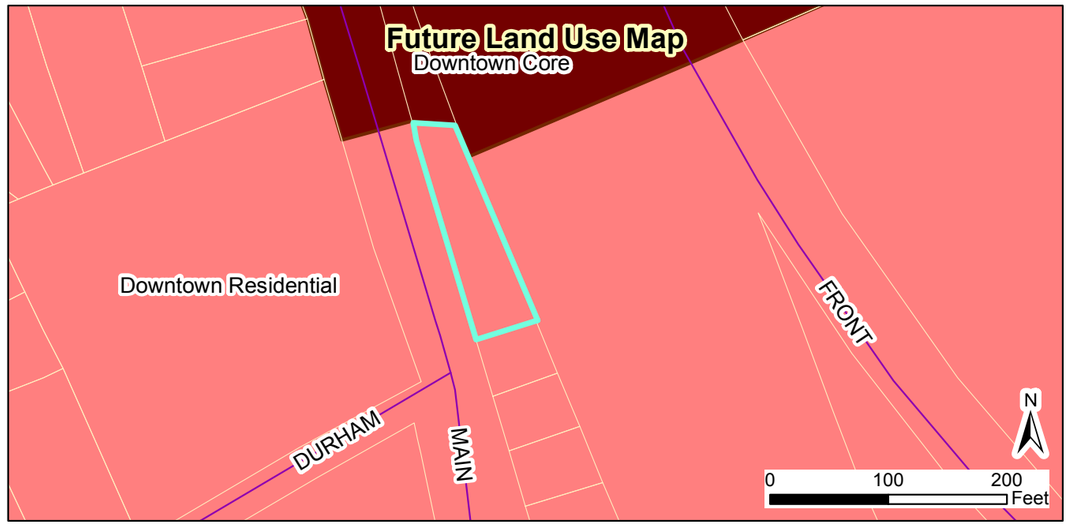
The applicant has addressed the Findings of Fact, as outlined above in this report and included as a part of the application.

ATTACHMENTS:

1. Application
2. Staff Report Maps
3. Associated Site Plan
4. Approved Site Plan (copy)
5. TRC Response from applicant
6. Newspaper Ad- public notice
7. Adjacent Property Letter- public notice







2018-157-VAR Vinson's Pub Variance

Request: variance from specific code requirements outlined in application

Applicant: James Lipscomb
Property Owners: Lipscomb, LLC
Parcel ID: 166806-29-8767
Tag #: 05008071

Staff Report Map

08/29/2018

Produced by: TOC Planning

Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\VARIANCE\2018\2018-157-VAR Vinson's Pub\Staff Report Maps - 2018-157-VAR - Vinson's Variance.mxd

Legend

- 100-yr Flood Zone
- Thoroughfare Overlay
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

Town of Clayton
Planning Department
111 East Second Street
Clayton, N.C. 27520

November 14, 2017

Ms. Hogg,

Below are our responses to the Town of Clayton's TRC First Review Comments for the 800 E Main Street site plan (2017-169-SPM). The Town's comments are in italic while our responses are in normal font.

1. *Please add the project number to the site plan.* As shown on the revised site plan.
   Please add/revise the following items to the Site Data Table:
   A) *Tag ID.* Done
   B) *Property Owner.* Done
   C) *Zoning District.* Done
   D) *Setbacks.* Done
   E) *Existing Use.* Done
   F) *Proposed Use.* Done
   G) *Proposed Impervious Percentage.* Done
   H) *Parking.* Done

4. *Please provide a fence detail.* Owner will provide this.
5. *Please fix the overlapping text.* Done.
6. *Please remove the note Formerly Discount Auto Parts.* Done
7. *Please provide a dumpster detail.* Owner will provide this.
8. *Please provide a note that all mechanical equipment to be screened.* Done.

Thank You

Mike Grindstaff
True Line Surveying, P.C.

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

TECHNICAL REVIEW COMMITTEE REVIEW

FROM: JAMES LIPSCOMB

TO: Planning Department

CONTACT: Haley Hogg, Planner, 919-359-2102, hhogg@townofclaytonnc.org

DATE: November 27, 2017

PROJECT NAME & NUMBER: 2017-169-SPM 800 E. Main Street

SUBJECT: RESPONSE TO 1st Review Comments

General Comments:

1. Please submit a wastewater allocation request for this project. IN PROCESS

Site / Subdivision Plan Sheet:

SEE RESPONSE LETTER FROM TRUE LINE FOR ITEMS 2-8.

2. Please add the project number to the site plan (2017-169-SPM)
3. Please add/revise the following items to the Site Data Table:
   a) Tag ID
   b) Property Owner
   c) Zoning District (B-1, not B-3)
   d) Setbacks (please adjust to B-1 setbacks)
   e) Existing Use
   f) Proposed Use (if restaurant, please include number of seats)
   g) Proposed Impervious Percentage
   h) Parking (note which calculation was used)
4. Please provide a fence detail for each fence type proposed. This detail must include the fence material and height. PROVIDED
5. Please fix the overlapping text located along the western property line.
6. Please remove the note "formerly discount auto parts" from the plan

7. Please include a detail of the dumpster enclosure. The height of the enclosure, as well as the materials must be included. Please note that dumpster enclosures must be 100% opaque and 8' in height, per UDC. PROVIDED
8. Please provide a note that all mechanical equipment shall be screened entirely from view, as required within the UDC.

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

SPECIAL USE APPLICATION

Pursuant to Article 7, Section 155.711 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town Council to allow a Special Use. Special Uses are uses that may be appropriate in a particular district, but have the potential to create incompatibilities with adjacent uses.

Application Fee: $400.00.
Advertisement Fee: $100.00.
All fees are due when the application is submitted.

Please note that Section 155.702(B) of the Unified Development Code requires a Neighborhood Meeting for all Special Use Permit applications.

APPLICATION TYPE

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

SITE INFORMATION

Name of Project: Spinning Mill Lofts at East Village **Acreage of Property:** 24.50
Parcel ID Number: See Attachment **Tax ID:** See Attachment
Deed Book: See Attachment **Deed Page(s):** See Attachment
Address/Location: 300 Mill Street, Clayton NC

Existing Use: Vacant Manufacturing Bldg. and Office **Proposed Use:** Apartments
Is project within a Planned Development? ☒ No ☐ Yes
Planned Development District (if applicable): N/A
Is project within an Overlay District: ☐ No ☒ Yes
Overlay District (if applicable): Watershed Protection

OFFICE USE ONLY

Date Received: APR 02 2018 Amount Paid: $500 Permit Number: 2018-65-SUP

RECEIVED
TOWN OF CLAYTON
PLANNING DEPARTMENT

Spinning Mill Lofts at East Village

County Tag #	NC PIN	Deed	Page
05037009T	1669.18-30-2104	3322	198
05037008V	1669.18-30-5328	3322	196
05037009W	1669.18-30-8385	3322	198
05037009U	1669.18-30-4740	3322	196
5037011	1668.06-48-6538	4099	330
05H03197H	1669.18-40-2748	3371	449

PROPERTY OWNER INFORMATION

Name: WBB, LLC; HCY, LLC; SCA Ventures, LLC; East Village Investments, LLC

Mailing Address: 132 Citation Lane, Smithfield, NC and 227 E. Front St. New Bern, NC 28560-2145

Phone Number: 919-938-1086; 252-670-9370 **Fax:** N/A

Email Address: Hubie@uhfdevelopmentgroup.com

APPLICANT INFORMATION

Applicant: Bass, Nixon and Kennedy, Inc. Consulting Engineers

Mailing Address: 6310 Chapel Hill Rd., Ste. 250, Raleigh, NC 27607

Phone Number: 919-851-4422 **Fax:** 919-851-8968

Contact Person: Marty D. Bizzell, PE

Email Address: marty.bizzell@bnkinc.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany a Conditional Use Permit (CUP) application.

To be completed by the applicant:			To be completed by staff:		
	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: 2/14/18	☑	☐			
2. Review Fee ($400) and Application Fee ($100)	☑	☐			
3. Completed application (9 copies)	☑	☐			
4. Owner's Consent Form (9 copies)	☑	☐			
5. Adjacent property owners list (9 copies)	☑	☐			
6. Wastewater allocation request OR verification of wastewater allocation (9 copies)	☑	☐			
7. Signed and sealed traffic impact analysis (2 copies)	☐	☐			
8. If applicant is concurrently applying for site plan approval, a copy of the proposed site plan.	☑	☐			
9. Neighborhood meeting notice letter (9 copies) *See sample letter and meeting requirements included in this packet*	May be provided at time of submittal if meeting date is known – otherwise must be submitted by email or mail on date the letter is mailed out.				
10. Set of stamped, addressed envelopes using the adjacent property owners list	May be provided at time of submittal OR no later than 25 days prior to the Town Council meeting.				
11. Neighborhood meeting summary form (9 copies) *Form is included in this packet*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.				

Note: More information may be requested by the Planning Department depending on the project

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.

The proposed use is residential apartments, which is allowed as a special use on the property. Residential apartments are appropriately located on the property in relation to the surrounding uses, which include single family and office. A total of 255 apartments are proposed.

All of the apartments proposed by the application will have adequate access to public streets, as well as water and sewer, which will be designed and constructed to Town of Clayton standards and specifications. Stormwater will also be controlled by compliance with Town of Clayton standards and regulations. There will no detrimental impact on the public health, safety and welfare from traffic or other secondary effects, such as dust and noise.

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.

The proposed residential apartment development will meet all rules and regulations within the Town of Clayton Unified Development Ordinance and all existing Town of Clayton policies. In addition, all construction will be in accordance with all Town of Clayton Standards and Specifications.

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 proposed use will not substantially injure the value of the adjoining or abutting properties.

Buffering, screening and landscaping will also be provided where required in accordance with Town ordinances, which will minimize the impact on adjoining properties as well.

In summary, the proposed use is consistent with adjoining or abutting uses and the values of those properties will be maintained or enhanced by the proposed use.

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 residential apartment development will meet all rules and regulations within the Town of Clayton Unifited Development Ordinance (UDO) and all existing Town of Clayton policies. In addition, all construction will be in accordance with all Town of Clayton Standards and Specifications. The proposed development will not violate the character of existing standards for development of the adjacent properties. The character of the existing standards for development of the adjacent properties will be maintained or enhanced by the proposed redevelopment of this property.

EXPLANATION OF PROJECT

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

Project includes the renovation of the Historic Clayton Spinning Mill Building. The existing mill building will be converted to a loft apartment building which will house 25 loft apartments. In addition, 8 new market rate apartments will be constructed on the surrounding properties to the south and east of the mill building containing 230 new market rate apartments. There will also be a portion of the existing building that will be utilized for a small coffee shop or restaurant.

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.

Marty D. Bizzell		3/30/18
Print Name	***Signature of Applicant***	***Date***

BASS, NIXON & KENNEDY, INC., CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
919/851-4422 FAX 919/851-8968 BNK@BNKinc.com

May 4, 2018

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: May 16, 2018 Meeting Time: 7:00PM

Meeting Location: The Arbors at East Village Apts. Clubhouse
50 Bentbranch Loop, Clayton

Type of Application: Rezoning, Special Use Permit and Site Plan.

Project/proposal property address: 300 Mill St., Clayton

Description of project/proposal: Residential apartments and amenities

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map at a scale that is appropriate to the project and shows neighboring properties and roads.
3. A map, drawing, or other depiction of the proposed land use change or development proposal.

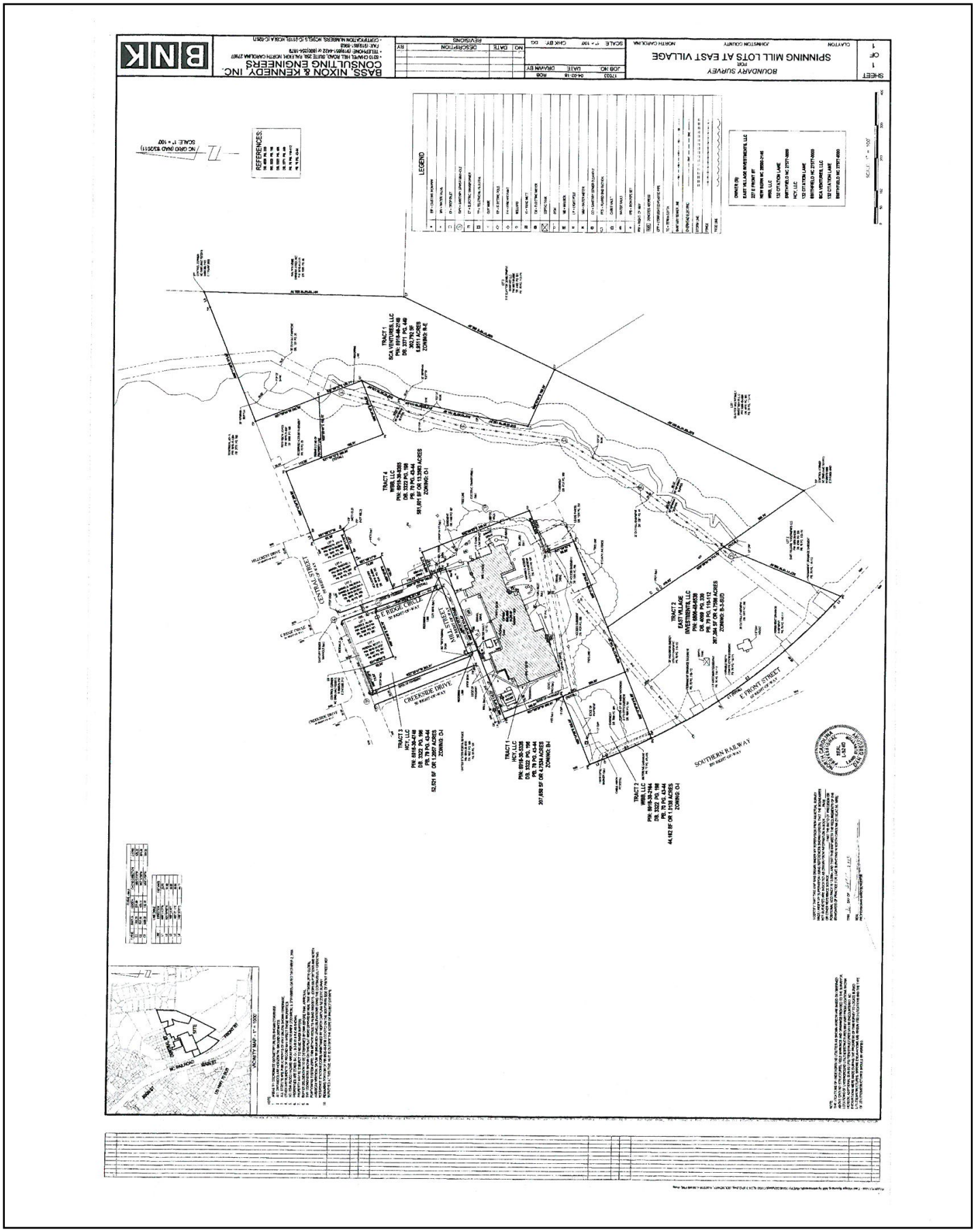
A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and/or development proposal.

If you have any questions prior to or after this meeting, you may contact us at 919-851-4422. You may also contact the Planning Department at 919-553-5002.

Sincerely,

Marty D. Bizzell, PE
Bass, Nixon & Kennedy, Inc

Cc: Town of Clayton Planning Dept.


BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
BNK
BOUNDARY SURVEY
FOR
SPINNING MILL LOTS AT EAST VILLAGE
LEGEND
REFERENCES:
CENTRAL STREET
CREEKSIDE DRIVE
MILL STREET
E FRONT STREET
SOUTHERN RAILWAY
TRACT 1
TRACT 2
TRACT 3
TRACT 4
VICINITY MAP

ADJACENT PROPERTY OWNERS LIST

Project Name: Spinning Mill Lofts at East Village (Page 1 of 2)

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
1669.18-30-1510	United States Postal Service	3980 Dekalb Tech. Parkway S240, Atlanta, GA 30340-2778
1669.18-30-3737	Scott J. Perdun	111 Central Street, Clayton, N.C. 27520-2004
1669.18-30-3799	Allen Rhodes	P.O. Box 973, Greenboro, NC 27402-0973
1669.18-30-2808	John R. & Elaine W. Johnson	155 Richard Dr., Garner, NC 27529-6717
1669.18-30-6834	SCA Ventures, LLC	132 Citation Lane, Smithfield, NC 27577
1669.18-30-5814	Nelson K. & Angelina A. Daniels	401 Central Street, Clayton, NC 27520
166.18-30-5887	Raechel L. Marsh	409 Central Street, Clayton, NC 27520-2006
1669.18-30-6849	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-9081	Joyce Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-7006	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-1477	Harvey B. & Mildred S. Gordon	133 Plantation Cir S., Ponte Vedra Beach, FL 32082
1669.18-41-1304	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-41-7775	Walden Homeowners Assoc., Inc.	2044 Deer Trail, Clayton, NC 27527
1669.18-41-6242	Jerry D. & Leetha House	2025 Deer Trail, Clayton, NC 27527
1669.18-41-5034	Hamilton Family Trust	2021 Deer Trail, Clayton, NC 27527
1669.18-40-5883	Anthony R. Tuel	2017 Deer Trl., Clayton, NC 27527-9181
1668.07-59-0985	TH Clayton Development Co., LLC	P.O. Box 566, Greenville, NC 27835-0566

ADJACENT PROPERTY OWNERS LIST

Project Name: Spinning Mill Lofts at East Village (Page 2 of 2)

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
1668.06-49-3499	Clayton Multi Family Investments, LLC	P.O Box 566, Greenville, NC 27835-0566
1668.06-39-9260	East Village Investments, LLC	227 E. Front St., New Bern, NC 28560-2145
	North Carolina Railroad	2809 Highwoods Blvd., Raleigh, NC 27604

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Spinning Mill Lofts at East Village

Application: Rezoning, Special Use and Major Site Plan

Location/Date: The Arbors Apts. Clubhouse - May 16, 2018

	NAME	ADDRESS
1	Angelina Daniels	401 Central St, Clayton, NC 27520
2	Marcia Wolfe	141 East Ridge Circle, Clayton, NC 27520
3		2021 Deer Trl
4	Allen Rhodes	508 #3 O Ferrell ST Greensboro, NC 27405
5	Jerry House	2025 Deer Trl
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NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Spinning Mill Lofts at East Village

Date of Mailing: May 4, 2018

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:

Printed Name: Marty D. Bizzell Signature: _____

Date of Meeting: May 16th Time of Meeting: 7:00

Location of Meeting: The Arbors Apartments Clubhouse

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.*

Five property owners attended the meeting held at the Arbors Apts. Clubhouse on May 16th at 7:00 p.m. An overview of the project was given by Marty Bizzell, Engineer for the project and Thomas Taft, Jr., developer. Several items were discussed including bldg. elevations, landscaping and traffic patterns. It was explained that the existing mill building will be renovated into 25 loft apartments. Stormwater ponds locations were discussed along with locations of Neuse Riparian buffers. There was some discussion about whether the adjacent house on E. Ridge Circle (PIN: 166918-30-6834) would remain or be demolished. It was explained the parcel is not part of the project and will remain. Property owners seemed pleased with the project at the meeting adjourned at approximately 8:30 p.m.

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

SYMBOLS AND ABBREVIATIONS

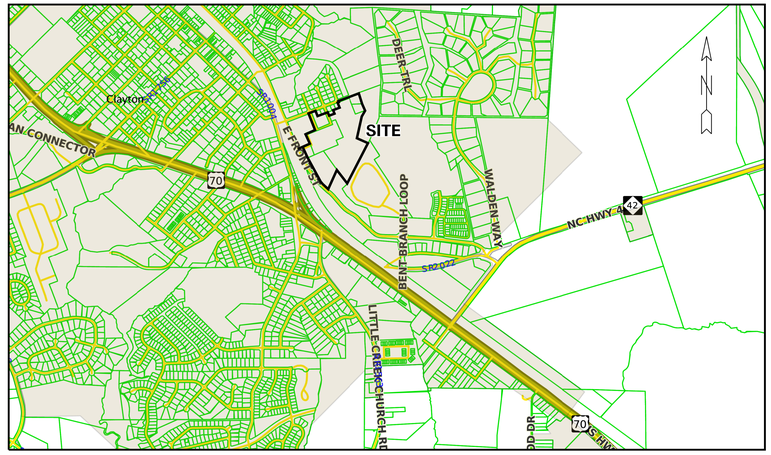
ABC	AGGREGATE BASE COURSE
ALUM	ALUMINUM
ASSY	ASSEMBLY
B-B	BACK TO BACK
BOA	BLOW-OFF ASSEMBLY
C&G	CURB AND GUTTER
CFS	CUBIC FEET PER SECOND
CI	CURB INLET
C/L	CENTER LINE
CO	CLEAN OUT
COM	COMMUNICATION
CONC	CONCRETE
CT	COURT
CU	COPPER
DCV	DOUBLE CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE
DEFL	DEFLECTION
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DRAIN	DRAINAGE
DR	DRIVE
EASE	EASEMENT
ELEC	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FES	FLARED END SECTION
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FEET
FT/SEC	FEET PER SEC
GALV	GALVANIZED
GV	GATE VALVE
HCR	HANDICAP RAMP
INV	INVERT
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
OHE	OVERHEAD ELECTRIC
PAVE	PAVEMENT
PERM	PERMANENT
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
S	SLOPE
SS	SANITARY SEWER
STA	STATION
T	TANGENT
TDD	TEMPORARY DIVERSION DITCH
TELE	TELEPHONE
TSB	TEMPORARY SEDIMENT BASIN
TSD	TEMPORARY SLOPE DRAIN
UG	UNDERGROUND
W	WIDTH
W/L	WATER LINE
WM	WATER METER
YI	YARD INLET

EXISTING CURB INLET
EXISTING DROP INLET / YARD INLET
EXISTING FLARED END SECTION
EXISTING FIRE HYDRANT
EXISTING BLOW-OFF ASSEMBLY
EXISTING GATE VALVE
EXISTING REDUCER
EXISTING WATER METER
EXISTING MANHOLE / JUNCTION BOX
EXISTING CLEAN OUT
EXISTING POWER POLE
EXISTING GUY WIRE
EXISTING TELEPHONE PEDESTAL
EXISTING LIGHT POLE / AREA LIGHT
EXISTING SIGN
NEW CURB INLET
NEW GRATE INLET/YARD INLET
NEW FLARED END SECTION
NEW FIRE HYDRANT
NEW BLOW-OFF ASSEMBLY
NEW GATE VALVE
NEW REDUCER
NEW WATER METER
NEW TEE
NEW PLUG
NEW MANHOLE
NEW CLEAN OUT
NEW SIGN
IRON PIPE
BENCHMARK
STORM STRUCTURE LABEL
BLOCK AND GRAVEL INLET PROTECTION
SILT FENCE INLET PROTECTION
EXCAVATED INLET PROTECTION
SEDIMENT BASIN
RISER BASIN
ROCK DAM
EXISTING GAS LINE
EXISTING COMMUNICATIONS LINE
EXISTING UNDERGROUND TELEPHONE
EXISTING UNDERGROUND ELECTRIC
EXISTING OVERHEAD ELECTRIC
EXISTING WATER LINE
EXISTING SANITARY SEWER FORCE MAIN
EXISTING SANITARY SEWER
EXISTING STORM DRAINAGE
NEW STORM DRAINAGE
STREAM
NEW WATER LINE
NEW SANITARY SEWER
NEW SANITARY SEWER FORCE MAIN
NEW GAS MAIN
GRASSED LINED DITCH/CHANNEL
JUTE MATTING LINED DITCH/CHANNEL
PYRAMAT LINED DITCH/CHANNEL
LIMITS OF CUT SLOPE
LIMITS OF FILL SLOPE
SILT FENCE
TREE FENCE
COMBINATION SILT/ TREE FENCE
DIVERSION DITCH

SPINNING MILL LOFTS AT EAST VILLAGE

MAJOR SITE PLAN

JOHNSTON COUNTY NORTH CAROLINA



VICINITY MAP

NOT TO SCALE

DEVELOPER:

SPINNINNG MILL INVESTMENTS, LLC
P.O. BOX 566
GREENVILLE, NC 27835
TELEPHONE: (252) 752-7101

PREPARED BY:

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
5316 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
TELEPHONE: (919)851-4422 or (800)354-1879
FAX: (919)851-8968
www.BNKinc.com
CERTIFICATION NUMBERS: NCBELS (C-0110)
NCBOLA (C-0267)

ENGINEERS:
BASS, NIXON AND KENNEDY, INC.
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
TELEPHONE: (919) 851-4422
FAX: (919) 851-8968

CONTACT: MARTY D. BIZZELL, PE, CPESC
EMAIL: MARTY.BIZZELL@BNKINC.COM

SHEET INDEX

SHEET No.	SHEET TITLE
—	COVER SHEET
C1.0	EXISTING CONDITIONS PLAN
C1.1	OVERALL SITE PLAN
C1.2	SITE PLAN
C1.3	SITE PLAN
C2.1	UTILITY PLAN
C2.2	UTILITY PLAN
C2.3	OFF SITE SANITARY SEWER PLAN
C3.1	GRADING PLAN
C3.2	GRADING PLAN
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN – NORTH
L1.2	LANDSCAPE PLAN – SOUTH
1.A1.10	BUILDING TYPE I ELEVATION
1.A1.11	BUILDING TYPE I ELEVATION
1.A2.03	BUILDING TYPE II ELEVATION
1.A2.08	BUILDING TYPE 2.1 ELEVATION
1.A2.09	BUILDING TYPE 2.1 ELEVATION
1.A3.03	BUILDING TYPE 3.0 ELEVATION
1.A3.12	BUILDING TYPE 3.1 ELEVATION
1.A3.24	BUILDING TYPE 3.2 ELEVATION
1.A5.10	GARAGE TYPE 1 ELEVATIONS
1.A5.11	GARAGE TYPE 2 ELEVATIONS
1.A5.12	GARAGE TYPE 3 ELEVATIONS
1.A6.00	COMPACTOR PLAN AND ELEVATION
1.A7.00	POOLSIDE GRILLING STATIONS
CB1	COLOR BOARD 1
A1.1	BUILDING PLAN
A1.2	BUILDING PLAN
A1.3	POOL-HOUSE – BUILDING PLAN – ELEVATIONS
A3.1	BUILDING ELEVATIONS
A3.2	BUILDING ELEVATIONS
A3.3	BUILDING ELEVATIONS

Received by Town of Clayton
9/19/2018

CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPALITY STANDARDS, SPECIFICATIONS, AND DETAILS. WORK IN THIS PROJECT SHALL ALSO CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.

3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.

6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

7. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEERING DIVISION.

8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.

9. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND APPLICABLE MUNICIPALITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

10. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

11. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D698. STONE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST AS SET OUT IN ASTM STANDARD D1557. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.

12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY

13. THE CONTRACTOR SHALL REVIEW, VERIFY AND COORDINATE ALL DIMENSIONS SHOWN ON PLANS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER PRIOR TO STARTING PROJECT.

14. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

15. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE, VOL. I–C ACCESSIBILITY CODE.

16. OWNER SHALL PROVIDE FENCING AND OTHER SAFETY MEASURES NECESSARY IN AND AROUND ANY PROPOSED STORMWATER MANAGEMENT MEASURES (PONDS, WETLANDS, ETC.) OBTAINING PROPER PERMITS SHALL BE THE RESPONSIBILITY OF THE OWNER.

17. RETAINING WALLS EXCEEDING 30 INCHES IN HEIGHT SHALL INCLUDE FALL PROTECTION IN THE FORM OF A HANDRAIL OR FENCING ON THE HIGH SIDE OF THE RETAINING WALL.

18. PROPER COMPACTION OF ALL FILL SOILS PLACED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION SHALL BE ADEQUATE TO SUPPORT THE PROPOSED USE OF AREAS IN WHICH FILL SOILS ARE PLACED. THE CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO TEST AND VERIFY THAT COMPACTION IS ADEQUATE FOR THE PROPOSED USE OF IN THE AREA OF FILL PLACEMENT.

19. ALL ASPECTS OF THIS PROJECT SHALL BE IN FULL COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR NOTES ANY ASPECTS OF THE PROJECT WHICH ARE NOT IN COMPLIANCE, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY FURTHER WORK BEING PERFORMED. ANY WORK PERFORMED AFTER THE CONTRACTOR NOTES SUCH A NON COMPLIANCE IS SUBJECT TO REMOVAL AND REPAIR AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR OR OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO TEST ALL EMBANKMENTS AND FILL PLACEMENT FOR PROPER COMPACTION. PROPER COMPACTION SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS OR THESE PLANS, WHICHEVER IS MORE STRINGENT. EMBANKMENTS FOR PONDS SHALL BE PLACED IN 6 INCH LOOSE LAYERS AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR – TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE AT ALL PHASES OF INSTALLATION AND SHALL RETAIN WITH GEOTECHNICAL TESTING DATA. THE CONTRACTOR SHALL ALSO RETAIN ALL SHIPPING RECORDS AND SPECIFICATIONS FOR THE OUTLET STRUCTURE MATERIALS AND STRUCTURES. ALL OF THE ABOVE DATA MAY BE REQUIRED AS PART OF THE MUNICIPALITY AS-BUILT PROCESS AND SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST. THE CONTRACTOR AND OWNER SHALL HAVE DOCUMENTATION OF THESE TESTS AVAILABLE UPON REQUEST.

21. RETAINING WALLS SHOWN HEREIN SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER WITH EXPERIENCE DESIGNING RETAINING WALLS. AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION OF RETAINING WALLS, THE CONTRACTOR SHALL CONTACT THE OWNER'S GEOTECHNICAL ENGINEER TO SCHEDULE AND COORDINATE ALL APPROPRIATE INSPECTIONS, TESTING, AND VERIFICATION NECESSARY DURING RETAINING WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTION, TESTING AND VERIFICATION FOR THE DURATION OF RETAINING WALL CONSTRUCTION. PROPER SCHEDULING, EXECUTION, AND RECORD KEEPING FOR ALL REQUIRED INSPECTIONS, TESTING, AND VERIFICATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH RECORDS SHALL BE RETAINED AND SHALL BE PROVIDED TO THE OWNER AND BASS, NIXON & KENNEDY, INC. ALL MONITORING, TESTING, AND VERIFICATION SHALL CONFORM TO THE MOST RECENT VERSION OF THE NC BUILDING CODE CHAPTER 18, SECTION 1806 OR THE WALL DESIGN ENGINEER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

NOT PERMITTED FOR CONSTRUCTION

9/18/2018 3:22:50 PM PLOT By:mork.ogiens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\17033_cover .dgn

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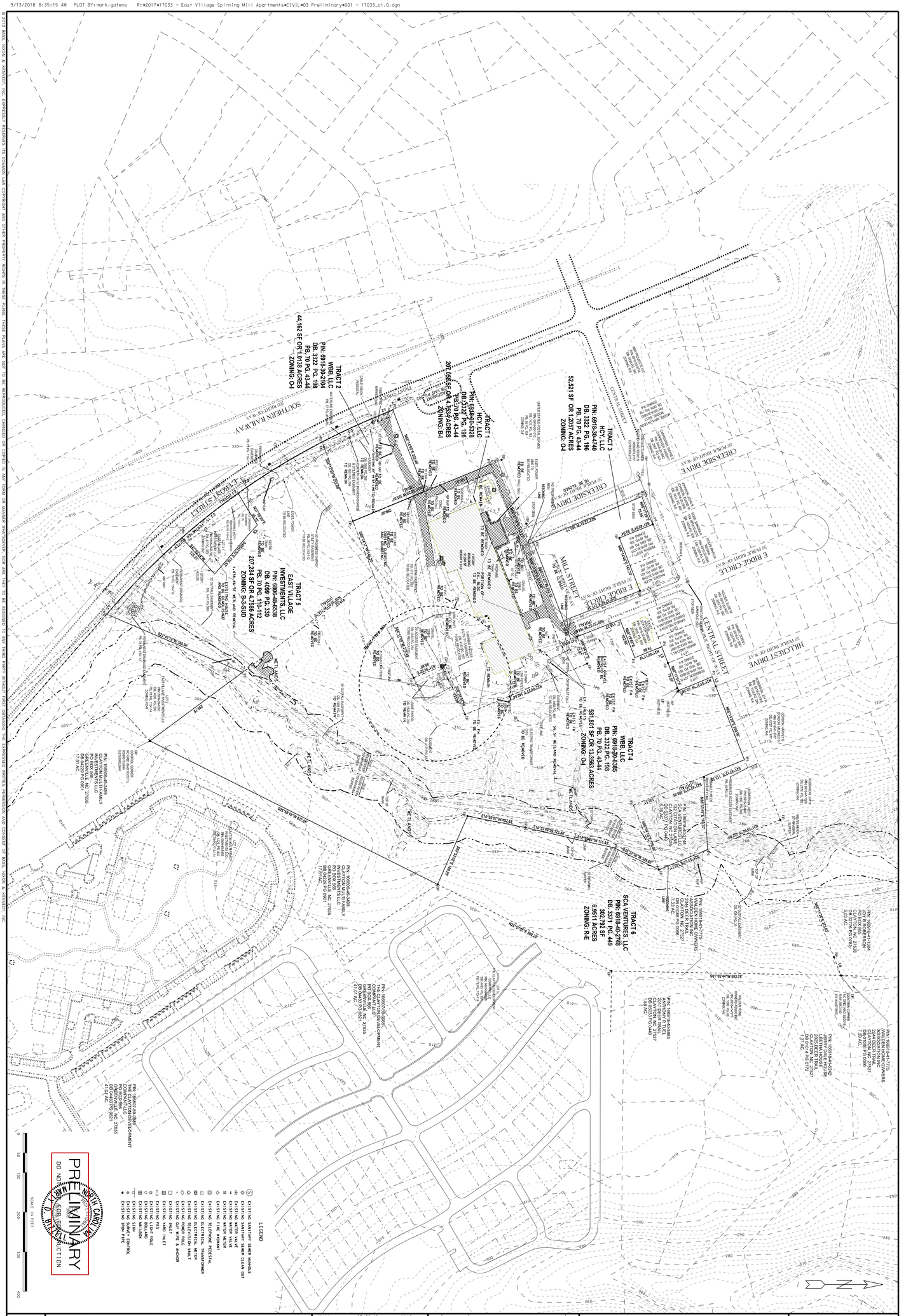
9/13/2018 8:35:15 AM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\001 - 17033_c1.0.dgn



SHEET	**SPINNING MILL LOFTS AT EAST VILLAGE**	17033 07-23-18 MJG
C1.0	**PHASE I PRELIMINARY SUBMITTAL**	JOB NO. DATE DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	**EXISTING CONDITIONS AND DEMOLITION PLAN**
		SCALE: 1" = 100' HORZ.

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

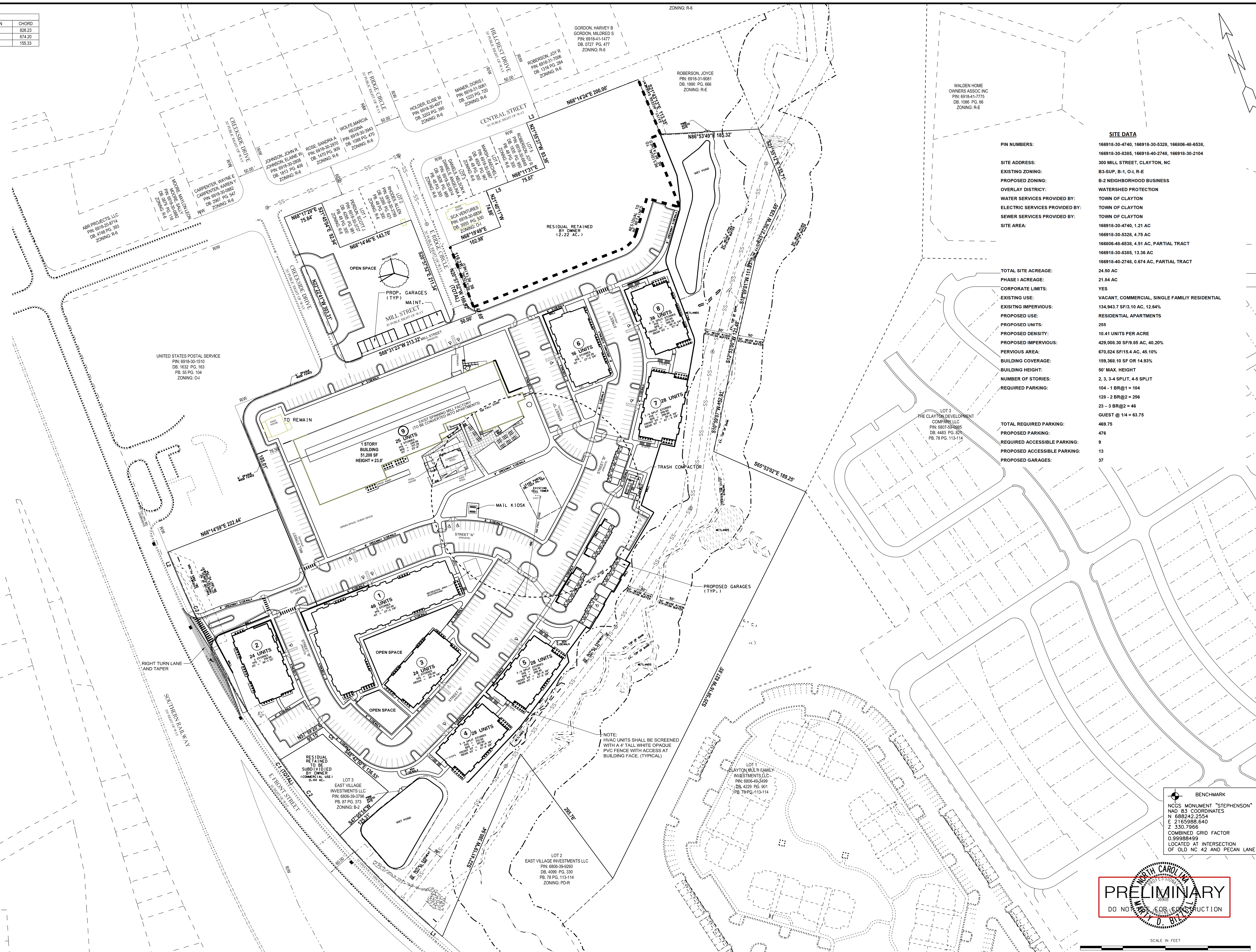
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C1	1820.00	833.50	N35°04'24"W	826.23
C2	1820.00	678.11	N37°31'09"W	674.20
C3	1820.00	155.38	N24°23'58"W	155.33

LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	N48°11'35"W	33.23
L2	N21°57'05"W	44.92
L3	N69°14'28"E	25.88
L4	N68°27'14"E	49.65
L5	N68°37'03"E	44.12



SITE DATA

PIN NUMBERS:	166918-30-4740, 166918-30-5328, 166806-48-6538,
	166918-30-8385, 166918-40-2748, 166918-30-2104
SITE ADDRESS:	300 MILL STREET, CLAYTON, NC
EXISTING ZONING:	B3-SUP, B-1, O-I, R-E
PROPOSED ZONING:	B-2 NEIGHBORHOOD BUSINESS
OVERLAY DISTRICY:	WATERSHED PROTECTION
WATER SERVICES PROVIDED BY:	TOWN OF CLAYTON
ELECTRIC SERVICES PROVIDED BY:	TOWN OF CLAYTON
SEWER SERVICES PROVIDED BY:	TOWN OF CLAYTON
SITE AREA:	166918-30-4740, 1.21 AC
	166918-30-5328, 4.75 AC
	166806-48-6538, 4.51 AC, PARTIAL TRACT
	166918-30-8385, 13.36 AC
	166918-40-2748, 0.674 AC, PARTIAL TRACT
TOTAL SITE ACREAGE:	24.50 AC
PHASE I ACREAGE:	21.84 AC
CORPORATE LIMITS:	YES
EXISTING USE:	VACANT, COMMERCIAL, SINGLE FAMILIY RESIDENTIAL
EXISITNG IMPERVIOUS:	134,943.7 SF/3.10 AC, 12.64%
PROPOSED USE:	RESIDENTIAL APARTMENTS
PROPOSED UNITS:	255
PROPOSED DENSITY:	10.41 UNITS PER ACRE
PROPOSED IMPERVIOUS:	429,008.30 SF/9.85 AC, 40.20%
PERVIOUS AREA:	670,824 SF/15.4 AC, 45.10%
BUILDING COVERAGE:	159,368.10 SF OR 14.93%
BUILDING HEIGHT:	50' MAX. HEIGHT
NUMBER OF STORIES:	2, 3, 3-4 SPLIT, 4-5 SPLIT
REQUIRED PARKING:	104 - 1 BR@1 = 104
	128 - 2 BR@2 = 256
	23 – 3 BR@2 = 46
	GUEST @ 1/4 = 63.75
TOTAL REQUIRED PARKING:	469.75
PROPOSED PARKING:	476
REQUIRED ACCESSIBLE PARKING:	9
PROPOSED ACCESSIBLE PARKING:	13
PROPOSED GARAGES:	37

BENCHMARK
NCGS MONUMENT "STEPHENSON"
NAD 83 COORDINATES
N 688242.2554
E 2165988.640
Z 330.7966
COMBINED GRID FACTOR
0.99988499
LOCATED AT INTERSECTION
OF OLD NC 42 AND PECAN LANE

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

BNK

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NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

OVERALL
PRELIMINARY SITE PLAN
SCALE: 1" = 80' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET
C1.1

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

9/18/2018 2:04:46 PM PLOT BY: mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*002 - 17033_c1.1.dgn

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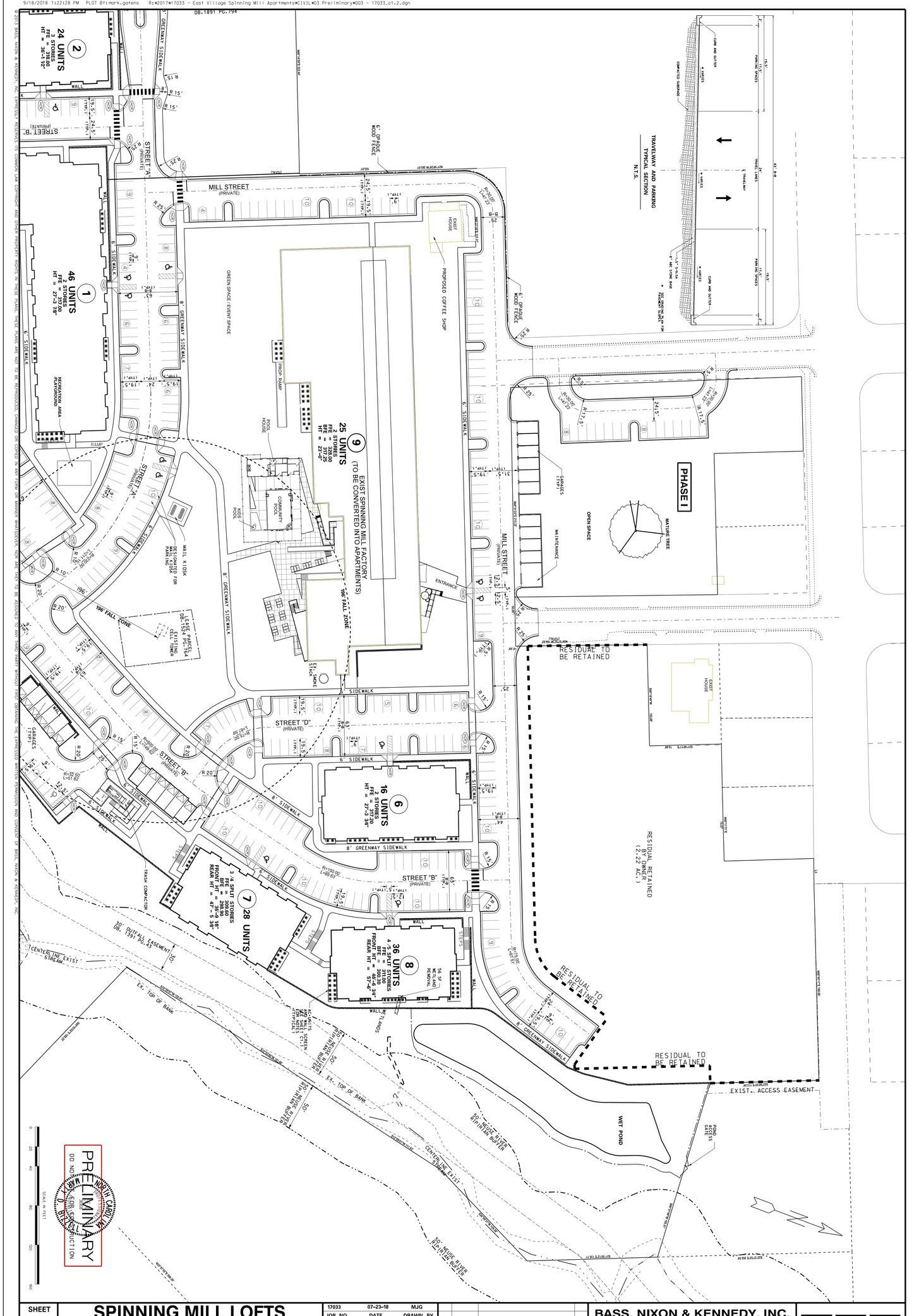

SHEET	C1.2		
SPINNING MILL LOFTS AT EAST VILLAGE			
PHASE I PRELIMINARY SUBMITTAL			
TOWN OF CLAYTON	JOHNSTON COUNTY	NORTH CAROLINA	
17033	07-23-18	MJG	
JOB NO.	DATE	DRAWN BY	
PRELIMINARY SITE PLAN			
SCALE: 1" = 40' HORZ			

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

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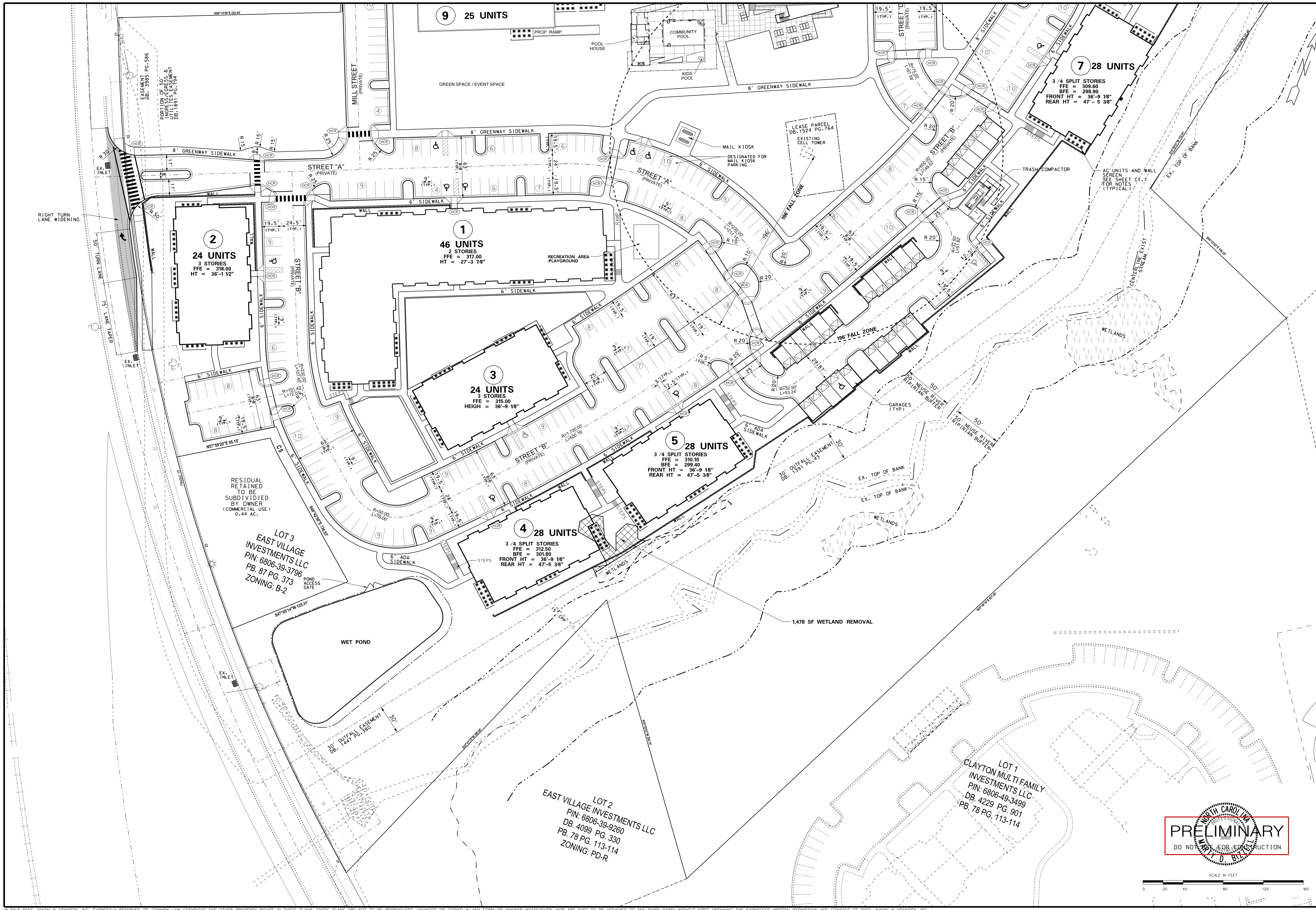
BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



BNK

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2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO. 17033 DATE 07-23-18 DRAWN BY MJG

PRELIMINARY SITE PLAN

SCALE: 1" = 40' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET C1.3

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

9/18/2018 1:24:00 PM PLOT BY: mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*004 - 17033_c1.3.dgn

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UTILITY NOTES

SANITARY SEWER:

BACKWATER VALVES SHALL BE PROVIDED FOR ALL UNITS WITH FINAL FLOOR ELEVATIONS OF BUILDINGS LESS THAN 1' ABOVE THE NEXT UPSTREAM MANHOLE, OR CONNECTING MANHOLE WHERE THERE IS NO UPSTREAM MANHOLE.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN NON-TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING (MINIMUM COVER SHALL BE NO LESS THAN 3').

MINIMUM SLOPE FOR 4" AND 6" SANITARY SEWER COLLECTION LINES SHALL BE NO LESS THAN 0.08% WITH CLEAN-OUTS EVERY 75 LINEAL FEET.

MAINTAIN 24" VERTICAL SEPARATION FROM STORM SEWER OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM WATER MAINS OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING.

IF SANITARY AND STORM SEWERS CROSS WITH LESS THAN 24" VERTICAL SEPARATION, A CONCRETE CRADLE OF FLOWABLE FILL SHALL BE INSTALLED TO THE SPRINGLINE OF BOTH PIPES. THE CRADLE SHALL BE THE FULL WIDTH OF THE PIPE TRENCH, WITH A MINIMUM OF 12" BEYOND THE OUTSIDE EDGES OF THE LARGER PIPE. THE LOWER PIPE SHALL HAVE 1" THICK COMPRESSIBLE JOINT MATERIAL BETWEEN THE CRADLE AND THE PIPE. THE MINIMUM VERTICAL PIPE SEPARATION WITH A CRADLE IS 6".

CLEAN-OUTS IN TRAFFIC AREAS SHALL BE TRAFFIC BEARING ACCORDING TO TOWN OF CLAYTON DETAILS. MANHOLES 0-12' DEEP SHALL BE 4'-0" DIAMETER MANHOLES. MANHOLES GREATER THAN 12' DEEP SHALL BE 5'-0" DIAMETER MANHOLES WITH AN EXTENDED BASE PER THE TOWN OF CLAYTON STANDARDS.

WATER:

MINIMUM COVER OF 3' TO BE PROVIDED.

MAINTAIN 18" VERTICAL SEPARATION FROM STORM SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM SANITARY SEWER MAINS. IF WATER MAIN CROSSES OVER THE SANITARY SEWER MAIN BUT HAS LESS THAN 18" CLEAR, THEN DIP IS REQUIRED FOR BOTH THE WATER MAIN AND SEWER MAIN WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF POINT OF CROSSING. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

IF THE WATER MAIN IS NOT AT LEAST 18" ABOVE THE STORM PIPE, OR IF IT CROSSES UNDER THE STORM PIPE, THEN THE WATER MAIN MUST BE DIP FOR 10 FEET ON EACH SIDE OF THE CROSSING.

PRESSURE REDUCING VALVES SHALL BE PROVIDED IF PRESSURE IS IN EXCESS OF 80 PSI.

GENERAL:

ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHTS-OF-WAY TO BE OWNED, OPERATED, AND MAINTAINED BY THE TOWN OF CLAYTON

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.

ALL UNDERGROUND UTILITIES ARE APPROXIMATELY LOCATED. ACTUAL LOCATION AND DEPTH TO BE CONFIRMED IN THE FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCY.

BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY CITY OR NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, THE FOLLOWING PROCEDURES SHOULD BE UNDERTAKEN:

CITY RIGHT-OF-WAY - CONTACT LOCAL AUTHORITIES TRAFFIC ENGINEERING DEPT. FOR INFORMATION ON DETOURS, OPEN CUTTING OF STREETS OR FOR ANYCONSTRUCTION WITHIN RIGHT-OF-WAY.

NCDOT RIGHT-OF-WAY - CONTACT PROJECT ENGINEERS AND OBTAIN ALL PERMITS AND ENCROACHMENTS. (CROSS-CHECK PLANS WITH SPECIAL PROVISIONS, KEEP COPIES ON CONSTRUCTION SITE, ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER)

PRELIMINARY
DO NOT RELEASE FOR CONSTRUCTION

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TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0287)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

17033 JOB NO. | 07-23-18 DATE | MJG DRAWN BY

UTILITY PLAN

SCALE: 1" = 40' HOR.

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

SHEET C2.1

9/18/2018 1:25:09 PM PLOT BY: mark.gaines R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\006 - 17033_c2.1.dgn

9 25 UNITS

1 46 UNITS
2 STORIES
FFE = 317.00
HT = 27'-3 7/8"

2 24 UNITS
3 STORIES
FFE = 318.00
HT = 36'-1 12"

3 24 UNITS
3 STORIES
FFE = 315.00
HEIGH = 36'-9 18"

4 28 UNITS
3 /4 SPLIT STORIES
FFE = 312.50
BFE = 301.80
FRONT HT = 36'-9 18"
REAR HT = 47'-5 38"

5 28 UNITS
3 /4 SPLIT STORIES
FFE = 310.10
BFE = 299.40
FRONT HT = 36'-9 18"
REAR HT = 47'-5 38"

7 28 UNITS
3 /4 SPLIT STORIES
FFE = 309.60
BFE = 298.90
FRONT HT = 36'-9 18"
REAR HT = 47'- 5 38"

MILL STREET (PRIVATE)
STREET "A" (PRIVATE)
STREET "B" (PRIVATE)
STREET "C" (PRIVATE)
STREET "D" (PRIVATE)

COMMUNITY POOL
KIDS POOL
POOL HOUSE
PROP. RAMP
GREEN SPACE / EVENT SPACE
OPEN SPACE
BACKFLOW PREVENTER TO BE LOCATED INSIDE POOLHOUSE
MAIL KIOSK
LEASE PARCEL DB.1524 PG.764 EXISTING CELL TOWER
20' PUBLIC UTILITY 30' ACCESS EASEMENT
20' PUBLIC UTILITY EASEMENT
EASEMENT DB. 3995 PG. 586
PORTION OF 50' UNITED STATES EASEMENT DB. 1891 PG. 794
20" EXISTING WATER MAIN
8" TAPPING SLEEVE AND VALVE
RIGHT TURN LANE AND TAPER
POND ACCESS GATE
WET POND
RESIDUAL RETAINED TO BE SUBDIVIDIED BY OWNER (COMMERCIAL USE) 0.44 AC.
50' OUTFALL EASEMENT DB. 1447 PG. 180
30' OUTFALL EASEMENT DB. 1791 PG. 43
50' NEUSE RIVER RIPARIAN BUFFER
EX. TOP OF BANK
CENTERLINE EXIST. STREAM
WATER LINE
SANITARY SEWER
FIRE HYDRANT ASSEMBLY (TYP.)
HOSE LAY (TYP.)
8" PVC WATER MAIN (TYP.)
2" PVC WATER MAIN
6" PVC S.S. SERVICE
8" PVC S.S.
6' SIDEWALK
8' GREENWAY SIDEWALK
6' ADA SIDEWALK
STEPS
RETAINING WALL
2" DOMESTIC SERVICE W/ 2" WATER METER (TYP.)
4" FIRE SERVICE (TYP.)
FDC
SS MH T6
SS MH T5
SS MH 13
SS MH 14
SS MH 15
SS MH 16
N87°59'14"W 135.37'
N87°59'20"E 85.15'

NOTES:

1. THE SITE LAYOUT AND BUILDING INFORMATION FOR SPINNING MILLS APARTMENTS WAS PROVIDED BY PLANWORK ARCHITECTS AND ROSS DECEKARD ARCHITECTS.

2. BACKFLOW PREVENTION DEVICES FOR THE DOMESTIC WATER AND FIRE SERVICES (WHERE APPLICABLE) FOR EACH BUILDING SHALL BE LOCATED INSIDE THE BUILDINGS. A DOUBLE CHECK VALVE ASSEMBLY (DVCA) BACKFLOW PREVENTOR IS REQUIRED FOR THE DOMESTIC SERVICES; A REDUCED PRESSURE ZONE (RPZ) IS REQUIRED FOR THE POOL SERVICE; AND A REDUCED PRESSURE DETECTOR DEVICE (RPDA) IS REQUIRED FOR THE FIRE SPRINKLER SERVICES. THE DEVICE MUST BE LISTED ON THE USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.

3. THE POOL HOUSE WILL INCLUDE A 2" WATER SERVICE WITH A 2" WATER METER.THE BACKFLOW BREVENTION DEVICES FOR THE WATER SERVICES SHALL BE LOCATED INSIDE THE BUILDINGS. THE POOL HOUSE WILL INCLUDE A 4" SEWER SERVICE.

4. ALL APARTMENT BUILDINGS WILL INCLUDE A 4" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR FIRE PROTECTION AND A 2" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR DOMESTIC SERVICE. A 2" WATER METER SHALL BE PROVIDED ON THE DOMESTIC SERVICE. BACKFLOW PREVENTION DEVICES FOR BOTH THE DOMESTIC AND FIRE SERVICES SHALL BE LOCATED INSIDE BUILDINGS. A 6" SEWER SERVICE WILL BE PROVIDED FOR ALL APARTMENT BUILDINGS.

5. THE CONTRACTOR MAY USE PVC C-900, CLASS 150 , DR 18 PIPE FOR THE WATERLINE INSTALLATION IN LIEU OF USING DIP AS SHOWN ON THESE DRAWINGS. ONLY DIP SHALL BE USED FOR THE WATER MAIN IN THE LOCATIONS NOTED ON THE PLANS AND BE ACCORDANCE WITH THE UTILITY NOTES INCLUDED ON THIS SHEET. ALL MATERIALS FURNISHED AND WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND NCDENR STANDARDS SPECIFICATIONS.

6. GROUNDWATER WELL(S) SHALL BE USED FOR PROVIDING SITE IRRIGATION. THERE SHALL BE NO CONNECTIONS BETWEEN THE IRRIGATION SYSTEM AND ANY OF THE WATER MAINS OR SERVICES CONNECTED TO THE PUBLIC MAINS.

7. ALL FIRE HYDRANT LEGS ARE TO BE CONSTRUCTED USING DUCTILE IRON PIPE.

8. ALL APARTMENT BUILDINGS WILL BE SPRINKLERED AND KNOX BOXES SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON REQUIREMENTS. THE KNOX BOX LOCATIONS, TYPE, ETC. SHALL BE COORDINATED WITH THE TOWN OF CLAYTON FIRE MARSHAL. CONTACT TONY ATKINSON AT (919)553-1577.

9. FDC CONNECTIONS AND ALARM PANELS SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON FIRE MARSHAL REQUIREMENTS. CONTACT TONY ATKINSON AT (919)553-1577. FDC CONNECTIONS SHALL BE LOCATED WITHIN 100-FEET OF A FIRE HYDRANT.

10. ALL 1" AND 2" WATER SERVICES SHALL INCLUDE TAPPING THE WATER MAIN FOR INSTALLATION FOR THE SERVICE IN ACCORDANCE WITH THE TOWN OF CLAYTON STANDARDS AND DETAILS. ALL 4" FIRE SERVICES SHALL BE INSTALLED WITH AN 8"x 4" TEE, A 4" STAINLESS STEEL TAPPING SLEEVE AND VALVE MAY BE USED IF THE FIRE SERVICE CONNECTION IS MADE AFTER INSTALLATION OF THE WATER MAIN.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 30650 MARY D. BASS
PRELIMINARY
DO NOT USE FOR CONSTRUCTION

SCALE IN FEET
0 20 40 80 120 160

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)384-1879 FAX: (919)851-4868
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO. 17033
DATE 07-23-18
DRAWN BY MJG
SCALE: 1" = 40' HORZ

UTILITY PLAN

SHEET C2.2

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

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9/18/2018 2:53:15 PM PLOT BY:mark.gotens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\C07 - 17033_c2-2.dgn

8/16/2018 4:47:44 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\009 - 17033_c2.4.dgn

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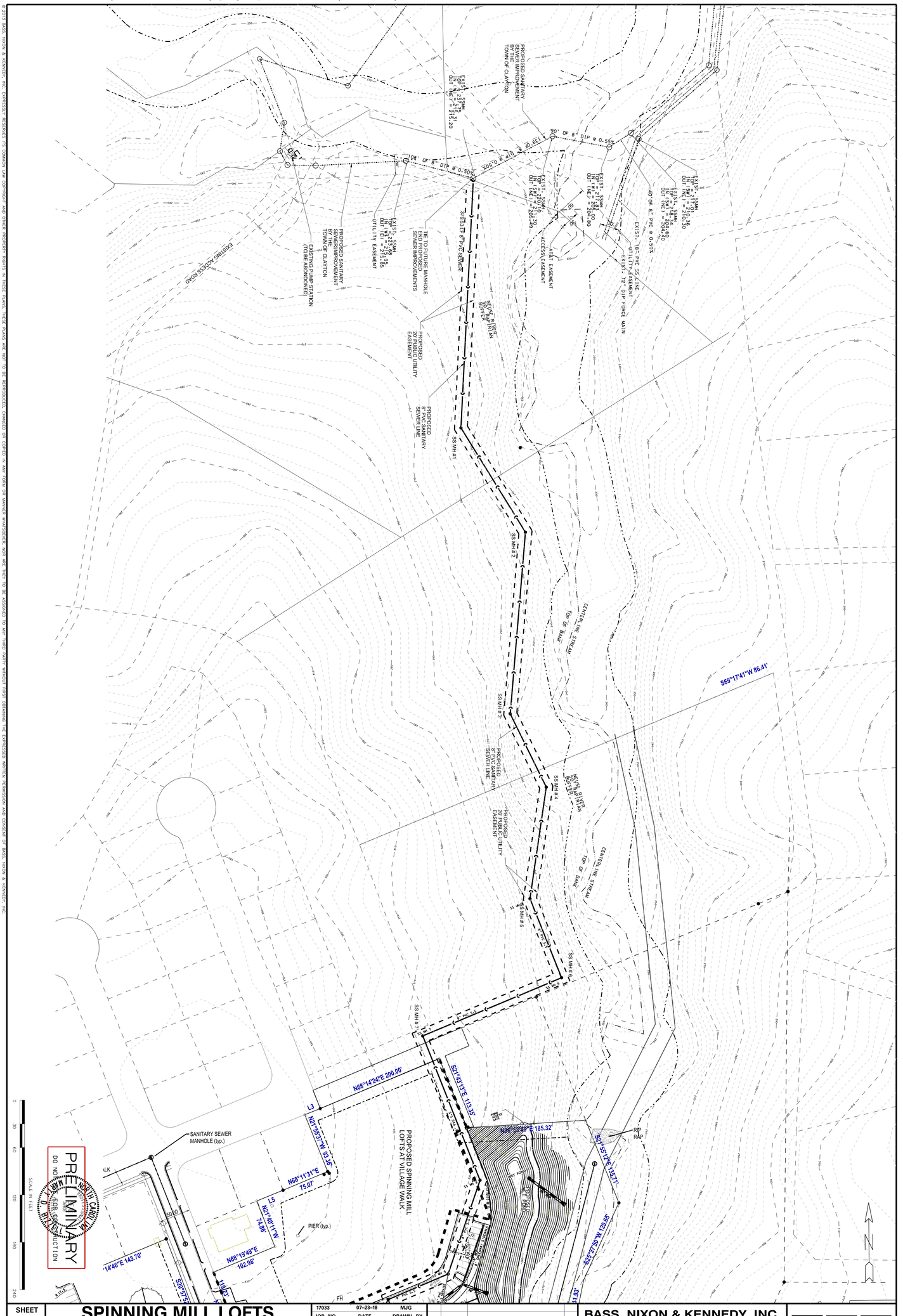

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033 07-23-18 MJG (JOB NO. DATE DRAWN BY)				
C2.3	PHASE I PRELIMINARY SUBMITTAL	OFF SITE SANITARY SEWER PLAN	3	8-17-18	T.O. CLAYTON COMMENTS	MG
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	SCALE: 1" = 60' HORZ.	2	7-23-18	T.O. CLAYTON COMMENTS	MG
			1	4-27-18	T.O. CLAYTON COMMENTS	MG
			NO.	DATE	DESCRIPTION (REVISIONS)	BY

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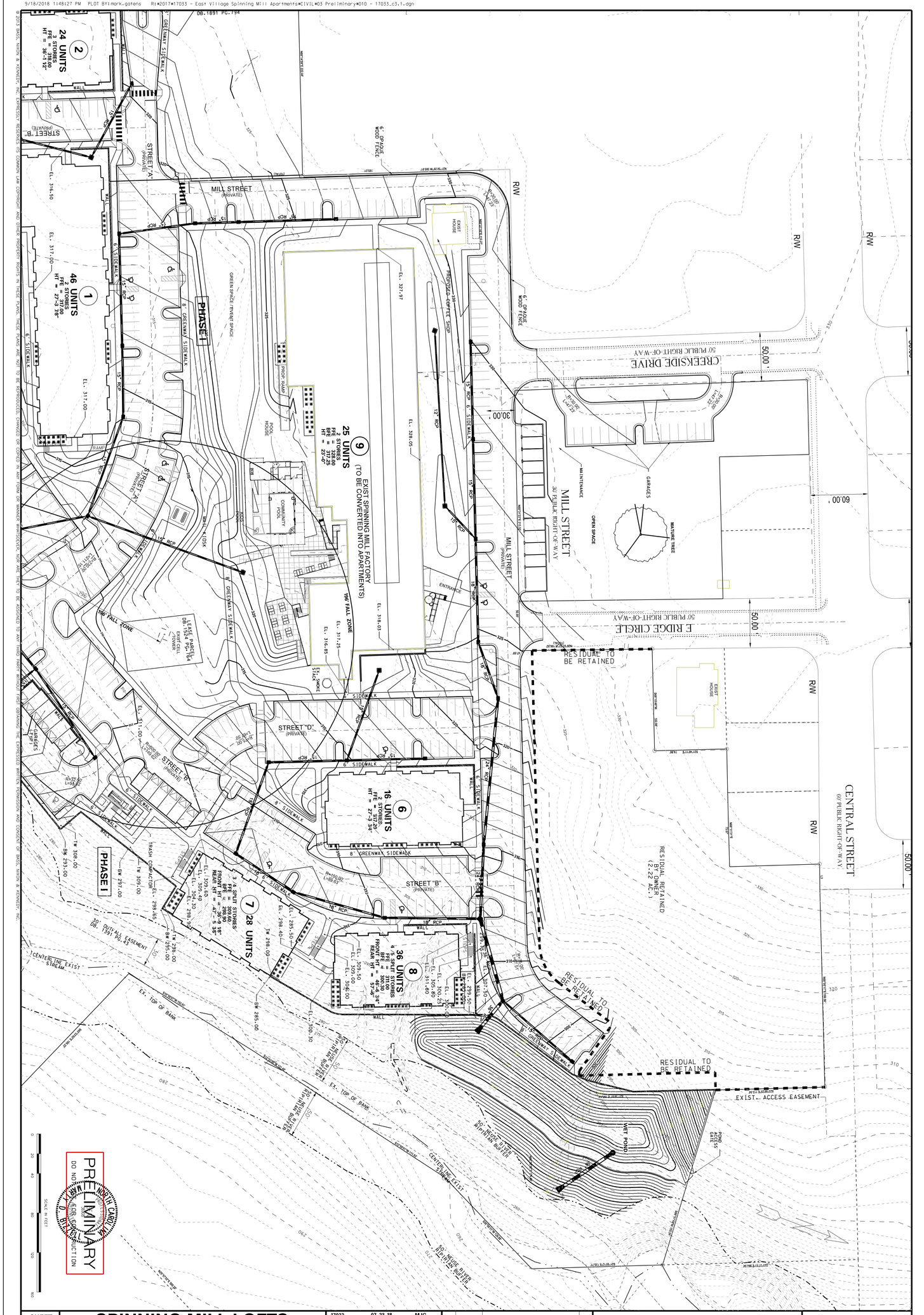

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9/18/2018 1:49:34 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\011 - 17033_c3.2.dgn

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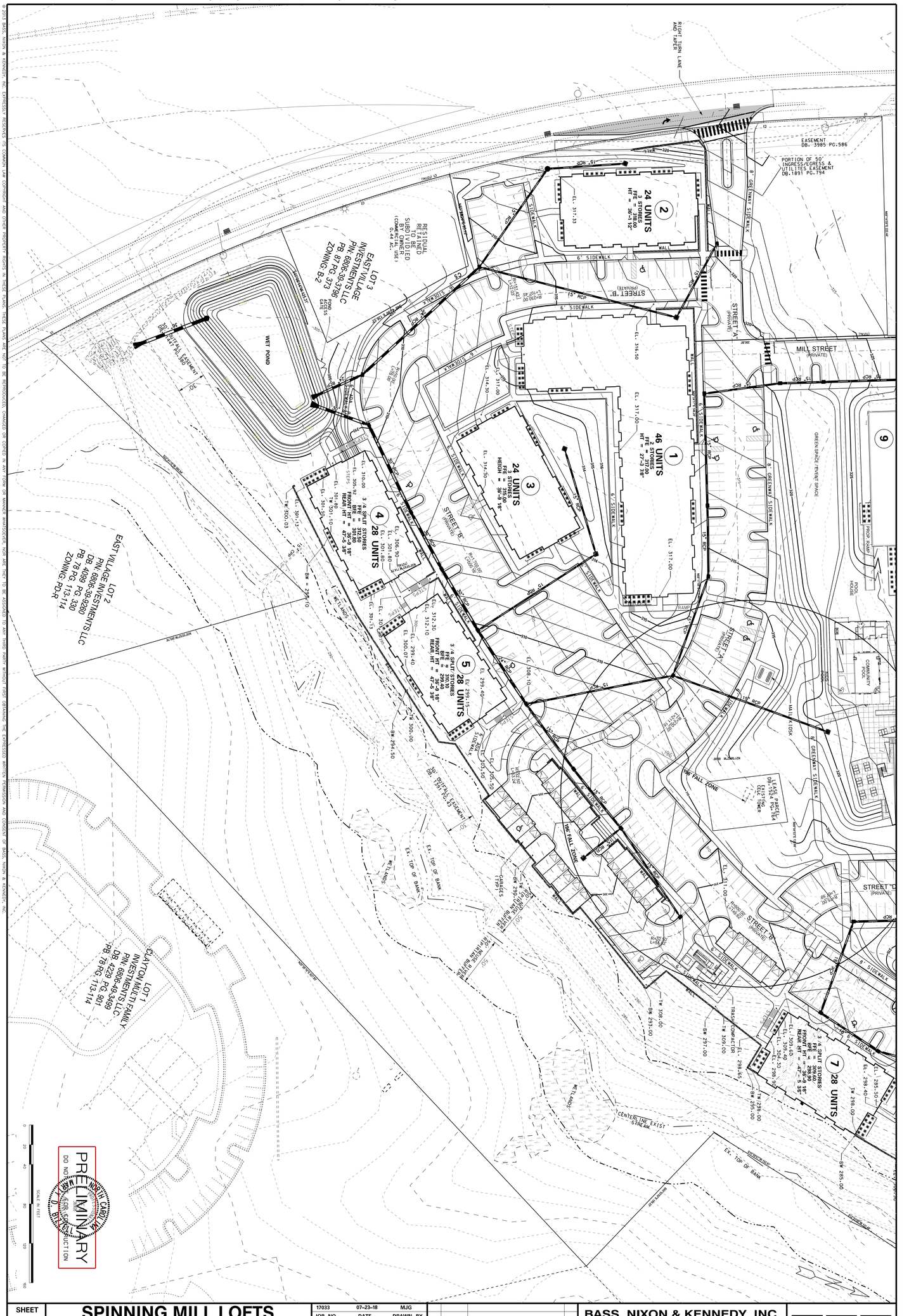

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C3.2	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	GRADING AND DRAINAGE PLAN		
		SCALE: 1" = 40' HORZ		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG
		REVISIONS	

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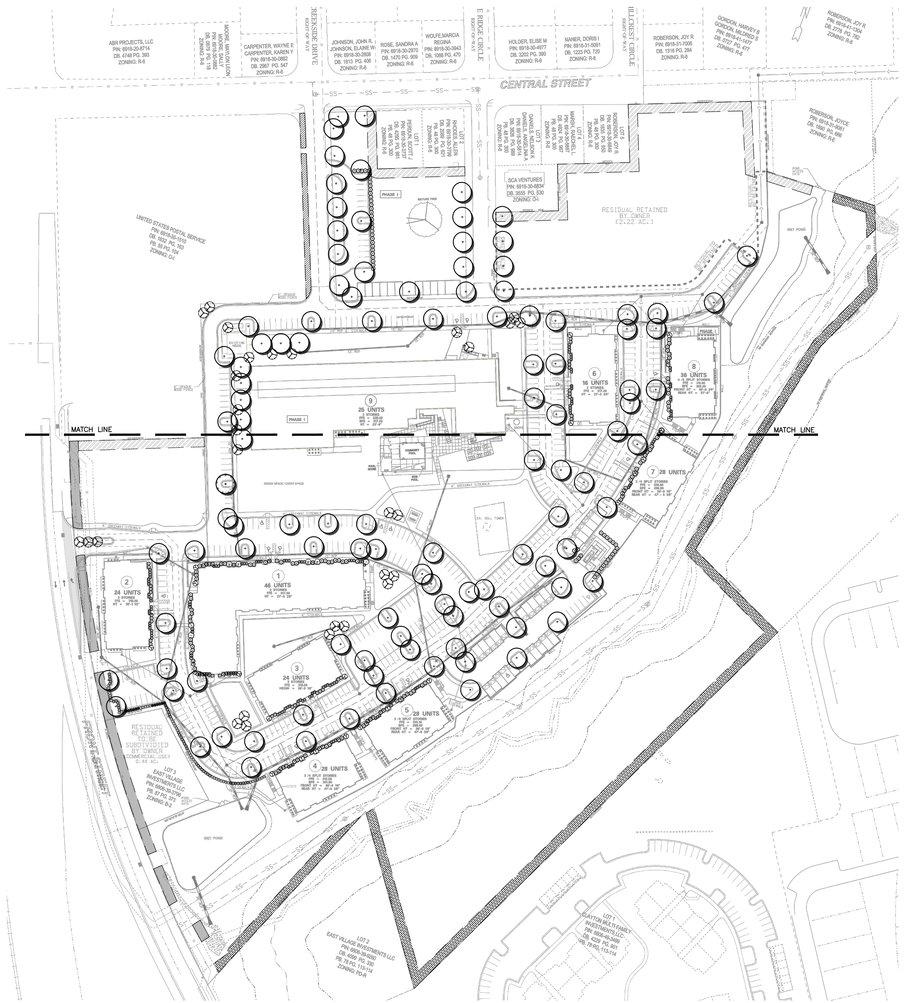

GENERAL NOTES

1. A/C UNITS, TRANSFORMERS AND OTHER MECHANICAL OR UTILITY EQUIPMENT, NOT SHOWN ON THE PLAN, SHALL BE SCREENED FROM VIEW BY THE ADDITION OF WAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
3. MULCH SHALL BE 3" DEEP SHREDDED HARDWOOD UNLESS OTHERWISE NOTED.
4. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST AND ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES BETWEEN PLANT LIST AND PLANTING PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
5. ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
7. B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
8. ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
10. ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
11. MULCH EDGES AND PROPOSED PLANTINGS SHALL NOT DISTURB ANY EXISTING GROUPS OF TREES TO REMAIN. EDGES ARE SHOWN FOR APPROXIMATION ONLY, BUT ARE TO INDICATE SMOOTH, CLEAN CURVES.
12. CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL WAX MYRTLES @ 24" HT. – 5' OC.
13. TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (C.O.). THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A (C.O.).
15. REQUIRED PLANTING AREAS SHALL INCORPORATE EXISTING NATURAL VEGETATION TO THE MAXIMUM EXTENT FEASIBLE.

LANDSCAPE REQUIREMENTS:

Site Landscaping

20% OF TOTAL LOT AREA SHALL BE LANDSCAPED AT A RATE OF (1) CANOPY TREE, (1) UNDERSTORY TREE, AND (2) SHRUBS PER 1,000 SF. 24.5 acres (1,067,220 s.f.)

1,067,220 SF x .20 = 213,444 S.F.
213,444/1,000 = 214
214 CANOPY TREES REQUIRED: 158 NEW + APPROXIMATELY 2500 EXISTING PROVIDED
214 UNDERSTORY TREES REQUIRED: 79 NEW + APPROXIMATELY 135 EXISTING PROVIDED
SHRUBS REQUIRED: 213,444/500 = 428 SHRUBS REQUIRED/ 732 PROVIDED

Streetyard Plantings

FRONT STREET: 800/40 = 20 TREES REQUIRED/PROVIDED
CENTRAL STREET: 80/40 = 2 TREES REQUIRED/PROVIDED
CREEKSIDE DRIVE: 250/40 = 7 TREES REQUIRED/PROVIDED
EAST RIDGE CIRCLE: 343/40 = 9 TREES REQUIRED/PROVIDED

Streetyard Buffer Plantings: Front Street: 800 LF

15' WIDE TYPE 'B' STSREET BUFFER ALONG FRONT STREET
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
800/100 x 2 = 16 CANOPY TREES REQUIRED/PROVIDED
800/100 x 2 = 16 UNDERSTORY TREES REQUIRED/PROVIDED
800/100 x 16 = 128 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 1,224 LF

15' WIDE TYPE 'B' BUFFER ALTERNATIVE 2
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
1,224/100 x 2 = 25 CANOPY TREES REQUIRED/PROVIDED
1,224/100 x 2 = 25 UNDERSTORY TREES REQUIRED/PROVIDED
1,224/100 x 16 = 196 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 290 LF

10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
291/100 x 2 = 6 CANOPY TREES REQUIRED/PROVIDED
290/100 x 3 = 9 UNDERSTORY TREES REQUIRED/PROVIDED
290/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 371 LF

A SIX FOOT OPAQUE WOOD FENCE IS PROPOSED BETWEEN THE PERIMETER DRIVE AROUND THE EXISTING MILL BUILDING AND THE USPS SITE. THE EXISTING DRIVE DOES NOT PROVIDE ENOUGH SPACE TO PLANT THE BUFFER ALONG THE PROPERTY LINE. THE TREES THAT WOULD TYPICALLY BE PLANTED IN THE BUFFER WILL BE PLANTED ELSEWHERE ON SITE.
10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
371/100 x 2 = 8 CANOPY TREES REQUIRED/PROVIDED
371/100 x 3 =12 UNDERSTORY TREES REQUIRED/PROVIDED
371/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 2,343 LF

EXISTING VEGETATION EXCEEDS PERFORMANCE STANDARDS FOR BUFFER. SEE SAMPLE AREA ON PLAN.

PLANT LEGEND

- CANOPY/SHADE TREE
- UNDERSTORY TREE
- LARGE SHRUB
- SMALL SHRUB

PRELIMINARY

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

SCALE IN FEET
0 50 100 200 300 400

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

BASS, NIXON & KENNEDY, INC.
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TELEPHONE: (919)851-1422 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION
1	04-30-18	PER ToC COMMENTS

REVISIONS BY: GW

GPW | DRAWN BY: GPW
04-02-18 | DATE
03-17033 | JOB NO.
SCALE: 1" = 100' | CHK BY: GPW

LANDSCAPE PLAN NORTH

SPINNING MILL LOFTS
AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.0

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

K:\03-17033 - East Village Spinning Mill (Commercial)\CAD\L1.0 Preliminary\17033 - Landscape.dwg, 4/19/2018 2:23:39 PM, mark.gaskins, \\bnkfs\data\Projects\Mark.Gaskins\17033 - Landscape.dwg

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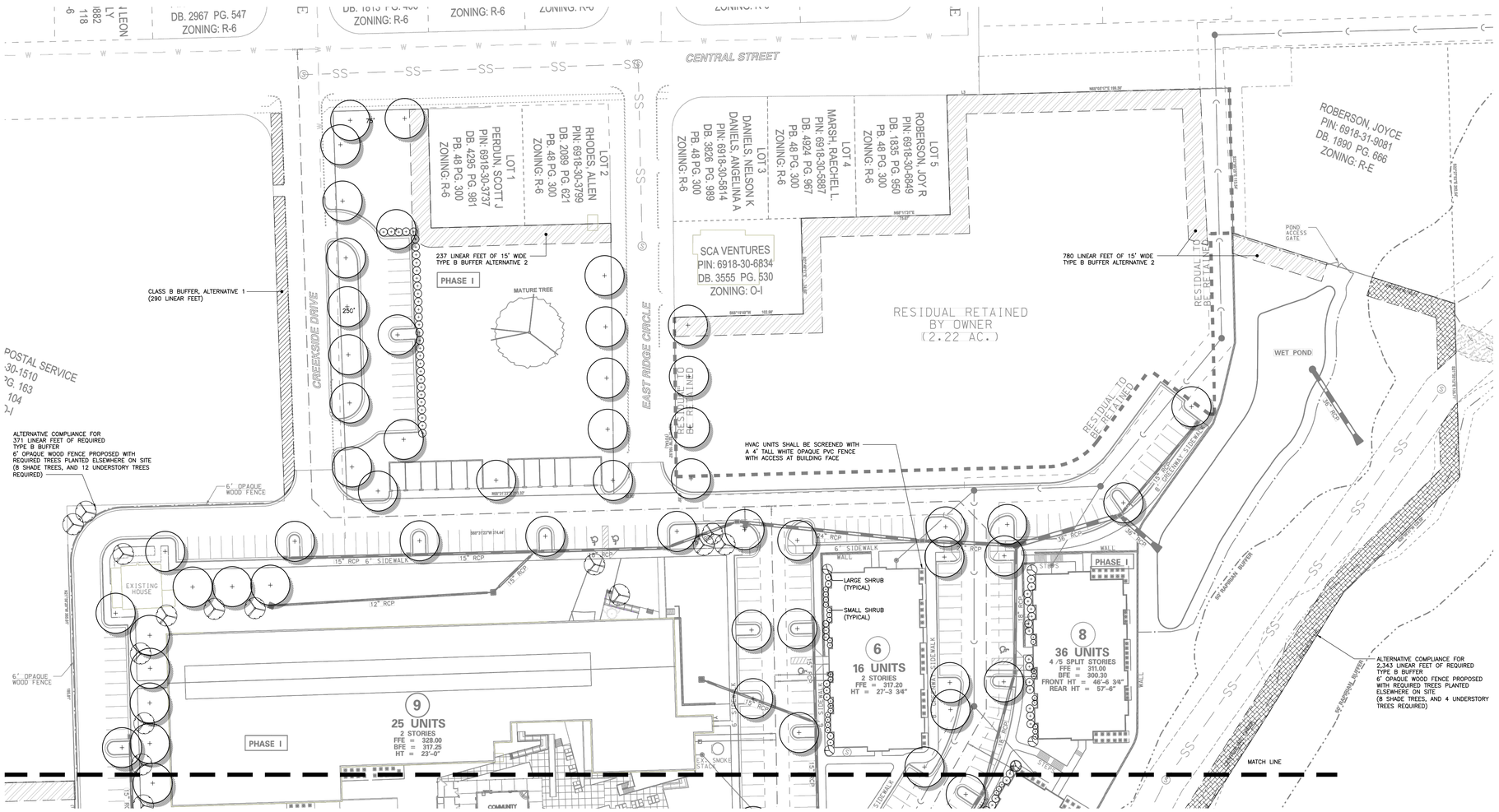

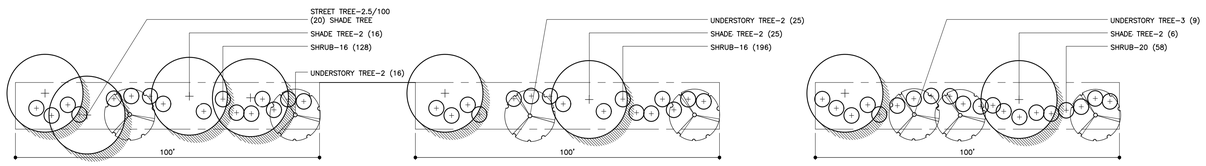

15' CLASS 'B' BUFFER ALTERNATIVE 2 (800 LF) FRONT STREET

15' CLASS 'B' BUFFER ALTERNATIVE 2 (1,224 LF)

10' CLASS 'B' BUFFER ALTERNATIVE 1 (290 LF)

PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	QUAN.	CAL	HT	ROOT	REMARKS
	SHADE TREES						
AR	Acer rubrum 'Somerset'	Red maple		2.5"	10'	B&B	
AS	Acer saccharum	Sugar Maple		2.5"	10'	B&B	
CB	Carpinus betula	European Hornbeam		2.5"	10'	B&B	
LT	Liriodendron tulipifera	Tulip Poplar		2.5"	10'	B&B	
QC	Quercus coccinea	Scarlett Oak		2.5"	10'	B&B	
QN	Quercus nuttalli	Nuttall oak		2.5"	10'	B&B	
QV	Quercus virginiana	Live Oak		2.5"	10'	B&B	
UP	Ulmus parvifolia	Chinese lacebark elm		2.5"	10'	B&B	
ZS	Zelkova serrata	Village Green Zelkova		2.5"	10'	B&B	
	UNDERSTORY TREES						
CC	Cercis canadensis 'Forest Pansy'	Eastern Redbud		2"	8'	B&B	
CF	Cornus florida	Dogwood		2"	8'	B&B	Buffer Tree
LCS	Lagerstroemia 'Centennial Spirit'	Crape Myrtle			8'	B&B	
MG	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia			8'	B&B	
NS	Syssa sylvatica	Tepelo		2"	8'	B&B	Buffer Tree
	SHRUBS						
BM	Buxus microphylla 'Winter Green'	Wintergreen Boxwood			12"	Cont	
IL	Ilex latifolia	Lustreleaf Holly			48"	Cont	
INS	Ilex x 'Nellie R Stevens'	Nellie Stevens Holly			48"		
LC	Loropetalum chinensis 'Chang's Ruby'	Loropetalum			12"	Cont	
OH	Osmanthus heterophyllus 'rotundifoli	Holly Osmanthus			24"	Cont	Buffer Shrub
PJ	Pieris japonica 'Mountain Snow"	Japanese Pieris			12"	Cont	
PT	Pittosporum tobira 'Tall 'N Tuff'	Pittosporum			24"	Cont	Buffer Shrub
RR	Rosa 'Double Red'	Double Knockout Rose			12"	Cont	
VD	Viburnum davidii	David Viburnum			12"	Cont	

NO WETLANDS EXIST ON-SITE

NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF CLAYTON AND NCDOT

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

PRELIMINARY

SCALE IN FEET
0 20 40 80 120 160

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	REVISIONS	BY
1	04-30-18	PER ToC COMMENTS	GW

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY: GPW | SCALE: 1" = 40'

LANDSCAPE PLAN NORTH

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.1

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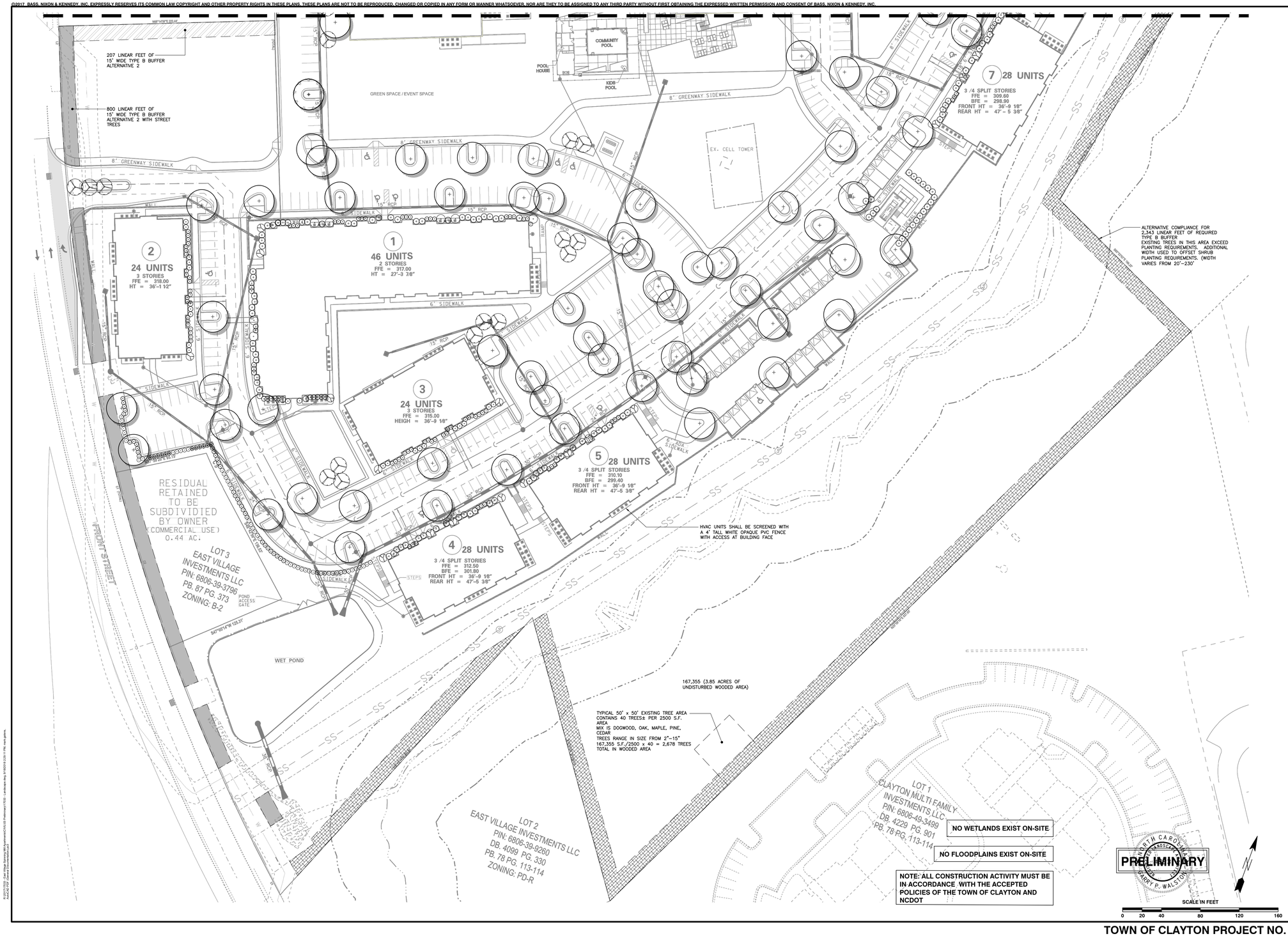

BNK

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NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO.	DATE	DRAWN BY
03-17033	04-02-18	GPW

LANDSCAPE PLAN SOUTH

SCALE: 1" = 40' CHK BY: GPW

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.2

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - FRONT ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - LEFT ELEVATION

Scale: 3/32" = 1'-0"

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CERT. NO. 50909
RALEIGH, N.C.

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	ISSUE DATE:	PROGRESS DATE:
		DESCRIPTION	09-18-18	

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 1 Elevations
--

SHEET NUMBER:
1.A1.10

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - REAR ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - RIGHT ELEVATION

Scale: 3/32" = 1'-0"

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PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Bldg Type 1 Elevations

--

SHEET NUMBER:

1.A1.11

1 BLDG TYPE 2 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

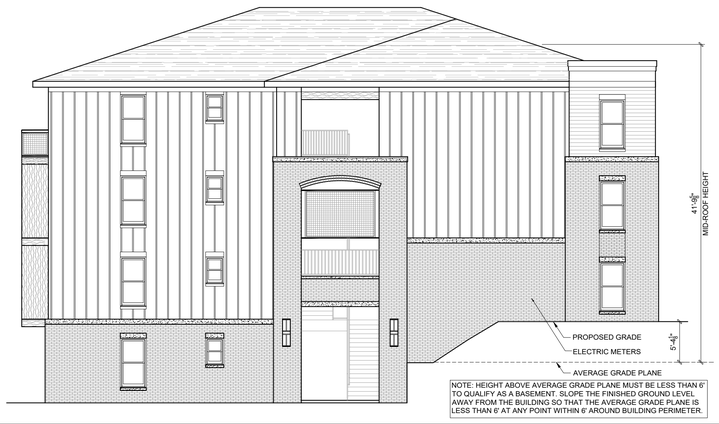
* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 2 - REAR ELEVATION

Scale: 1/8" = 1'-0"



3 BLDG TYPE 2 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submittal
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NO.	DATE	INITIALS
09-18-18		DESCRIPTION	

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2 Elevations
--

SHEET NUMBER:
1.A2.03

1 BLDG TYPE 2.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

3 BLDG TYPE 2.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Spinning Mill Apartments

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ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1 Elevations

SHEET NUMBER:
1.A2.08

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 2.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1
Elevations

SHEET NUMBER:
1.A2.09

1 BLDG TYPE 3 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

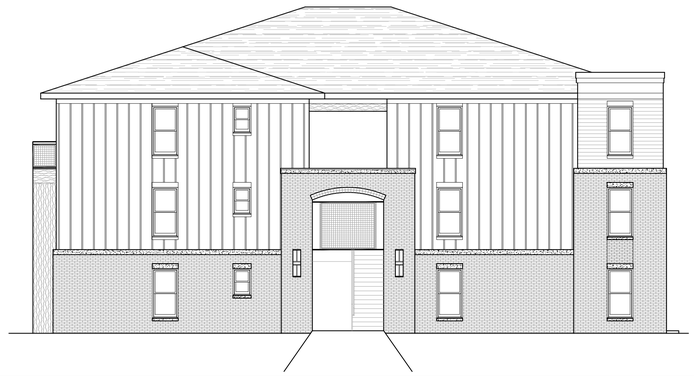
ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.



2 BLDG TYPE 3 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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RALEIGH, NC

Civil Submission
Spinning Mill Apartments
Clayton NC

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PROGRESS DATE:	09-18-18		
ISSUE DATE:		DESCRIPTION	
REVISIONS	NO.	DATE	INITIALS
	1		
	2		
	3		

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3 Elevations
--

SHEET NUMBER:
1.A3.03

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

2 BLDG TYPE 3.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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NUMBER	DATE	INITIALS	DESCRIPTION

PROJECT NO: 003417
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SHEET TITLE: Bldg Type 3.1 Elevations

SHEET NUMBER: 1.A3.12

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.2 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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REVISIONS NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417
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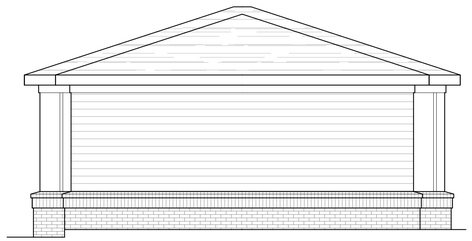
SHEET TITLE:
Bldg Type 3.2 Elevations

SHEET NUMBER:
1.A3.24

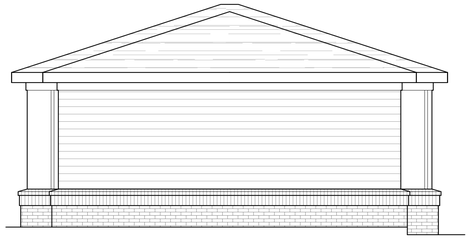
1 GARAGE TYPE 1 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 1 - RIGHT ELEVATION

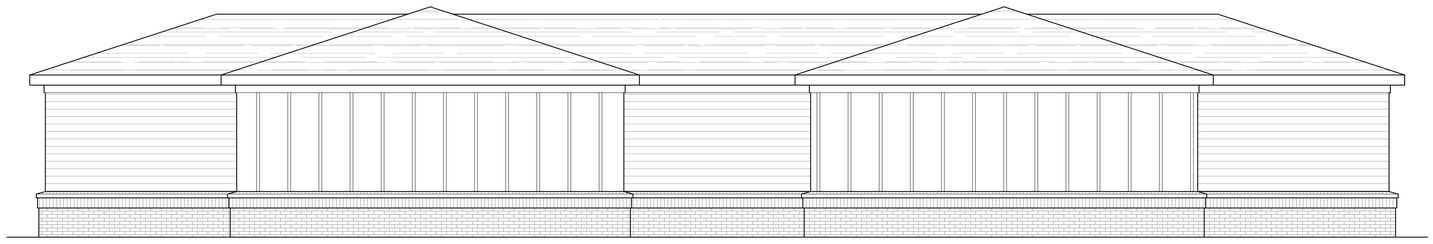
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 1 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH
COLORS/MATERIALS OF PRIMARY
APARTMENT BUILDINGS



4 GARAGE TYPE 1 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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RALEIGH, NC NORTH CAROLINA

Civil Submission

Spinning Mill Apartments

Clayton NC

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PROGRESS DATE:			
ISSUE DATE:	09-18-18		
REVISIONS	NUMBER	DATE	INITIALS
		DESCRIPTION	

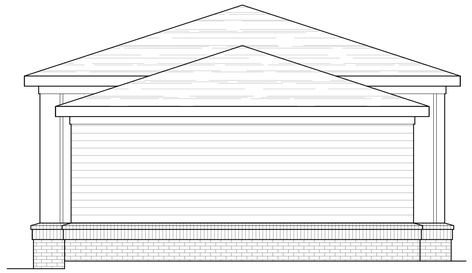
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 1
Elevations

SHEET NUMBER:
1.A5.10

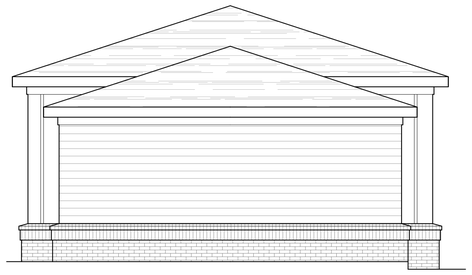
1 GARAGE TYPE 2 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 2 - RIGHT ELEVATION

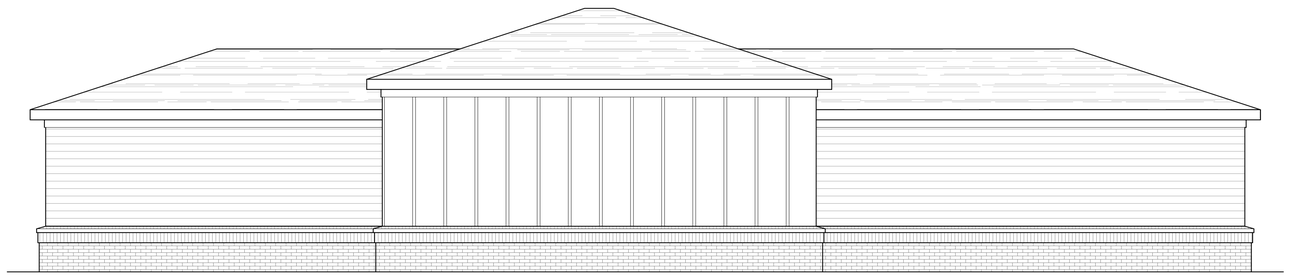
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 2 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS



4 GARAGE TYPE 2 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS
09-18-18	DESCRIPTION		

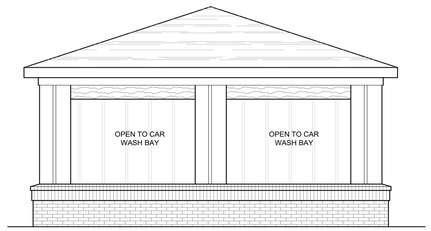
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 2 Elevations

SHEET NUMBER:
1.A5.11

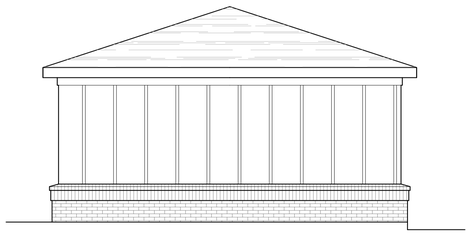
1 GARAGE TYPE 3 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 3 - RIGHT ELEVATION

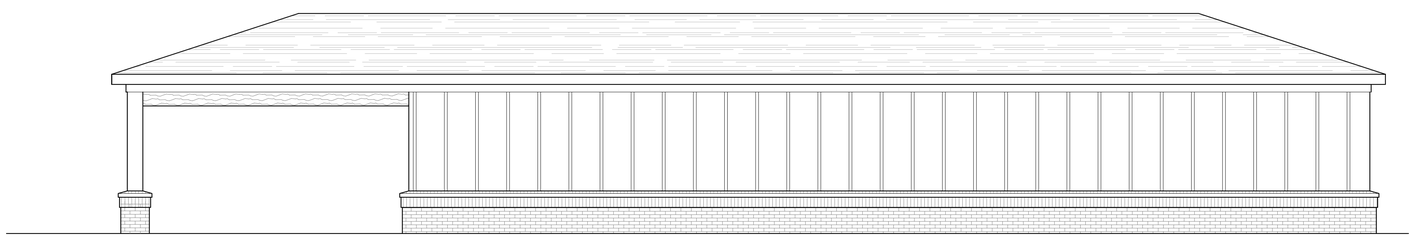
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 3 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS



4 GARAGE TYPE 3 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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2. Contractor is to notify architect immediately of conditions or items varying from depicted information.
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PLANWORX ARCHITECTURE, PA REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 50909 NORTH CAROLINA RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS			
NUMBER	DATE	DESCRIPTION	INITIALS
		09-18-18	

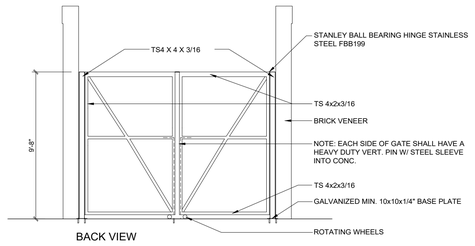
PROJECT NO: 003417

DRAWN BY: JK

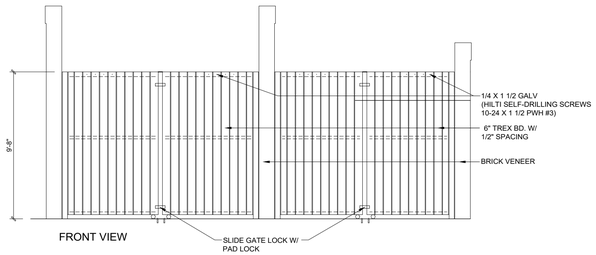
CHECKED BY: -

SHEET TITLE:
Garage Type 3 Elevations

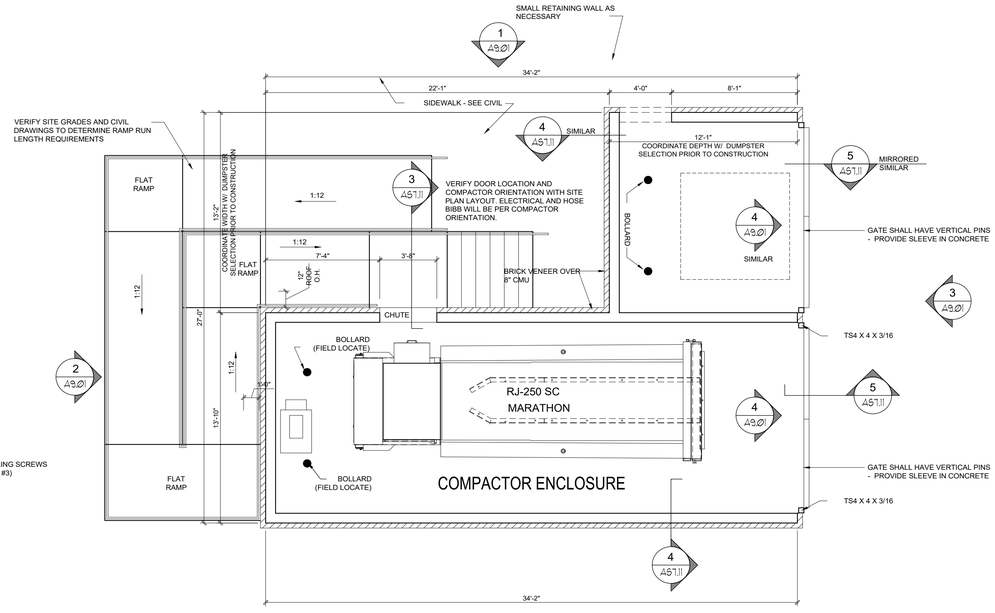
SHEET NUMBER:
1.A5.12



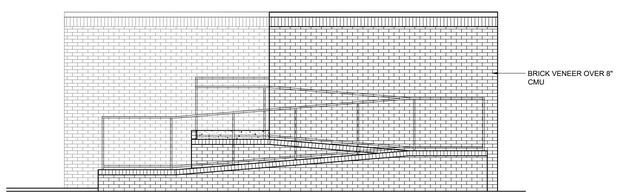
4 GATE DETAIL BACK VIEW
1/4"=1'-0"



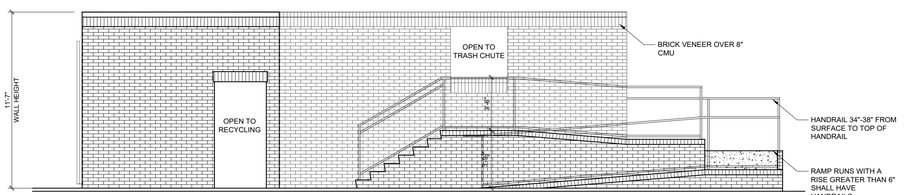
3 GATE DETAIL FRONT VIEW
1/4"=1'-0"



5 TRASH COMPACTOR ENCLOSURE PLAN
1/4"=1'-0"



2 TRASH COMPACTOR REAR ELEVATION
1/4"=1'-0"



1 TRASH COMPACTOR SIDE ELEVATION
1/4"=1'-0"

1 TRASH COMPACTOR - PLAN AND ELEVATIONS

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PLANWORX ARCHITECTURE, P.A. REGISTERED ARCHITECTURAL CORPORATION CERT. NO. 50909 NORTH CAROLINA RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

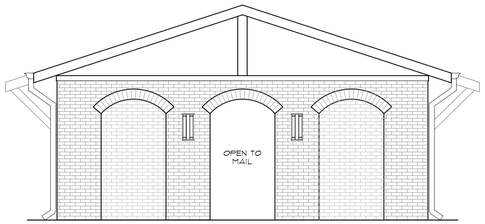
PROGRESS DATE: 09-18-18
ISSUE DATE:
REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Compactor Plan and Elevations

SHEET NUMBER:
1.A6.00



3 TYPICAL SIDE ELEVATION

Scale: 1/4" = 1'-0"

ARCHITECTURAL PLANS
EXTERIOR MATERIALS

- ASPHALT SHINGLE ROOF
- STANDING SEAM METAL ROOF
- FIBER CEMENT SIDING
- FIBER CEMENT VERTICAL SIDING PANELS W/ FIBER CEMENT BATTENS
- CULTURED STONE VENEER
- STONE HEADER

ELEVATION GENERAL NOTES

ROOFS

IF USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

PAINT ALL ROOF PENETRATIONS TO MATCH SHINGLE COLOR

ROOF VENTILATION

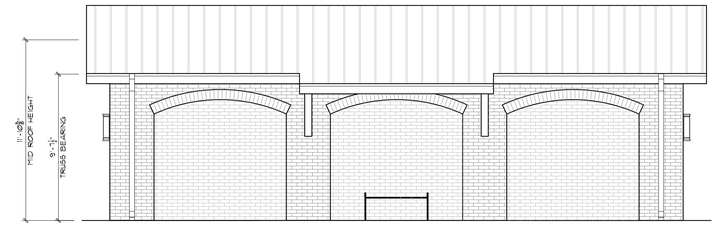
SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

SQUARE FOOTAGE

MAIL BOX BAY SHELL (74sf x 2) =	148
TOTAL COVERED AREA =	748

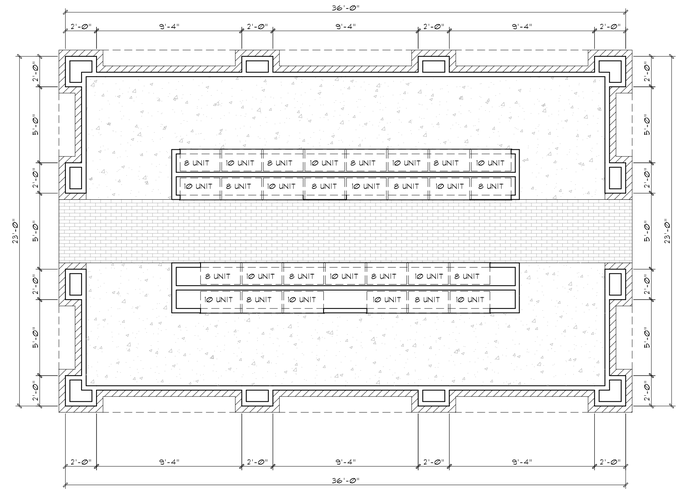
- GENERAL NOTES

Scale: 1/4" = 1'-0"



2 FRONT/REAR ELEVATION

Scale: 1/4" = 1'-0"



1 FLOOR PLAN

Scale: 1/4" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS NUMBER	DATE	INITIALS	DESCRIPTION

PROGRESS DATE: 09-18-18
ISSUE DATE:

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

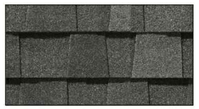
SHEET TITLE:
Mail Kiosk Plan and Elevations

SHEET NUMBER:
1.A7.00

= FIBER CEMENT BOARD & BATTEN
SW6250 GRANITE PEAK

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)



= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW6148 WOOL SKEIN

= CORRUGATED METAL PANELING

= BRICK SOLDIER

= PRE-CAST CONCRETE HEADER

1 COLOR SCHEME 1

Scale:

= FIBER CEMENT BOARD & BATTEN
SW6244 NAVAL

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

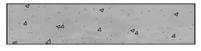
= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)

= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW9170 ACIER

= CORRUGATED METAL PANELING

= BRICK SOLDIER



= PRE-CAST CONCRETE HEADER

2 COLOR SCHEME 2

Scale:

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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

09-18-18

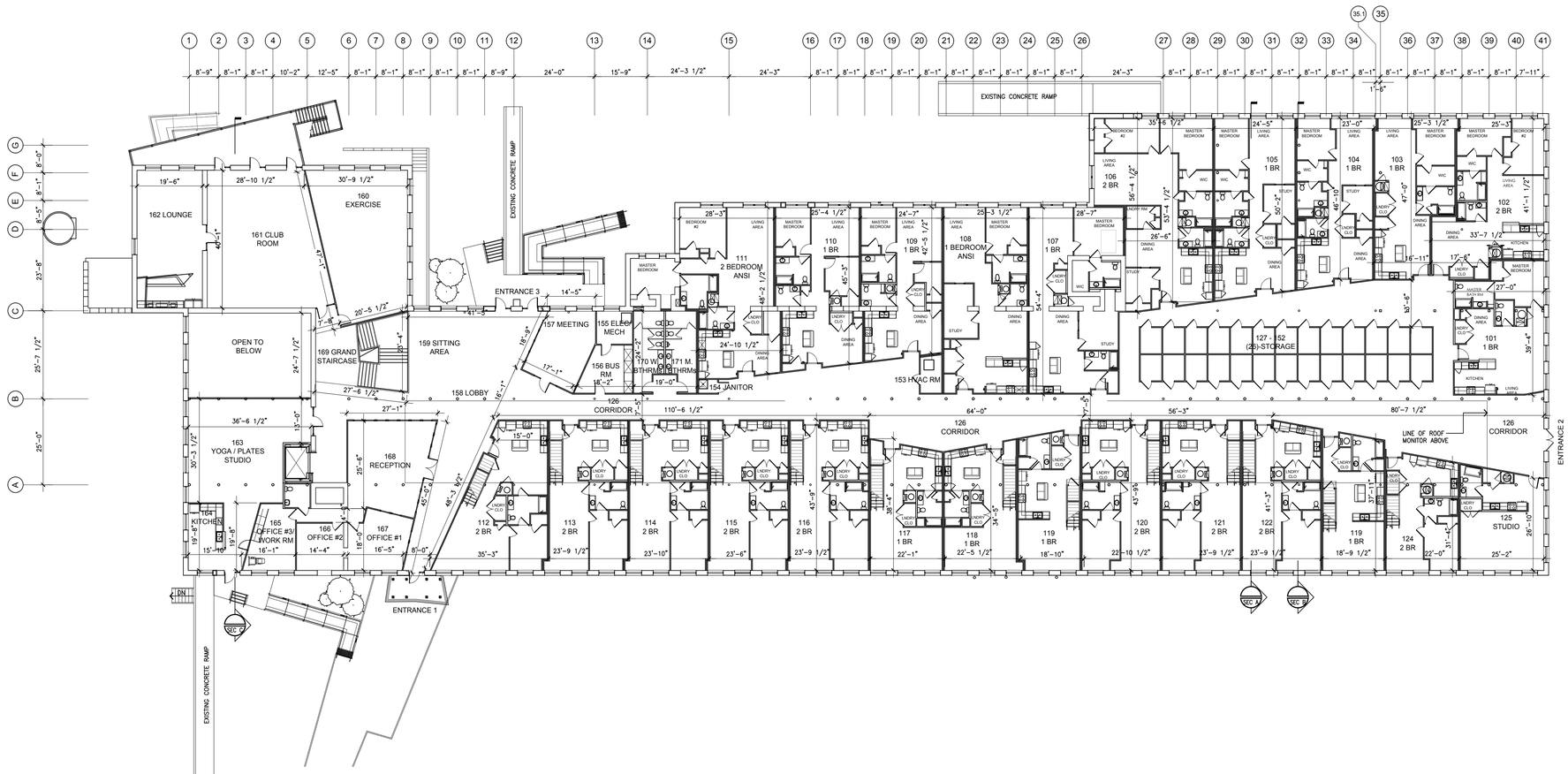
REVISIONS NUMBER	DATE	INITIALS	DESCRIPTION

PROGRESS DATE:
ISSUE DATE:

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: --

SHEET TITLE:
Color Board 1
--

SHEET NUMBER:
CB1



1 Main Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.1

SHEET OF
TOTAL SHEETS IN SET:
DRAWN BY: -
CHECKED BY: -

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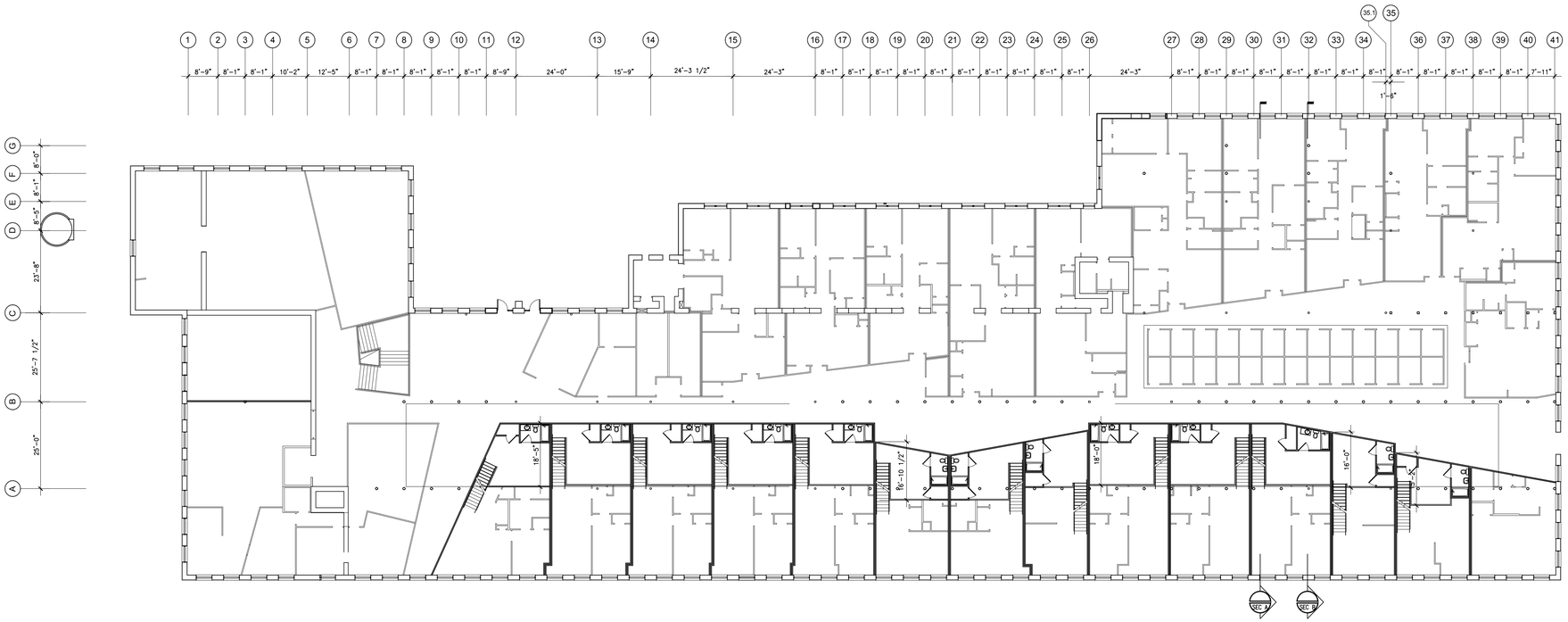
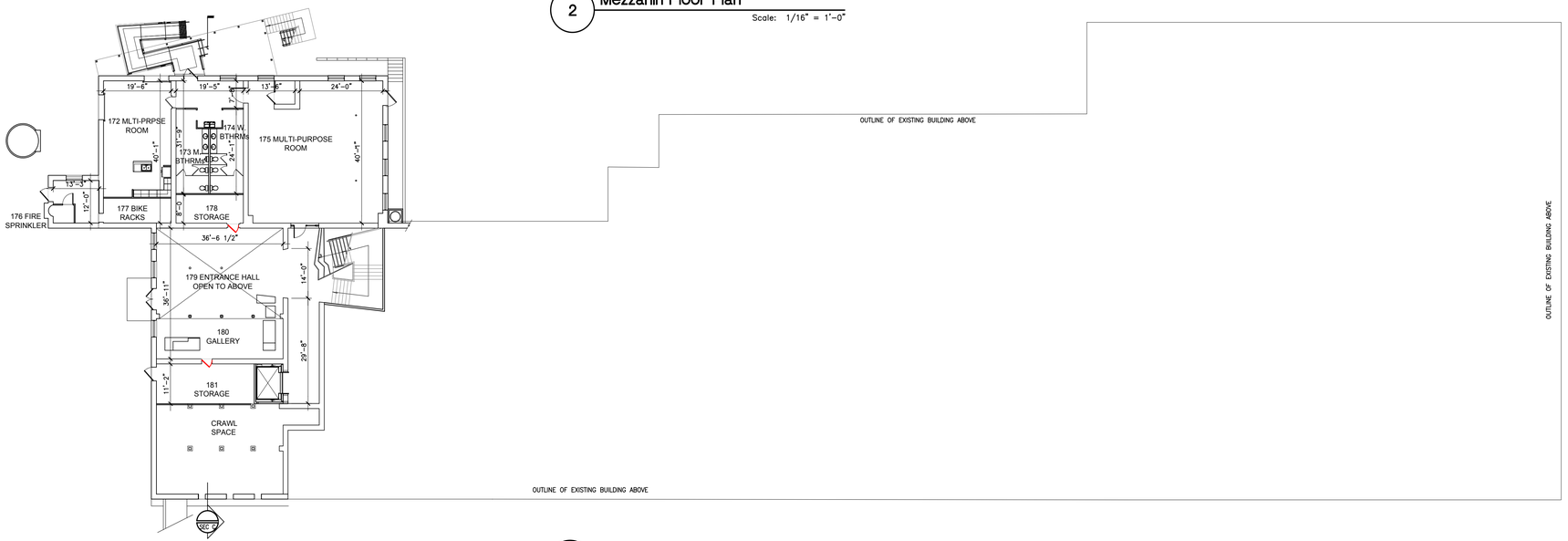


2 Mezzanin Floor Plan

Scale: 1/16" = 1'-0"



1 Basement Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.2

SHEET OF DRAWN BY: -
TOTAL SHEETS IN SET: CHECKED BY: -

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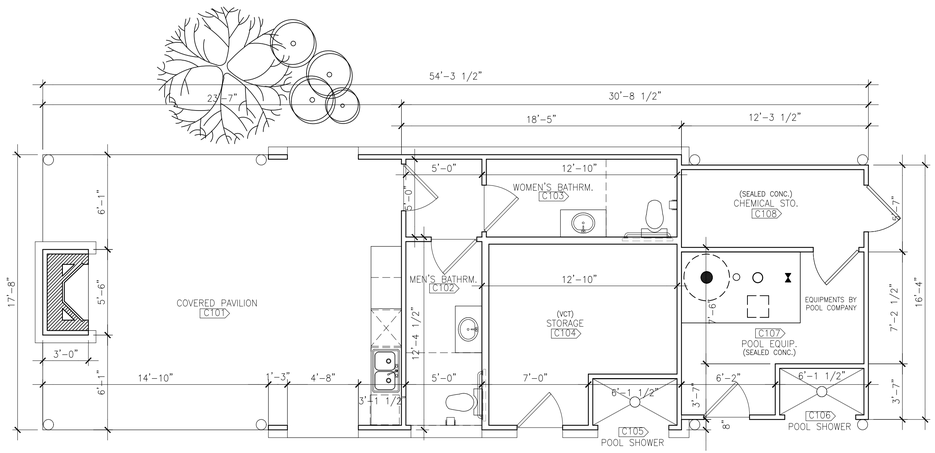
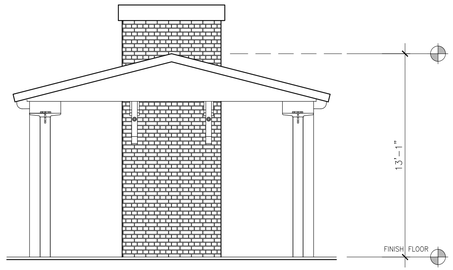


1 **Building Plan**
Scale: 1/4"=1'-0"

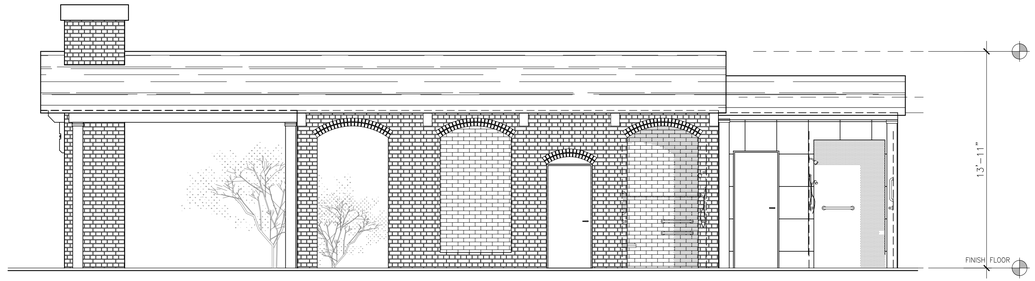
ELEVATION KEY

- BRICK VENEER SIMILAR TO EXISTING BUILDING
- EIFS - EXTERIOR INSULATION & FINISHING SYSTEM, COLOR TO BE LIGHT GREY
- ASPHALT SHINGLES

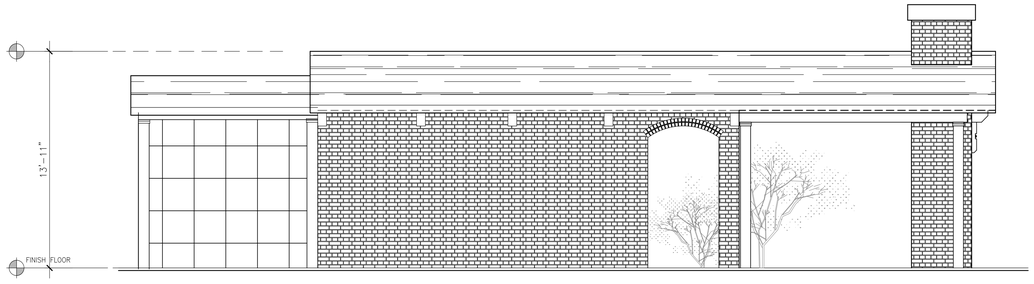
NOTE: BUILDING TO BE TYPE VB CONSTRUCTION



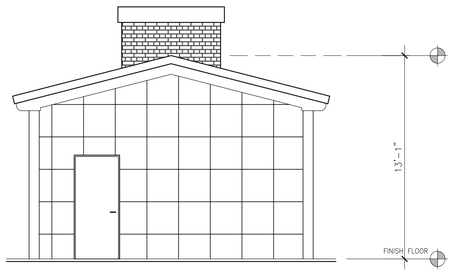
2 **Side Elevation**
Scale: 1/4"=1'-0"



3 **Building Front Elevation**
Scale: 1/4"=1'-0"



4 **Building Rear Elevation**
Scale: 1/4"=1'-0"



5 **Side Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

1 April 27, 2018
Review Comments

DATE: April 9, 2018
ISSUED FOR: Review

Pool House
- Building Plan
- Elevations

A 1.3

SHEET OF
TOTAL SHEETS IN SET:
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CHECKED BY: -

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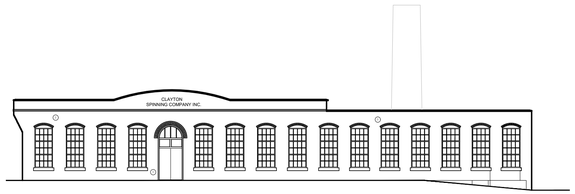
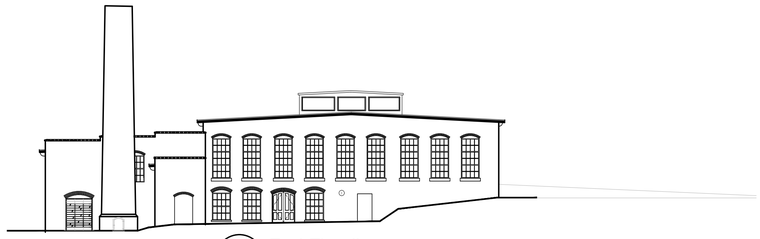


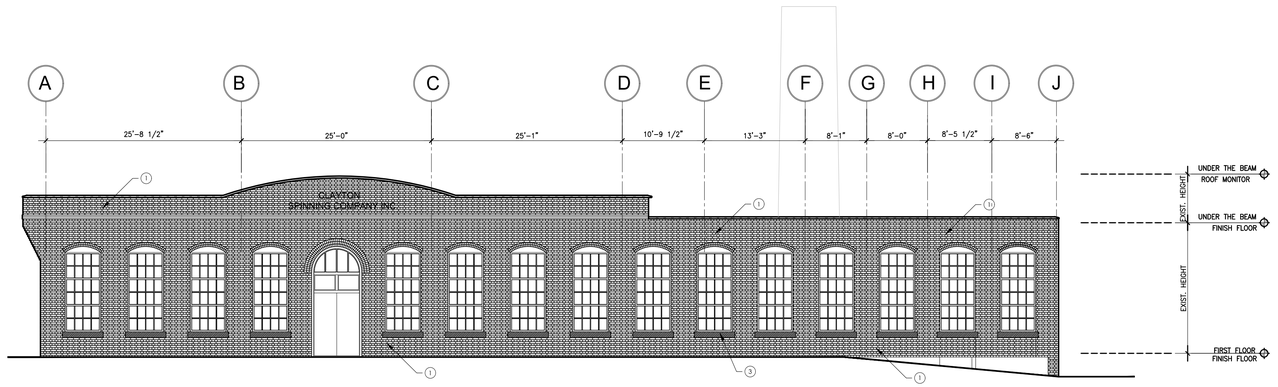
1 West Elevation

Scale: 1/16" = 1'-0"



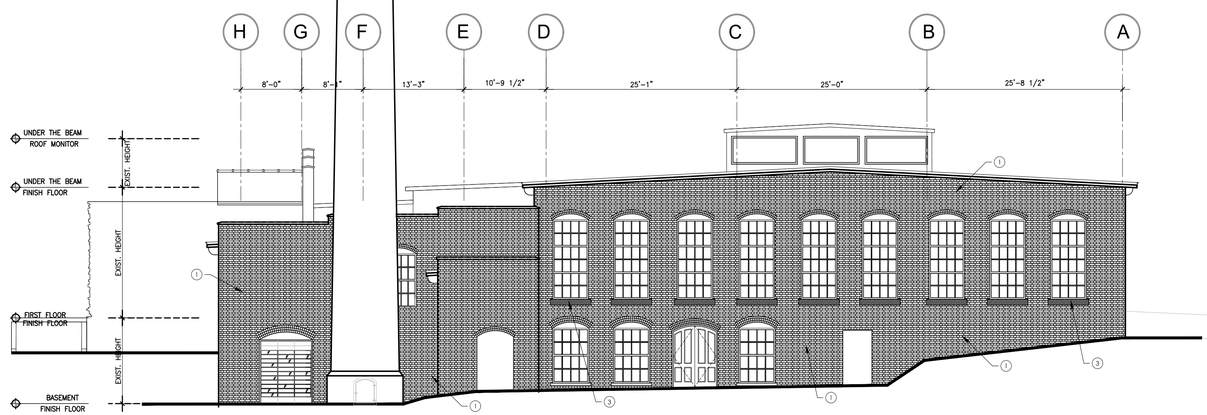
2 East Elevation

Scale: 1/16" = 1'-0"



3 West Elevation

Scale: 1/8" = 1'-0"



4 East Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠1 September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.1

DRAWN BY:
CHECKED BY: JTL

Drawing File: G:\2017 Projects\700-HISTORIC\17-701.00 Clayton, NC - Clayton Spinning Mill\Cadd\Arch\9-18-2018\17-701.00_A3.1.dwg
Plotted by: S.Imanirad
Plotted Date: Sep 18, 2018 - 6:03pm

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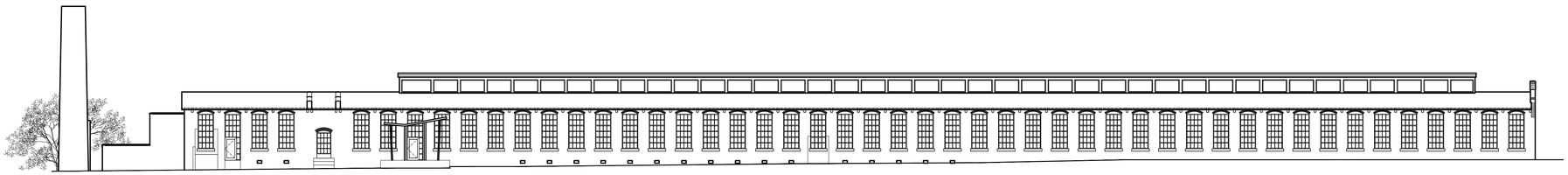
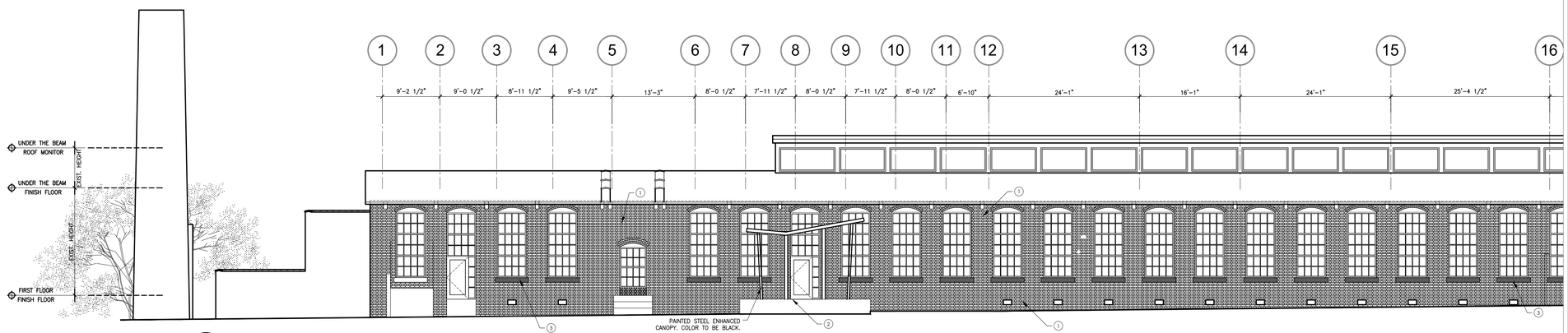


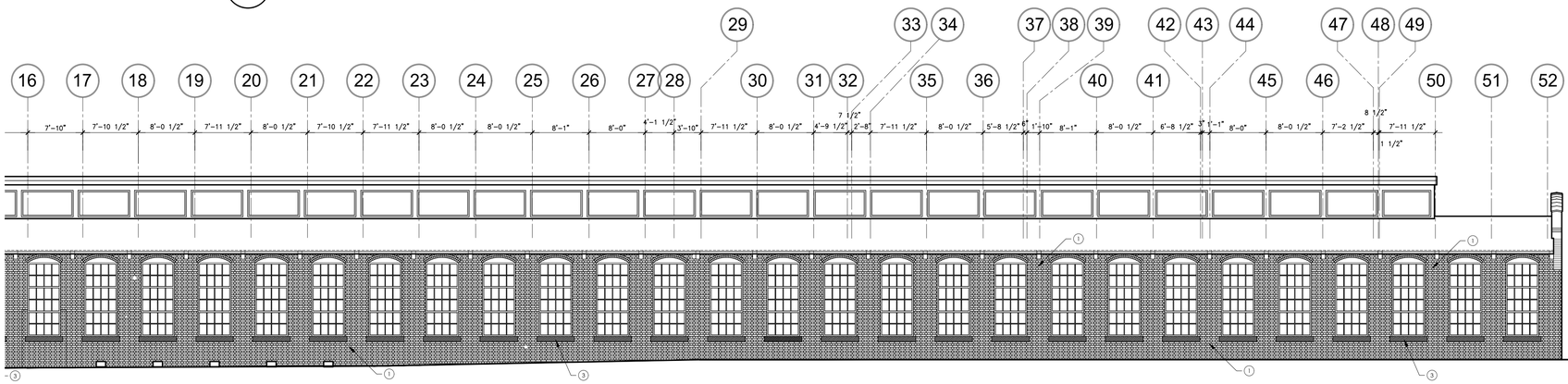
1 North Elevation

Scale: 1/16" = 1'-0"



2 Partial North Elevation

Scale: 1/8" = 1'-0"



3 Partial North Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠ September 18, 2018 Plan Review

DATE: April 2 , 2018
ISSUED FOR: Review

Building Elevations

A 3.2

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Hansrod
Plotted Date: Sep 18, 2018 - 6:04pm

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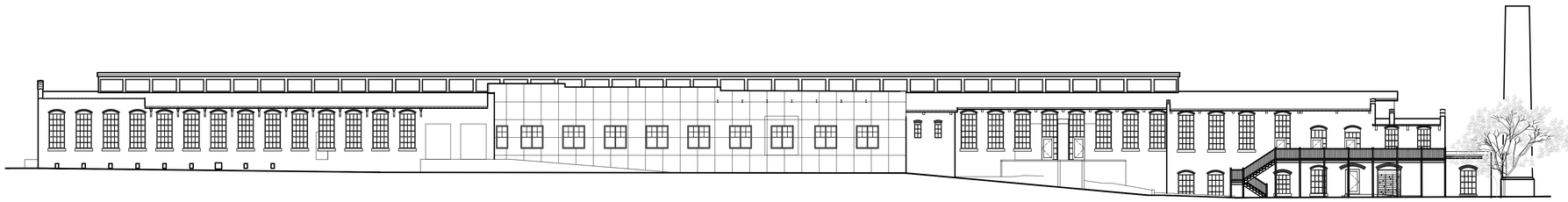
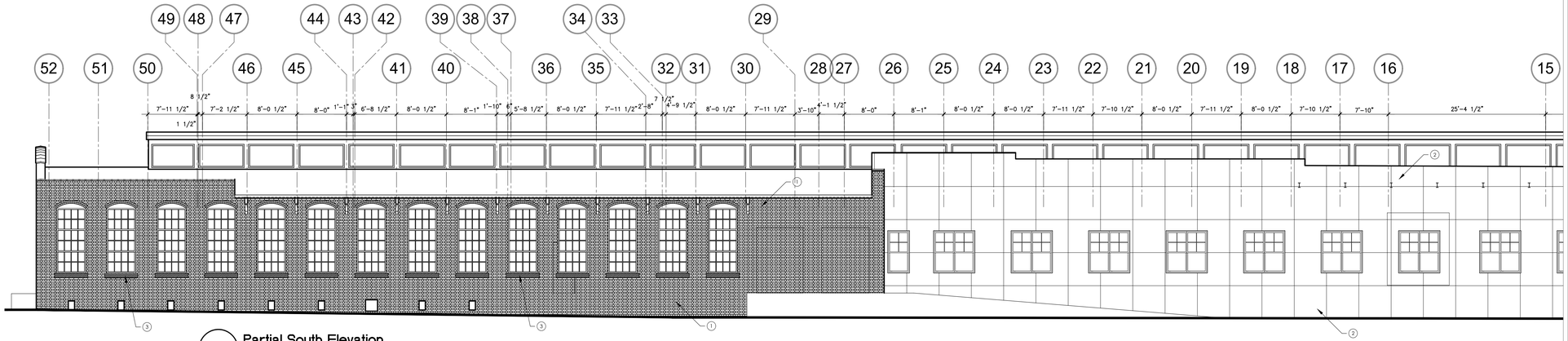


1 South Elevation

Scale: 1/16" = 1'-0"



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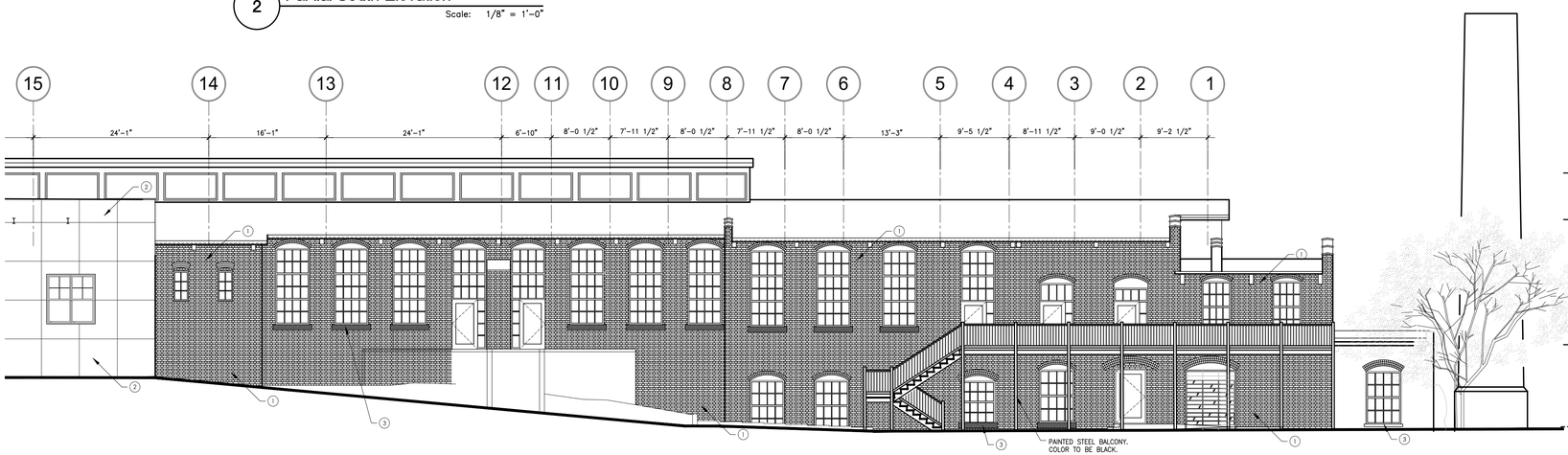
Scale: 1/8" = 1'-0"



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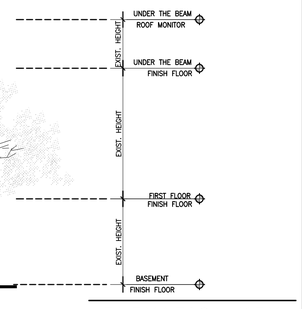
Scale: 1/8" = 1'-0"



ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠1 September 18, 2018 Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.3

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Umanrad
Plotted Date: Sep 18, 2018 - 6:05pm

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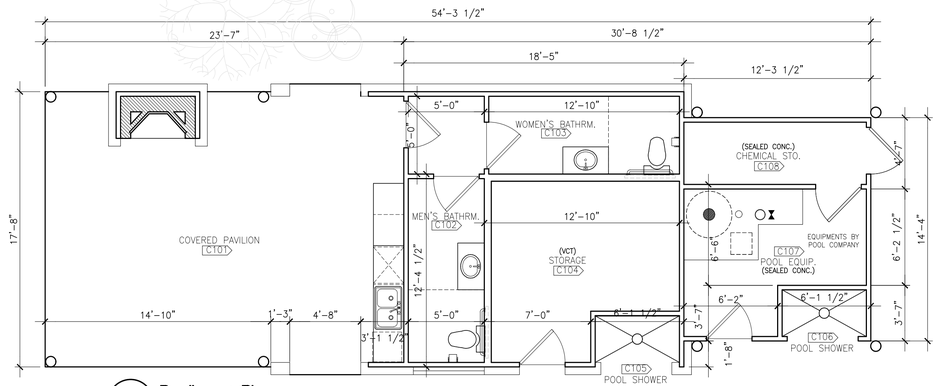
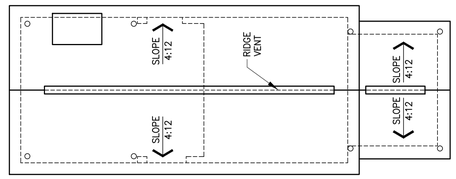


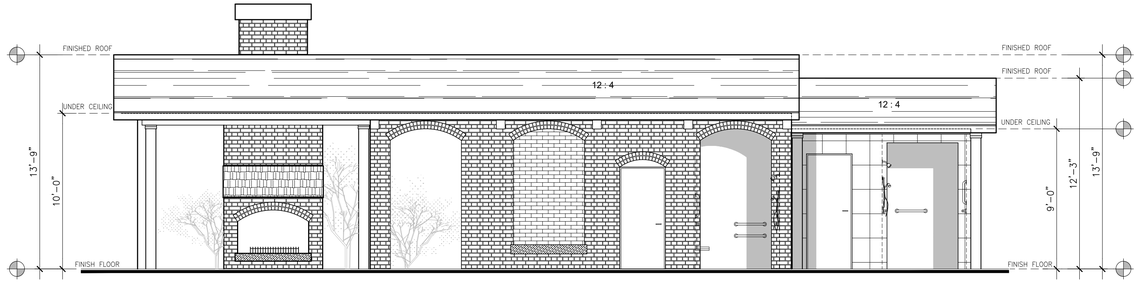
1 **Poolhouse Plan**
Scale: 1/4"=1'-0"



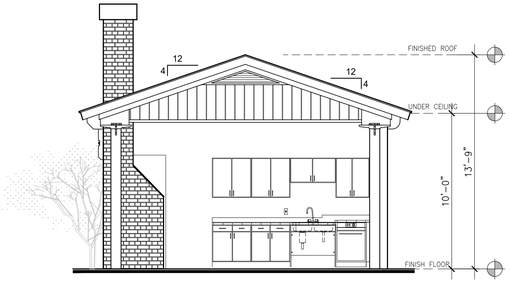
2 **Roof Plan**
Scale: 1/4"=1'-0"

ELEVATION KEY

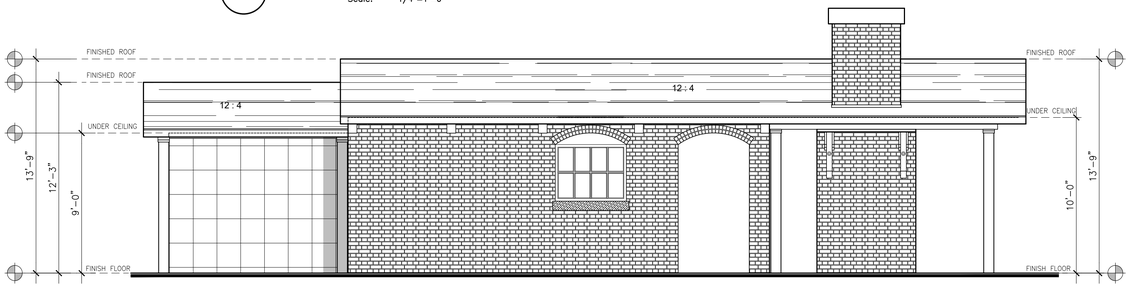
1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.
4. ASPHALT SHINGLES, COLOR TO MATCH THE ADJACENT MATERIAL



3 **Front Elevation**
Scale: 1/4"=1'-0"



4 **Left Elevation**
Scale: 1/4"=1'-0"



5 **Rear Elevation**
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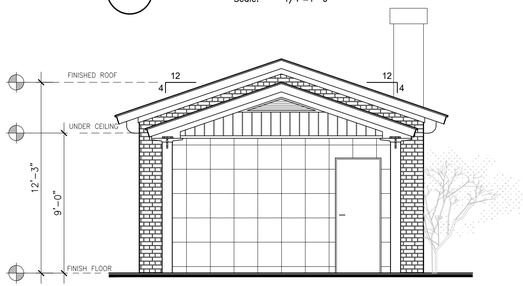

6 **Right Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠ September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Poolhouse

A 3.4

DRAWN BY:
CHECKED BY: JTL

Drawing File: G:\201 Projects\700-HISTORIC\17-701.00 Clayton, NC - Clayton Spinning Mill\Cadd\Arch\18-19-2018\17-701.00_A3.4.dwg
Plotted by: S.Umanrad
Plotted Date: Sep 18, 2018 - 6:02pm

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SYMBOLS AND ABBREVIATIONS

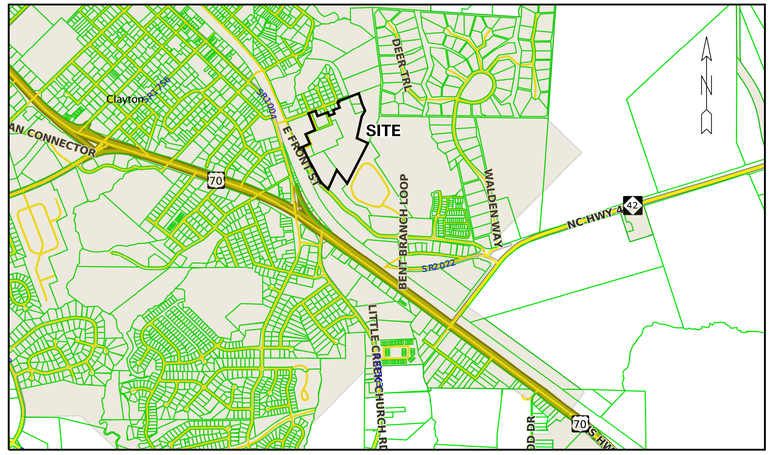
ABC	AGGREGATE BASE COURSE
ALUM	ALUMINUM
ASSY	ASSEMBLY
B-B	BACK TO BACK
BOA	BLOW-OFF ASSEMBLY
C&G	CURB AND GUTTER
CFS	CUBIC FEET PER SECOND
CI	CURB INLET
C/L	CENTER LINE
CO	CLEAN OUT
COM	COMMUNICATION
CONC	CONCRETE
CT	COURT
CU	COPPER
DCV	DOUBLE CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE
DEFL	DEFLECTION
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DRAIN	DRAINAGE
DR	DRIVE
EASE	EASEMENT
ELEC	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FES	FLARED END SECTION
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FEET
FT/SEC	FEET PER SEC
GALV	GALVANIZED
GV	GATE VALVE
HCR	HANDICAP RAMP
INV	INVERT
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
OHE	OVERHEAD ELECTRIC
PAVE	PAVEMENT
PERM	PERMANENT
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
S	SLOPE
SS	SANITARY SEWER
STA	STATION
T	TANGENT
TDD	TEMPORARY DIVERSION DITCH
TELE	TELEPHONE
TSB	TEMPORARY SEDIMENT BASIN
TSD	TEMPORARY SLOPE DRAIN
UG	UNDERGROUND
W	WIDTH
W/L	WATER LINE
WM	WATER METER
YI	YARD INLET

EXISTING CURB INLET
EXISTING DROP INLET / YARD INLET
EXISTING FLARED END SECTION
EXISTING FIRE HYDRANT
EXISTING BLOW-OFF ASSEMBLY
EXISTING GATE VALVE
EXISTING REDUCER
EXISTING WATER METER
EXISTING MANHOLE / JUNCTION BOX
EXISTING CLEAN OUT
EXISTING POWER POLE
EXISTING GUY WIRE
EXISTING TELEPHONE PEDESTAL
EXISTING LIGHT POLE / AREA LIGHT
EXISTING SIGN
NEW CURB INLET
NEW GRATE INLET/YARD INLET
NEW FLARED END SECTION
NEW FIRE HYDRANT
NEW BLOW-OFF ASSEMBLY
NEW GATE VALVE
NEW REDUCER
NEW WATER METER
NEW TEE
NEW PLUG
NEW MANHOLE
NEW CLEAN OUT
NEW SIGN
IRON PIPE
BENCHMARK
STORM STRUCTURE LABEL
BLOCK AND GRAVEL INLET PROTECTION
SILT FENCE INLET PROTECTION
EXCAVATED INLET PROTECTION
SEDIMENT BASIN
RISER BASIN
ROCK DAM
EXISTING GAS LINE
EXISTING COMMUNICATIONS LINE
EXISTING UNDERGROUND TELEPHONE
EXISTING UNDERGROUND ELECTRIC
EXISTING OVERHEAD ELECTRIC
EXISTING WATER LINE
EXISTING SANITARY SEWER FORCE MAIN
EXISTING SANITARY SEWER
EXISTING STORM DRAINAGE
NEW STORM DRAINAGE
STREAM
NEW WATER LINE
NEW SANITARY SEWER
NEW SANITARY SEWER FORCE MAIN
NEW GAS MAIN
GRASSED LINED DITCH/CHANNEL
JUTE MATTING LINED DITCH/CHANNEL
PYRAMAT LINED DITCH/CHANNEL
LIMITS OF CUT SLOPE
LIMITS OF FILL SLOPE
SILT FENCE
TREE FENCE
COMBINATION SILT/ TREE FENCE
DIVERSION DITCH

SPINNING MILL LOFTS AT EAST VILLAGE

MAJOR SITE PLAN

JOHNSTON COUNTY NORTH CAROLINA



VICINITY MAP

NOT TO SCALE

DEVELOPER:

SPINNINNG MILL INVESTMENTS, LLC
P.O. BOX 566
GREENVILLE, NC 27835
TELEPHONE: (252) 752–7101

PREPARED BY:

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
5316 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
TELEPHONE: (919)851–4422 or (800)354–1879
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CONTACT: MARTY D. BIZZELL, PE, CPESC
EMAIL: MARTY.BIZZELL@BNKINC.COM

SHEET INDEX

SHEET No.	SHEET TITLE
—	COVER SHEET
C1.0	EXISTING CONDITIONS PLAN
C1.1	OVERALL SITE PLAN
C1.2	SITE PLAN
C1.3	SITE PLAN
C2.1	UTILITY PLAN
C2.2	UTILITY PLAN
C2.3	OFF SITE SANITARY SEWER PLAN
C3.1	GRADING PLAN
C3.2	GRADING PLAN
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN – NORTH
L1.2	LANDSCAPE PLAN – SOUTH
1.A1.10	BUILDING TYPE I ELEVATION
1.A1.11	BUILDING TYPE I ELEVATION
1.A2.03	BUILDING TYPE II ELEVATION
1.A2.08	BUILDING TYPE 2.1 ELEVATION
1.A2.09	BUILDING TYPE 2.1 ELEVATION
1.A3.03	BUILDING TYPE 3.0 ELEVATION
1.A3.12	BUILDING TYPE 3.1 ELEVATION
1.A3.24	BUILDING TYPE 3.2 ELEVATION
1.A5.10	GARAGE TYPE 1 ELEVATIONS
1.A5.11	GARAGE TYPE 2 ELEVATIONS
1.A5.12	GARAGE TYPE 3 ELEVATIONS
1.A6.00	COMPACTOR PLAN AND ELEVATION
1.A7.00	POOLSIDE GRILLING STATIONS
CB1	COLOR BOARD 1
A1.1	BUILDING PLAN
A1.2	BUILDING PLAN
A1.3	POOL–HOUSE – BUILDING PLAN – ELEVATIONS
A3.1	BUILDING ELEVATIONS
A3.2	BUILDING ELEVATIONS
A3.3	BUILDING ELEVATIONS

CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPALITY STANDARDS, SPECIFICATIONS, AND DETAILS. WORK IN THIS PROJECT SHALL ALSO CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.

3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE–CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1–800–632–4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.

6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

7. A PRE–CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEERING DIVISION.

8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.

9. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND APPLICABLE MUNICIPALITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

10. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

11. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D698. STONE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST AS SET OUT IN ASTM STANDARD D1557. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.

12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY

13. THE CONTRACTOR SHALL REVIEW, VERIFY AND COORDINATE ALL DIMENSIONS SHOWN ON PLANS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER PRIOR TO STARTING PROJECT.

14. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

15. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE, VOL. I–C ACCESSIBILITY CODE.

16. OWNER SHALL PROVIDE FENCING AND OTHER SAFETY MEASURES NECESSARY IN AND AROUND ANY PROPOSED STORMWATER MANAGEMENT MEASURES (PONDS, WETLANDS, ETC.) OBTAINING PROPER PERMITS SHALL BE THE RESPONSIBILITY OF THE OWNER.

17. RETAINING WALLS EXCEEDING 30 INCHES IN HEIGHT SHALL INCLUDE FALL PROTECTION IN THE FORM OF A HANDRAIL OR FENCING ON THE HIGH SIDE OF THE RETAINING WALL.

18. PROPER COMPACTION OF ALL FILL SOILS PLACED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION SHALL BE ADEQUATE TO SUPPORT THE PROPOSED USE OF AREAS IN WHICH FILL SOILS ARE PLACED. THE CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO TEST AND VERIFY THAT COMPACTION IS ADEQUATE FOR THE PROPOSED USE OF IN THE AREA OF FILL PLACEMENT.

19. ALL ASPECTS OF THIS PROJECT SHALL BE IN FULL COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR NOTES ANY ASPECTS OF THE PROJECT WHICH ARE NOT IN COMPLIANCE, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY FURTHER WORK BEING PERFORMED. ANY WORK PERFORMED AFTER THE CONTRACTOR NOTES SUCH A NON COMPLIANCE IS SUBJECT TO REMOVAL AND REPAIR AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR OR OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO TEST ALL EMBANKMENTS AND FILL PLACEMENT FOR PROPER COMPACTION. PROPER COMPACTION SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS OR THESE PLANS, WHICHEVER IS MORE STRINGENT. EMBANKMENTS FOR PONDS SHALL BE PLACED IN 6 INCH LOOSE LAYERS AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR – TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE AT ALL PHASES OF INSTALLATION AND SHALL RETAIN WITH GEOTECHNICAL TESTING DATA. THE CONTRACTOR SHALL ALSO RETAIN ALL SHIPPING RECORDS AND SPECIFICATIONS FOR THE OUTLET STRUCTURE MATERIALS AND STRUCTURES. ALL OF THE ABOVE DATA MAY BE REQUIRED AS PART OF THE MUNICIPALITY AS–BUILT PROCESS AND SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST. THE CONTRACTOR AND OWNER SHALL HAVE DOCUMENTATION OF THESE TESTS AVAILABLE UPON REQUEST.

21. RETAINING WALLS SHOWN HEREIN SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER WITH EXPERIENCE DESIGNING RETAINING WALLS. AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION OF RETAINING WALLS, THE CONTRACTOR SHALL CONTACT THE OWNER'S GEOTECHNICAL ENGINEER TO SCHEDULE AND COORDINATE ALL APPROPRIATE INSPECTIONS, TESTING, AND VERIFICATION NECESSARY DURING RETAINING WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTION, TESTING AND VERIFICATION FOR THE DURATION OF RETAINING WALL CONSTRUCTION. PROPER SCHEDULING, EXECUTION, AND RECORD KEEPING FOR ALL REQUIRED INSPECTIONS, TESTING, AND VERIFICATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH RECORDS SHALL BE RETAINED AND SHALL BE PROVIDED TO THE OWNER AND BASS, NIXON & KENNEDY, INC. ALL MONITORING, TESTING, AND VERIFICATION SHALL CONFORM TO THE MOST RECENT VERSION OF THE NC BUILDING CODE CHAPTER 18, SECTION 1806 OR THE WALL DESIGN ENGINEER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

NOT PERMITTED FOR CONSTRUCTION

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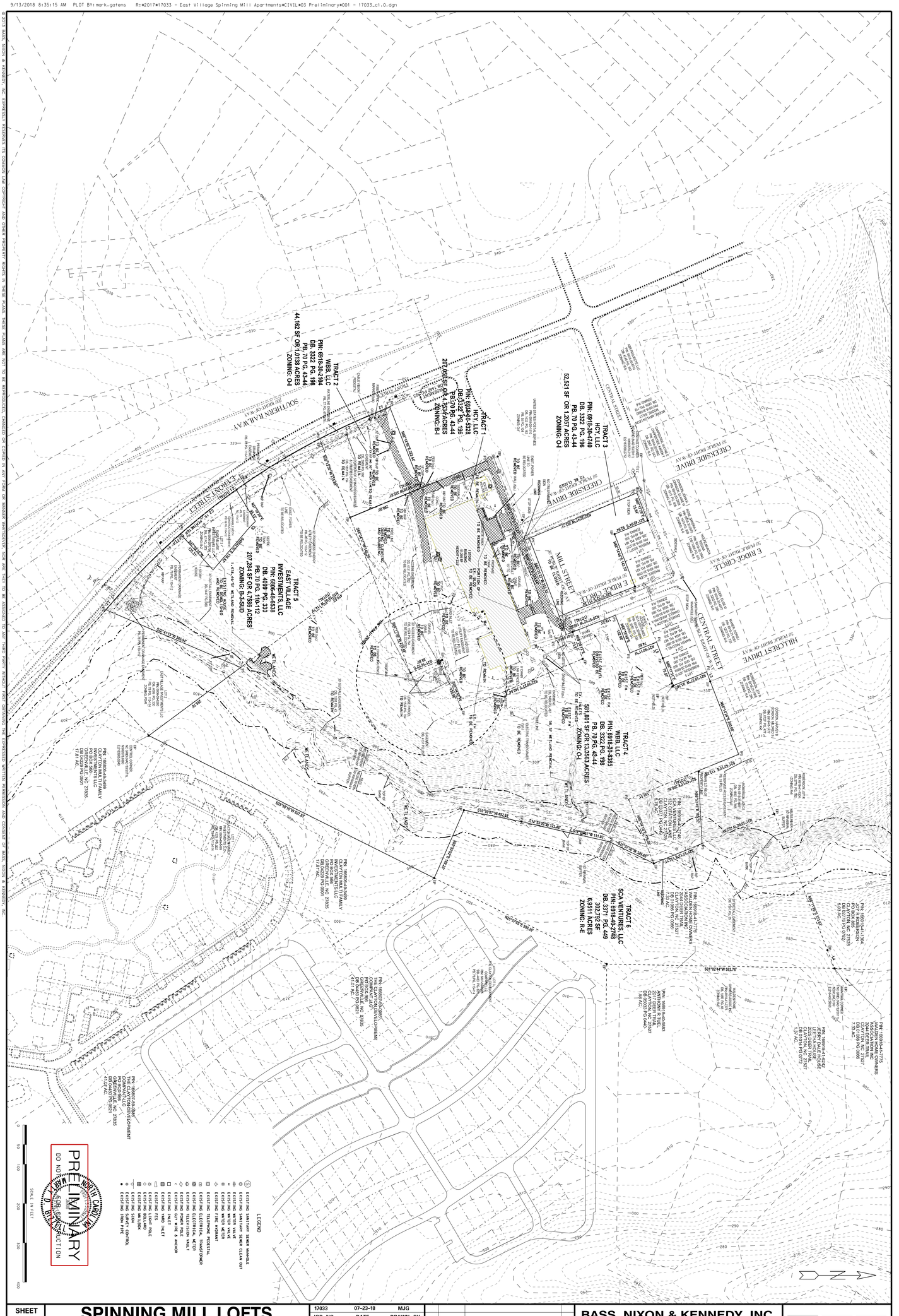

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C1.0	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	EXISTING CONDITIONS AND DEMOLITION PLAN		
		SCALE: 1" = 100' HORZ.		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)
BNK

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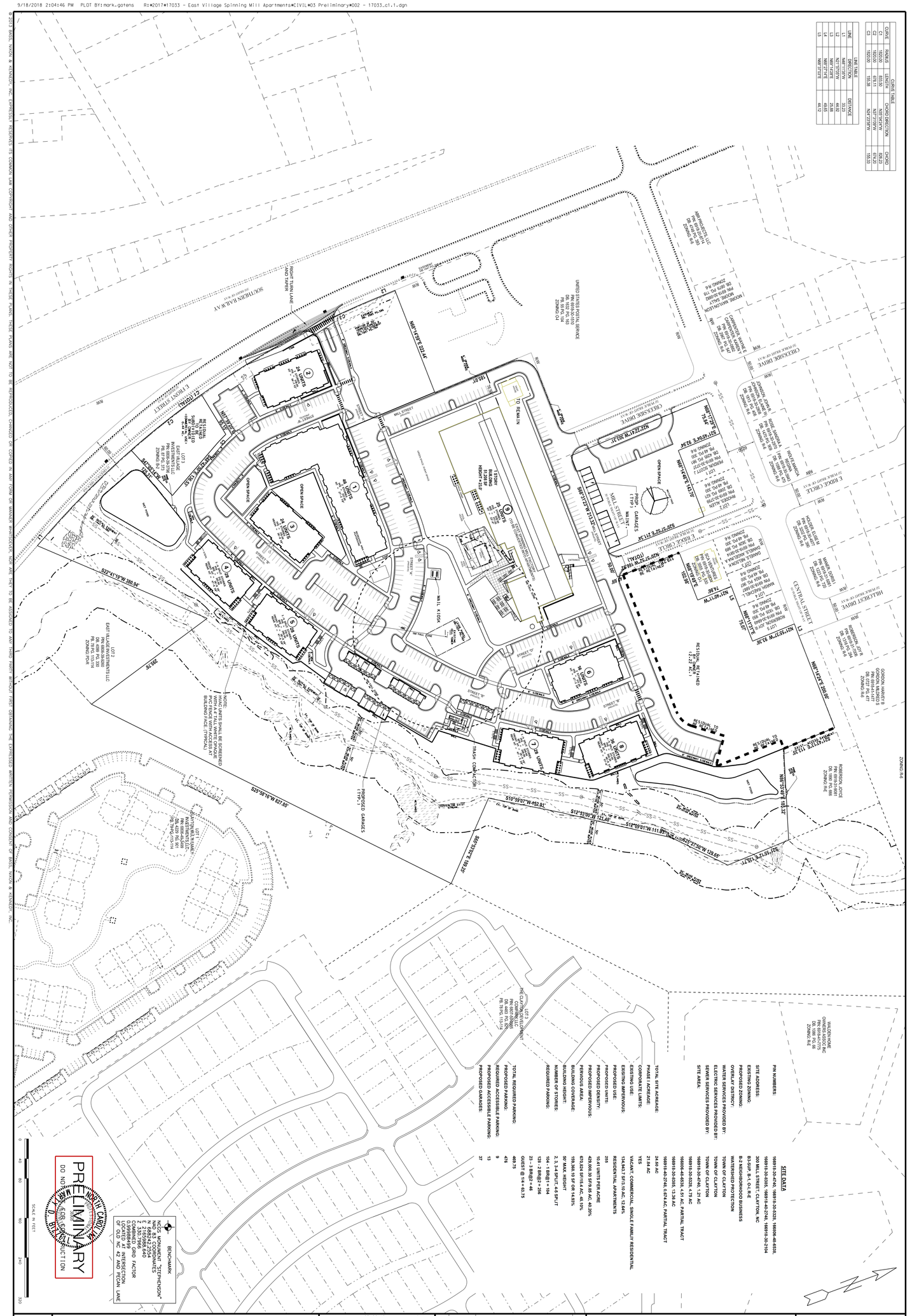
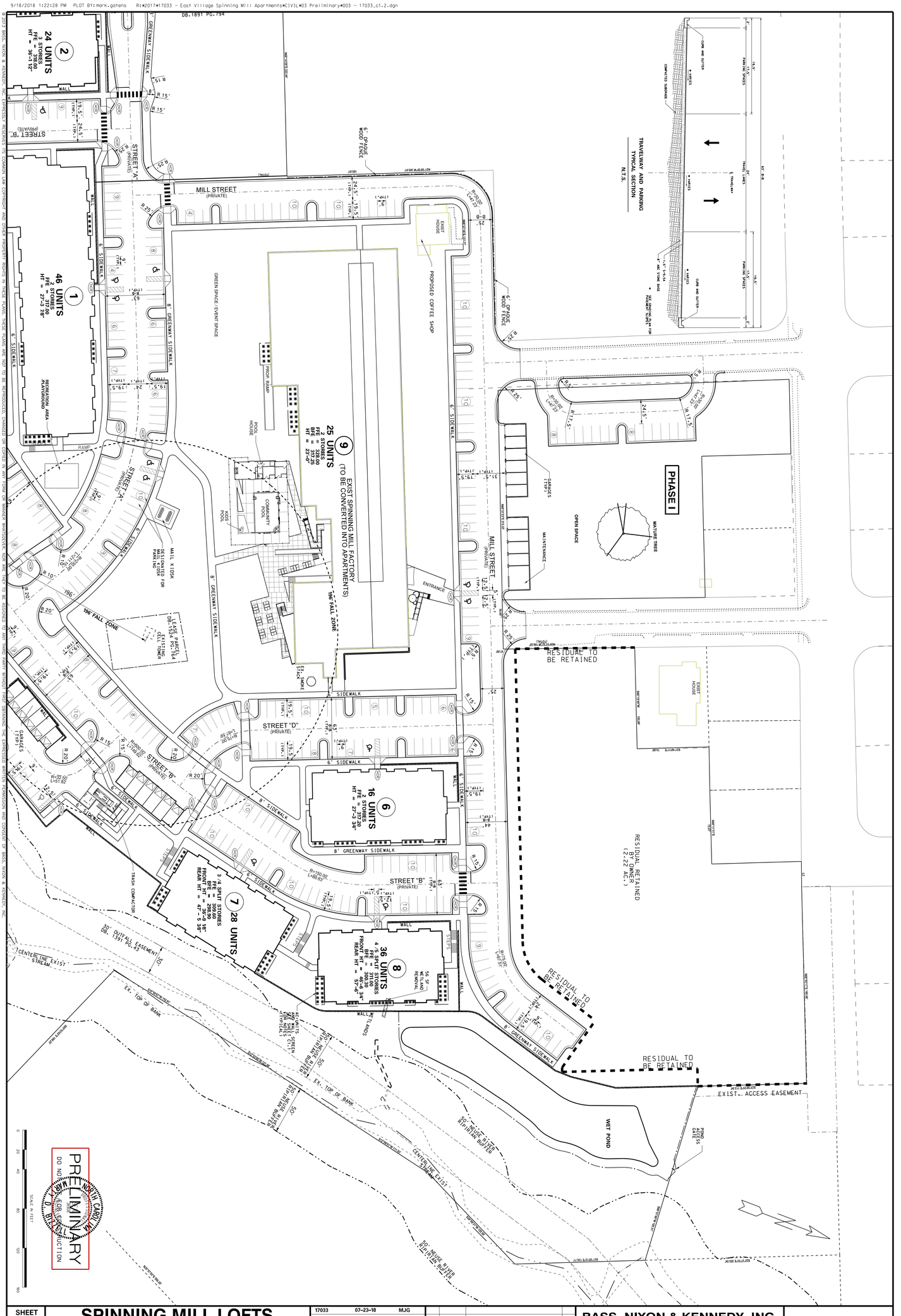

SOUTHERN RAILWAY
RIGHT TURN LANE AND TAPER
CENTRAL STREET
MAIL KIOSK
TO REMAIN
MILL STREET
E EDGE CIRCLE
CEDARSIDE DRIVE
HILLCREST DRIVE
CENTRAL STREET
OPEN SPACE
RESIDUAL REZONED 2.27 AC.±
PROPOSED GARAGES
TRAIL CONNECTION
STREET "A"
STREET "B"
PROPOSED 24 UNIT BUILDING
PROPOSED 36 UNIT BUILDING
PROPOSED 48 UNIT BUILDING
PROPOSED CLUBHOUSE
PROPOSED POOL
PROPOSED MAIL KIOSK
PROPOSED DUMPSTER
PROPOSED GAZEBO
PROPOSED PICNIC SHELTER
PROPOSED PLAYGROUND
PROPOSED SIDEWALK
PROPOSED CURB & GUTTER
PROPOSED STORM DRAIN
PROPOSED WATER LINE
PROPOSED SEWER LINE
PROPOSED GAS LINE
PROPOSED OVERHEAD UTILITIES
PROPOSED UNDERGROUND UTILITIES
PROPOSED TREE LINE
PROPOSED LIGHT POLE
PROPOSED FIRE HYDRANT
PROPOSED WATER VALVE
PROPOSED SEWER MANHOLE
PROPOSED SEWER CLEANOUT
PROPOSED STORM DRAIN MANHOLE
PROPOSED STORM DRAIN INLET
PROPOSED STORM DRAIN FLARE END SECTION
PROPOSED STORM DRAIN HEADWALL
PROPOSED STORM DRAIN CATCH BASIN
PROPOSED STORM DRAIN JUNCTION BOX
PROPOSED STORM DRAIN YARD INLET
PROPOSED STORM DRAIN CURB INLET
PROPOSED STORM DRAIN GRATE INLET
PROPOSED STORM DRAIN DROP INLET
PROPOSED STORM DRAIN CLEANOUT
PROPOSED STORM DRAIN MANHOLE



SHEET	SPINNING MILL LOFTS AT EAST VILLAGE				BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS	BNK
C1.2	PHASE I PRELIMINARY SUBMITTAL				6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607	
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA				TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968	
					CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)	

17033	07-23-18	MJG
JOB NO.	DATE	DRAWN BY

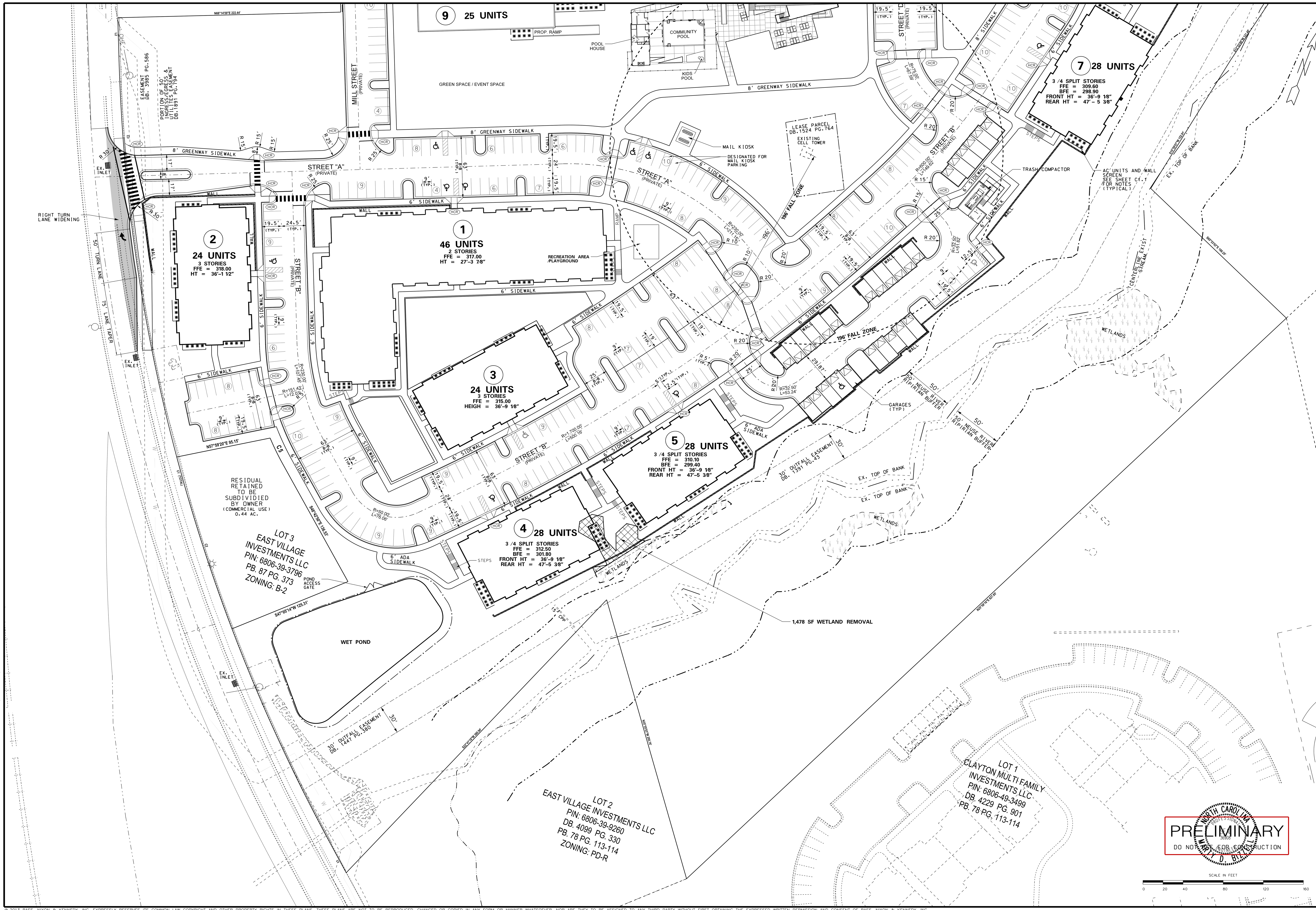
PRELIMINARY SITE PLAN

SCALE: 1" = 40' HORZ

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



BNK

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CONSULTING ENGINEERS
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REVISIONS

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

PRELIMINARY SITE PLAN

SCALE: 1" = 40' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET **C1.3**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

9/18/2018 1:24:00 PM PLOT BY:mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*004 - 17033_c1.3.dgn

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UTILITY NOTES

SANITARY SEWER:

BACKWATER VALVES SHALL BE PROVIDED FOR ALL UNITS WITH FINAL FLOOR ELEVATIONS OF BUILDINGS LESS THAN 1' ABOVE THE NEXT UPSTREAM MANHOLE, OR CONNECTING MANHOLE WHERE THERE IS NO UPSTREAM MANHOLE.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN NON-TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING (MINIMUM COVER SHALL BE NO LESS THAN 3').

MINIMUM SLOPE FOR 4" AND 6" SANITARY SEWER COLLECTION LINES SHALL BE NO LESS THAN 0.08% WITH CLEAN-OUTS EVERY 75 LINEAL FEET.

MAINTAIN 24" VERTICAL SEPARATION FROM STORM SEWER OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM WATER MAINS OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING.

IF SANITARY AND STORM SEWERS CROSS WITH LESS THAN 24" VERTICAL SEPARATION, A CONCRETE CRADLE OF FLOWABLE FILL SHALL BE INSTALLED TO THE SPRINGLINE OF BOTH PIPES. THE CRADLE SHALL BE THE FULL WIDTH OF THE PIPE TRENCH, WITH A MINIMUM OF 12" BEYOND THE OUTSIDE EDGES OF THE LARGER PIPE. THE LOWER PIPE SHALL HAVE 1" THICK COMPRESSIBLE JOINT MATERIAL BETWEEN THE CRADLE AND THE PIPE. THE MINIMUM VERTICAL PIPE SEPARATION WITH A CRADLE IS 6".

CLEAN-OUTS IN TRAFFIC AREAS SHALL BE TRAFFIC BEARING ACCORDING TO TOWN OF CLAYTON DETAILS. MANHOLES 0-12' DEEP SHALL BE 4'-0" DIAMETER MANHOLES. MANHOLES GREATER THAN 12' DEEP SHALL BE 5'-0" DIAMETER MANHOLES WITH AN EXTENDED BASE PER THE TOWN OF CLAYTON STANDARDS.

WATER:

MINIMUM COVER OF 3' TO BE PROVIDED.

MAINTAIN 18" VERTICAL SEPARATION FROM STORM SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM SANITARY SEWER MAINS. IF WATER MAIN CROSSES OVER THE SANITARY SEWER MAIN BUT HAS LESS THAN 18" CLEAR, THEN DIP IS REQUIRED FOR BOTH THE WATER MAIN AND SEWER MAIN WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF POINT OF CROSSING. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

IF THE WATER MAIN IS NOT AT LEAST 18" ABOVE THE STORM PIPE, OR IF IT CROSSES UNDER THE STORM PIPE, THEN THE WATER MAIN MUST BE DIP FOR 10 FEET ON EACH SIDE OF THE CROSSING.

PRESSURE REDUCING VALVES SHALL BE PROVIDED IF PRESSURE IS IN EXCESS OF 80 PSI.

GENERAL:

ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHTS-OF-WAY TO BE OWNED, OPERATED, AND MAINTAINED BY THE TOWN OF CLAYTON

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.

ALL UNDERGROUND UTILITIES ARE APPROXIMATELY LOCATED. ACTUAL LOCATION AND DEPTH TO BE CONFIRMED IN THE FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCY.

BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY CITY OR NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, THE FOLLOWING PROCEDURES SHOULD BE UNDERTAKEN:

CITY RIGHT-OF-WAY - CONTACT LOCAL AUTHORITIES TRAFFIC ENGINEERING DEPT. FOR INFORMATION ON DETOURS, OPEN CUTTING OF STREETS OR FOR ANYCONSTRUCTION WITHIN RIGHT-OF-WAY.

NCDOT RIGHT-OF-WAY - CONTACT PROJECT ENGINEERS AND OBTAIN ALL PERMITS AND ENCROACHMENTS. (CROSS-CHECK PLANS WITH SPECIAL PROVISIONS, KEEP COPIES ON CONSTRUCTION SITE, ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER)

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

17033 JOB NO.
07-25-18 DATE
MJG DRAWN BY

UTILITY PLAN

SCALE: 1" = 40' HOR.Z

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET C2.1

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9/18/2018 1:25:09 PM PLOT BY: mark.gaines R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\006 - 17033_c2.1.dgn

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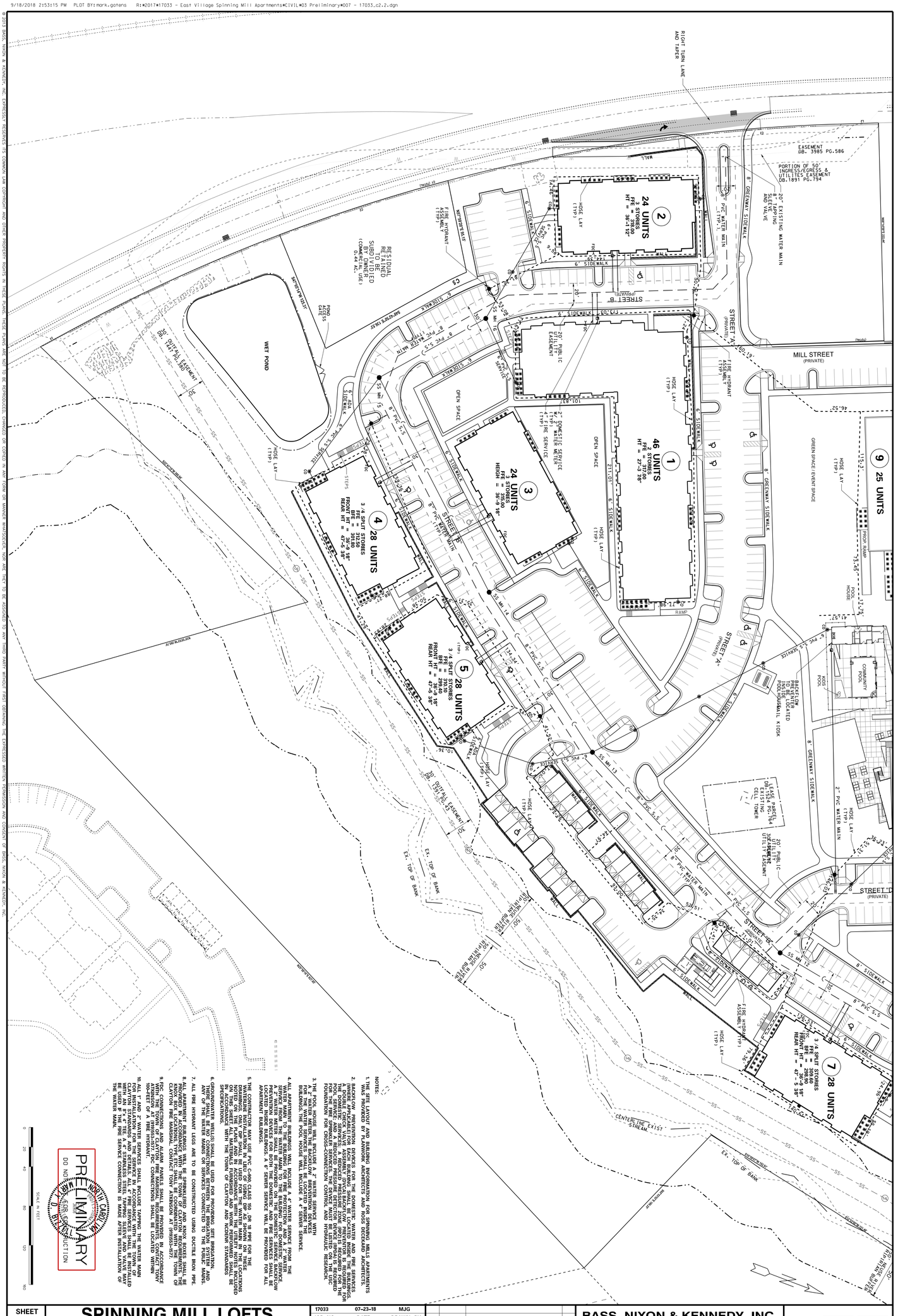
9/18/2018 2:53:15 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\007 - 17033.c2.2.dgn



NOTES:

1. THE SITE LAYOUT AND BUILDING INFORMATION FOR SPINNING MILLS APARTMENTS WAS PROVIDED BY PLANWORK ARCHITECTS AND ROSS DICKERARD ARCHITECTS.
2. THE FIRE FLOW REQUIREMENTS WERE BASED ON THE 2012 NORTH CAROLINA FIRE CODE (WHERE APPLICABLE) FOR EACH BUILDING. SHALL BE LOCATED ABOVE THE BUILDINGS. THE DOMESTIC SERVICES. A REDUCED PRESSURE ZONE (RPZ) IS REQUIRED FOR THE DOMESTIC SERVICE. THE DEVICE MUST BE TESTED ON THE USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
3. 2" WATER METER, THE BACKFLOW PREVENTION DEVICES AND THE IRRIGATION SYSTEM SHALL BE LOCATED IN THE POOL HOUSE.
4. ALL APARTMENT BUILDINGS WILL INCLUDE A 4" WATER SERVICE FROM THE BUILDINGS. THE POOL HOUSE WILL INCLUDE A 4" SEWER SERVICE.
5. THE CONTRACTOR MAY USE PVC C-900 CLASS 200 OR 18 PSI FOR THE WATERMAIN INSTALLATION IN LIEU OF DUCTILE IRON AS SHOWN ON THESE PLANS. ALL WATERLINES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF CLAYTON AND NCDENR STANDARDS AND SPECIFICATIONS.
6. GROUNDWATER WELLS(S) SHALL BE USED FOR PROVIDING SITE IRRIGATION. THERE SHALL BE NO CROSS CONNECTIONS BETWEEN ANY OF THE WATER MAINS OR SERVICES CONNECTED TO THE PUBLIC MAINS.
7. ALL FIRE HYDRANT LEGS ARE TO BE CONSTRUCTED USING DUCTILE IRON PIPE.
8. ALL APARTMENT BUILDINGS WILL BE SPRINKLERED AND KNOX BOXES SHALL BE PROVIDED AT EACH BUILDING. LOCATIONS, TYPE, ETC SHALL BE COORDINATED WITH THE TOWN OF CLAYTON FIRE MARSHAL.
9. PIV, FDC AND POST INDICATOR VALVE SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON FIRE MARSHAL REQUIREMENTS. ALL VALVES SHALL BE LOCATED WITHIN 100-FEET OF A FIRE HYDRANT.
10. ALL CONNECTIONS TO EXISTING WATER MAINS SHALL BE MADE BY THE CONTRACTOR FOR INSTALLATION FOR THE SERVICE IN ACCORDANCE WITH THE TOWN OF CLAYTON STANDARDS AND SPECIFICATIONS. ALL CONNECTIONS SHALL BE MADE WITH AN 8"x4" TEE AND A 4" GATE VALVE AND BOX. ALL PIPING SHALL BE 4" PVC C-900 CLASS 200 OR 18 PSI. ALL BOLTS AND NUTS SHALL BE 304 STAINLESS STEEL. THRUST BLOCKING SHALL BE INSTALLED AT ALL BENDS AND VALVES AS REQUIRED BY THE TOWN OF CLAYTON. NO FIRE SERVICE CONNECTION IS MADE AFTER INSTALLATION OF THE WATER MAIN.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033 07-23-18 MJG (JOB NO. DATE DRAWN BY)	REVISIONS	BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS	BNK
C2.2	PHASE I PRELIMINARY SUBMITTAL TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	UTILITY PLAN SCALE: 1" = 40' HORZ	3 8-17-18 T.O. CLAYTON COMMENTS MG 2 7-23-18 T.O. CLAYTON COMMENTS MG 1 4-27-18 T.O. CLAYTON COMMENTS MG NO. DATE DESCRIPTION BY	6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)	

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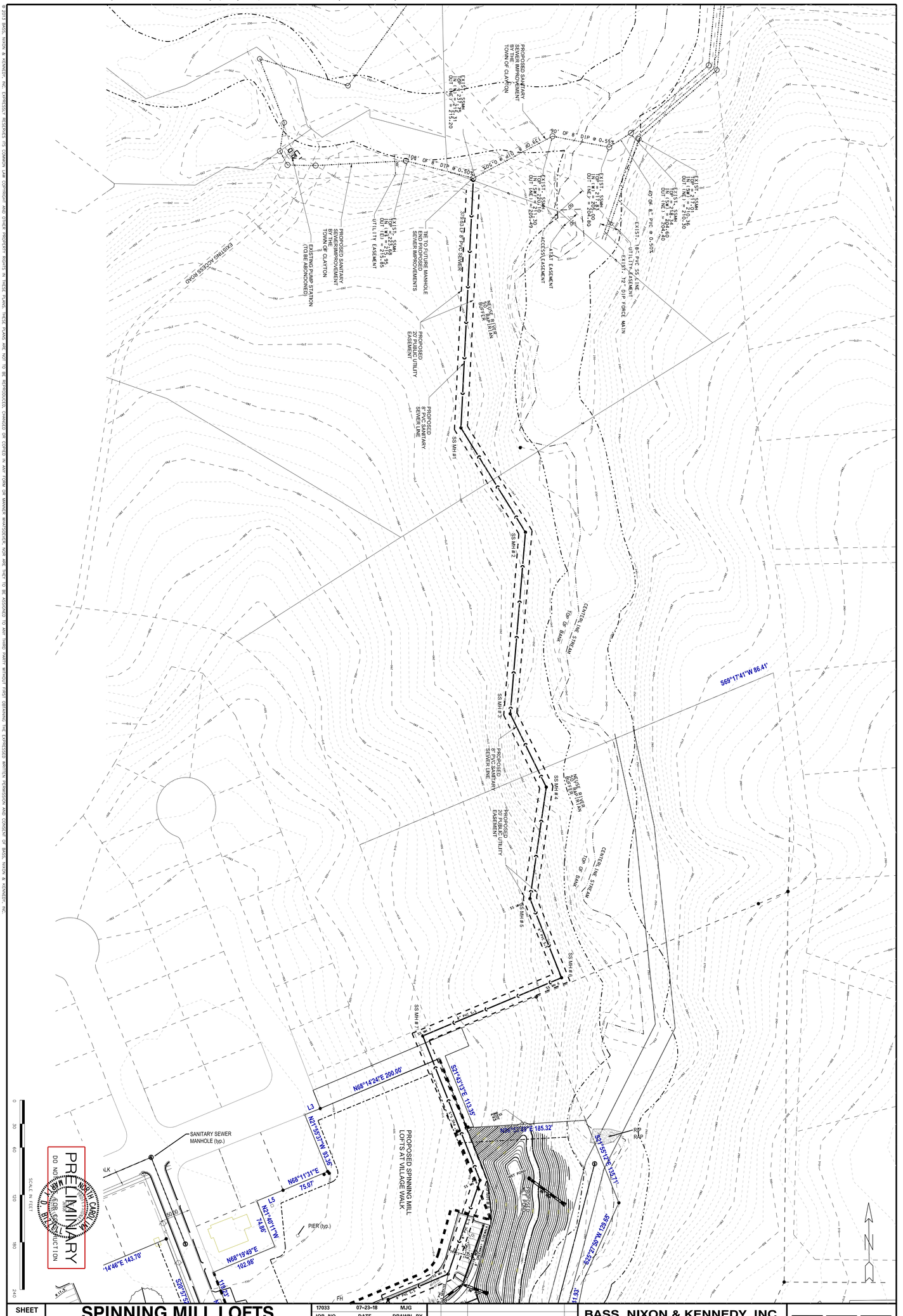
8/16/2018 4:47:44 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\009 - 17033_c2.4.dgn



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SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C2.3	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	OFF SITE SANITARY SEWER PLAN		
		SCALE: 1" = 60' HORZ.		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

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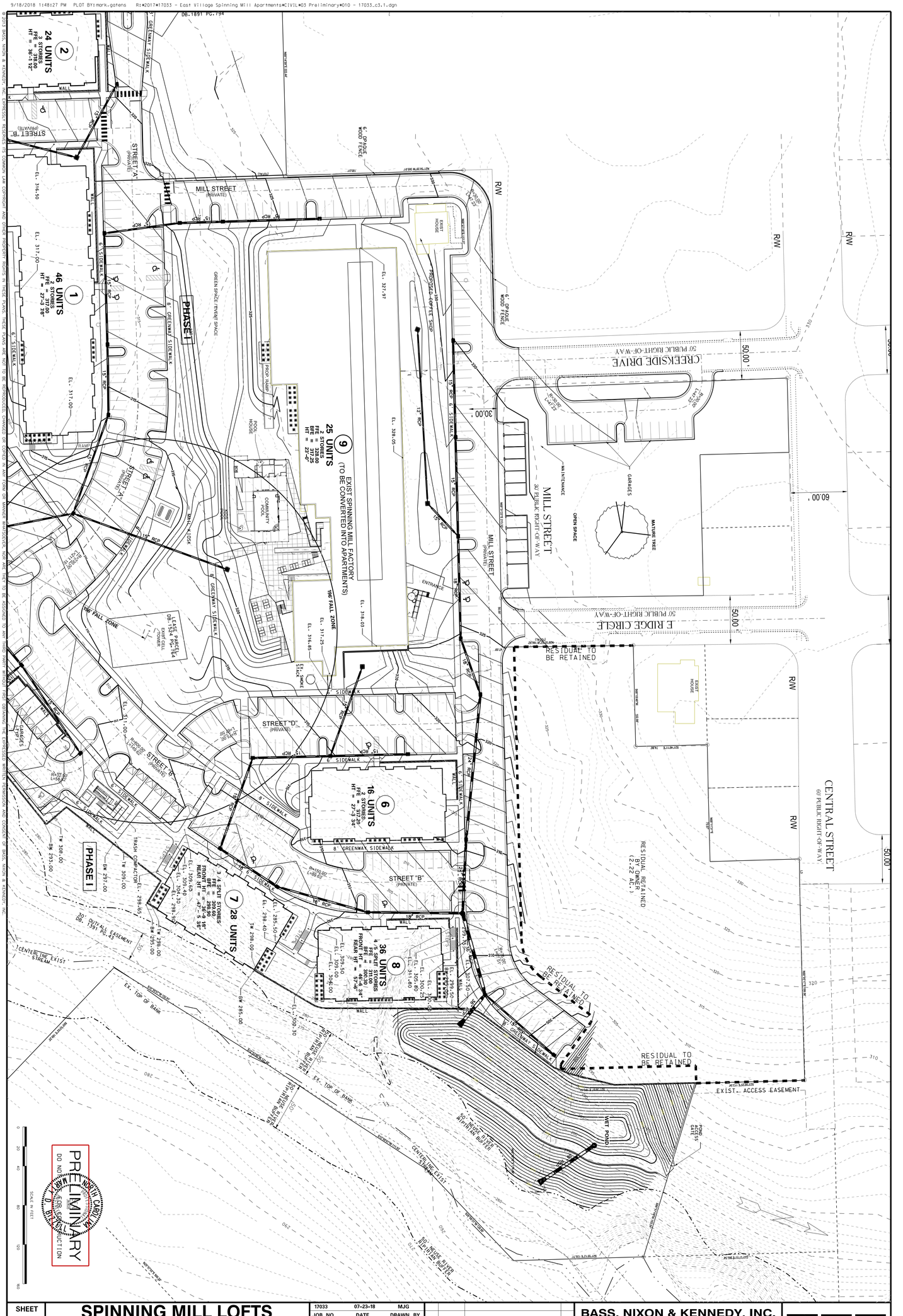
9/18/2018 1:48:27 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\010 - 17033.c3.1.dgn


DB.1891 PG.794
24 UNITS
3 STORIES
FFE = 320.00
HT = 36'-1 12"
46 UNITS
3 STORIES
FFE = 317.00
HT = 27'-3 28"
25 UNITS
2 STORIES
FFE = 317.25
HT = 27'-4"
EXIST SPINNING MILL FACTORY
(TO BE CONVERTED INTO APARTMENTS)
16 UNITS
3 STORIES
FFE = 312.20
HT = 27'-3 34"
36 UNITS
4 & 5 SPLIT STORIES
FFE = 309.00
REAR HT = 47'-2 18"
28 UNITS
3 & 4 SPLIT STORIES
FFE = 309.60
REAR HT = 38'-4 18"
PROPOSED 4,000 FT² SHOP
MILL STREET
(PRIVATE)
STREET 'A'
(PRIVATE)
STREET 'B'
(PRIVATE)
STREET 'C'
(PRIVATE)
STREET 'D'
(PRIVATE)
CREEKSIDE DRIVE
50' PUBLIC RIGHT-OF-WAY
E RIDGE CIRCLE
50' PUBLIC RIGHT-OF-WAY
CENTRAL STREET
60' PUBLIC RIGHT-OF-WAY
MILL STREET
30' REGULAR RIGHT-OF-WAY
MAINTENANCE
GARAGES
OPEN SPACE
MATURE TREE
RESIDUAL TO BE RETAINED
RESIDUAL RETAINED BY OWNER (2.22 AC.)
EXIST. ACCESS EASEMENT
PHASE I
PHASE II
GREENWAY SIDEWALK
SIDEWALK
6' OPAQUE WOOD FENCE
15' RCP
12' RCP
18" RCP
100' FALL ZONE
TRASH COMPACTOR
WET POND
ACCESS GATE
CENTERLINE EXIST. STREAM
EX. TOP OF BANK
30' DUKE ALL EASEMENT
DB. 7391 PG. 43
RIVER BASIN BUFFER
RIVER BASIN BUFFER
RIVER BASIN BUFFER
RIVER BASIN BUFFER
PROPOSED 6' SEWER EASEMENT
PROPOSED 8" SEWER
EXIST. 8" SEWER
EXIST. 12" WATER
PROPOSED 8" WATER
PROPOSED 12" WATER
EXIST. 8" WATER
EXIST. 6" WATER
EXIST. 24" WATER
EXIST. 16" WATER
EXIST.

9/18/2018 1:49:34 PM PLOT BY:mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*011 - 17033_c3.2.dgn

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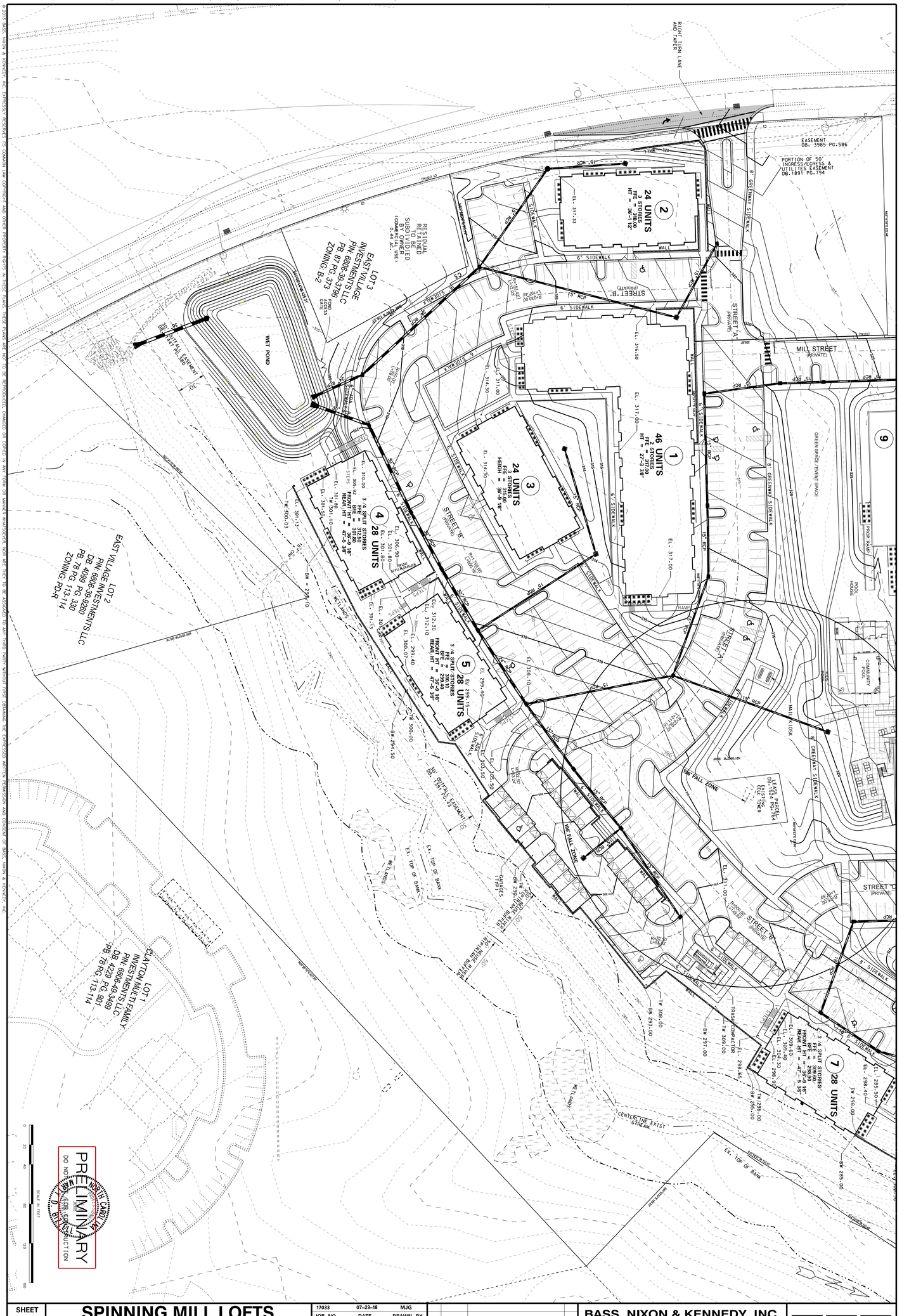

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C3.2	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	GRADING AND DRAINAGE PLAN		
		SCALE: 1" = 40' HORZ		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
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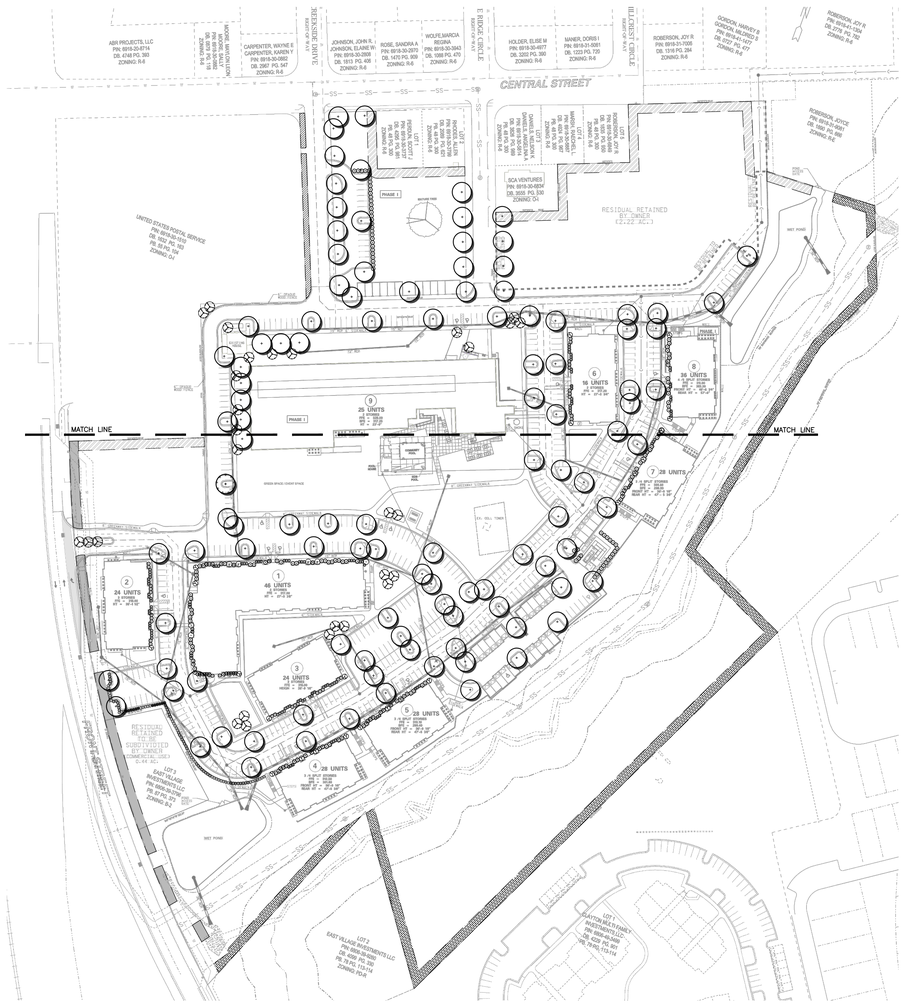

GENERAL NOTES

1. A/C UNITS, TRANSFORMERS AND OTHER MECHANICAL OR UTILITY EQUIPMENT, NOT SHOWN ON THE PLAN, SHALL BE SCREENED FROM VIEW BY THE ADDITION OF WAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
3. MULCH SHALL BE 3" DEEP SHREDDED HARDWOOD UNLESS OTHERWISE NOTED.
4. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST AND ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES BETWEEN PLANT LIST AND PLANTING PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
5. ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
7. B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
8. ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
10. ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
11. MULCH EDGES AND PROPOSED PLANTINGS SHALL NOT DISTURB ANY EXISTING GROUPS OF TREES TO REMAIN. EDGES ARE SHOWN FOR APPROXIMATION ONLY, BUT ARE TO INDICATE SMOOTH, CLEAN CURVES.
12. CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL WAX MYRTLES @ 24" HT. – 5' OC.
13. TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (C.O.). THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A (C.O.).
15. REQUIRED PLANTING AREAS SHALL INCORPORATE EXISTING NATURAL VEGETATION TO THE MAXIMUM EXTENT FEASIBLE.

LANDSCAPE REQUIREMENTS:

Site Landscaping

20% OF TOTAL LOT AREA SHALL BE LANDSCAPED AT A RATE OF (1) CANOPY TREE, (1) UNDERSTORY TREE, AND (2) SHRUBS PER 1,000 SF. 24.5 acres (1,067,220 s.f.)

1,067,220 SF x .20 = 213,444 S.F.
213,444/1,000 = 214
214 CANOPY TREES REQUIRED: 158 NEW + APPROXIMATELY 2500 EXISTING PROVIDED
214 UNDERSTORY TREES REQUIRED: 79 NEW + APPROXIMATELY 135 EXISTING PROVIDED
SHRUBS REQUIRED: 213,444/500 = 428 SHRUBS REQUIRED/ 732 PROVIDED

Streetyard Plantings

FRONT STREET: 800/40 = 20 TREES REQUIRED/PROVIDED
CENTRAL STREET: 80/40 = 2 TREES REQUIRED/PROVIDED
CREEKSIDE DRIVE: 250/40 = 7 TREES REQUIRED/PROVIDED
EAST RIDGE CIRCLE: 343/40 = 9 TREES REQUIRED/PROVIDED

Streetyard Buffer Plantings: Front Street: 800 LF

15' WIDE TYPE 'B' STSREET BUFFER ALONG FRONT STREET
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
800/100 x 2 = 16 CANOPY TREES REQUIRED/PROVIDED
800/100 x 2 = 16 UNDERSTORY TREES REQUIRED/PROVIDED
800/100 x 16 = 128 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 1,224 LF

15' WIDE TYPE 'B' BUFFER ALTERNATIVE 2
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
1,224/100 x 2 = 25 CANOPY TREES REQUIRED/PROVIDED
1,224/100 x 2 = 25 UNDERSTORY TREES REQUIRED/PROVIDED
1,224/100 x 16 = 196 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 290 LF

10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
291/100 x 2 = 6 CANOPY TREES REQUIRED/PROVIDED
290/100 x 3 = 9 UNDERSTORY TREES REQUIRED/PROVIDED
290/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 371 LF

A SIX FOOT OPAQUE WOOD FENCE IS PROPOSED BETWEEN THE PERIMETER DRIVE AROUND THE EXISTING MILL BUILDING AND THE USPS SITE. THE EXISTING DRIVE DOES NOT PROVIDE ENOUGH SPACE TO PLANT THE BUFFER ALONG THE PROPERTY LINE. THE TREES THAT WOULD TYPICALLY BE PLANTED IN THE BUFFER WILL BE PLANTED ELSEWHERE ON SITE.
10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
371/100 x 2 = 8 CANOPY TREES REQUIRED/PROVIDED
371/100 x 3 =12 UNDERSTORY TREES REQUIRED/PROVIDED
371/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 2,343 LF

EXISTING VEGETATION EXCEEDS PERFORMANCE STANDARDS FOR BUFFER. SEE SAMPLE AREA ON PLAN.

PLANT LEGEND

- CANOPY/SHADE TREE
- UNDERSTORY TREE
- LARGE SHRUB
- SMALL SHRUB

PRELIMINARY

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

SCALE IN FEET
0 50 100 200 300 400

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-1422 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW
		REVISIONS	

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY GPW

LANDSCAPE PLAN NORTH

SCALE: 1" = 100'

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.0

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

K:\2017\17033 - East Village Spinning Mill (Commercial)\CAD\L1.0 Preliminary\17033 - Landscape.dwg, 4/19/2018 2:23:29 PM, mark.gaskins, \\bnkfs\data\Projects\Mark.Gaskins

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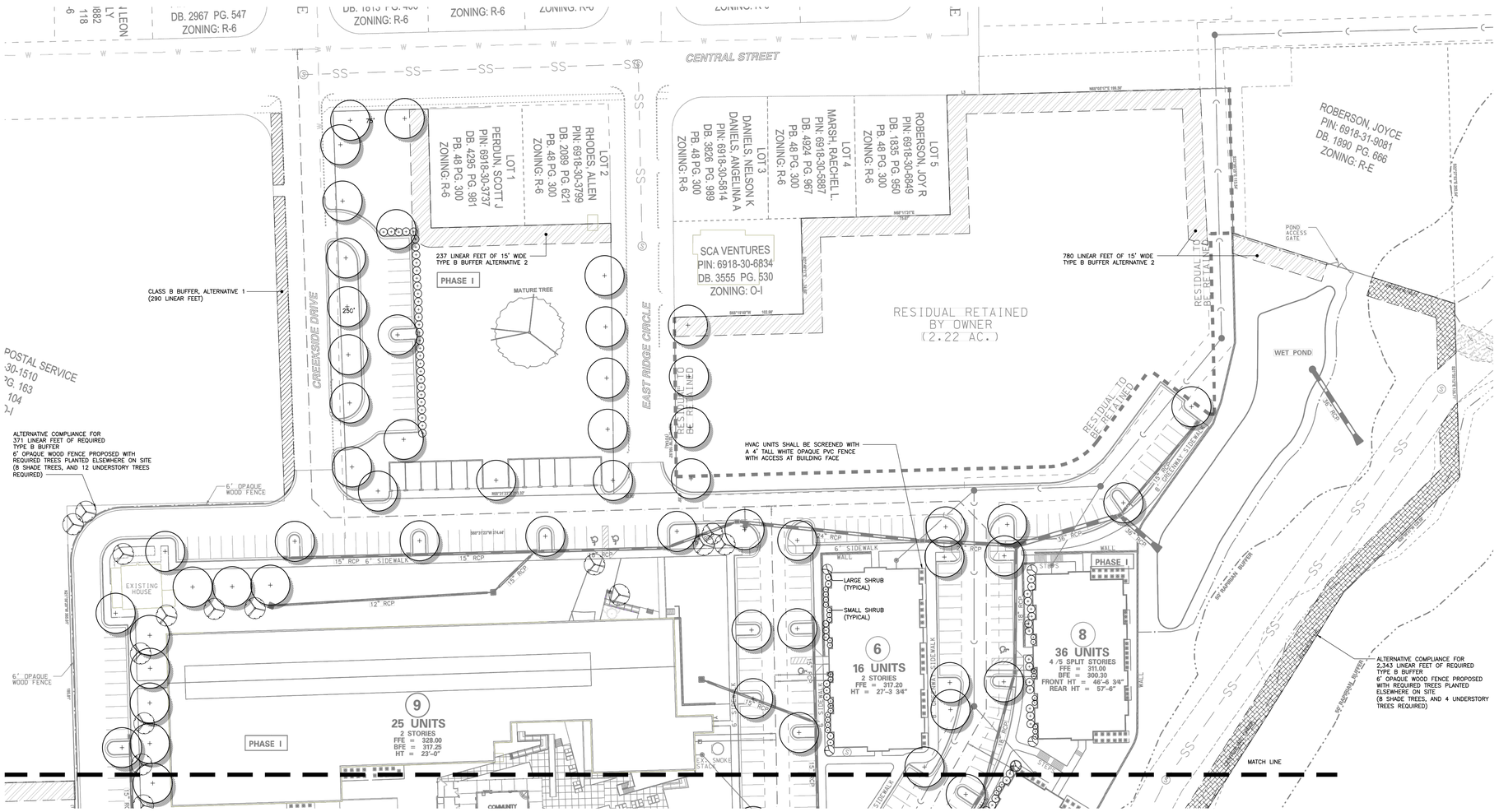
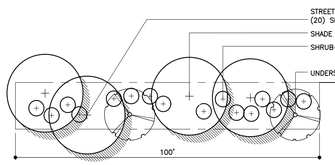
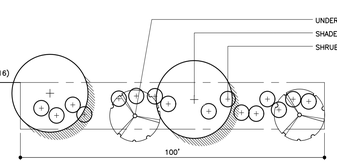
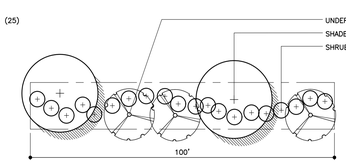




15' CLASS 'B' BUFFER ALTERNATIVE 2 (800 LF) FRONT STREET



15' CLASS 'B' BUFFER ALTERNATIVE 2 (1,224 LF)



10' CLASS 'B' BUFFER ALTERNATIVE 1 (290 LF)

PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	QUAN.	CAL	HT	ROOT	REMARKS
	SHADE TREES						
AR	Acer rubrum 'Somerset'	Red maple		2.5"	10'	B&B	
AS	Acer saccharum	Sugar Maple		2.5"	10'	B&B	
CB	Carpinus betula	European Hornbeam		2.5"	10'	B&B	
LT	Liriodendron tulipifera	Tulip Poplar		2.5"	10'	B&B	
QC	Quercus coccinea	Scarlett Oak		2.5"	10'	B&B	
QN	Quercus nuttalli	Nuttall oak		2.5"	10'	B&B	
QV	Quercus virginiana	Live Oak		2.5"	10'	B&B	
UP	Ulmus parvifolia	Chinese lacebark elm		2.5"	10'	B&B	
ZS	Zelkova serrata	Village Green Zelkova		2.5"	10'	B&B	
	UNDERSTORY TREES						
CC	Cercis canadensis 'Forest Pansy'	Eastern Redbud		2"	8'	B&B	
CF	Cornus florida	Dogwood		2"	8'	B&B	Buffer Tree
LCS	Lagerstroemia 'Centennial Spirit'	Crape Myrtle			8'	B&B	
MG	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia			8'	B&B	
NS	Syssa sylvatica	Tepelo		2"	8'	B&B	Buffer Tree
	SHRUBS						
BM	Buxus microphylla 'Winter Green'	Wintergreen Boxwood			12"	Cont	
IL	Ilex latifolia	Lustreleaf Holly			48"	Cont	
INS	Ilex x 'Nellie R Stevens'	Nellie Stevens Holly			48"		
LC	Loropetalum chinensis 'Chang's Ruby'	Loropetalum			12"	Cont	
OH	Osmanthus heterophyllus 'rotundifoli	Holly Osmanthus			24"	Cont	Buffer Shrub
PJ	Pieris japonica 'Mountain Snow"	Japanese Pieris			12"	Cont	
PT	Pittosporum tobira 'Tall 'N Tuff'	Pittosporum			24"	Cont	Buffer Shrub
RR	Rosa 'Double Red'	Double Knockout Rose			12"	Cont	
VD	Viburnum davidii	David Viburnum			12"	Cont	

NO WETLANDS EXIST ON-SITE

NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF CLAYTON AND NCDOT

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

PRELIMINARY

SCALE IN FEET
0 20 40 80 120 160

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

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NO.	DATE	BY
1	04-30-18	GW
	DESCRIPTION OF REVISIONS	
	PER ToC COMMENTS	

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY: GPW | SCALE: 1" = 40'

LANDSCAPE PLAN
NORTH

SPINNING MILL LOFTS
AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.1

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

R:\2017\17033 - East Village Commons Mill Apartments\CIVIL\03 Preliminary\17033 - Landscape.dwg, 4/18/2018 2:28:46 PM, mark.gallimore

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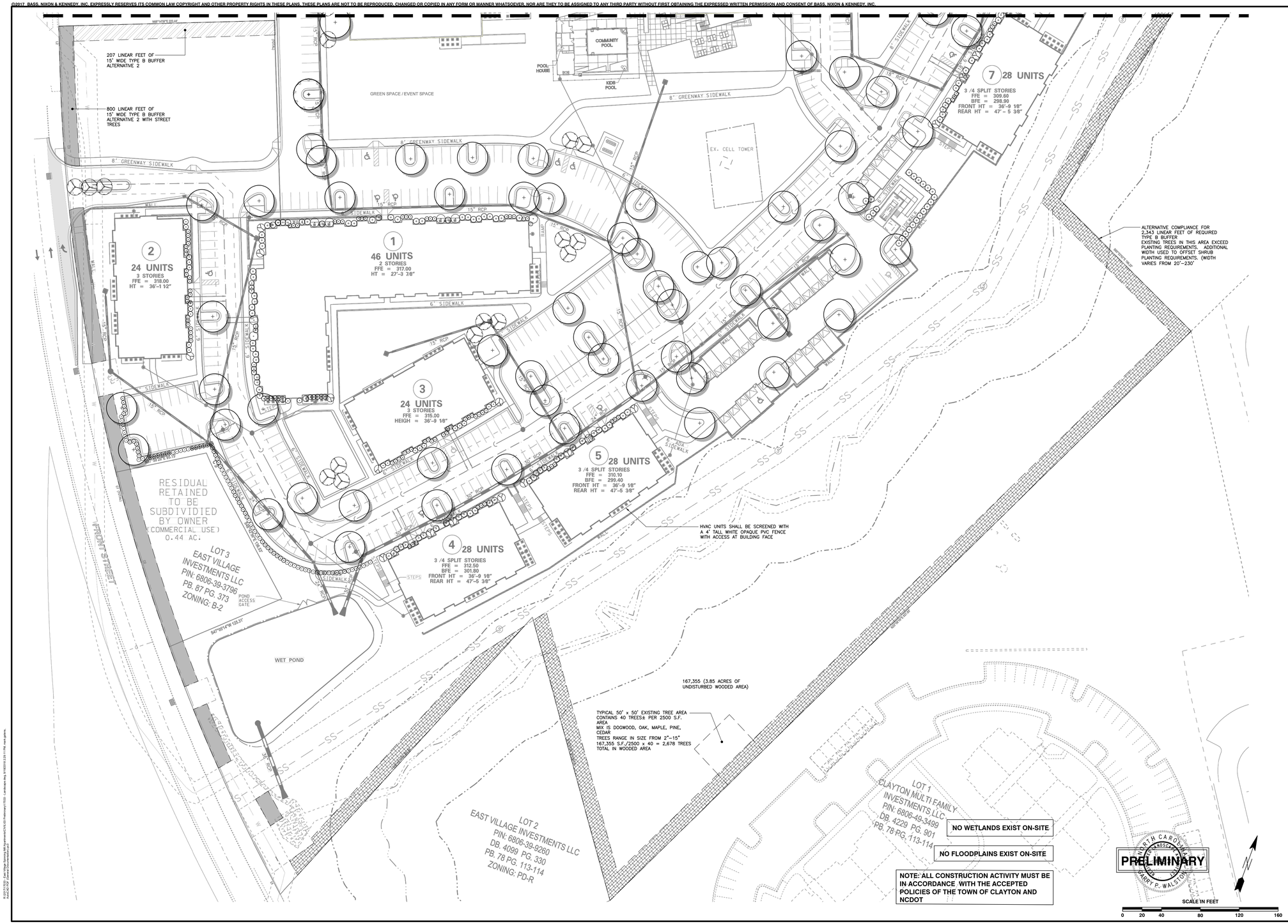

BNK

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NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO.	DATE	DRAWN BY
03-17033	04-02-18	GPW

LANDSCAPE PLAN
SOUTH

SCALE: 1" = 40' CHK BY: GPW

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.2

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - FRONT ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - LEFT ELEVATION

Scale: 3/32" = 1'-0"

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes.
2. Contractor is to notify architect immediately of conditions or items varying from depicted information.
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REGISTERED ARCHITECTURAL CORPORATION
CERT. NO. 50909
N.C.
RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:		
ISSUE DATE:		
REVISIONS		
NUMBER	DATE	DESCRIPTION
		09-18-18

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 1 Elevations
--

SHEET NUMBER:
1.A1.10

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - REAR ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - RIGHT ELEVATION

Scale: 3/32" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

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ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			09-18-18

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 1 Elevations
--

SHEET NUMBER:
1.A1.11

1 BLDG TYPE 2 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

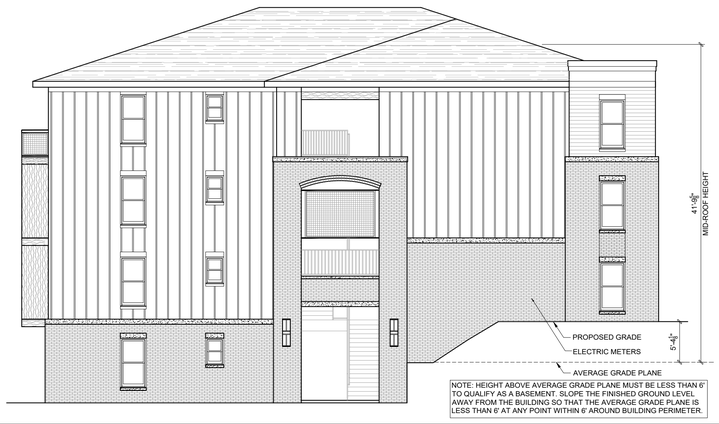
* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 2 - REAR ELEVATION

Scale: 1/8" = 1'-0"



3 BLDG TYPE 2 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submittal
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18		
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2 Elevations
--

SHEET NUMBER:
1.A2.03

1 BLDG TYPE 2.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
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ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

3 BLDG TYPE 2.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18		
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1 Elevations

SHEET NUMBER:
1.A2.08

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

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ELEVATION GENERAL NOTES

ROOFS

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ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 2.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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RALEIGH, NC NORTH CAROLINA

Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18		
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1
Elevations

SHEET NUMBER:
1.A2.09

1 BLDG TYPE 3 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 3 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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REGISTERED ARCHITECTURAL CORPORATION
CERT. NO. 50909
N.C.
RALEIGH, NC

Civil Submission
Spinning Mill Apartments
Clayton NC

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ISSUE DATE:		DESCRIPTION	
REVISIONS	NO.	DATE	INITIALS
	1		
	2		
	3		

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3 Elevations
--

SHEET NUMBER:
1.A3.03

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

2 BLDG TYPE 3.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE: Bldg Type 3.1 Elevations

SHEET NUMBER: 1.A3.12

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.2 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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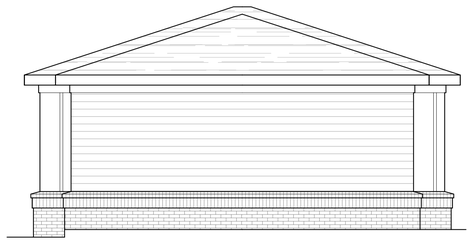
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3.2 Elevations

SHEET NUMBER:
1.A3.24

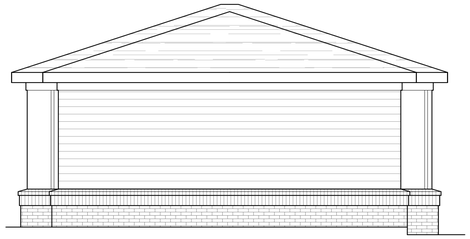
1 GARAGE TYPE 1 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 1 - RIGHT ELEVATION

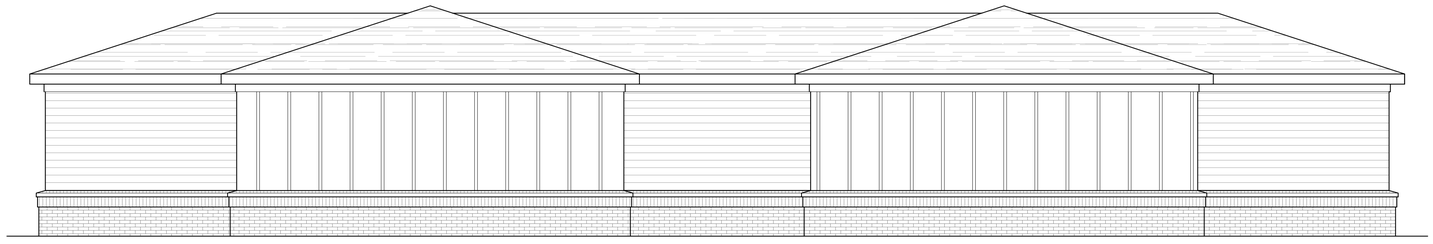
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 1 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH
COLORS/MATERIALS OF PRIMARY
APARTMENT BUILDINGS



4 GARAGE TYPE 1 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission

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Clayton NC

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			09-18-18

PROJECT NO: 003417
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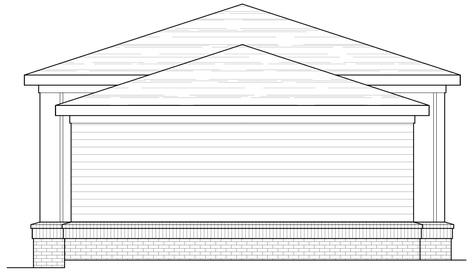
CHECKED BY: -

SHEET TITLE:
Garage Type 1
Elevations

SHEET NUMBER:
1.A5.10

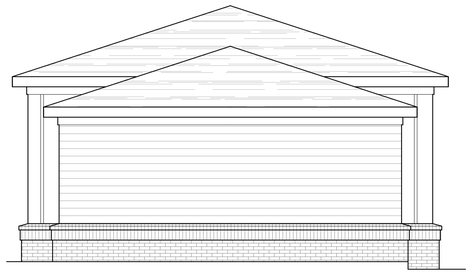
1 GARAGE TYPE 2 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 2 - RIGHT ELEVATION

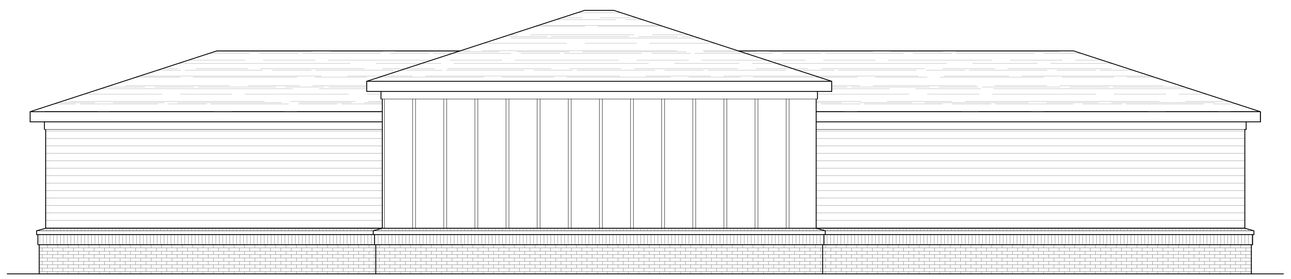
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 2 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS



4 GARAGE TYPE 2 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Clayton NC

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REVISIONS	NUMBER	DATE	INITIALS
09-18-18	DESCRIPTION		

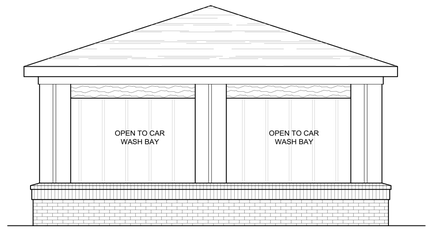
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 2 Elevations

SHEET NUMBER:
1.A5.11

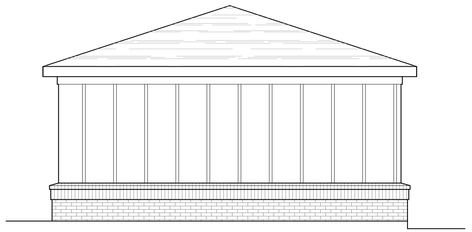
1 GARAGE TYPE 3 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 3 - RIGHT ELEVATION

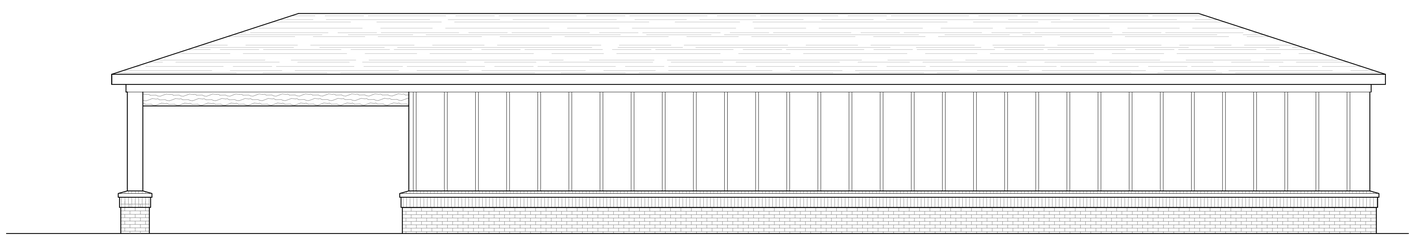
Scale: 1/4" = 1'-0"



COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS

3 GARAGE TYPE 3 - LEFT ELEVATION

Scale: 1/4" = 1'-0"



4 GARAGE TYPE 3 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission

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Clayton NC

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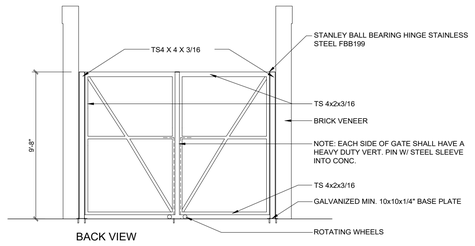
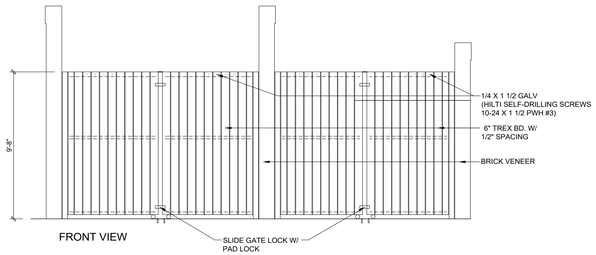
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 3 Elevations

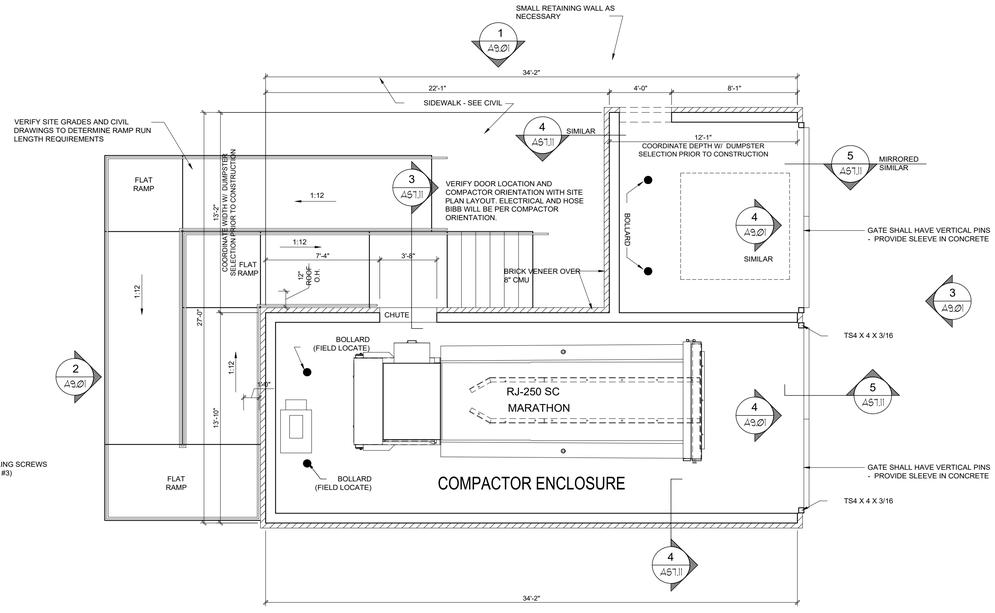
SHEET NUMBER:
1.A5.12



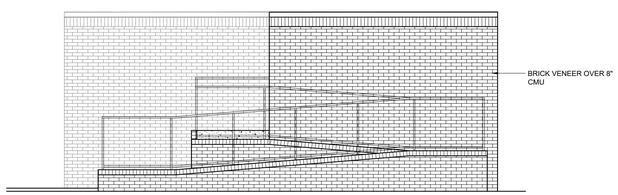
4 GATE DETAIL BACK VIEW
1/4"=1'-0"



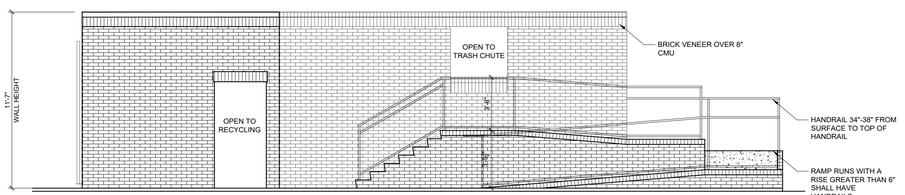
3 GATE DETAIL FRONT VIEW
1/4"=1'-0"



5 TRASH COMPACTOR ENCLOSURE PLAN
1/4"=1'-0"



2 TRASH COMPACTOR REAR ELEVATION
1/4"=1'-0"



1 TRASH COMPACTOR SIDE ELEVATION
1/4"=1'-0"

1 TRASH COMPACTOR - PLAN AND ELEVATIONS

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PROGRESS DATE: 09-18-18
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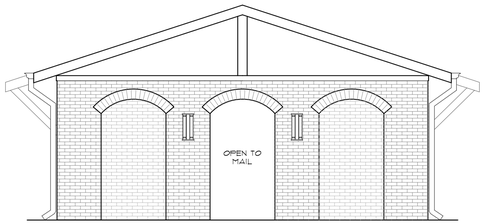
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE: Compactor Plan and Elevations

SHEET NUMBER: 1.A6.00



3 TYPICAL SIDE ELEVATION

Scale: 1/4" = 1'-0"

ARCHITECTURAL PLANS
EXTERIOR MATERIALS

- ASPHALT SHINGLE ROOF
- STANDING SEAM METAL ROOF
- FIBER CEMENT SIDING
- FIBER CEMENT VERTICAL SIDING PANELS W/ FIBER CEMENT BATTENS
- CULTURED STONE VENEER
- STONE HEADER

ELEVATION GENERAL NOTES

ROOFS

IF USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

PAINT ALL ROOF PENETRATIONS TO MATCH SHINGLE COLOR

ROOF VENTILATION

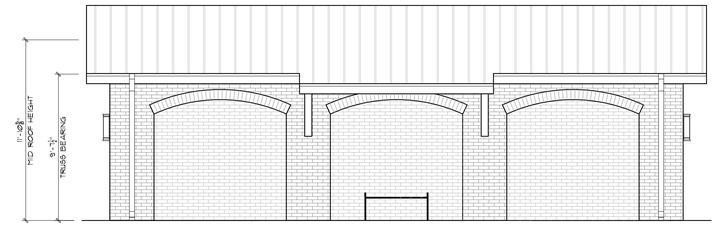
SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

SQUARE FOOTAGE

MAIL BOX BAY SHELL (74sf x 2) =	148
TOTAL COVERED AREA =	748

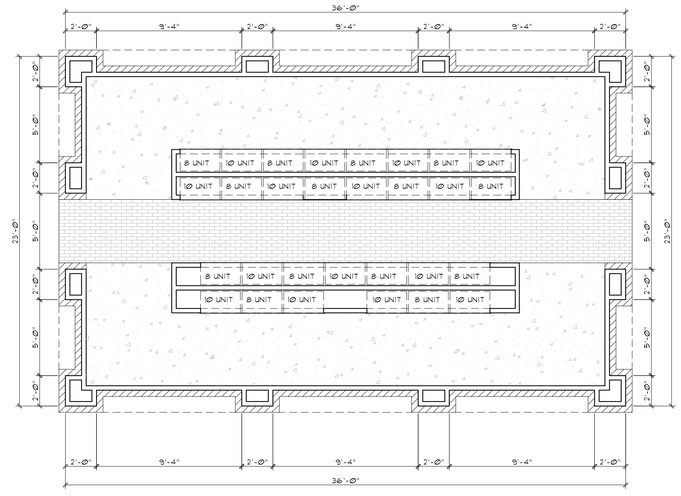
- GENERAL NOTES

Scale: 1/4" = 1'-0"



2 FRONT/REAR ELEVATION

Scale: 1/4" = 1'-0"



1 FLOOR PLAN

Scale: 1/4" = 1'-0"

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PROJECT NO: 003417

DRAWN BY: JK

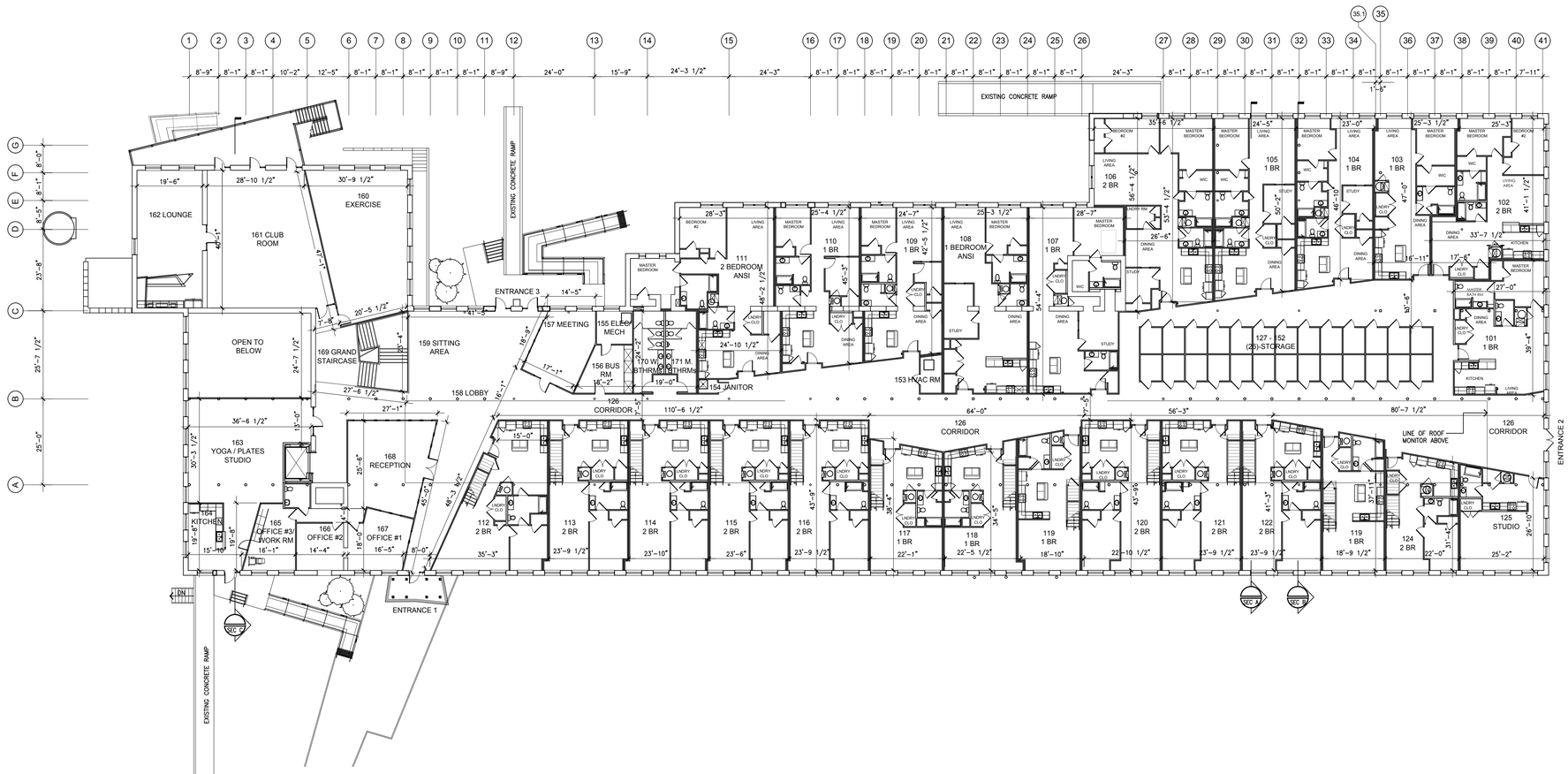
CHECKED BY: -

SHEET TITLE:

Mail Kiosk Plan and Elevations

SHEET NUMBER:

1.A7.00



1 Main Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.1

SHEET OF
TOTAL SHEETS IN SET:
DRAWN BY: -
CHECKED BY: -

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Fax: 919.875.9200
Phone: 919.875.0001

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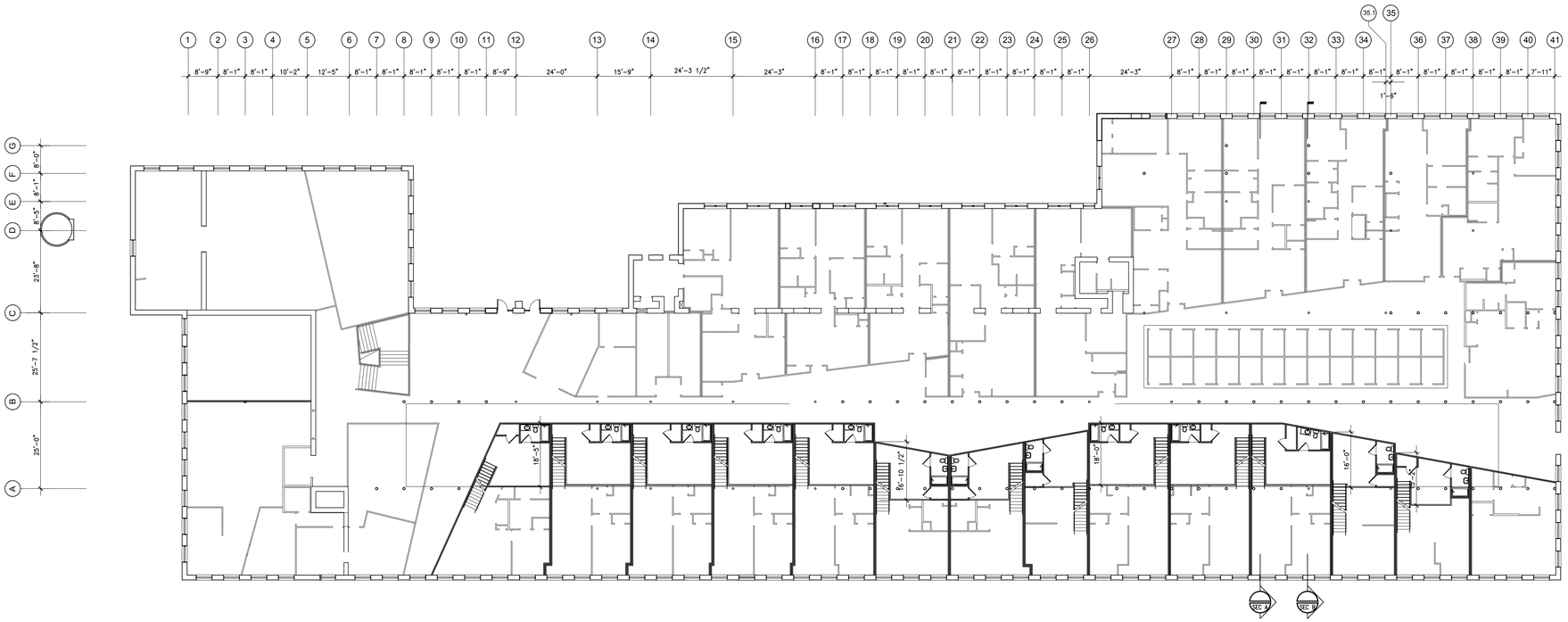
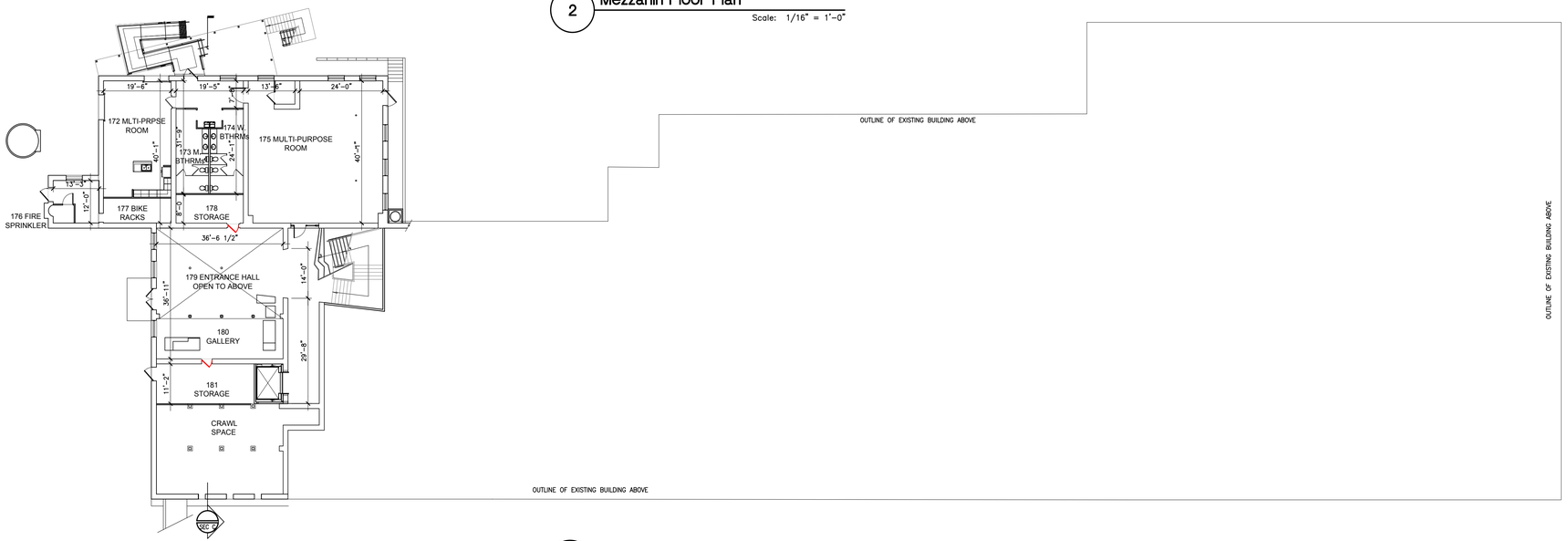


2 Mezzanin Floor Plan

Scale: 1/16" = 1'-0"



1 Basement Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.2

SHEET OF DRAWN BY: -
TOTAL SHEETS IN SET: CHECKED BY: -

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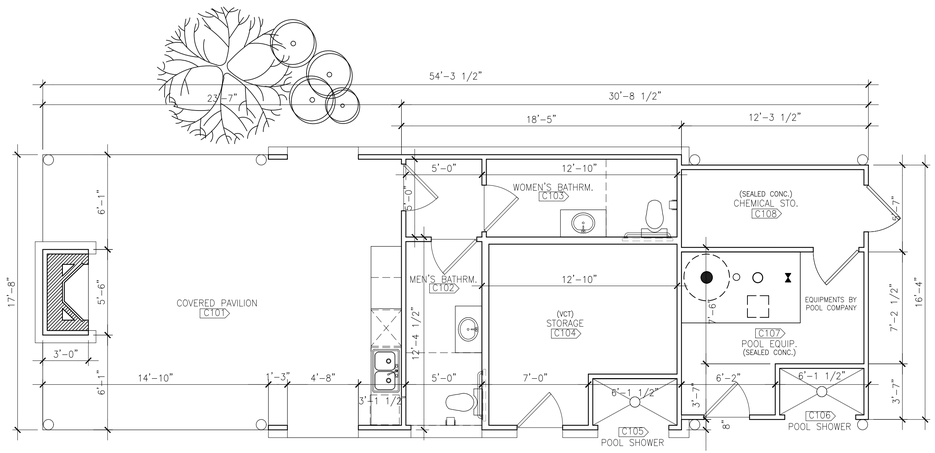


1 **Building Plan**
Scale: 1/4"=1'-0"

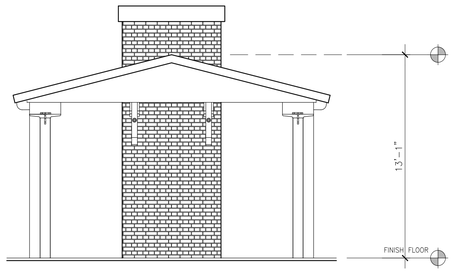
ELEVATION KEY

BRICK VENEER SIMILAR TO EXISTING BUILDING

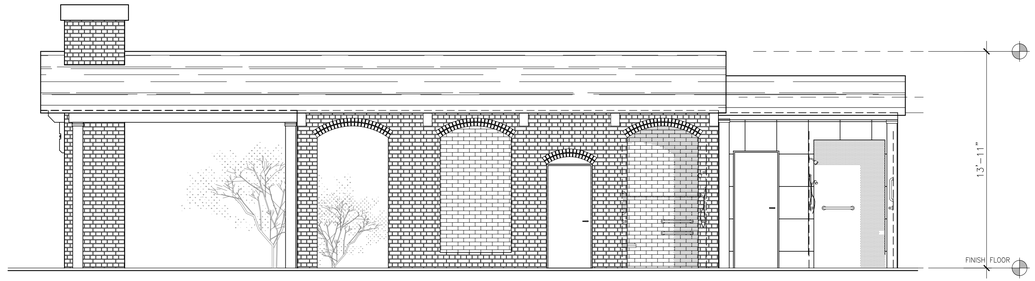
EIFS - EXTERIOR INSULATION & FINISHING SYSTEM, COLOR TO BE LIGHT GREY

ASPHALT SHINGLES

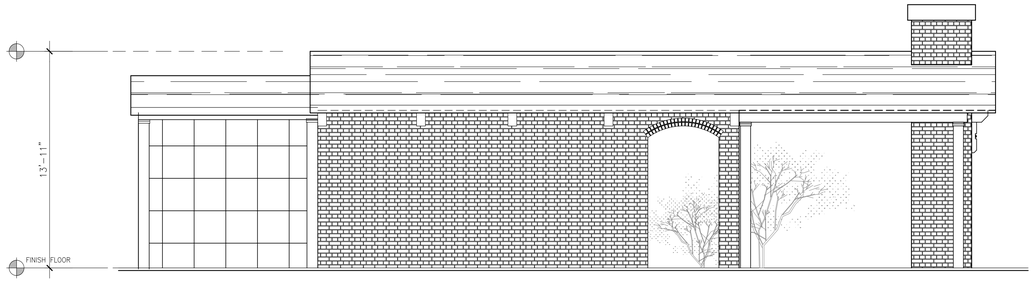
NOTE: BUILDING TO BE TYPE VB CONSTRUCTION



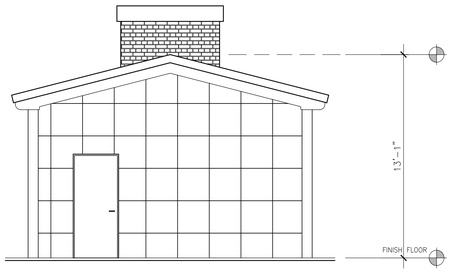
2 **Side Elevation**
Scale: 1/4"=1'-0"



3 **Building Front Elevation**
Scale: 1/4"=1'-0"



4 **Building Rear Elevation**
Scale: 1/4"=1'-0"



5 **Side Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

1 April 27, 2018
Review Comments

DATE: April 9, 2018
ISSUED FOR: Review

Pool House
- Building Plan
- Elevations

A 1.3

SHEET OF
TOTAL SHEETS IN SET:
DRAWN BY: -
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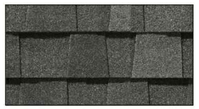
= FIBER CEMENT BOARD & BATTEN
SW6250 GRANITE PEAK

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)



= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW6148 WOOL SKEIN

= CORRUGATED METAL PANELING

= BRICK SOLDIER

= PRE-CAST CONCRETE HEADER

1 COLOR SCHEME 1

Scale:

= FIBER CEMENT BOARD & BATTEN
SW6244 NAVAL

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

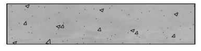
= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)

= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW9170 ACIER

= CORRUGATED METAL PANELING

= BRICK SOLDIER



= PRE-CAST CONCRETE HEADER

2 COLOR SCHEME 2

Scale:

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes.
2. Contractor is to notify architect immediately of conditions or items varying from depicted information.
3. Planworx Architecture, P.A. is not responsible for constructed variations from the information depicted.
4. Planworx Architecture, P.A. will not assume any liability for expenses associated with errors and omissions on these drawings unless offset by verified construction savings as a result of planworx architecture, p.A. Design.
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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE: 09-18-18
ISSUE DATE:
REVISIONS

NUMBER	DATE	DESCRIPTION	INITIALS

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DRAWN BY: JK
CHECKED BY: --
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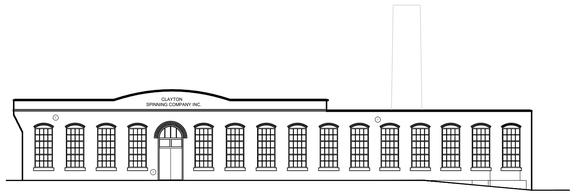
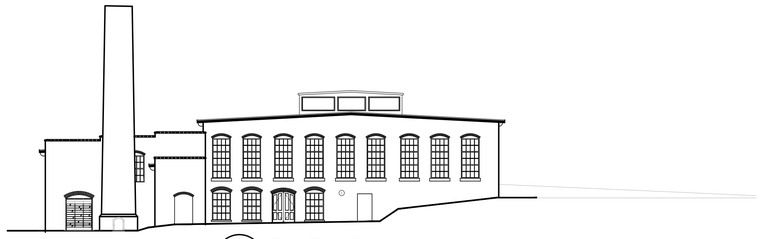
SHEET NUMBER: CB1



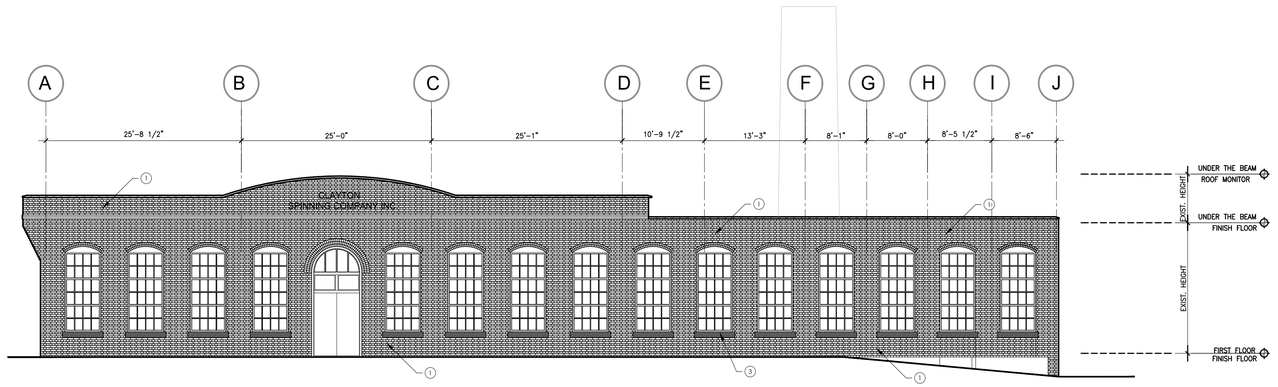
1 West Elevation

Scale: 1/16" = 1'-0"



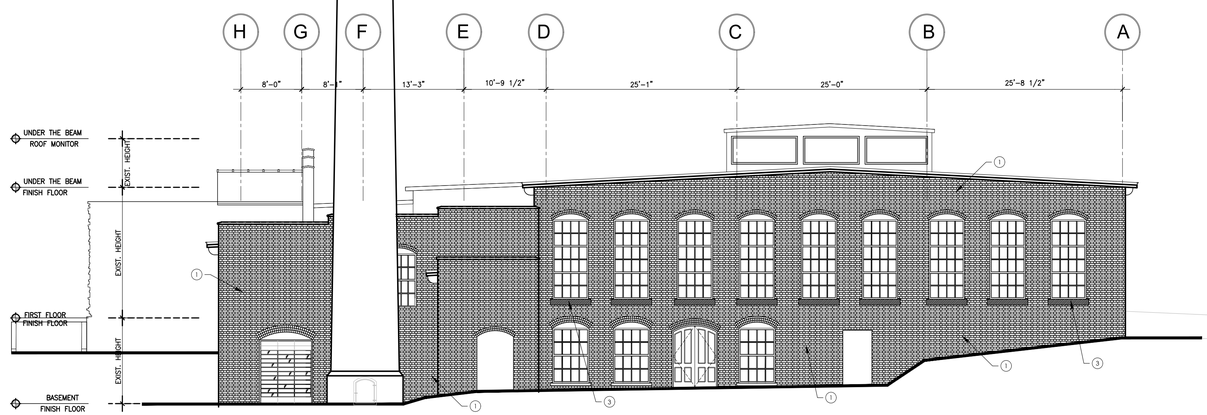
2 East Elevation

Scale: 1/16" = 1'-0"



3 West Elevation

Scale: 1/8" = 1'-0"



4 East Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠1 September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.1

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Imanirad
Plotted Date: Sep 18, 2018 - 6:03pm

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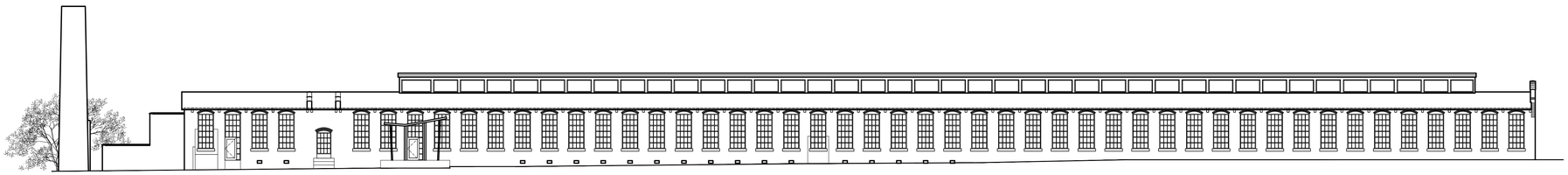

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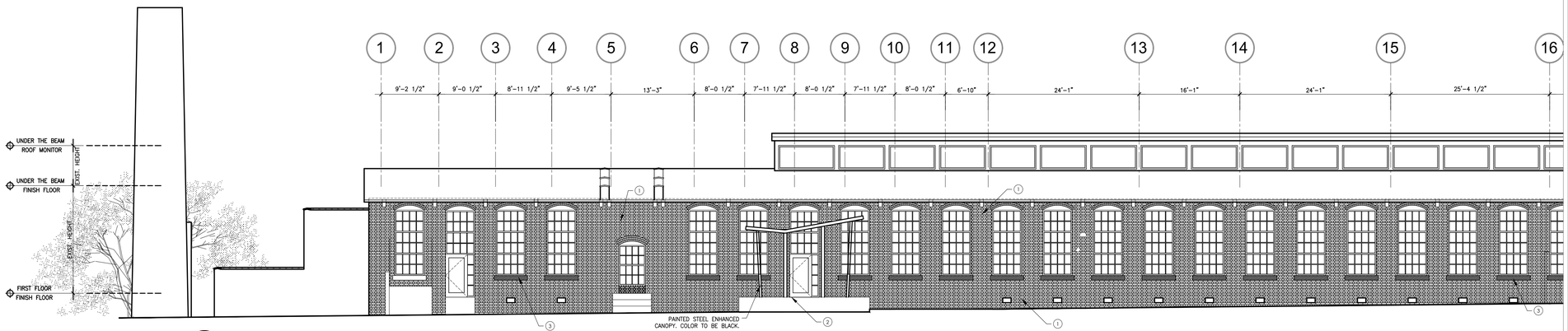
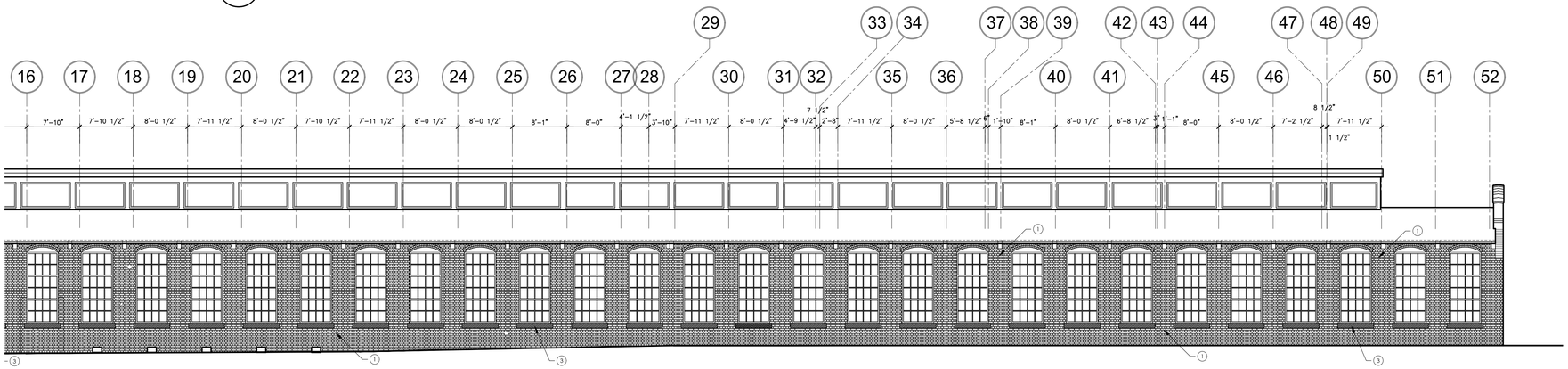
Scale: 1/16" = 1'-0"



2 Partial North Elevation

Scale: 1/8" = 1'-0"



3 Partial North Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

September 18, 2018 Plan Review

DATE: April 2 , 2018
ISSUED FOR: Review

Building Elevations

A 3.2

DRAWN BY:
CHECKED BY: JTL

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Plotted Date: Sep 18, 2018 - 6:04pm

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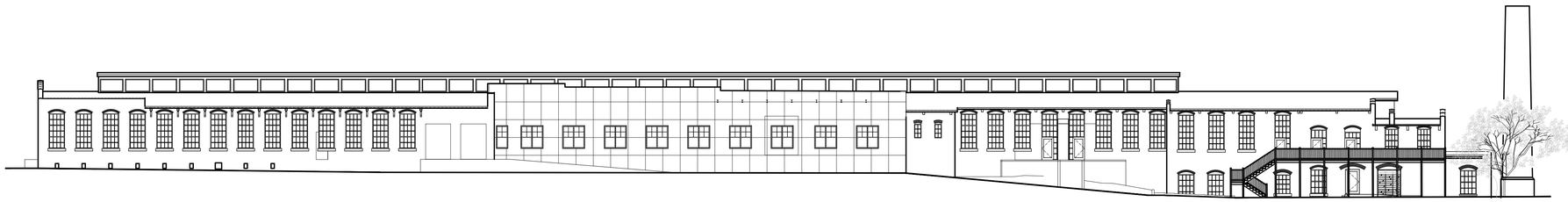

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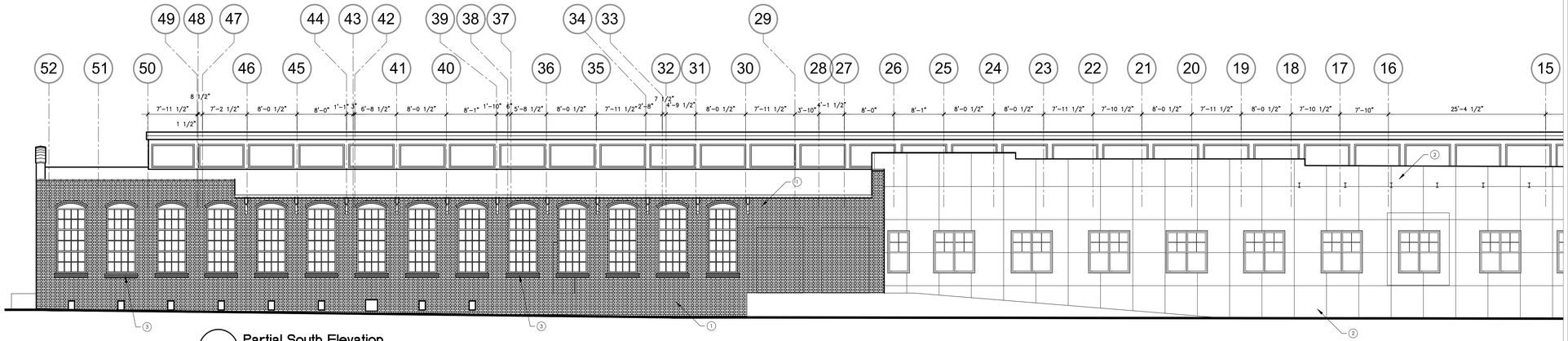
Scale: 1/16" = 1'-0"



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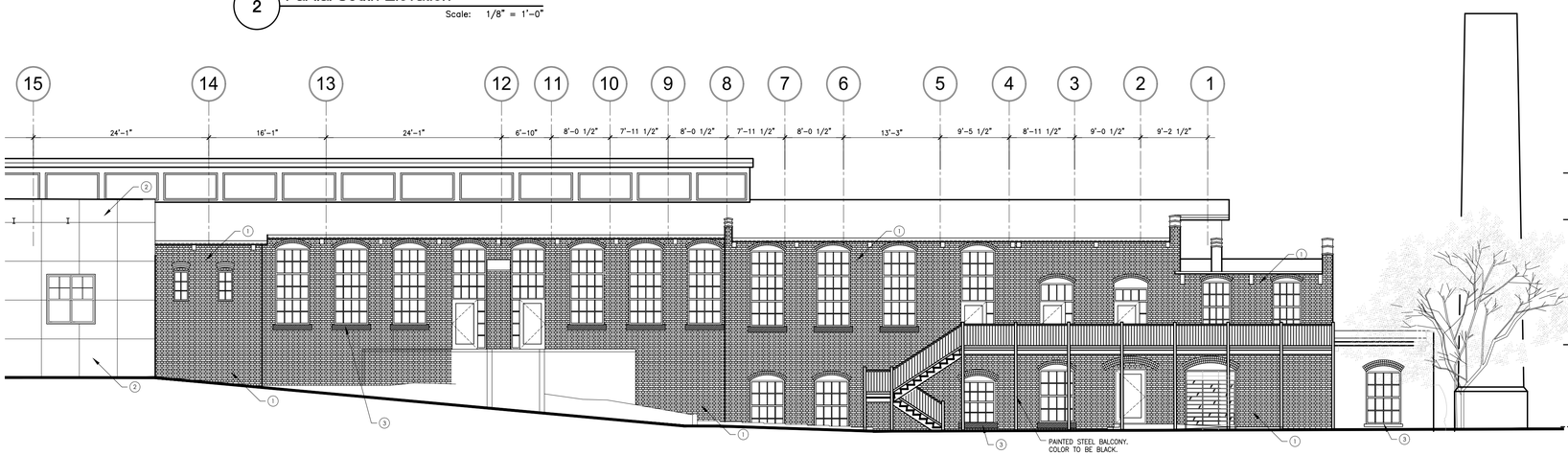
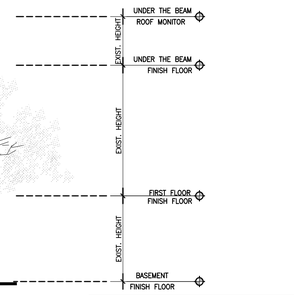
Scale: 1/8" = 1'-0"



3 Partial South Elevation

Scale: 1/8" = 1'-0"



ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠1 September 18, 2018 Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.3

DRAWN BY:
CHECKED BY: JTL

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Plotted Date: Sep 18, 2018 - 6:05pm

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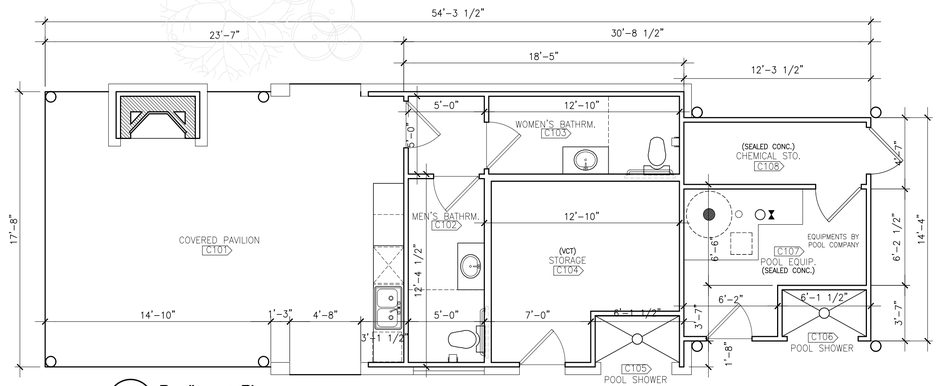
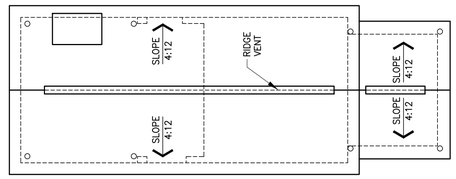


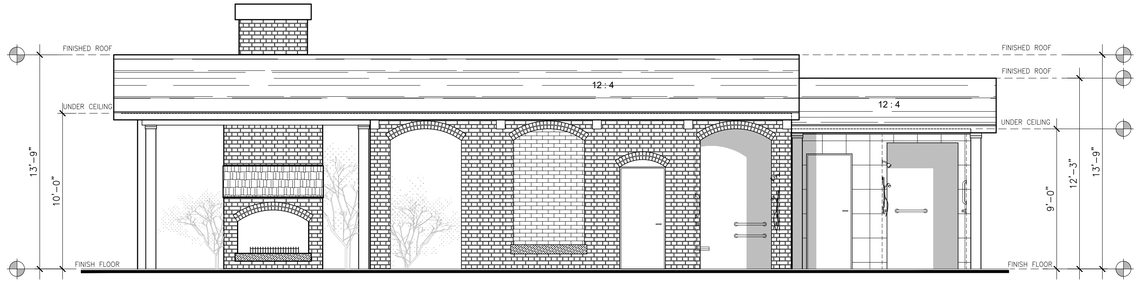
1 **Poolhouse Plan**
Scale: 1/4"=1'-0"



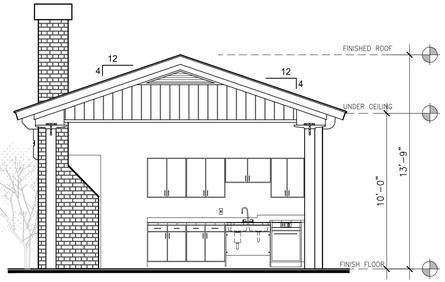
2 **Roof Plan**
Scale: 1/4"=1'-0"

ELEVATION KEY

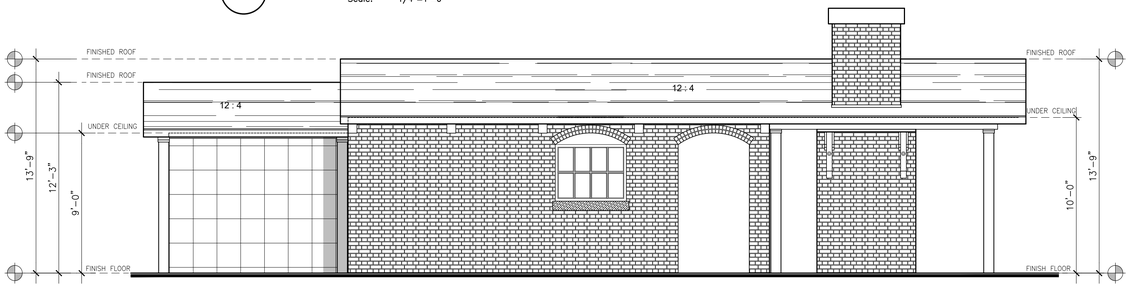
1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.
4. ASPHALT SHINGLES, COLOR TO MATCH THE ADJACENT MATERIAL



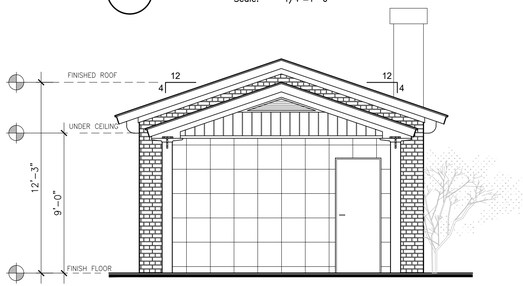
3 **Front Elevation**
Scale: 1/4"=1'-0"



4 **Left Elevation**
Scale: 1/4"=1'-0"



5 **Rear Elevation**
Scale: 1/4"=1'-0"



6 **Right Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠1 September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Poolhouse

A 3.4

DRAWN BY:
CHECKED BY: JTL

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E-mail: mail@RossDeckardArchitects.com
Fax: 919.875.9200
Phone: 919.875.0001

Drawing File: G:\201 / Projects\ /00-HISTORIC\17-701.00 Clayton, NC - Clayton Spinning Mill\Cadd\Arch\18-19-2018\17-701.00_A3.4.dwg
Plotted by: S.Umanrad
Plotted Date: Sep 18, 2018 - 6:02pm

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-65-SUP
Project Name: Spinning Mill Apartments Special Use Permit

NC PIN / Tag #:	166918-30-2104 / 05037009T, 166918-30-5328 / 05037008V, 166918-30-8385 / 05037009W, 166918-30-4740 / 05037009U, 166806-48-6538 / 05037011, 166918-40-2748 / 05H03197H
Overlay:	Watershed Protection Overlay
Applicant:	Bass, Nixon, and Kennedy, Inc.
Owner:	WBB LLC, HCY LLC, SCA Ventures LLC, East Village Investments LLC
Location:	Located off Front Street and Central Street

Public Noticing:

- Neighborhood meeting held on May 16, 2018
- Sign posted prior to July 13, 2018

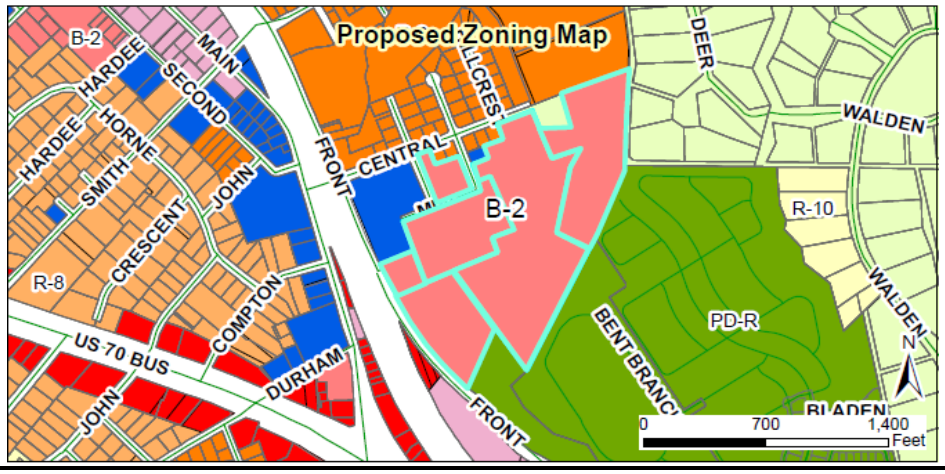
REQUEST: The applicant is requesting Special Use Permit approval to develop the use of apartments on the subject properties, zoned B-2. A Major Site Plan application is running concurrently with this request (2018-64-SUP).

SITE DATA:

Acreage: 24.50 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-6 (R-6) / Office Institutional (O-I)	Single-family residential / Post Office
South	Planned Development Residential (PD-R)	Apartments, single-family residential
East	Residential-10 (R-10) and Planned Development Residential (PD-R)	Single-family residential
West	Office Institutional (O-I)	Railroad ROW/ Single-family residential



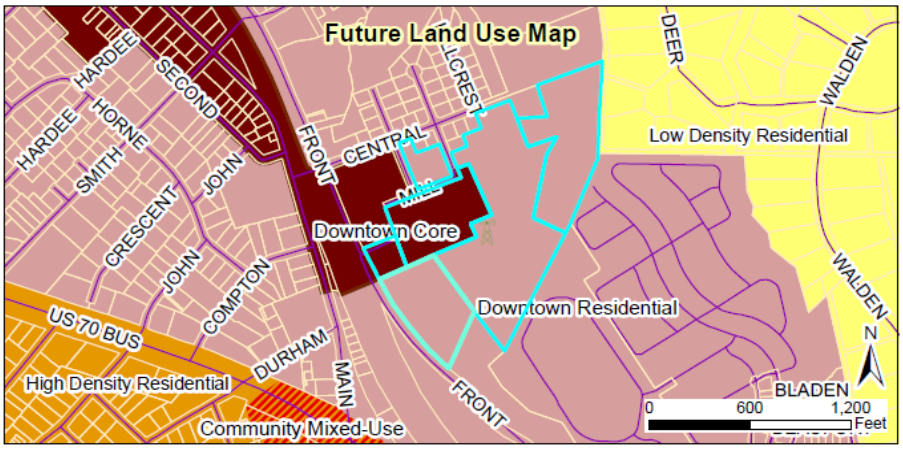
DEVELOPMENT DATA:

Proposed Uses:	Apartments (255 units)
Buildings:	8 new buildings, plus 1 existing building to be utilized
Impervious Surface:	54.9%
Proposed Parking:	476 Spaces (470 required)
Access/Streets:	One access point off Front Street and two access point off Central Street

STAFF ANALYSIS:

Overview

The applicant is requesting a Special Use Permit to develop the use of apartments on the subject property, which is zoned Neighborhood Business (B-2). Per UDC requirements, any development of apartments within the B-2 zoning district must obtain a Special Use Permit in order to be permitted. The subject properties are currently vacant, with the exception of the existing historic Spinning Mill. The applicant is proposing to develop eight new apartment buildings and to revitalize the existing Spinning Mill to accommodate apartment units as well. Running concurrently with this request is a Major Site Plan (2018-64-SP).



Consistency with Adopted Plans:

- **Comprehensive Plan 2040**
  The proposed development is consistent with the comprehensive plan 2040, which designates this land as partially "Downtown Core" and primarily "Downtown Residential". Downtown residential typically consists of single-family residential per the comprehensive plan 2040. However, the proposed use is consistent with the existing development pattern in the area which includes apartments directly adjacent to the south.

- **Unified Development Code**
  The proposed development is consistent with the Unified Development Code (UDC).

Associated Site Plan

The applicant is proposing to develop 8 new apartment buildings and revitalize the existing historic Spinning Mill in order to accommodate 255 apartment units. The development will be access off Front Street and Central Street. An amenity center will be located at the Spinning Mill building and will include a community pool and green space/event space. The applicant will provide required landscape buffers along all property lines, and will provide sidewalk connections throughout the development. A portion of the proposed sidewalk will be built to 8' in width and serve as greenway for future connection to the northeast.

Watershed Protection Overlay

The proposed development is located entirely within the Watershed Protection Overlay. Proposed multi-family residential development in this overlay is limited to 24% of impervious surface area unless storm water quality mitigation structures are installed and maintained by the property owner. Two wet pond detention areas are provided onsite for stormwater controls.

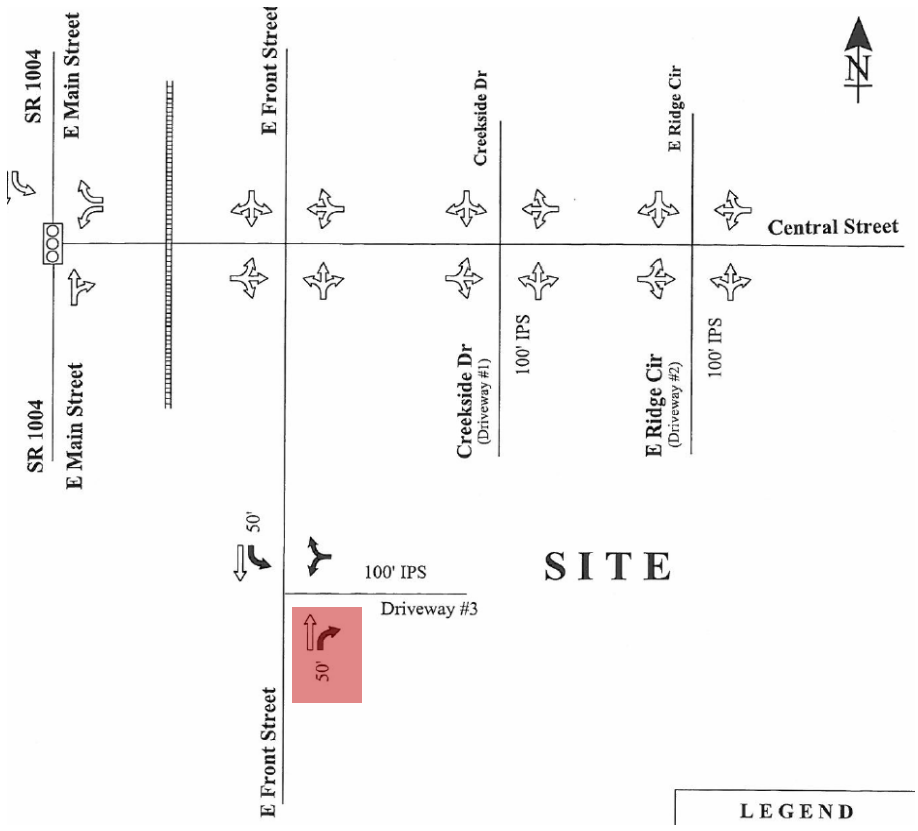
Traffic Impact Analysis

A Traffic Impact Analysis was submitted by Ramey Kemp and Associates dated June 2018. The TIA states that 1,900 total site trips are expected to be generated from this development during a typical 24-hour weekday period. It is anticipated that 116 trips will occur during the AM peak hour and 136 trips will occur during the PM peak hour.

NCDOT Congestion Management has reviewed this application and the associated TIA. NCDOT concurs with the findings of the TIA, and recommends to the Town that the following additional improvements be made:

1. A 100’ internal protected stem at all site driveway entrances.
2. 150’ of storage on the left turn lane, at E Front Street entering into the main driveway entrance.
3. 150’ storage on the northbound approach to the intersection of Front Street and Central Street.

Staff has reviewed the TIA and NCDOT’s recommendations internally. Due to the proximity of the Railroad ROW along Front Street, the applicant is not be permitted by NCRR to encroach into the ROW for any roadway improvements. As such, staff does not recommend a left-turn lane on Front Street turning into the development nor a left-turn lane at the intersection with Central Street be required. NCDOT is aware of the site restrictions due to the proximity to the NCRR and concurs with staff’s recommendations. Instead, staff recommends that a 100’ internal protected stem be provided at all site driveway entrances and a right-turn lane into the site off Front Street be provided with 50’ taper (as required from the TIA).



Wastewater Allocation Request

A wastewater allocation request of 65,960 gallons per day has been submitted for review. The Town Engineer has reviewed this request. The request will proceed to Town Council for final approval, subject to the approval of this application as well as the associated Special Use Permit application.

Architecture/Design
The new buildings proposed within the development will consist of fiber cement siding, with brick veneer features. The buildings will vary in the number of stories, but all will feature balconies on the front and rear upper floors. The existing Spinning Mill will be renovated to accommodate the apartment units, but the applicant is not proposing changes to the design of the exterior building in order to maintain the historic character.

CONSIDERATIONS:

- The Town Council shall make final decisions regarding Special Use Permits.
- Approval of the associated Major Site Plan is contingent upon approval of the Special Use Permit.

FINDINGS OF FACT:

The applicant has addressed the Findings of Fact for the 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.

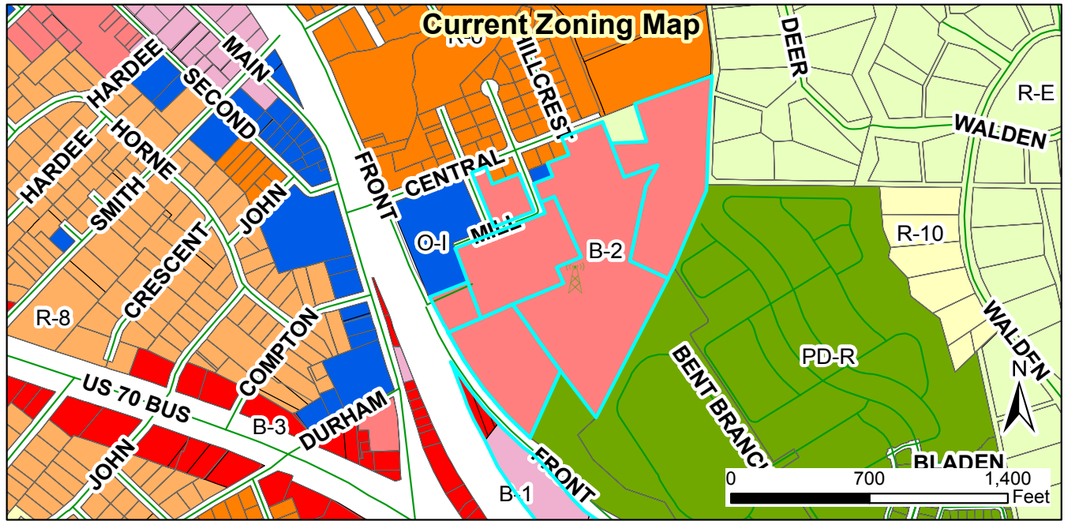
STAFF RECOMMENDATION:

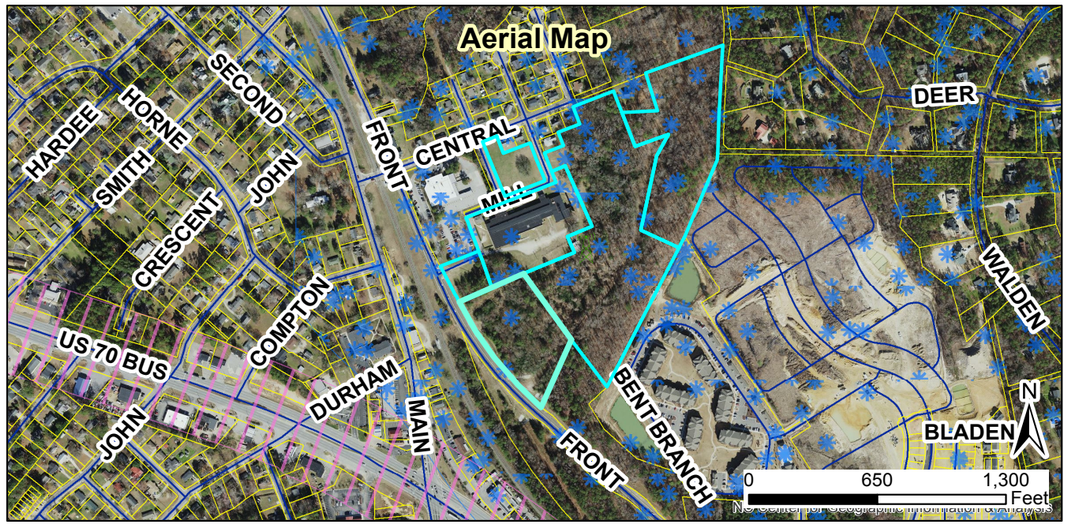
If approved, staff recommends the following conditions of approval be placed upon this application:

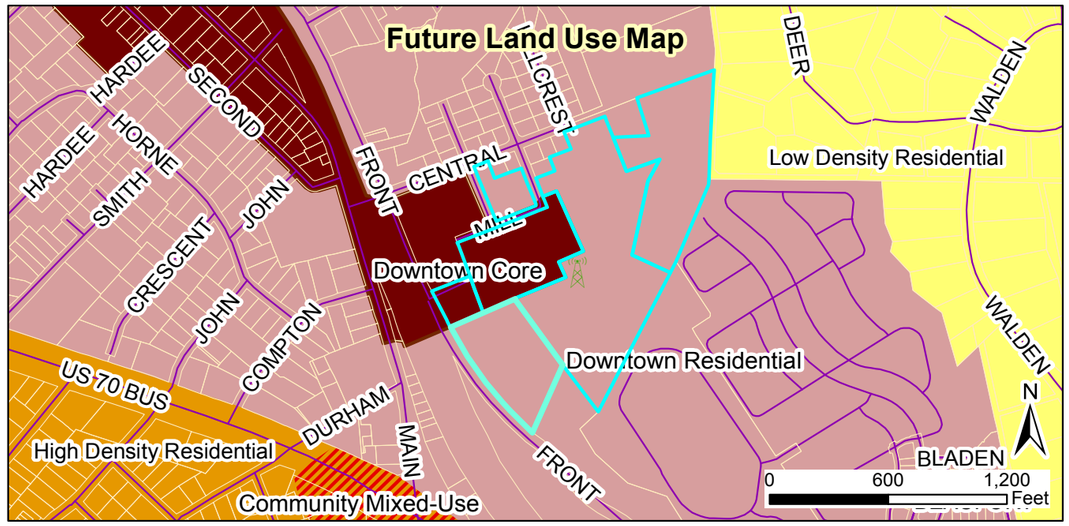
1. These conditions of approval shall be recorded on the final plan set, which will be delivered to the Planning Department for review and final approval.
2. The final development of the site shall be consistent with the specifications of the associated Major Site Plan and this Special Use Permit. Modifications may require additional approvals pursuant to the requirements of the Unified Development Code.
3. All site driveways shall include a 100' protected stem, as recommend and outlined by the Traffic Impact Analysis. This shall be completed prior to issuance of the certificate of occupancy that creates the demand for the improvement.
4. A right-turn lane with 50' taper shall be provided off Front Street into the development, as recommended by NCDOT and the Town of Clayton. This shall be completed prior to issuance of the certificate of occupancy that creates the demand for the improvement.
5. All parking rows shall terminate in a curbed landscaped island. All terminal islands shall include a minimum of one tree with a minimum caliper of 2.5", pursuant to 155.404(D)(2)(b)(2) of the UDC.

ATTACHMENTS:

1) Staff report maps
2) Application
3) Neighborhood Meeting Materials
4) Site Plan
5) Traffic Impact Analysis
6) NCDOT Letter- TIA
7) Wastewater Allocation Request







Request:
2018-64-SP and 2018-65-SUP

Applicant: Bass, Nixon, and Kennedy, Inc.
Property Owners: WBB LLC; HCY LLC; SCA Ventures LLC; East Village Investments LLC
Parcel ID: 166918-30-2104; 166918-30-5328; 166918-30-8385; 166918-30-4740; 166806-48-6538 (portion north of Front Street; 166918-40-2748
Tag #: 05037009t; 05037008v; 05037009w; 05037009u; 05037011 (portion north of Front Street); 05h03197h

Staff Report Map

05/03/2018

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\2018\2018-65-SUP Spinning Mill Lofts at East Village\Maps\Map 2018-66-RZ Spinning Mill Lofts at East Village.mxd

Legend

- 100-yr Flood Zone
- Thoroughfare Overlay
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

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

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.

Application MUST be completed and sealed by a registered engineer unless otherwise approved by staff.

SITE INFORMATION

Name of Project: Spinning Mill Lofts at East Village **Acreage of Property:** 24.50

County Tag Number: See Attached **NC PIN:** See Attached

Address/Location: 300 Mill Street

Zoning District: Existing: O&I; B-1; B-3; RE Proposed: B2 - Neighborhood Business

Town Limits / ETJ: ☑ Town Limits ☐ ETJ (Extra-Territorial Jurisdiction)

APPLICANT INFORMATION – Applicant must be a registered engineer unless otherwise approved by Town Engineer

Applicant: Bass, Nixon and Kennedy, Inc.

Mailing Address: 6310 Chapel Hill Rd., Ste. 250, Raleigh, NC 27607

Phone Number: 919-851-4422 **Fax:** 919-851-8968

Contact Person: Marty D. Bizzell, PE

Email Address: marty.bizzell@bnkinc.com

PROPERTY OWNER INFORMATION

Name: WBB, LLC; HCY, LLC; SCA Ventures, LLC; East Village Investments, LLC

Mailing Address: 132 Citation Lane, Smithfield, NC and 227 E. Front St. New Bern, NC 28560-2145

Phone Number: 919-938-1086; 252-670-9370 **Fax:** N/A

Email Address: thomas@tfonc.com

FOR OFFICE USE ONLY

Date Received: RECEIVED APR 30 2018 TOWN OF CLAYTON PLANNING DEPARTMENT File Number: _____ Associated Project Number: _____

Spinning Mill Lofts at East Village

County Tag #:

05037009T; 05037008V; 05037009W; 05037009U: 05037011; 05H03197H

NC PIN:

1669.18-30-2104; 1669.18-30-5328; 1669.18-30-8385; 1669.18-30-4740; 1668.06-48-6538; 1669.18-40-2748

PROJECT INFORMATION

Use: ☑ New ☐ Expanded ☑ Change **Use Type:** ☑ Residential ☑ Non-Residential

Proposed Use(s): Apartments/Restaurant **Existing Use(s):** Vacant

Invoice shall be mailed to the following:

Developer Name: Spinning Mill Investments, LLC

Mailing Address: P.O. Box 566, Greenville, NC 27835

Phone Number: 252-752-7101 **Fax Number:** N/A

Email Address: thomas@tfonc.com

ALLOCATION REQUEST

- *Use additional sheets if necessary.*
- *Provide any documentation supporting/justifying the request as an attachment.*
- *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			
>3 Bedroom Units			
Total		------	

Multi-Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units	232	240	55,682
3 Bedroom Units	23	360	8,280
>3 Bedroom Units			
Total		------	63,960

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
Restaurant/Coffee Shop	gal/seat	50	40	2,000
Total		50	------	2,000

TOTAL REQUESTED GALLONS PER DAY: 65,960

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.

Marty D. Bizzell, PE		4/26/18
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.

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

Establishment Type	Daily Flow Rate
Parks, Recreation, Camp Grounds, R-V Parks and other Outdoor Activity Facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
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

SPINNING MILL LOFTS

SEWER CALCUI

APARTMENT BUILDING	1-Bedroom		2-Bedroom	
ID	# of Units	Flow (240 GPD/Unit)	# of Units	Flow (240 GPD
1	24	5,760	22	5,280
2	6	1,440	12	2,880
3	6	1,440	12	2,880
4	14	3,360	14	3,360
5	14	3,360	14	3,360
6	4	960	8	1,920
7	6	1,440	16	3,840
8	18	4,320	18	4,320
9	12	2,880	12	2,880
Restaurant/Coffee Shop	50 Seats	40 gal/seat		
Totals				

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

July 19, 2018

Traffic Impact Analysis Review Report

Spinning Mill Lofts at East Village

TIA Project: SC-2018-088
Division: 4
County: Johnston
Description: Spinning Mill Lofts at East Village on E Front St at Central St in Clayton

NORTH CAROLINA PROFESSIONAL SEAL 18080 ENGINEER JAMES H. DUNLOP

19 July 2018

James H. Dunlop, P. E.
Congestion Management Engineer

Solomon Mengesha
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/

Spinning Mill Lofts at East Village		
SC-2018-088	Johnston County	07/19/2018

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 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.

Date Initially Received by CMS	07/06/2018	Date of Site Plan Prepared by Bass, Nixon and Kennedy, Inc	04/02/2018
Date of Preliminary Review Letter Accepting TIA for Review	07/19/2018	Date of Sealed TIA Prepared by Ramey Kemp & Associates, Inc	06/11/2018

Proposed Development

According to the TIA, the proposed Spinning Mill Lofts at East Village is to be located on E Front St at Central St in Clayton, Johnston County. The TIA states the development is to be constructed by 2021 and is to consist of the following:

Land Use	Land Use Code	Size
Multifamily Housing (Low Rise)	220	2 Dwelling Units

Trip Generation - Unadjusted Volumes During a Typical Weekday
Based on appropriate methodology outlined in the *ITE Trip Generation Manual, 9th Ed.*

	IN	OUT	TOTAL
AM Peak Hour	27	89	116
PM Peak Hour	86	50	136
Daily Trips			**1,900**

Requested Access Points

Driveway	Public Roadway	Access Type
Site Driveway #1 (Creekside Dr)	Central Street	All-Movement
Site Driveway #2 (E Ridge Cir)	Central Street	All -Movement
Site Driveway #3	E Front Street	All-Movement

TIP Projects in Study Area

None In Area

General Reference

For reference to various documents applicable to this review please reference the following link: *http://www.ncdot.org/doh/preconstruct/traffic/teppl/Topics/C-37/C-37.html*

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) 773-2800.

Recommendations

LEGEND

❶ Improvement by Developer. Congestion Management concurs with recommendation.
❷ Improvement by Developer. Additional or modified recommendation.

Central St and E Front St) Intersection

TIA (page 31) suggested that additional stop control will be necessary to achieve significant improvements of LOS. Due to the close proximity to the railroad, any improvements at this location required approval from NCDOT Rail Division.

Central St and Creekside Dr (Site Driveway #1) Intersection

- **NB Site Driveway #1**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Thru/Right Lane ❶
  - 100' Internal Protected Stem ❷

Central St and E Ridge Cir (Site Driveway #2) Intersection

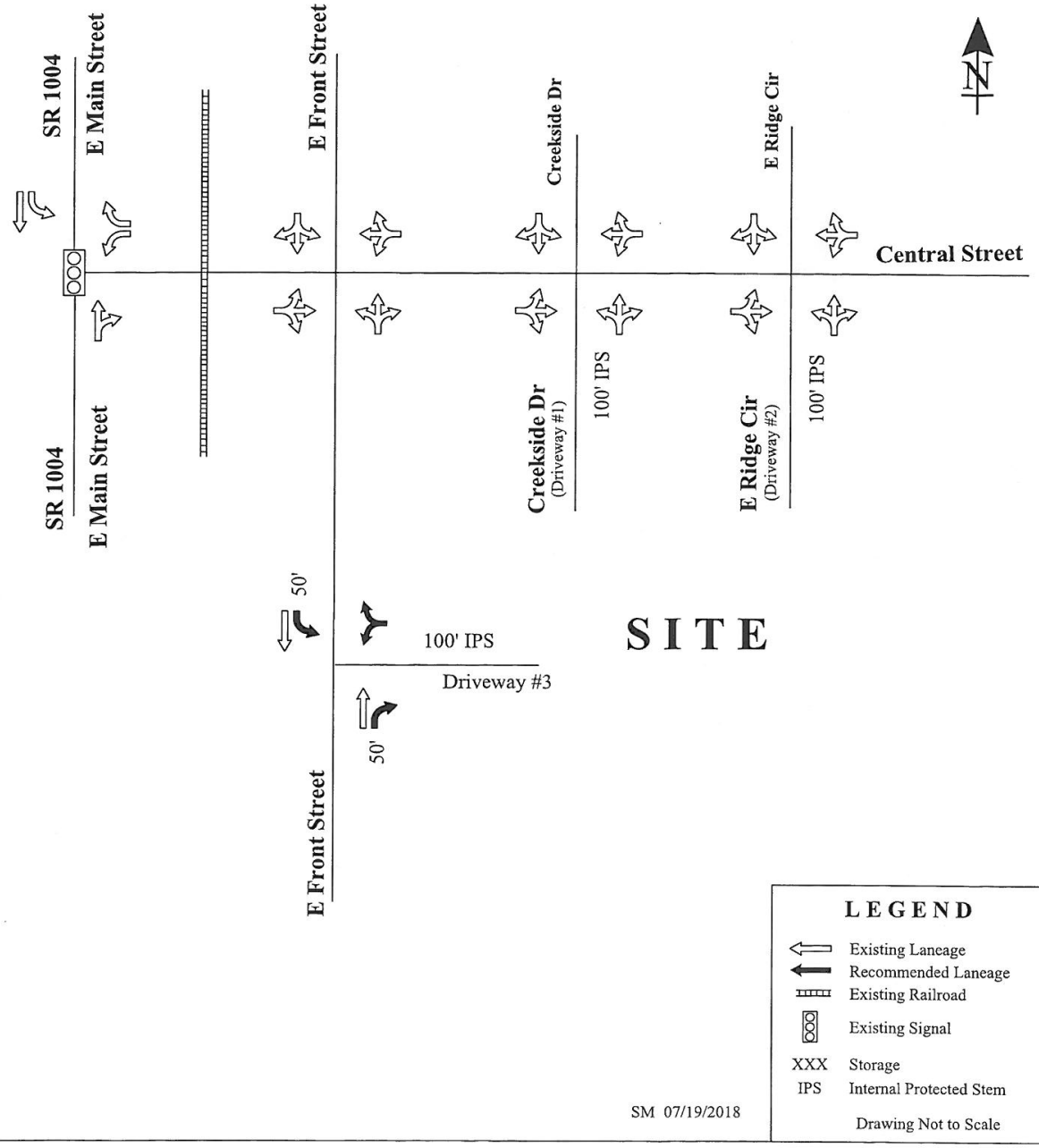
- **NB Site Driveway #2**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Thru/Right Lane ❶
  - 100' Internal Protected Stem ❷

E Front St and Site Driveway #3 Intersection

- **NB E Front St**
  - 50' Right-Turn Lane ❶
- **SB E Front St**
  - 50' Left-Turn Lane ❶
- **EB Site Driveway #3**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Right Lane ❶
  - 100' Internal Protected Stem ❷

No other improvements are recommended for site traffic.

Spinning Mill Lofts at East Village
SC-2018-088



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

DELIVERY VIA EMAIL

July 23, 2018

Samantha L. Wullenwaber, MPA
Planning Director - Town of Clayton
PO Box 879
Clayton, NC 27528

COUNTY: Johnston

SUBJECT: **TIA Review of Proposed Spinning Mill Lofts at East Village**

Dear Ms. Wullenwaber,

Highway Division Four (Division) has reviewed the Traffic Impact Analysis (TIA) for the subject development and offers the following comments. These comments are in addition to any requirements that are included in the attached Traffic Impact Analysis Review Report performed by the Congestion Management Section of the Transportation Mobility and Safety Division of NCDOT. All requirements or recommendations included herein are based off current Department policies. 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.

GENERAL COMMENTS

- Lane Closures for required improvement construction on NCDOT ROW will only be permitted under restricted hours due to heavy traffic volumes in the vicinity of the proposed development. These restrictions will be determined during the driveway permitting application and approval.

INTERSECTIONS / SITE ACCESSES AND ASSOCIATED IMPROVEMENTS

The following comments are in addition to individual intersection improvements recommended by the TIA and TIA Review Report and are considered necessary for consistency with local District and Division policy. If an intersection is not listed herein, then the Division concurs with the TIA Review Report recommendations.

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

E Front Street & Site Driveway Intersection

- E Front Street is a non-State maintained road. If NCDOT maintained Front Street we would require 150' of storage on the left turn lane. NCDOT suggests the Town of Clayton to still require this storage.

E Front Street & Central Street Intersection

- E Front Street and Central Street are both non-State maintained roads. If NCDOT maintained Front Street and Central Street, we would require a left turn lane with 150' of storage on the NB approach. If the tapers for any turn lane overlap, NCDOT requires the entire section to be widened to three lanes on all NCDOT roads. NCDOT suggests the Town of Clayton to still require this turn lane. NCDOT does not recommend additional stop control, due to the proximity of the railroad.

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, PE
District Engineer

cc: Ronnie Keeter, PE - Division Engineer
Andy Brown, PE - Division Traffic Engineer
Solomon Mengesha – Congestion Management Project Design Engineer
Caroline Bojarski, EI– Ramey Kemp and Associates
Driveway Permit File

Traffic Impact Analysis
Spinning Mill Loft at East Village
Clayton, NC

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

TRAFFIC IMPACT ANALYSIS

FOR

SPINNING MILL LOFTS AT EAST VILLAGE

LOCATED

IN

CLAYTON, NC

Prepared For:
Bass, Nixon, & Kennedy, Inc.
6310 Chapel Hill Road, Suite 250
Raleigh, NC

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

6-11-18

June 2018

RKA Project No. 18129

Prepared By: CB

Reviewed By: JR

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1. Site Location and Study Area 1
1.2. Proposed Land Use and Site Access 2
1.3. Adjacent Land Uses 2
1.4. Existing Roadways 2
2. EXISTING (2018) PEAK HOUR CONDITIONS 7
2.1. Existing (2018) Peak Hour Traffic 7
2.2. Analysis of Existing (2018) Peak Hour Traffic 7
3. BACKGROUND (2021) PEAK HOUR CONDITIONS 9
3.1. Ambient Traffic Growth 9
3.2. Adjacent Development Traffic 9
3.3. Future Roadway Improvements 10
3.4. Background (2021) Peak Hour Traffic Volumes 10
3.5. Analysis of Background (2021) Peak Hour Traffic Conditions 10
4. SITE TRIP GENERATION AND DISTRIBUTION 14
4.1. Trip Generation 14
4.2. Site Trip Distribution and Assignment 14
5. COMBINED (2021) TRAFFIC CONDITIONS 17
5.1. Combined (2021) Peak Hour Traffic Volumes 17
5.2. Analysis of Combined (2021) Peak Hour Traffic 17
6. TRAFFIC ANALYSIS PROCEDURE 19
6.1. Adjustments to Analysis Guidelines 19
7. CAPACITY ANALYSIS 20
7.1. Front Street and Central Street 20
7.2. Central Street and Main Street 22
7.3. Front Street and NC 42 23
7.4. Front Street and Old State NC 42 / Walden Way 24
7.5. Front Street and Bent Branch Loop Road 25
7.6. Central Street and Creekside Drive (Site Drive 1) 26
7.7. Central Street and East Ridge Circle (Site Drive 2) 27

7.8. Front Street and Mill Street (Site Drive 3) 28

8. CONCLUSIONS 30

9. RECOMMENDATIONS 32

LIST OF FIGURES

Figure 1 – Site Location Map 4

Figure 2 – Preliminary Site Plan 5

Figure 3 – Existing Lane Configurations 6

Figure 4 – Existing (2018) Peak Hour Traffic 8

Figure 5 – Projected (2021) Peak Hour Traffic 11

Figure 6 – Adjacent Development Trips 12

Figure 7 – Background (2021) Peak Hour Traffic 13

Figure 8 –Site Trip Distribution 15

Figure 9 –Site Trip Assignment 16

Figure 10 – Combined (2021) Peak Hour Traffic 18

Figure 11 – Recommended Lane Configurations 33

LIST OF TABLES

Table 1: Existing Roadway Inventory 3

Table 2: Trip Generation Summary 14

Table 3: Highway Capacity Manual – Levels-of-Service and Delay 19

Table 4: Analysis Summary of Front Street and Central Street 20

Table 5: Analysis Summary of Central Street and Main Street 22

Table 6: Analysis Summary of Front Street and NC 42 23

Table 7: Analysis Summary of Front Street and Old State NC 42 / Walden Way 24

Table 8: Analysis Summary of Front Street and Bent Branch Loop Road 25

Table 9: Analysis Summary of Central Street and Creekside Drive 26

Table 10: Analysis Summary of Central Street and East Ridge Circle 27

Table 11: Analysis Summary of Front Street and Mill Street 28

TECHNICAL APPENDIX

Appendix A:	Scoping Information
Appendix B:	Traffic Counts
Appendix C:	Signal Plans
Appendix D:	Adjacent Development Information
Appendix E:	Capacity Calculations – Front Street and Central Street
Appendix F:	Capacity Calculations – Central Street and Main Street
Appendix G:	Capacity Calculations – Front Street and NC 42
Appendix H:	Capacity Calculations – Front Street and Old State NC 42 / Walden Way
Appendix I:	Capacity Calculations – Front Street and Bent Branch Loop Road
Appendix J:	Capacity Calculations – Central Street and Creekside Drive
Appendix K:	Capacity Calculations – Central Street and East Ridge Circle
Appendix L:	Capacity Calculations – Front Street and Mill Street

TRAFFIC IMPACT ANALYSIS
SPINNING MILL LOFTS AT EAST VILLAGE
CLAYTON, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Spinning Mill Lofts at East Village development to be located south of Central Street and east of Front Street in Clayton, North Carolina. 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 Spinning Mill Lofts at East Village development is a residential development that is expected to re-develop the existing Clayton Spinning Mill. For the purpose of the TIA, the site is analyzed with 255 low-rise apartment units and is expected to be completed in 2021.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2018) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located south of Central Street and east of Front Street 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:

- Front Street and Central Street
- Front Street and Old State NC 42 / Walden Way

- Front Street and NC 42
- Central Street and Main Street
- Front Street and Bent Branch Loop Road
- Central Street and Creekside Drive
- Central Street and East Ridge Circle
- Front Street and Mill Street

Refer to Appendix A for the NCDOT Scoping Checklist and the approved Memorandum of Understanding (MOU).

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2021, is assumed to consist of 255 low-rise apartment units. Site access is proposed via the two existing full movement intersections on Central Street and one existing full movement intersection on Front Street. 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.

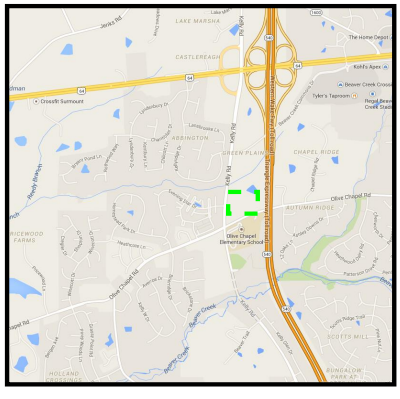
1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information was collected through field reconnaissance by Ramey Kemp & Associates, Inc. (RKA). Table 1 provides a summary of the field data collected. Refer to Figure 3 for an illustration of the existing lane configurations within the study area.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	Maintained By	AADT* (vpd)
Front Street	N/A	2-lane undivided	35 mph	Town	5,900
Central Street	N/A	2-lane undivided	25 mph	Town	5,800
NC 42	NC 42	4-lane divided	45 mph	NCDOT	23,000**
Old NC 42	Old NC-42	2-lane undivded	35 mph (assumed)	NCDOT	2,300
Main Street	SR 1004	2-lane undivided	35 mph	NCDOT	7,700**
Bent Branch Loop Road	N/A	2-lane undivided	25 mph (assumed)	Private	800
Creekside Drive	N/A	2-lane undivided	25 mph (assumed)	Private	N/A
East Ridge Circle	N/A	2-lane undivided	25 mph (assumed)	Private	N/A
Mill Street	N/A	2-lane undivided	25 mph (assumed)	Private	N/A

* AADT based on the traffic counts from 2018 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.
** 2015 AADT based on the NCDOT Traffic Volumes Map



LEGEND

- Proposed Site Location
- Study Intersection
- Study Area

N

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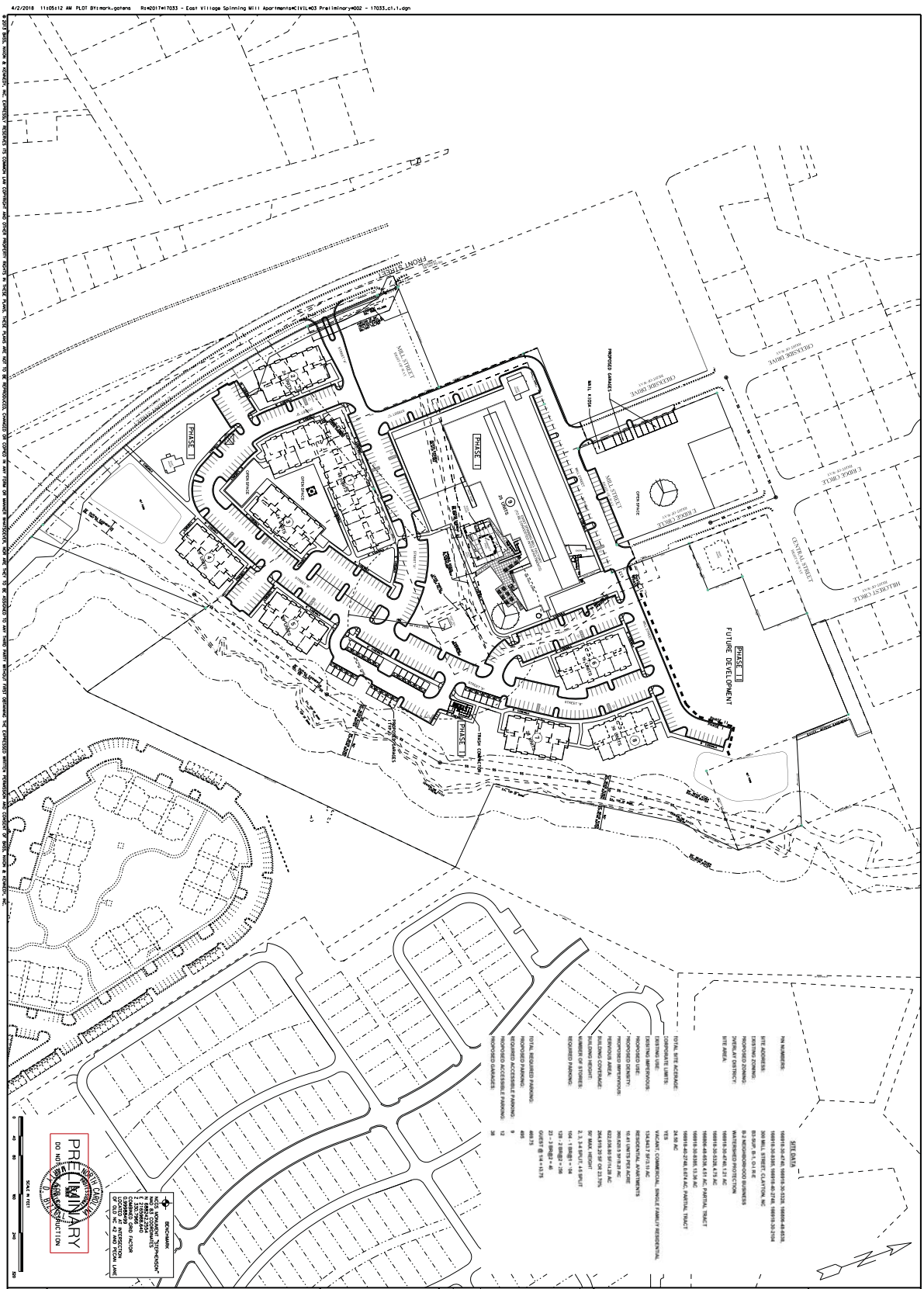
TRANSPORTATION ENGINEERS

Spinning Mill Lofts at East Village
Clayton, NC

Site Location Map

Scale: Not to Scale | Figure 1



SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	JOB NO. 17033	DATE 04-02-18	DRAWN BY MJG	BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS
C1.1	PHASE I PRELIMINARY SUBMITTAL	OVERALL PRELIMINARY SITE PLAN			6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	SCALE: 1" = 80' HORZ	NO.	DATE	DESCRIPTION BY REVISIONS
					TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

4/2/2018 11:05:12 AM PLOT By:mark.gatens Ref:2017e17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\002 - 17033_c1.1.dgn
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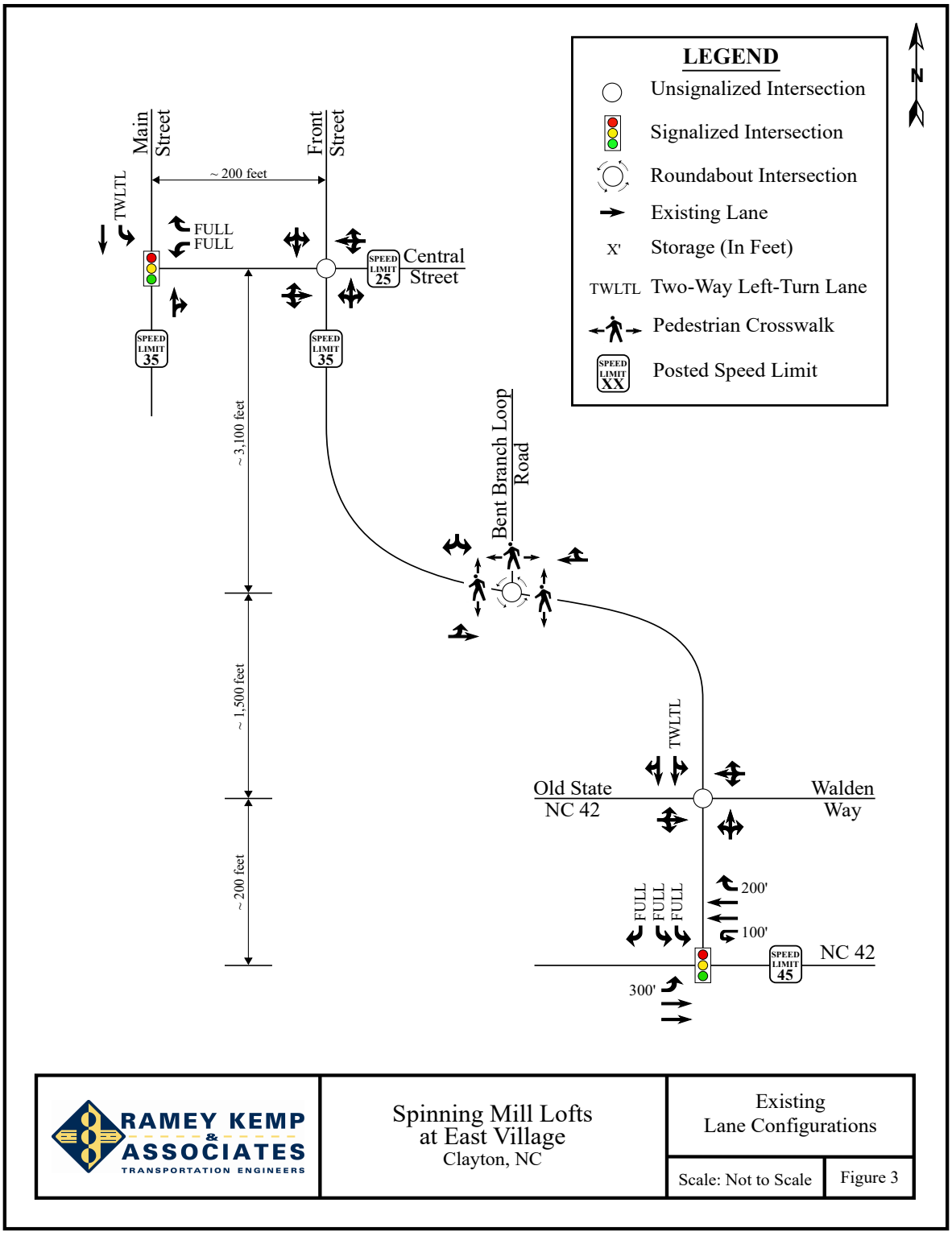

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Spinning Mill Lofts
at East Village
Clayton, NC

Existing
Lane Configurations

Scale: Not to Scale | Figure 3

2. EXISTING (2018) PEAK HOUR CONDITIONS

2.1. Existing (2018) Peak Hour Traffic

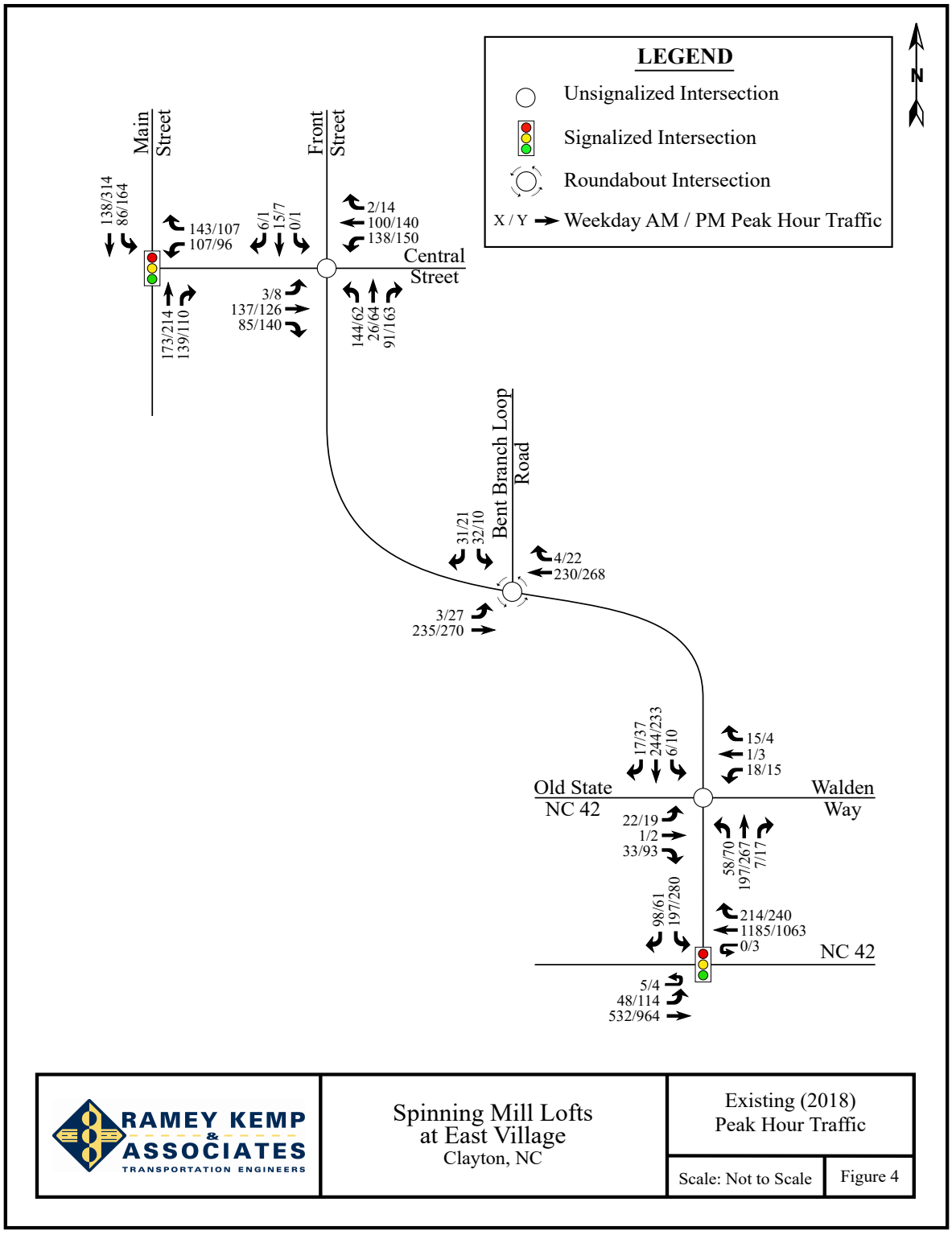
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in May of 2018 by RKA during a typical weekday AM (6:30 AM – 9:00 AM) and PM (4:00 PM – 7:00 PM) peak periods:

- Front Street and Central Street
- Front Street and Old State NC 42 / Walden Way
- Front Street and NC 42
- Central Street and Main Street
- Central Street and Bent Branch Loop Road

Traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for existing (2018) weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of Existing (2018) Peak Hour Traffic

The existing (2018) 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. The results of the analysis are presented in Section 7 of this report.



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Spinning Mill Lofts
at East Village
Clayton, NC

Existing (2018)
Peak Hour Traffic

Scale: Not to Scale | Figure 4

3. BACKGROUND (2021) 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 (2021) weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for projected (2021) peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the Town, three adjacent developments were identified to be included in this study.

Arbors Phase 2 is anticipated to consist of 74 apartment units. The site is located north of Front Street with access at its intersection with Bent Branch Loop Road in Clayton, North Carolina.

East Village Walk consists of 300 single-family homes. The site is located north of Front Street with access at its intersection with Bent Branch Loop Road in Clayton, North Carolina.

The Hunt Property development is a mixed-use development that is anticipated to be built-out by 2019. The development is located southeast of the intersection of Glen Laurel Road and NC 42 in Clayton, North Carolina, and is expected to consist of 240 apartment units, 180,000 sq. ft. of commercial retail space, and a 117,000 sq. ft. self-storage facility.

As a result of the site driveways for the above listed adjacent developments, the trips associated with these developments do not balance between all study intersections for the

proposed Spinning Mill Lofts at East Village. Adjacent development trips are shown in Figure 6. Adjacent development information can be found in Appendix D.

3.3. Future Roadway Improvements

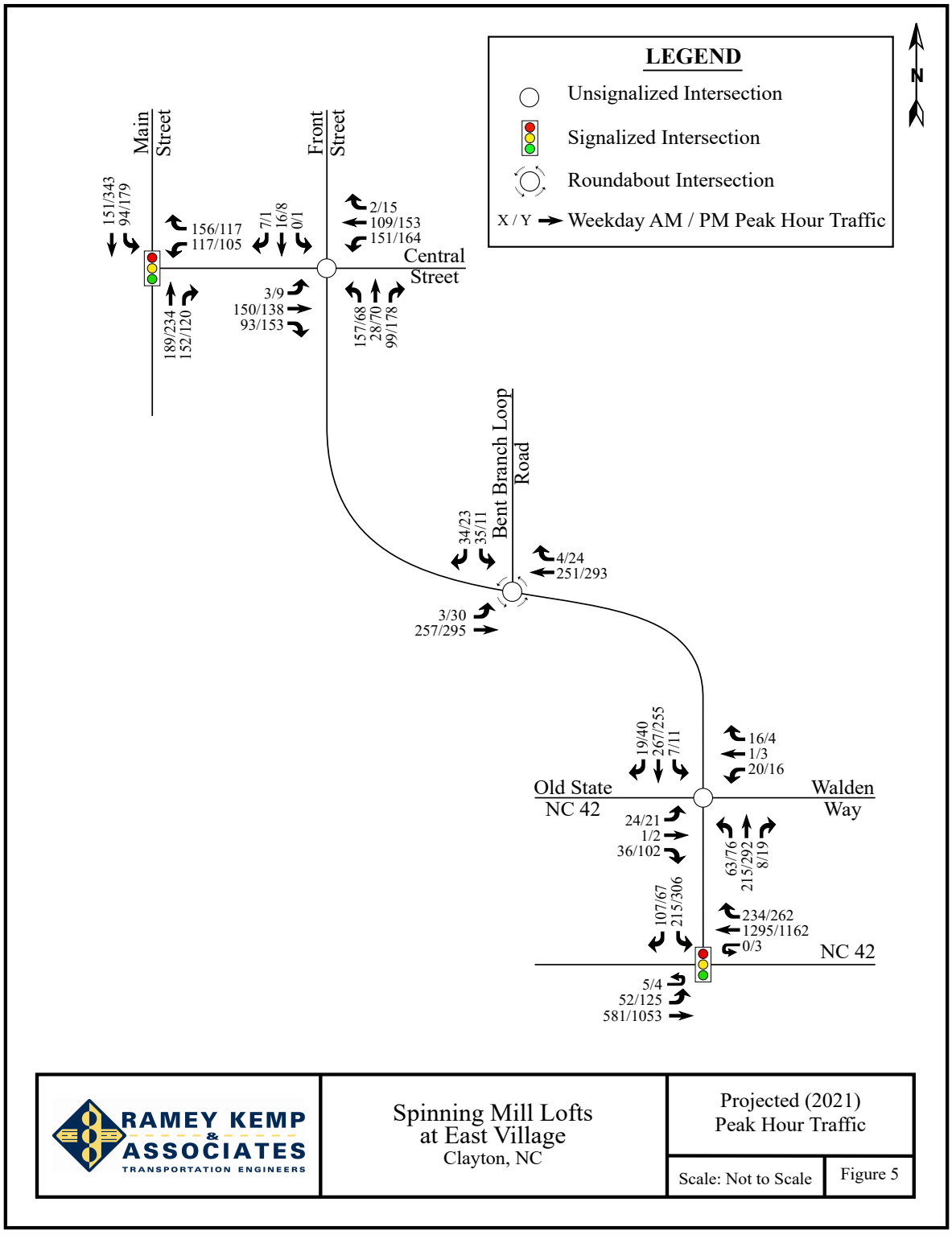
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

3.4. Background (2021) Peak Hour Traffic Volumes

The background (2021) traffic volumes were determined by projecting the existing (2018) peak hour traffic to the year 2021 and adding the adjacent development trips. Refer to Figure 7 for an illustration of the background (2021) peak hour traffic volumes at the study intersections.

3.5. Analysis of Background (2021) Peak Hour Traffic Conditions

The background (2021) 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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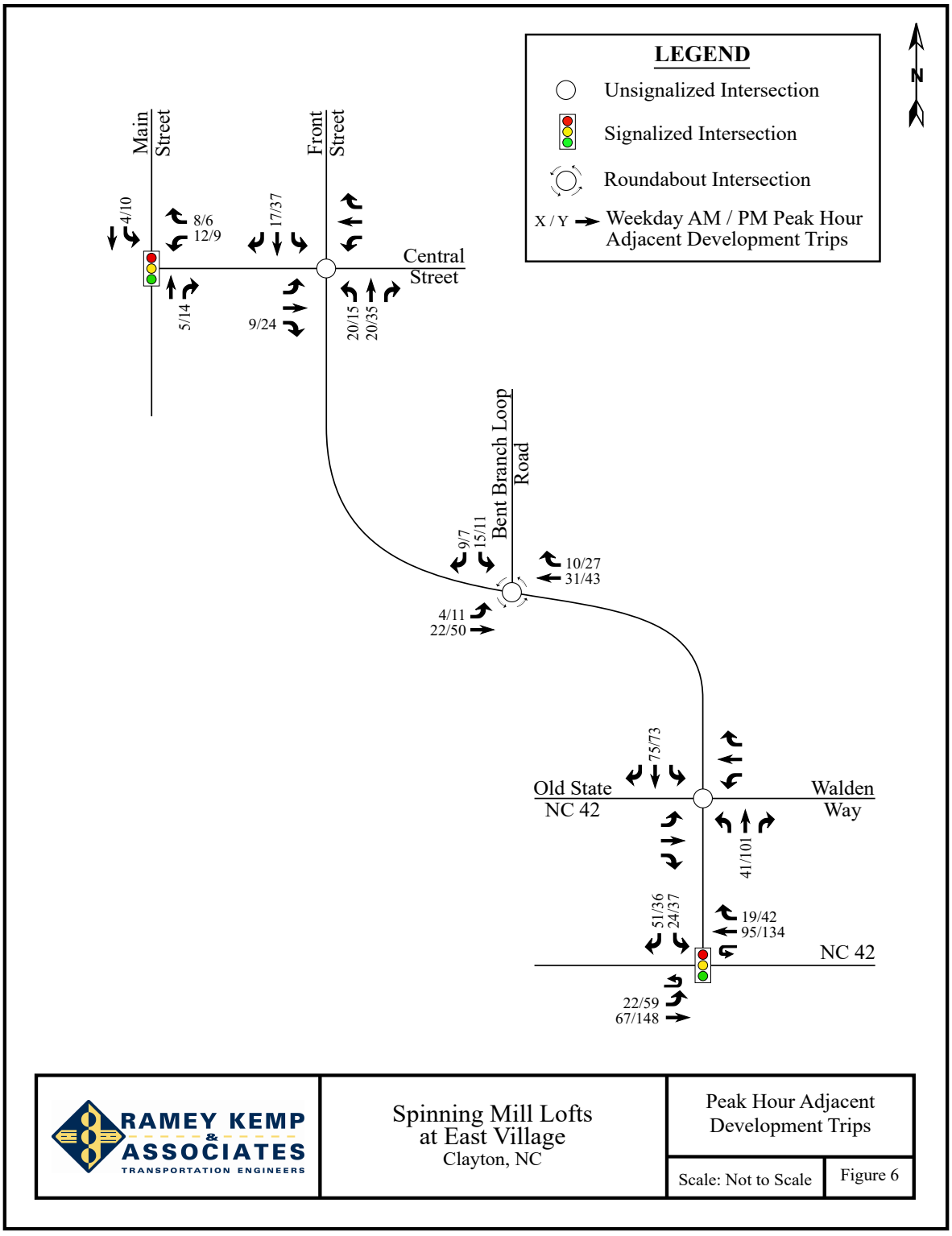
Spinning Mill Lofts
at East Village
Clayton, NC

Projected (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 5



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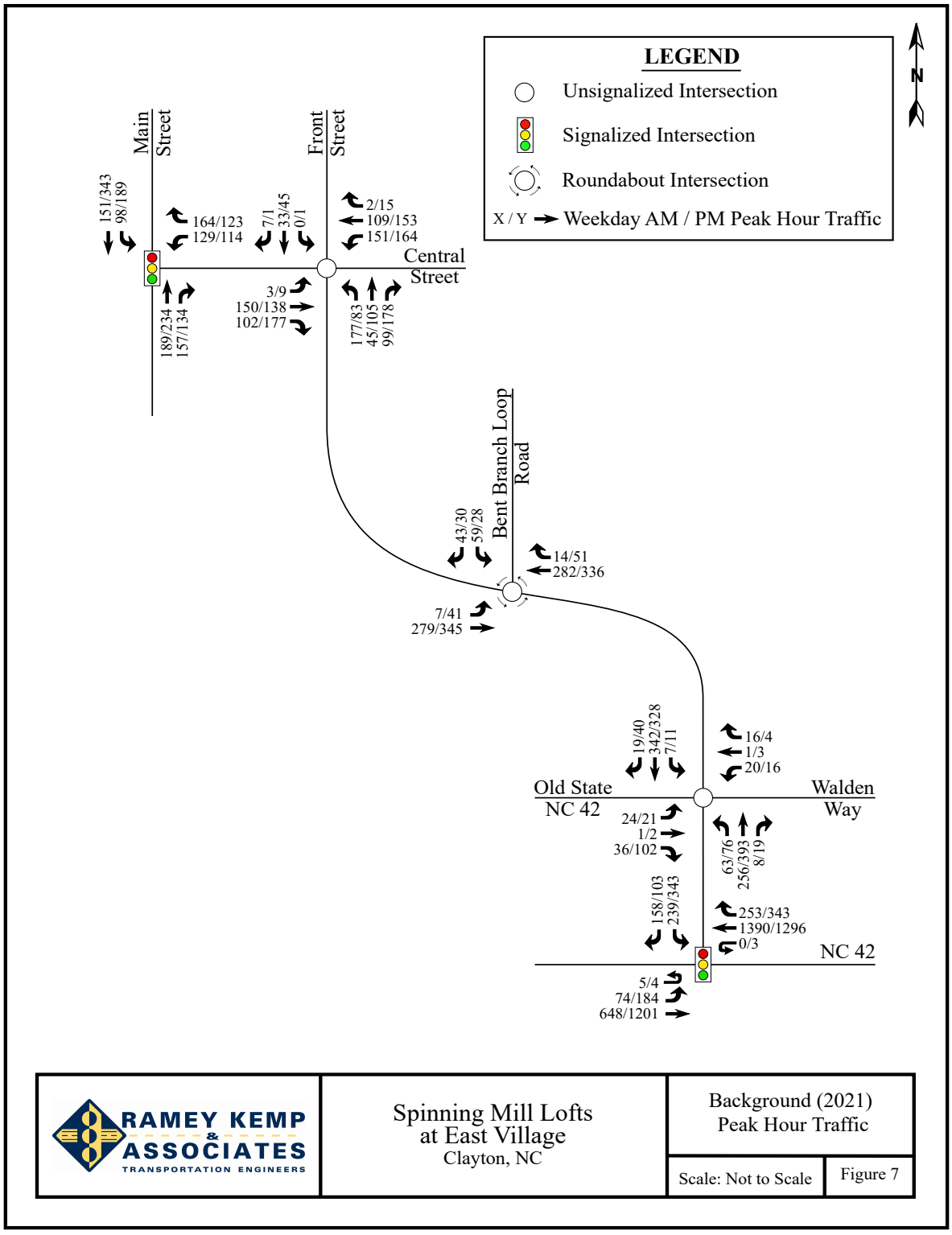
Spinning Mill Lofts
at East Village
Clayton, NC

Peak Hour Adjacent
Development Trips

Scale: Not to Scale | Figure 6



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Spinning Mill Lofts
at East Village
Clayton, NC

Background (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 7

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of 255 low-rise apartment 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 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
Low-Rise Apartments (220)	255 dwellings	1,900	27	89	86	50

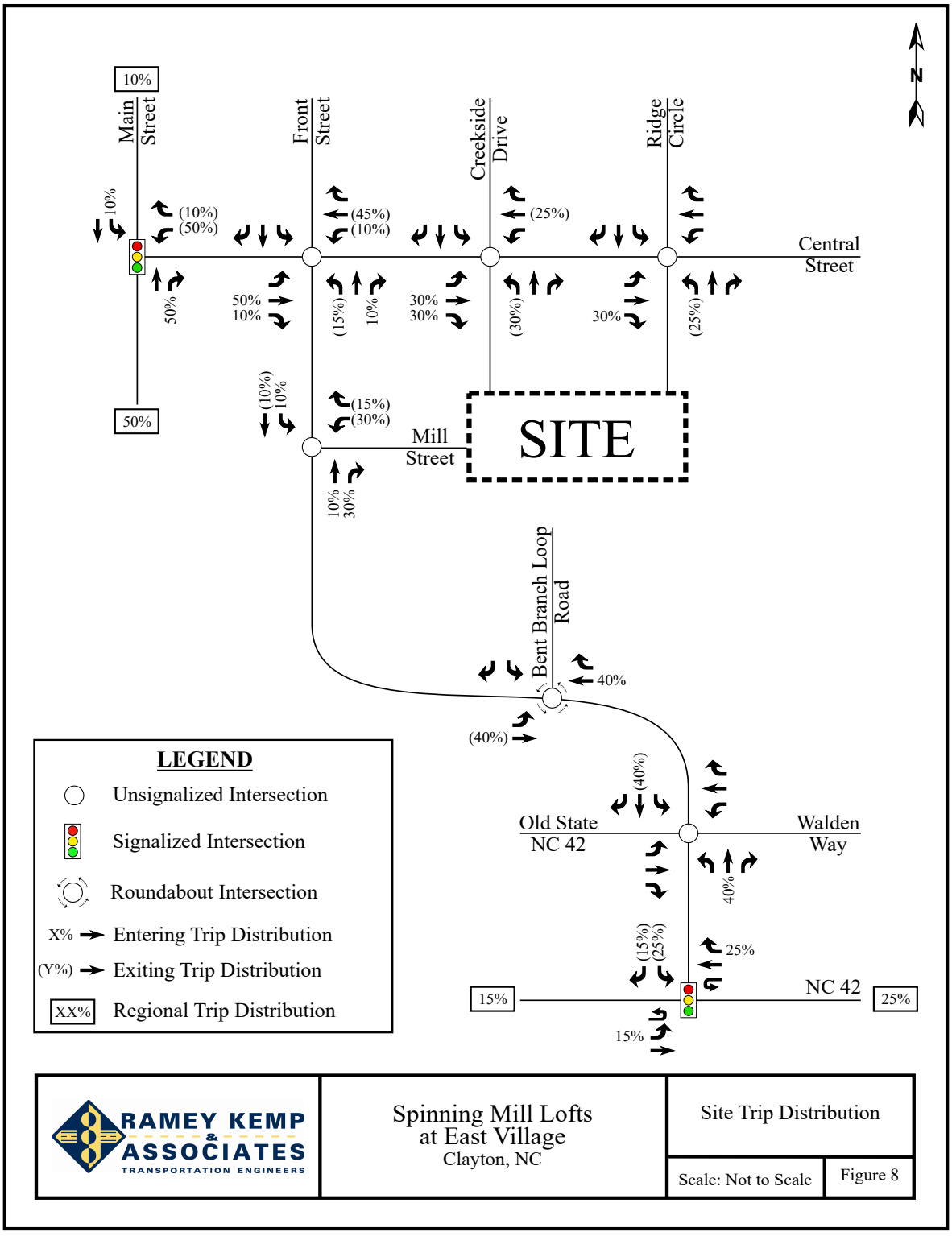
It is estimated that the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the 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 trips will be distributed as follows:

- 10% to/from the north via Main Street
- 25% to/from the east via NC 42
- 50% to/from the south via Main Street
- 15% to/from the west via NC 42

The site trip distribution is shown in Figure 8. Refer to Figure 9 for the site trip assignment.



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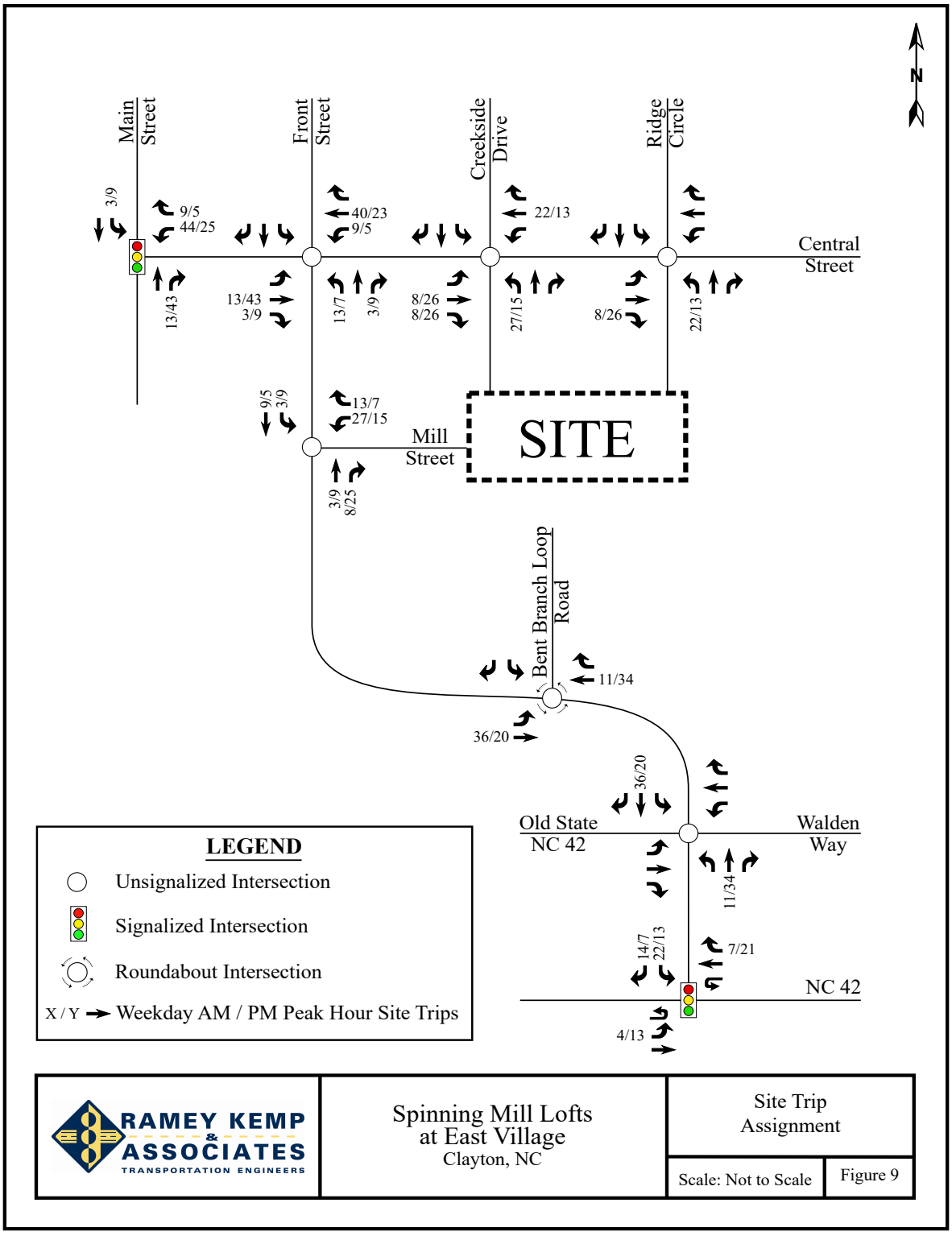
Spinning Mill Lofts
at East Village
Clayton, NC

Site Trip Distribution

Scale: Not to Scale | Figure 8



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Spinning Mill Lofts
at East Village
Clayton, NC

Site Trip
Assignment

Scale: Not to Scale | Figure 9

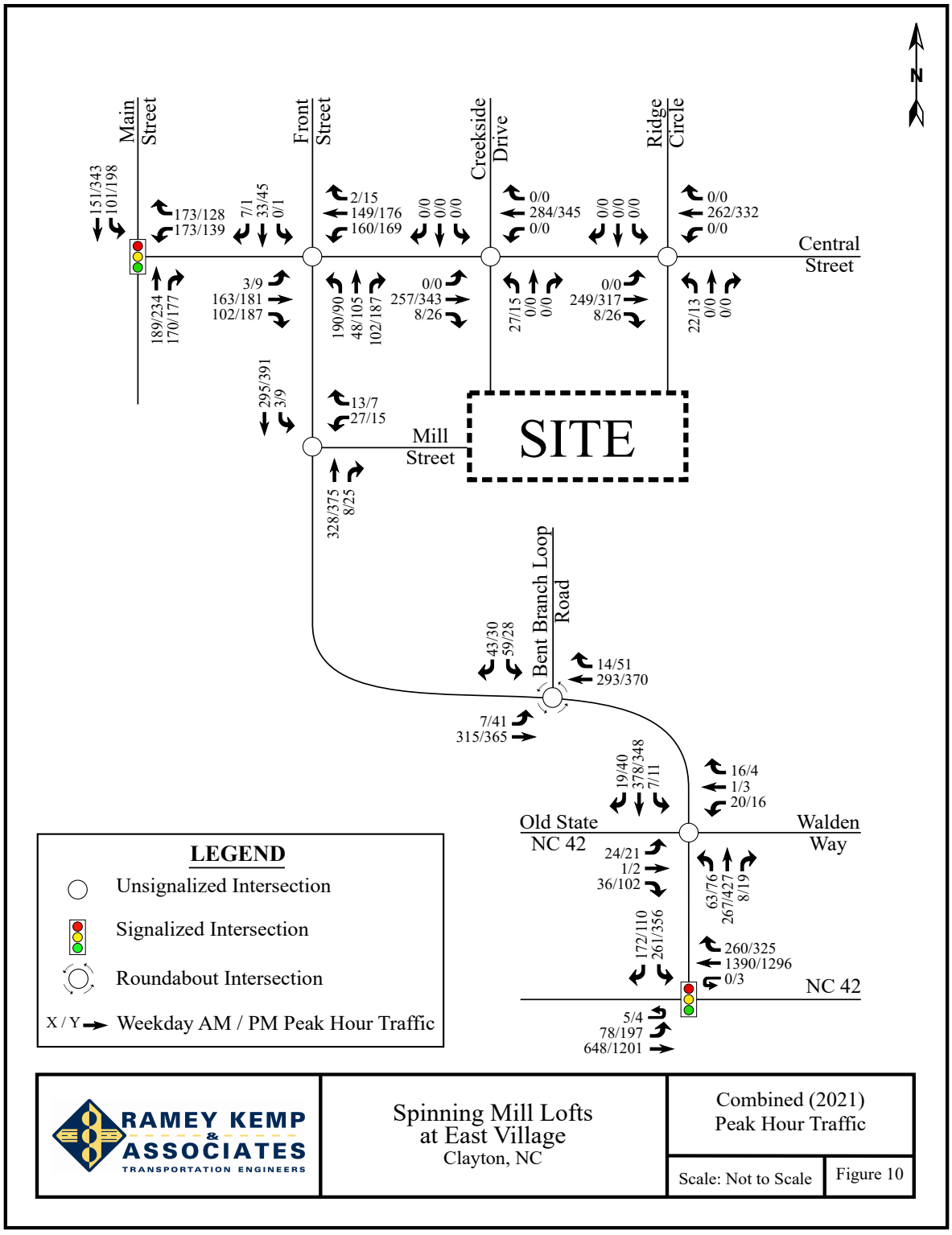
5. COMBINED (2021) TRAFFIC CONDITIONS

5.1. Combined (2021) Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the background (2021) traffic volumes to determine the combined (2021) traffic volumes. Refer to Figure 10 for an illustration of the combined (2021) peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of Combined (2021) Peak Hour Traffic

Study intersections were analyzed with the combined (2021) 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.



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Spinning Mill Lofts
at East Village
Clayton, NC

Combined (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 10

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *2010 Highway Capacity Manual* (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 9.2), 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. Front Street and Central Street

The existing unsignalized intersection of Front Street and Central Street was analyzed under existing (2018), background (2021), and combined (2021) 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 Front Street and Central 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 (2018) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] D[2] B[2]	N/A	A[1] A[1] D[2] C[2]	N/A
Background (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] F[2] C[2]	N/A	A[1] A[1] F[2] D[2]	N/A
Combined (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] F[2] C[2]	N/A	A[1] A[1] F[2] D[2]	N/A
Combined (2021) Conditions with Improvements*	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	C B C B	N/A	D C C B	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

*Due to limitations with the Synchro software, four-way stop control was reported in lieu of three-way stop control.

Capacity analysis of existing (2018) traffic conditions indicates all minor-street approaches and major-street left-turn movements at Front Street and Central Street are expected to operate at LOS D or better during both weekday AM and PM peak hours. Under background (2021) and combined (2021) traffic conditions, the northbound approach is expected to operate at LOS F during the weekday AM and PM peak hour. It should be noted that it is typical for the minor-street approach at an unsignalized intersection to operate with delay when the major-

street operates with a similar, high volume of traffic as the minor-street. It should also be noted that the proposed development contributes less than 10% of the total traffic at the intersection of Front Street and Central Street.

Alternate traffic control was considered at this intersection. Three-way stop control was considered at this intersection in combined (2021) traffic conditions with improvements. Capacity analysis of combined (2021) traffic conditions with improvements indicates that all approaches are expected to operate at LOS D or better during both weekday AM and PM peak hours. Due to limitations with the Synchro software, three-way stop control must be analyzed as four-way stop control; however, three-way stop control was analyzed with SimTraffic. Due to the proximity of the railroad, it is recommended that the eastbound movement remains free. A traffic signal was also considered at this intersection utilizing the methodology contained in the Manual on Uniform Traffic Control Devices (MUTCD). The intersection is not expected to warrant during either weekday peak hour under combined (2021) traffic conditions. Additionally, due to the high volume of residential development, which typically generates trips during two peak hours each day, it is anticipated that a 4- or 8-hour signal warrant would not be met either. Due to the proximity to other signalized intersections less than 200 feet away from the adjacent signalized intersection, this intersection is not a desirable intersection for signalization.

Modifying the westbound approach to provide stop control would be necessary in order to achieve significant improvements in operation and level of service; however, this improvement is not recommended by the Spinning Mill Lofts at East Village development because the proposed development is expected to contribute less than 10% of the total 2021 traffic to the intersection of Front Street and Central Street.

7.2. Central Street and Main Street

The existing signalized intersection of Central Street and Main Street was analyzed under existing (2018), background (2021), and combined (2021) 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 Central Street and Main 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 (2018) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	B B A	B (13)	B B A	B (11)
Background (2021) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	C B A	B (17)	C C A	B (15)
Combined (2021) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	C C A	B (18)	C C A	B (17)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Central Street and Main Street is expected to operate at an overall LOS B during both weekday AM and PM peak hours.

7.3. Front Street and NC 42

The existing signalized intersection of Front Street and NC 42 was analyzed under existing (2018), background (2021), and combined (2021) 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 Front Street 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 (2018) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (14)	A B D	B (13)
Background (2021) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A B D	B (16)	A B D	B (17)
Combined (2021) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A B D	B (17)	A B D	B (17)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Front Street and NC 42 is expected to operate at an overall LOS B during both weekday AM and PM peak hours.

7.4. Front Street and Old State NC 42 / Walden Way

The existing signalized intersection of Front Street and Old State NC 42 / Walden Way was analyzed under existing (2018), background (2021), and combined (2021) traffic conditions with existing 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 Front Street and Old State NC 42 / Walden Way

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 (2018) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	B[2] B[2] A[1] A[1]	N/A	B[2] C[2] A[1] A[1]	N/A
Background (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	C[2] B[2] A[1] A[1]	N/A	C[2] C[2] A[1] A[1]	N/A
Combined (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	C[2] B[2] A[1] A[1]	N/A	C[2] C[2] A[1] A[1]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Front Street and Old State NC 42 / Walden Way are expected to operate at LOS C or better during both weekday AM and PM peak hours.

7.5. Front Street and Bent Branch Loop Road

The existing roundabout intersection of Front Street and Bent Branch Loop Road was analyzed under existing (2018), background (2021), and combined (2021) traffic conditions with existing 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 Front Street and Bent Branch Loop 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 (2018) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)
Background (2021) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)
Combined (2021) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Front Street and Bent Branch Loop Road is expected to operate at an overall LOS A during both weekday AM and PM peak hours.

7.6. Central Street and Creekside Drive (Site Drive 1)

The existing unsignalized intersection of Central Street and Creekside Drive (Site Drive 1) was analyzed under combined (2021) 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 Central Street and Creekside Drive (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 (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] B[2] B[2]	N/A	A[1] A[1] C[2] C[2]	N/A

3. Level of service for major-street left-turn movement.
4. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Central Street and Creekside Drive (Site Drive 1) are expected to operate at LOS C or better during the weekday AM and PM peak hours.

7.7. Central Street and East Ridge Circle (Site Drive 2)

The existing unsignalized intersection of Central Street and East Ridge Circle (Site Drive 2) was analyzed under combined (2021) 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 Central Street and East Ridge Circle (Site Drive 2)

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 (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] B[2] B[2]	N/A	A[1] A[1] C[2] B[2]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Central Street and East Ridge Circle (Site Drive 2) are expected to operate at LOS C or better during the weekday AM and PM peak hours.

7.8. Front Street and Mill Street (Site Drive 3)

The existing unsignalized intersection of Front Street and Mill Street (Site Drive 3) was analyzed under combined (2021) 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 Front Street and Mill Street (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 (2021) Conditions	WB NB SB	1 LT-RT 1 TH, **1 RT** 1 LT-TH	B[2] -- A[1]	N/A	C[2] -- A[1]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates the minor-street approach and major-street left-turn movement at the intersection of Front Street and Mill Street (Site Drive 3) is expected to operate at LOS C or better during the weekday AM and PM peak hours.

Left and right-turn lanes were considered at this intersection based on the methodology outlined in the *Policy on Street and Driveway Access to North Carolina Highways* (published by the NCDOT) was considered. Based on the findings from the turn lane warrant analysis, the intersection does not meet the criteria to warrant an exclusive left-turn lane; however, based on the 2018 AADT (~5,900 vpd) an exclusive left-turn lane is recommended to remove left turning vehicles from the through lane. It should be noted that although turning lanes were considered at this intersection, a full width left-turn lane may not fit within the existing right-of-way. The intersection was analyzed without a designated left-turn lane to determine the operations of the intersection if a designated left-turn lane cannot be constructed. The intersection is expected to operate at acceptable levels of service without a designated left-turn

lane. If right-of-way is available, a designated left-turn lane is recommended. The intersection is expected to warrant an exclusive right-turn lane with 50 feet of storage and appropriate taper.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Spinning Mill Lofts at East Village, located south of Central Street and east of Front Street in Clayton, North Carolina. The proposed development is expected to redevelop the existing Spinning Mill for residential use and be built out by 2021. Site access is proposed via the two existing full movement accesses on Central Street and the existing full movement access on Front Street.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2018) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

Trip Generation

It is estimated that the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the 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 intersection listed below. A summary of the study area intersection that are expected to need improvements are as follows:

Front Street and Central Street

The poor level-of-service observed on the northbound Front Street approach is due to it being an unsignalized approach at a two-lane mainline (Central Street) with heavy through volumes. Additionally, the northbound approach has similar traffic volumes as the mainline movements in both weekday AM and PM peak hours. Additional stop control of the westbound approach will be necessary in order to achieve significant improvements in operation and level of service. The traffic at this intersection does not meet the peak hour warrant for the weekday AM and PM peak hours from the *Manual on Uniform Traffic Control Devices* (MUTCD) and it is unlikely this intersection will satisfy the MUTCD 8-hour and 4-hour warrants. Improvement is not recommended by the Spinning Mill Lofts at East Village development since this development contributes less than 10% of the total traffic volumes to the intersection of Front Street and Central Street.

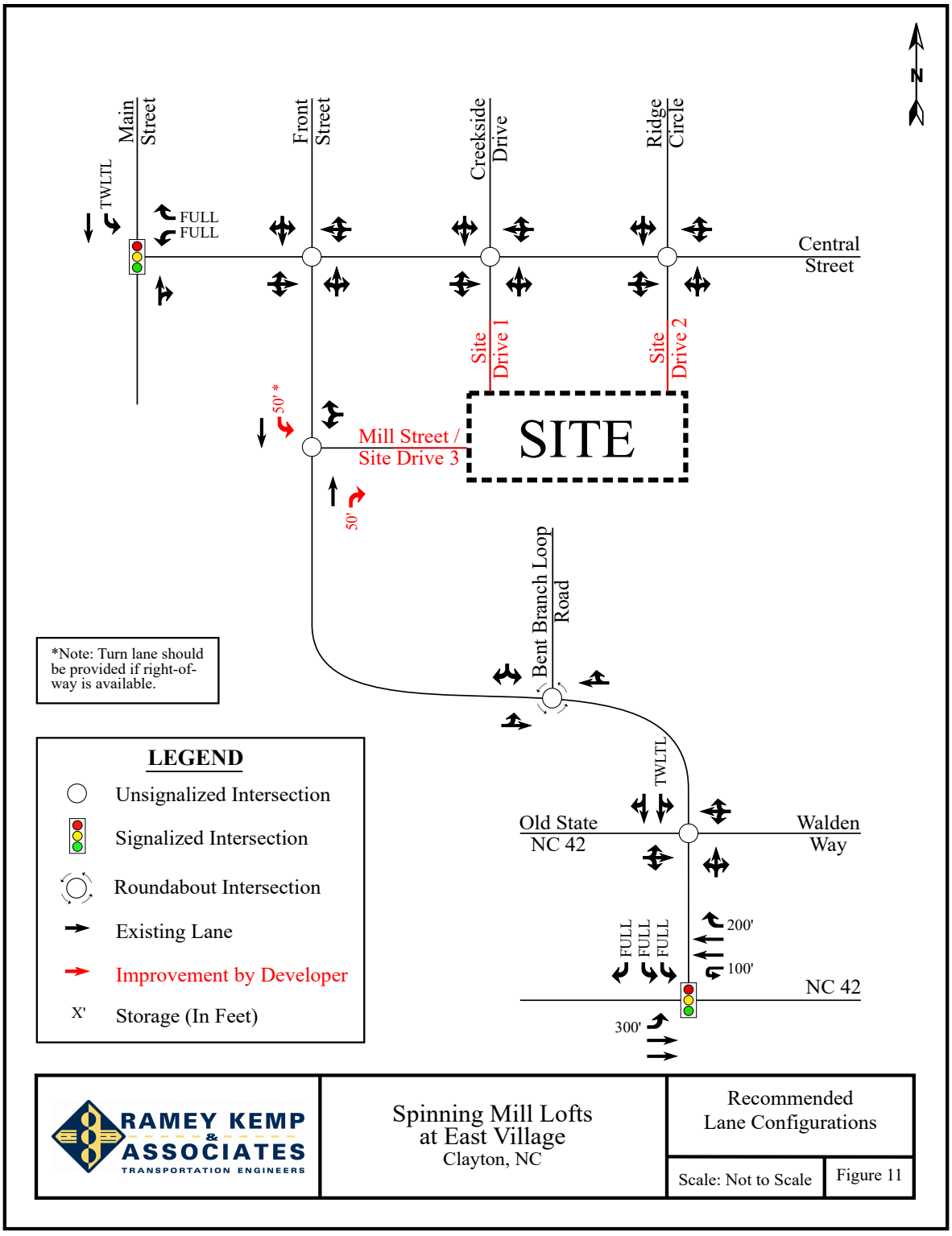
9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Recommended Improvements by Developer

Front Street and Mill Street (Site Drive 3)

- Provide an exclusive northbound right-turn lane on Front Street with 50 feet of storage and appropriate taper.
- If right-of-way is available, provide an exclusive southbound left-turn lane on Front Street with 50 feet of storage and appropriate taper.


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
TWLTL
FULL
FULL
Site Drive 1
Site Drive 2
50' *
Mill Street / Site Drive 3
SITE
50'
Bent Branch Loop Road
*Note: Turn lane should be provided if right-of-way is available.
LEGEND
Unsignalized Intersection
Signalized Intersection
Roundabout Intersection
Existing Lane
Improvement by Developer
X' Storage (In Feet)
TWLTL
Old State NC 42
Walden Way
FULL
FULL
FULL
200'
100'
NC 42
300'
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
Spinning Mill Lofts at East Village
Clayton, NC
Recommended Lane Configurations
Scale: Not to Scale
Figure 11

TECHNICAL APPENDIX

APPENDIX A

SCOPING INFORMATION

APPENDIX B

COUNT DATA

APPENDIX C

SIGNAL INFORMATION

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

CENTRAL STREET

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

MAIN STREET

APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

NC 42

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

OLD STATE NC 42 / WALDEN WAY

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

BENT BRANCH LOOP ROAD

APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

CREEKSIDE DRIVE

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

EAST RIDGE CIRCLE

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

MILL STREET

TECHNICAL APPENDIX

APPENDIX A

SCOPING INFORMATION

Mary Smith

From: Caroline Bojarski
Sent: Tuesday, May 22, 2018 9:49 AM
To: Mary Smith
Subject: FW: East Village (Spinning Mill) TIA Scoping Checklist, East Village Walk
Attachments: Trip Generation 8-20-15.pdf; Trip Generation Comparison - 9-4-2015 - submission.pdf

---

From: Jay McLeod <jwmcleod@townofclaytonnc.org>
Sent: Thursday, May 03, 2018 8:24 AM
To: Caroline Bojarski <cbojarski@rameykemp.com>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist, East Village Walk

Attached is the TIA info for East Village Walk, 300 homes just west of The Arbors apartments.
This is the last email. I hope this information helps you.

Thanks,
Jay McLeod
919-359-9335

From: Caroline Bojarski <cbojarski@rameykemp.com>
Sent: Wednesday, May 02, 2018 3:36 PM
To: Jay McLeod <jwmcleod@townofclaytonnc.org>
Cc: Jessica McClure <JMCClure@rameykemp.com>; Harrell, Jiles P <jpharrell@ncdot.gov>; Samantha Wullenwaber <swullenwaber@townofclaytonnc.org>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist

Jay / Samantha,

Thanks for the quick response. The new legislation calls out the timeline that NCDOT has to respond to specific items during the TIA scoping and submittal process: http://www.ncleg.net/Sessions/2017/Bills/House/PDF/H528v3.pdf

It's still relatively new, so we have been trying to determine the best way to scope projects in different municipalities. Some areas that didn't require in-person meetings for every project are requiring them now and vice versa.

Could you send us on the information regarding the adjacent developments that you mentioned? If there is anything on the 72-unit apartment that would be great, but I would imagine that traffic would be captured in a 3% growth rate. The 300 homes and the 244 apartments likely had a traffic study that we could pull the trips from to include.

We will continue to update the scoping checklist with the scoping information.

Thanks!

Caroline Bojarski, EI
Transportation Associate

Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Ph: 919-872-5115

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From: Jay McLeod <jwmcleod@townofclaytonnc.org>
Sent: Tuesday, May 01, 2018 3:55 PM
To: Caroline Bojarski <cbojarski@rameykemp.com>
Cc: Jessica McClure <JMCClure@rameykemp.com>; Harrell, Jiles P <jpharrell@ncdot.gov>; Samantha Wullenwaber <swullenwaber@townofclaytonnc.org>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist

Hello,
What you have outlined seems sufficient scoping to begin your work. What you have provided is more than is usually presented and takes a well-rounded look at the site and potentially impacted intersections. I think it should be fine.
Please note that in the past we have used a 3% background population growth rate, but depending on what NCDOT thinks, that may not be applicable in this instance.
You might want to change the Project Description on the first page to match that shown in the rest of the document, which lists 255 apartments. The 255 figure is also reflected in the plans that have been submitted to the Town.
I must admit that I am not familiar with the legislation you reference regarding scoping timelines. Would you please let me know the referenced section of NC G.S. so that I can look it up?
The Town does have the TIA's for other local projects, including the 72-unit apartment addition at the Arbors and the 300 homes at East Village Walk. There are also 244 apartments going in on the corner of NC Hwy 42 W and Glen Laurel Road, but that might be out of the area of interest for your project.
Please note that I will no longer be working for the Town after May 10th, so please direct all future correspondence to Samantha Wullenwaber, Planning Director. She will probably also review this scoping document (attached) and will let you know if she has any comments.
Again, thanks for putting so much into this scoping document, and if you have any other questions, we're happy to help.

Thanks,
Jay McLeod, AICP
Senior Planner
TOWN OF CLAYTON
111 East Second Street | PO Box 879 | Clayton NC 27528
Direct (919) 359-9335 | Office (919) 553-5002
jwmcleod@townofclaytonnc.org

From: Caroline Bojarski [mailto:cbojarski@rameykemp.com]
Sent: Tuesday, May 01, 2018 2:09 PM
To: Harrell, Jiles P <jpharrell@ncdot.gov>; Jay McLeod <jwmcleod@townofclaytonnc.org>

Cc: Jessica McClure <JMCClure@rameykemp.com>
Subject: East Village TIA Scoping Checklist

Jiles / Jay,

Please see the attached scoping checklist and the preliminary site plan for the proposed East Village Apartments development in Clayton, NC. The development is expected to convert the existing Spinning Mill into apartments. We have filled out as much of the scoping checklist as we could with our assumptions.

Jay, please let us know if you will need a scoping meeting to finalize the scope. Per the legislation, we will need to finalize the scope within 10 business days, so if a meeting is required please provide your next availability as soon as possible.

Thanks!

Caroline Bojarski, EI
Transportation Associate

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Ph: 919-872-5115

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DRAFT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

A Traffic Impact Analysis (TIA) may be required for developments based on the site trip generation estimates, site context, or at the discretion of the NCDOT District Engineer. The Applicant or the TIA Consultant shall submit this form along with the site plan to the District Engineer to determine the TIA need and, if a TIA is required, initiate the TIA scoping process. Without an approved scope, the TIA is incomplete and will be rejected until the study is revised to conform to NCDOT's TIA requirements.

Project Name: East Village Apartments - Clayton **Previous Name:** If Applicable

Location: West of E Front St and South of Central St **County:** Johnston **Municipality:** Clayton

Project Description: Re-develop the existing Clayton Spinning Mill into 255 apartments

Project Contact:	Applicant	TIA Consultant
Company Name	Bass, Nixon, & Kennedy, Inc. (BNK)	Ramey Kemp & Associates, Inc. (RKA)
Contact Person	Marty Bizzell, PE, CPESC	Jessica McClure, PE
Phone Number	(919) 851-4422	(919) 872-5115
Email	Marty.Bizzell@bnkinc.com	jmmclure@rameykemp.com
Mailing Address	6310 Chapel Hill Road, Suite 250 Raleigh, NC 27607	5808 Faringdon Place, Suite 100 Raleigh, NC 27609

Site Plan Prepared By: Bnk **Site Plan Date:** 04/02/2018

See site plan/vicinity map requirements on page 2.

Parcel Size: 24.5 Acre(s) **Anticipated Build-Out Year:** Assume 2021

Weekday Site Trip Generation - Do NOT adjust for mode split, pass-by, internal capture, or diverted trips.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
220	Apartments	255	dwellings	1900	Adj. Street	27	89	116	86	50	136	ITE Equation
Total												

Refer to the current *NCDOT Congestion Management Capacity Analysis Guidelines* for acceptable trip calculation methods and data sources.

**Explain local or other data sources, if used:

☐ The estimated site trips meet NCDOT's TIA trip threshold of 3,000 daily trips.

☒ The estimated site trips meet the municipal TIA trip threshold of 100 trips / peak hour

☐ This project is located in a known STIP and/ or local CIP project #

☐ This project includes a rezoning request.

☐ The proposed site access is located within 1,000 feet of an interchange.

☐ The Applicant requests for a new or modified control-of-access break.

☐ The Applicant requests for a new or modified median break.

Applicant's Signature | Print Name | Date

DRAFT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

Site Plan/Vicinity Map Requirement for TIA Need Screening: While the site plan may not be finalized during the TIA scoping stage, the graphic representation of the proposed development shall provide adequate details on the development scope and context. More specifically, the site plan/map shall clearly show the location and type of each access point, spacing to adjacent and opposing driveways or intersections, internal street network, proposed buildings/parcels with their anticipated uses and sizes at full build-out and, if applicable, any nearby interstate, US, NC or Secondary Roads (SR).

Project Name: _____ **Project Reference Number:** _____

☒ **A TIA is Required by the Local Government.** In addition, the study area is expected to include NCDOT maintained transportation facilities.

☐ **A TIA is Required by NCDOT,** per the *Policy on Street and Driveway Access to North Carolina Highways*.

If either or both of the boxes above are checked, the Applicant/TIA Consultant is hereby requested to fill out as much as possible of the following TIA scoping checklist, and return it along with the supporting documents to NCDOT prior to the scoping meeting.

☐ **A TIA is NOT required**. This decision is based on the development information presented above. Changes in the development plan will require re-evaluation of the TIA need, and may necessitate a TIA. The Applicant should inform the District Engineer of any significant changes in a timely fashion to avoid delays or rejections of the driveway permit / encroachment agreement applications.

Additional Comments:

The TIA need decision is made by the NCDOT Division ____ District____ on _____.

_____ _____

NCDOT District Representative's Signature — Print Name

Email concurrence may be used in lieu of the signature.

DRAFT TIA Scoping Checklist

TIA Need Screening → TIA Scoping → TIA Submittal

Project Name: East Village Apartments - Clayton **TIA Scoping Date:** _____

☒ **TIA Need Screening Forms are Attached.** Project Reference #: _____ Decision Date: _____

☒ **Site Plan and Access**

☒ Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.
Refer to NCDOT's *Policy on Street and Driveway Access to North Carolina Highways* pages 14 and 15 for site plan requirements.

☒ Identify site access.

New Access	On Road	Access Type		Driveway Spacing		
	Road Name	Permitted Movements	Traffic Control	Distance (ft)	Direction	Nearest Intersection / Access
Access A	Front Street	Conventional Full-Mvmt	2-Way Stop		Please Select	
Access B						
Access C						
Access D						
Access E						
Access F						
Access G						
Access H						

Existing Access	Existing Intersection of		Access Modification	**Proposed Interconnectivity** (If Applicable)		
	Road A	Road B		Connector #	Road Connected	Adjacent Development
Access 1	Central Street	Creekside Drive	N/A	Connector 1		
Access 2	Central Street	E Ridge Circle	N/A	Connector 2		
Access 3	Front Street	Mill Street	N/A	Connector 3		
Access 4				Connector 4		

☐ Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).

☐ **Proposed K-12 School Site**

☐ NCDOT MSTA School Traffic Calculator for Select School Type shall be used.

☐ Peak Hour Factors (PHFs) shall be adjusted/weighted for new school trips (0.5 PHF by default).

☐ Internal school circulation analysis is required, and should be submitted in advance or concurrent with the TIA submittal.

☐ Clarify traffic operation plans (e.g. traffic circulation pattern, pedestrian access, drop-off/pick-up zone location and configuration, queue storage area and, if applicable, staggered start times).

☒ **Trip Generation**

The TIA Consultant shall prepare trip generation estimates following the current *NCDOT Congestion Management Capacity Analysis Guidelines*, and submit the calculation sheets and supporting information to the District Engineer for approval prior to capacity analysis.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
220	Apartments	255	dwellings	1900	Adj. Street	27	89	116	86	50	136	ITE Equation
Unadjusted Site Trips				1900		27	89	116	86	50	136	
Internal Capture Trips (Attach Calculation Sheets)												Please Select
Internal Capture % of Unadjusted Site Trips				%		%			%			
LUC	Proposed Land Use	Any Internal Trips?		Pass-By % of External Trips								
		Please Select		%		%			%			Please Select
				%		%			%			
				%		%			%			
				%		%			%			
				%		%			%			
Pass-By Trips (Attach Calculation Sheets)												
Adjacent Street Volumes												Please Select
Non-Pass-By Primary Trips												
Diverted Trips, if Applicable and Justifiable												Please Select

**Explain local or other data sources, if used:

☒ Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

ITE LUC	Existing Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
					Please Select							Please Select
Total Existing Site Trips												

☒ **Trip Distribution**

☐ Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).

☐ Trip distribution diagrams will be submitted separately, along with supporting information, to the District Engineer for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

If required by the District Engineer, the following additional diagrams shall also be submitted:

☐ Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)

☐ Inter-Development Trips (if 'internal" trips cross public streets)

☐ Pass-By Trips

☐ Diverted Trips

☐ Each Analysis Period

☐ **Mode Split**

☐ Provide Data Source and Justification

Mode / Period	Auto		
AM Peak	%	%	%
PM Peak	%	%	%
Daily	%	%	%
	%	%	%

☐ Identify proper infrastructure and accommodation for other modes of travel.

☒ **Analysis Peak Periods:**

☒ Weekday AM Peak _____

☒ Weekday PM Peak _____

☐ Weekday Midday Peak _____

☐ Weekday PM School Peak _____

☐ Weekend _____ Peak _____

☐ Other _____

☒ Study Area Intersections and Data Collection

The study area shall include the site access intersections (both new and existing) identified under "Site Plan and Access" on page 1, as well as the following external and, if applicable, internal intersections.

External Intersection	Intersection of		Traffic Control	Intersection Turning Movement Counts			Notes
	Road A	Road B		New / Existing	Date of Counts	Growth Adjustment	
#1	Front Street	Central Street	2-Way Stop	Require New Counts			
#2	Front Street	NC 42	Signal	Require New Counts			
#3	Old State NC 42	NC 42	Signal	Require New Counts			
#4	Central Street	Main Street	Signal	Require New Counts			
#5	Front Street	Bent Branch Loop	Yield	Require New Counts			
#6							
#7							
#8							
#9							
#10							
#11							
#12							

Internal Intersection	Intersection of		Access Type		Intersection Spacing		
	Road A	Road B	Traffic Control	Permitted Movements	Distance (ft)	Direction	Nearest Intersection
#101	Central Street	Creekside Drive	2-Way Stop	Conventional Full-Mvmt		Please Select	
#102	Central Street	East Ridge Circle	2-Way Stop	Conventional Full-Mvmt			
#103	Front Street	Mill Street	2-Way Stop	Conventional Full-Mvmt			
#104							
#105							

The following data will be collected:

☒ New traffic turning movement counts in ☒ 15-min intervals ☐ 5-min intervals (near schools)
Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.

☐ To account for the impact of existing and/or proposed school traffic, PHFs will be adjusted for:

intersections numbered: _____

and access points numbered: _____

☐ Traffic Forecast Data for TIP: _____

☒ Roadway/Intersection Configuration & Traffic Control

☒ Traffic Signal Phasing & Timing Data

☐ Crash Data: _____ Period: _____

☐ Other:

☒ **Future Year Conditions**

☒ Project Build-Out Year: Assume 2021

☒ Future Analysis Year(s): _____

☐ Identify below any funded/committed future transportation improvements, as well as any approved but incomplete developments near the site.

Funded STIP / Local CIP Project	Project Description	Year Complete

Nearby Approved Development	Location	Future Land Use (exclude any completed phases)	Committed Improvements

☐ Annual Growth Factor: _____%

Justification/Data Source: _____

☐ **Local Comprehensive Transportation Plan Compliance**

☐ Identify Applicable Local Transportation Planning Documents

☐ Identify Applicable Roadways inside the Study Area

Road Name	Classification	Speed Limit	Proposed Cross-Section	Proposed Right-of-Way	Compliance Requirements	Affect Study Intersection #

☒ **Study Method**

The traffic analysis shall follow the current *NCDOT Congestion Management Capacity Analysis Guidelines*, *Policy on Street and Driveway Access to North Carolina Highways*, and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

1. Existing Conditions
2. Future No-Build Conditions (existing + background growth + approved developments + committed or funded improvements)
3. Future Build Conditions (future no-build + site trips)
4. Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development's impacts) and, if applicable:

☐ 5. TIP Design Year Analysis _____

☐ 6. Alternative Access Scenario (without proposed control-of-access or median break / modification)

The following additional analysis/outputs should be provided as warranted:

☐ Signal Warrant Analysis for accesses/intersections _____
☐ Multi-Modal Level of Service Analysis
☐ School Loading Zone Traffic Simulation
☐ Phasing Analysis (scope separately as needed)
☐ Safety/Crash Analysis
☐ Control-of-Access Modification Justification
☐ Median Break / Modification Justification
☐ Other _____

☒ **Submittals**

In addition to the hardcopies required below, the TIA Consultant shall provide the District Engineer and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

☐ Div. Traffic Engr ☐ Regional Traffic Engr ☐ Congestion Management ☐ Other _____

Submittals	NCDOT		Local Government	
	Electronic	Hardcopy	Electronic	Hardcopy
Trip Generation & Distribution	Required		Please Select	
Draft TIA Report	Required			
Final Sealed TIA Report	Required			

☐ **Additional Comments (**municipal TIA requirements, approved variations from NCDOT guidelines)

Agreement by All Parties

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the District Engineer in writing. If approved by NCDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

This agreement shall become effective on the date approved by NCDOT, and shall expire____ months after the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

APPLICANT

_____	_____	_____
Signature	Print Name	Date

TIA CONSULTANT

_____	_____	_____
Signature	Print Name	Date

LOCAL GOVERNMENT REPRESENTATIVE (If Applicable)

_____	_____	_____
Signature	Print Name	Date

Email concurrence may be used in lieu of the signature.

NCDOT DISTRICT REPRESENTATIVE

Reviewed and approved by the NCDOT Division ____District____ on _____.

_____	_____
Signature	Print Name

Email concurrence may be used in lieu of the signature.

DRAFT TIA Submittal Checklist

TIA Need Screening → TIA Scoping → TIA Submittal

Submittal: Please Select **Document Date:** _____

Project Name: _____ **Previous Name:** If Applicable _____

NCDOT Division: _____ **District:** _____ **County:** _____ **Municipality:** _____

TIA Consultant: _____ Submitted By: _____

Phone Number: _____ Email: _____

TIA Scoping Checklist Approval Date: _____ **Unadjusted Daily Site Trips:** _____

☒ The approved TIA Scoping Checklist is included in this submittal.

☒ LOS D or better is expected at all study intersections after proposed mitigations.

☒ The study report is sealed by a NC Professional Engineer with expertise in traffic engineering.

☒ This study has identified all known deficiencies with and without the proposed development.

☒ This study has identified mitigation measures to adequately accommodate the site trips.

Explain here if any of the boxes above are unchecked:

The undersigned affirms that, except for the deviations noted below, the TIA submittal conforms to the current *NCDOT Congestion Management Capacity Analysis Guidelines*, *Policy on Street and Driveway Access to North Carolina Highways*, and the TIA Scoping Checklist approved by the NCDOT District Office. The undersigned also acknowledges that the TIA will be rejected if the deviations and justifications are not properly documented and approved by NCDOT.

Deviations and Justifications (e.g., changes in site plan, development schedule, site trip and off-site trip estimates, study area, data collection, analysis period and method. Attached separate sheets if needed.)

TIA Consultant's Signature (Professional Engineer of TIA Record)	Print Name	Date

Effective Date: 10/01/2017 (Version 17-721)

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

May 23, 2018

Ms. Samantha Wullenwaber
Clayton Planning Department
111 E 2nd Street
Clayton, NC 27520
P: 919.553.5002
E: swullenwaber@townofclaytonnc.org

Reference: East Village Apartments
Clayton, North Carolina

Subject: Memorandum of Understanding for TIA Report

Dear Ms. Wullenwaber:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions to be included in the Traffic Impact Analysis (TIA) report for the proposed development located south of Central Street and east of Front Street in Clayton, North Carolina.

The East Village Apartments development is a residential development that is expected to re-develop the existing Clayton Spinning Mill. For the purpose of the TIA, the site is analyzed with 255 low-rise apartment units and is expected to be completed in 2021. Site access will be provided via the existing two full-movement driveways along Central Street and the existing full-movement driveway along Front Street. It should be noted that although the existing spinning mill is currently operational, it is expected that traffic to and from this mill is minimal. Therefore, to remain conservative, counts at these existing access drives were not collected and the volumes were considered negligible. A general site plan has been attached for your reference.

Study Area

The study area is proposed to consist of the following intersections:

- Front Street and Central Street (unsignalized)
- Front Street and NC 42 (signalized)
- Old State NC 42 and NC 42 (signalized)
- Central Street and Main Street (signalized)
- Front Street and Bent Branch Loop Road (roundabout)
- Central Street and Creekside Drive (unsignalized, site access)
- Central Street and East Ridge Circle (unsignalized, site access)
- Front Street and Mill Street (unsignalized, site access)

Existing Traffic Volumes

Peak hour turning movement counts were collected at the following existing study intersections by RKA in May of 2018 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hours:

- Front Street and Central Street
- Front Street and NC 42
- Old State NC 42 and NC 42
- Central Street and Main Street
- Front Street and Bent Branch Loop Road

It should be noted these counts were collected while the local schools were in session. An existing (2018) peak hour traffic volumes figure has been attached for your reference.

Trip Generation

Average weekday daily and peak hour trips for the proposed site were calculated utilizing methodology contained within the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. Per North Carolina Department of Transportation (NCDOT) Congestion Management guidelines, equations were used to generate trips for the development. No pass-by trips are associated with this type of development. Refer to Table 1 for a detailed breakdown of the trip generation.

TABLE 1
Trip Generation

Land Use (ITE Code)	Size	Weekday Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Low-Rise Apartments (220)	255 dwellings	1,900	27	89	86	50

It is estimated at full build-out the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the PM peak hour.

Trip Distribution and Assignment

The proposed site trip distribution is based on existing traffic patterns, population centers, and engineering judgment. A summary of the overall distribution is below:

- 10% to/from the north via Main Street
- 25% to/from the east via NC 42
- 50% to/from the south via Main Street
- 15% to/from the west via NC 42

A site trip distribution figure has been attached for your reference.

Analysis Scenarios

All capacity analyses will be performed utilizing Synchro 9.2. All study intersections will be analyzed during the weekday AM and PM peak hours under the following proposed traffic scenarios:

- Existing (2017) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

Background Traffic Volumes

Background traffic volumes will be determined by projecting existing (2018) traffic volumes to each analysis year using a 3% annual growth rate. Historical data was considered when determining the proposed annual growth rate. It was determined, through coordination with the Town of Clayton that three adjacent developments are to be included in the study. Traffic from these developments will be distributed according to the approved TIA's, if available, or a trip generation / distribution will be calculated. These adjacent developments are listed below:

- Arbors Phase 2 (Trip Generation Letter provided)
- East Village Walk
- Hunt Property (TIA provided)

Refer to the attached adjacent development traffic figures for a summary of these trips.

Report

The TIA report will be prepared based on the North Carolina Department of Transportation requirements.

If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report as requested. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,
Ramey Kemp & Associates, Inc.

Joshua Reinke, P.E.
Transportation Manager

Attachments: Preliminary Site Plan
Existing (2017) Count Figure
Trip Distribution Figure

CC: Sam Lawhorn, NCDOT

RAMEY KEMP & ASSOCIATES

4/2/2018 11:05:12 AM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\002 - 17033_c1.1.dgn

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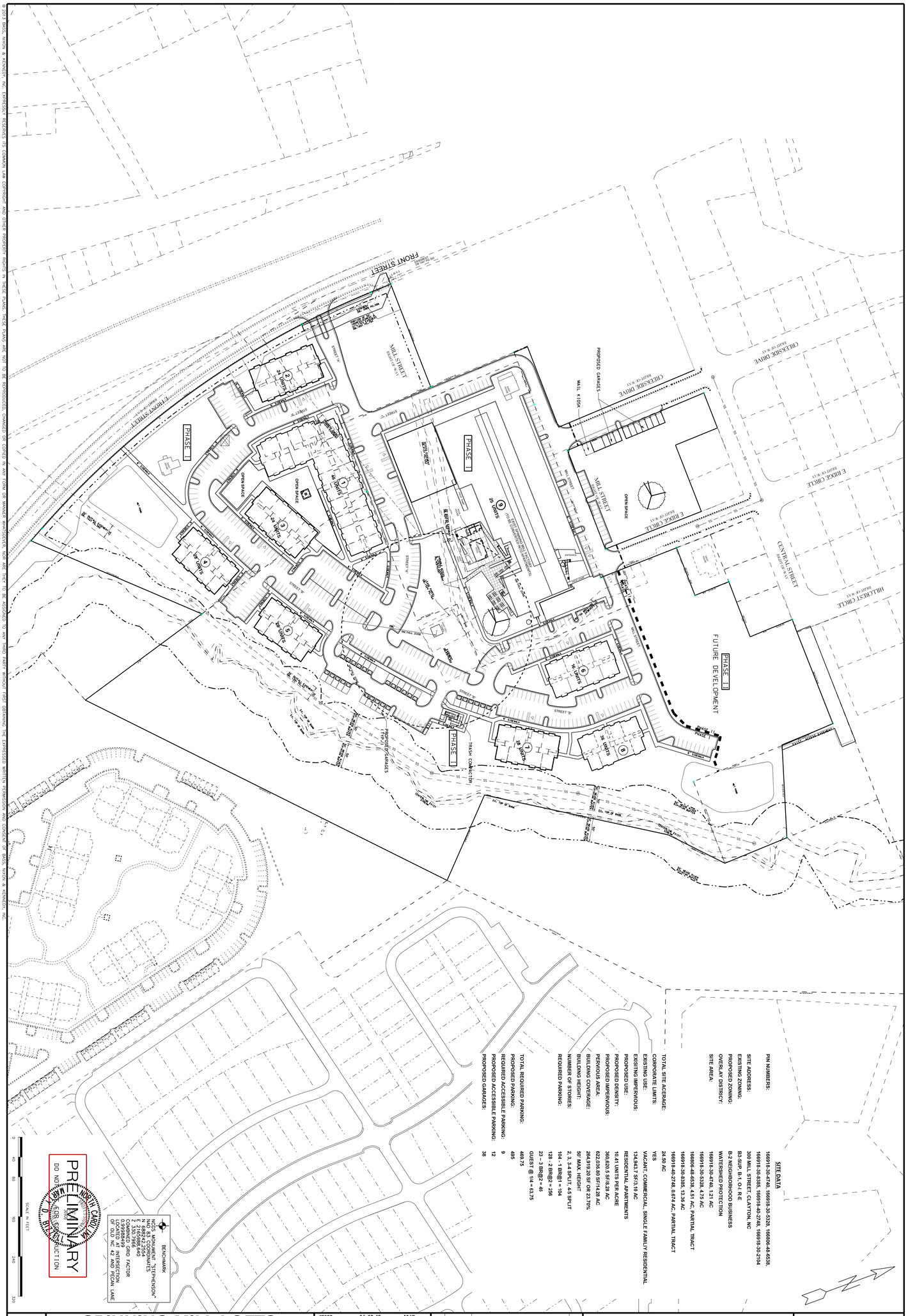


SITE DATA

PIN NUMBERS:	169919-30-4746, 169919-30-3326, 166806-48-6539,
SITE ADDRESS:	169919-30-3335, 169919-40-2716, 169919-30-2104 300 MILL STREET, CLAYTON, NC
EXISTING ZONING:	B3-SUP, D-1, O-I, R-E
PROPOSED ZONING:	B-3 NEIGHBORHOOD BUSINESS
OVERLAY DISTRICT:	WATERSHED PROTECTION
SITE AREA:	169919-30-4746, 1.21 AC 169919-30-5326, 4.79 AC 166806-48-6539, 4.91 AC, PARTIAL TRACT 169919-30-3335, 13.36 AC 169919-40-2716, 0.674 AC, PARTIAL TRACT
TOTAL SITE ACREAGE:	24.92 AC
CONSTRUCTION LIMITS:	19.5 AC
EXISTING USE:	VACANT, COMMERCIAL, SINGLE FAMILY RESIDENTIAL
EXISTING IMPERVIOUS:	134,443.7 SF/3.19 AC
PROPOSED USE:	RESIDENTIAL APARTMENTS
PROPOSED DENSITY:	10.41 UNITS PER ACRE
PROPOSED IMPERVIOUS:	300,625.5 SF/6.29 AC
PERVIOUS AREA:	622,036.80 SF/14.28 AC
BUILDING COVERAGE:	264,919.20 SF OR 23.70%
BUILDING HEIGHT:	50' MAX. HEIGHT
NUMBER OF STORIES:	2, 3, 3-4 SPLIT, 4-5 SPLIT
REQUIRED PARKING:	104 - 1 BR@1 = 104 128 - 2 BR@2 = 256 23 - 3 BR@2 = 46 GUEST @ 1/4 = 63.75
TOTAL REQUIRED PARKING:	469.75
PROPOSED PARKING:	495
REQUIRED ACCESSIBLE PARKING:	9
PROPOSED ACCESSIBLE PARKING:	12
PROPOSED GARAGES:	38

BENCHMARK
NGS MONUMENT "STEPHENSON"
NAD 83 COORDINATES
N 2185982.640
E 2185982.640
GRID TO GROUND
COMBINED GRID FACTOR
0.99988944
LOCATED AT INTERSECTION
OF OLD NC 42 AND PECAN LANE

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

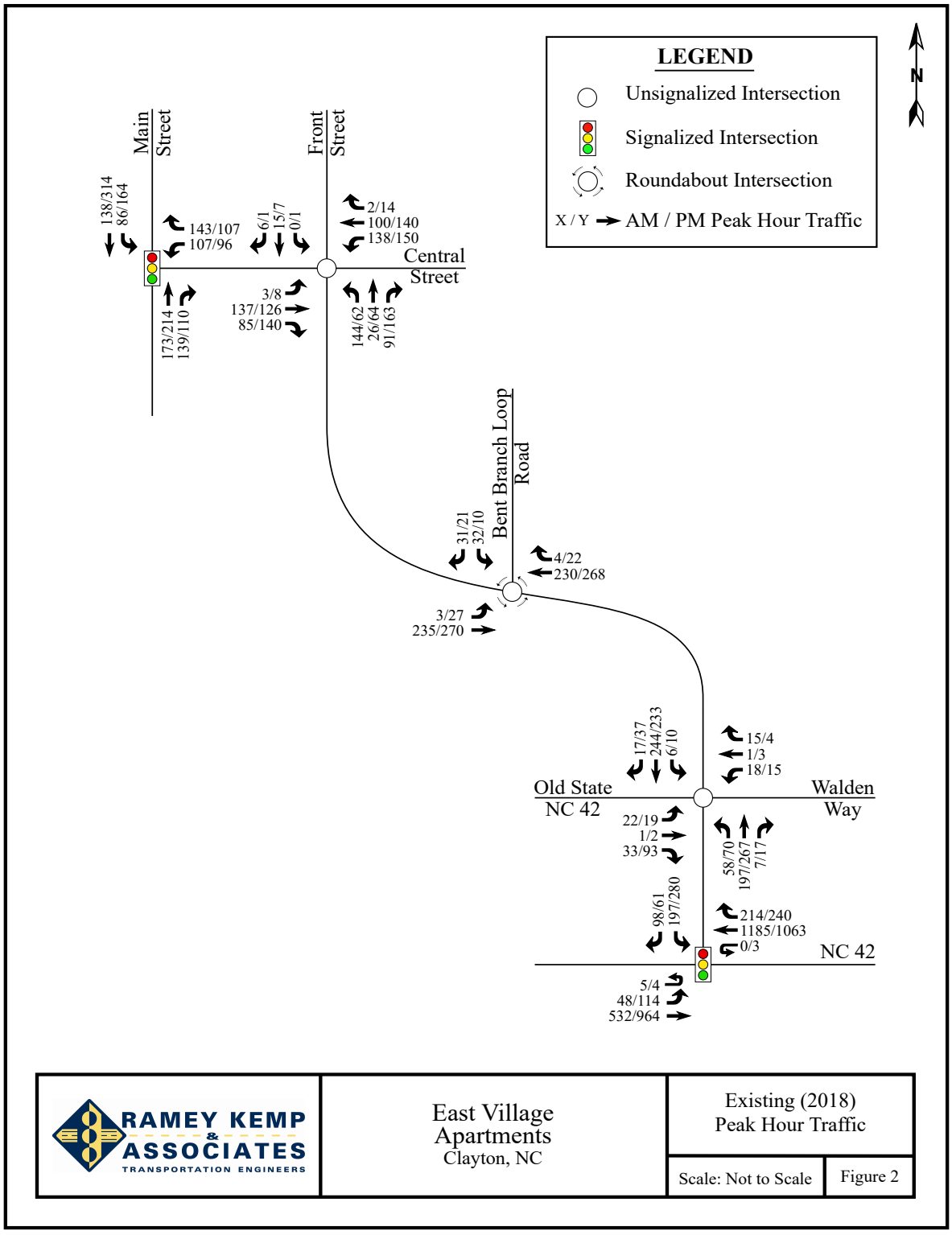
SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	04-02-18	MJG
C1.1	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	OVERALL PRELIMINARY SITE PLAN		
		SCALE: 1" = 80' HORZ		

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

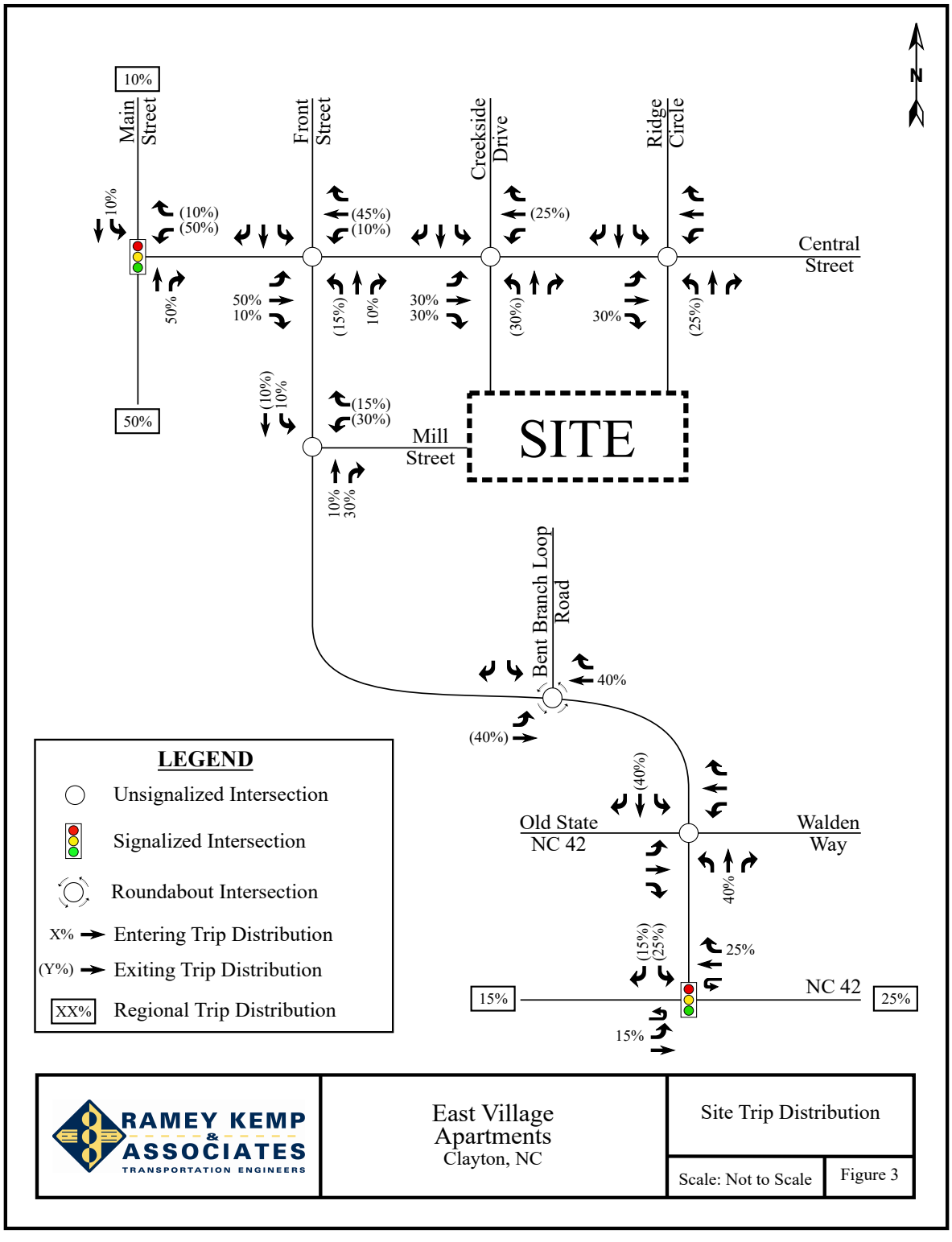


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

East Village Apartments
Clayton, NC

Existing (2018) Peak Hour Traffic

Scale: Not to Scale | Figure 2



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

East Village Apartments
Clayton, NC

Site Trip Distribution

Scale: Not to Scale

Figure 3

APPENDIX B

COUNT DATA

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 1

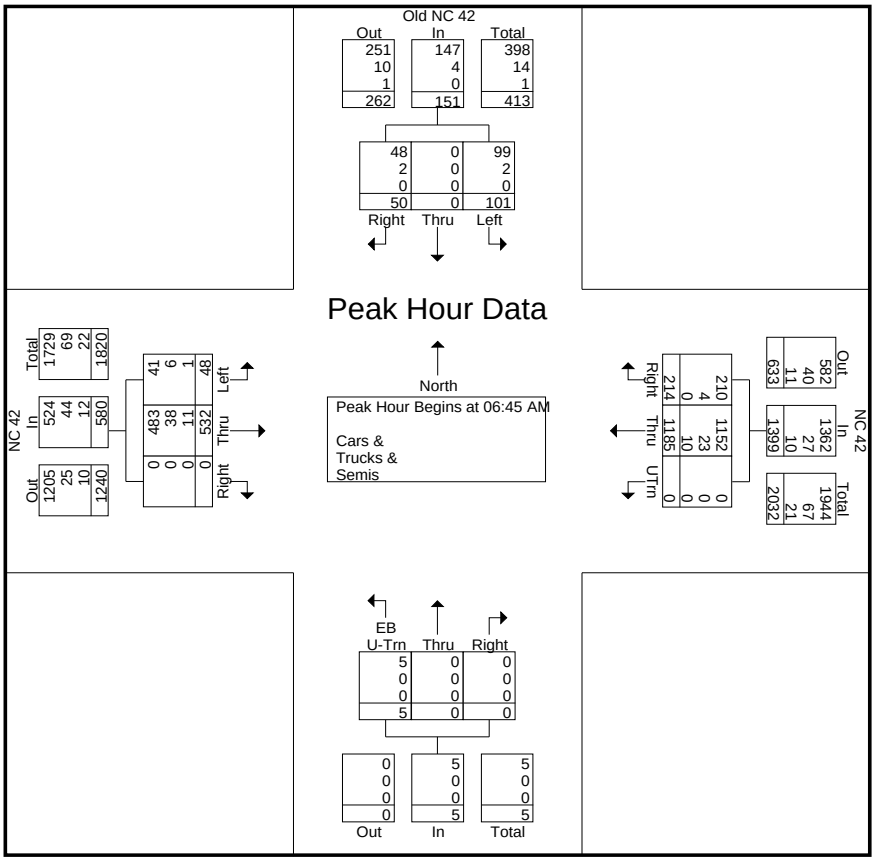
Groups Printed- Cars & - Trucks & - Semis

	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	14	0	15	29	34	317	0	351	0	0	2	2	0	92	6	98	480
06:45 AM	10	0	16	26	61	335	0	396	0	0	1	1	0	102	9	111	534
Total	24	0	31	55	95	652	0	747	0	0	3	3	0	194	15	209	1014
07:00 AM	6	0	26	32	56	314	0	370	0	0	2	2	0	138	9	147	551
07:15 AM	18	0	32	50	53	281	0	334	0	0	2	2	0	145	17	162	548
07:30 AM	16	0	27	43	44	255	0	299	0	0	0	0	0	147	13	160	502
07:45 AM	19	0	40	59	38	248	0	286	0	0	1	1	0	149	10	159	505
Total	59	0	125	184	191	1098	0	1289	0	0	5	5	0	579	49	628	2106
08:00 AM	15	0	25	40	40	245	1	286	0	0	2	2	0	149	16	165	493
08:15 AM	10	0	22	32	25	253	0	278	0	0	1	1	0	158	20	178	489
08:30 AM	8	0	34	42	59	293	1	353	0	0	5	5	0	153	9	162	562
08:45 AM	8	0	32	40	94	297	0	391	0	0	4	4	0	130	11	141	576
Total	41	0	113	154	218	1088	2	1308	0	0	12	12	0	590	56	646	2120
*** BREAK ***																	
04:00 PM	13	0	62	75	42	223	0	265	0	0	4	4	0	194	17	211	555
04:15 PM	7	0	67	74	44	218	0	262	0	0	2	2	0	227	31	258	596
04:30 PM	12	0	56	68	43	305	1	349	0	0	0	0	0	242	19	261	678
04:45 PM	15	0	64	79	50	274	0	324	0	0	0	0	0	256	17	273	676
Total	47	0	249	296	179	1020	1	1200	0	0	6	6	0	919	84	1003	2505
05:00 PM	9	0	82	91	36	259	1	296	0	0	1	1	0	189	24	213	601
05:15 PM	25	0	78	103	46	225	1	272	0	0	3	3	0	277	23	300	678
05:30 PM	4	0	75	79	43	286	0	329	0	0	5	5	0	218	20	238	651
05:45 PM	12	0	49	61	46	270	0	316	0	0	5	5	0	228	20	248	630
Total	50	0	284	334	171	1040	2	1213	0	0	14	14	0	912	87	999	2560
06:00 PM	7	0	58	65	42	183	0	225	0	0	3	3	0	190	15	205	498
06:15 PM	12	0	78	90	45	241	0	286	0	0	2	2	0	255	11	266	644
06:30 PM	8	0	66	74	33	225	0	258	0	0	0	0	0	225	20	245	577
06:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	255	13	268	270
Total	27	0	202	229	120	649	0	769	0	0	7	7	0	925	59	984	1989
Grand Total	248	0	1004	1252	974	5547	5	6526	0	0	47	47	0	4119	350	4469	12294
Apprch %	19.8	0	80.2		14.9	85	0.1		0	0	100		0	92.2	7.8		
Total %	2	0	8.2	10.2	7.9	45.1	0	53.1	0	0	0.4	0.4	0	33.5	2.8	36.4	
Cars &	234	0	985	1219	961	5392	5	6358	0	0	47	47	0	3956	324	4280	11904
% Cars &	94.4	0	98.1	97.4	98.7	97.2	100	97.4	0	0	100	100	0	96	92.6	95.8	96.8
Trucks &	13	0	18	31	13	115	0	128	0	0	0	0	0	123	24	147	306
% Trucks &	5.2	0	1.8	2.5	1.3	2.1	0	2	0	0	0	0	0	3	6.9	3.3	2.5
Semis	1	0	1	2	0	40	0	40	0	0	0	0	0	40	2	42	84
% Semis	0.4	0	0.1	0.2	0	0.7	0	0.6	0	0	0	0	0	1	0.6	0.9	0.7

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 2

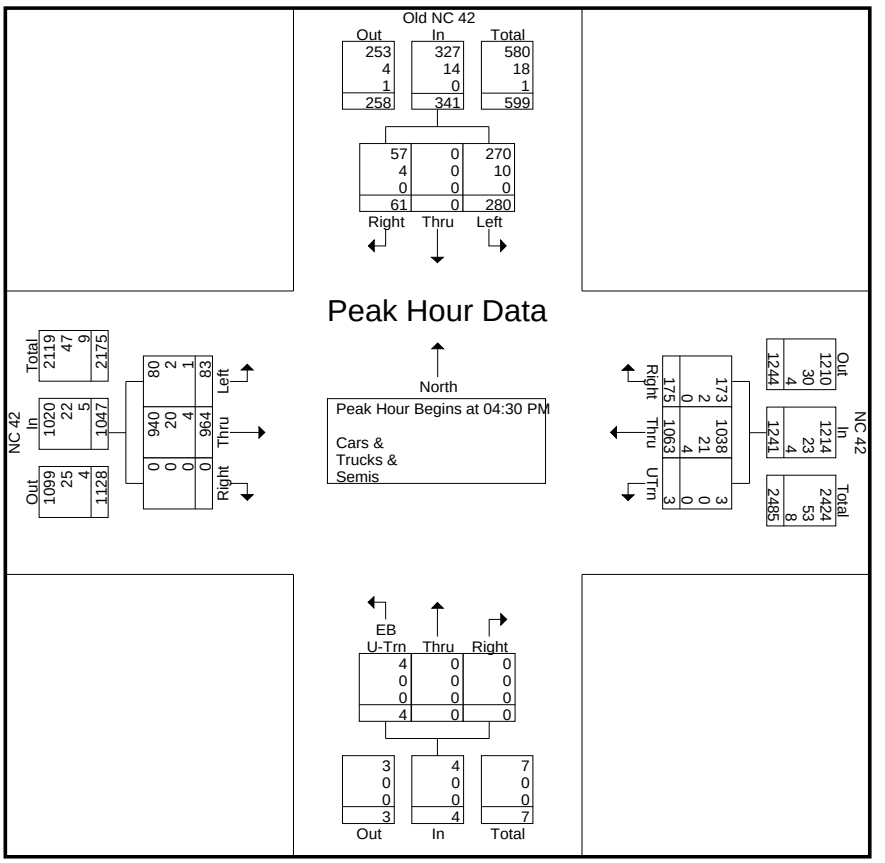
	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	10	0	16	26	61	335	0	396	0	0	1	1	0	102	9	111	534
07:00 AM	6	0	26	32	56	314	0	370	0	0	2	2	0	138	9	147	551
07:15 AM	18	0	32	50	53	281	0	334	0	0	2	2	0	145	17	162	548
07:30 AM	16	0	27	43	44	255	0	299	0	0	0	0	0	147	13	160	502
Total Volume	50	0	101	151	214	1185	0	1399	0	0	5	5	0	532	48	580	2135
% App. Total	33.1	0	66.9		15.3	84.7	0		0	0	100		0	91.7	8.3		
PHF	.694	.000	.789	.755	.877	.884	.000	.883	.000	.000	.625	.625	.000	.905	.706	.895	.969
Cars &	48	0	99	147	210	1152	0	1362	0	0	5	5	0	483	41	524	2038
% Cars &	96.0	0	98.0	97.4	98.1	97.2	0	97.4	0	0	100	100	0	90.8	85.4	90.3	95.5
Trucks &	2	0	2	4	4	23	0	27	0	0	0	0	0	38	6	44	75
% Trucks &	4.0	0	2.0	2.6	1.9	1.9	0	1.9	0	0	0	0	0	7.1	12.5	7.6	3.5
Semis	0	0	0	0	0	10	0	10	0	0	0	0	0	11	1	12	22
% Semis	0	0	0	0	0	0.8	0	0.7	0	0	0	0	0	2.1	2.1	2.1	1.0



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 3

	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	0	56	68	43	305	1	349	0	0	0	0	0	242	19	261	678
04:45 PM	15	0	64	79	50	274	0	324	0	0	0	0	0	256	17	273	676
05:00 PM	9	0	82	91	36	259	1	296	0	0	1	1	0	189	24	213	601
05:15 PM	25	0	78	103	46	225	1	272	0	0	3	3	0	277	23	300	678
Total Volume	61	0	280	341	175	1063	3	1241	0	0	4	4	0	964	83	1047	2633
% App. Total	17.9	0	82.1		14.1	85.7	0.2		0	0	100		0	92.1	7.9		
PHF	.610	.000	.854	.828	.875	.871	.750	.889	.000	.000	.333	.333	.000	.870	.865	.873	.971
Cars &	57	0	270	327	173	1038	3	1214	0	0	4	4	0	940	80	1020	2565
% Cars &	93.4	0	96.4	95.9	98.9	97.6	100	97.8	0	0	100	100	0	97.5	96.4	97.4	97.4
Trucks &	4	0	10	14	2	21	0	23	0	0	0	0	0	20	2	22	59
% Trucks &	6.6	0	3.6	4.1	1.1	2.0	0	1.9	0	0	0	0	0	2.1	2.4	2.1	2.2
Semis	0	0	0	0	0	4	0	4	0	0	0	0	0	4	1	5	9
% Semis	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0	0.4	1.2	0.5	0.3



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PH: 919 872-5115

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 1

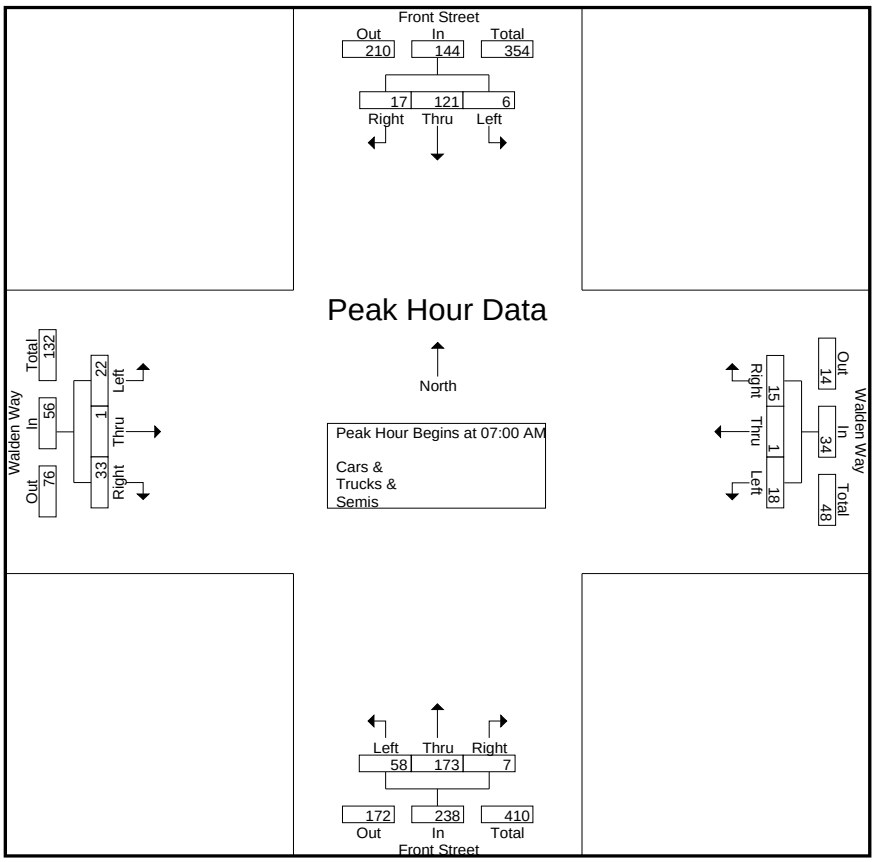
Groups Printed- Cars & - Trucks & - Semis

	Front Street From North				Walden Way From East				Front Street From South				Walden Way 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
06:30 AM	4	21	0	25	3	0	5	8	1	31	10	42	4	0	3	7	82
06:45 AM	5	20	0	25	4	1	4	9	1	54	15	70	4	0	4	8	112
Total	9	41	0	50	7	1	9	17	2	85	25	112	8	0	7	15	194
07:00 AM	6	25	0	31	5	0	0	5	2	52	12	66	5	1	7	13	115
07:15 AM	0	29	5	34	4	1	7	12	3	43	19	65	8	0	4	12	123
07:30 AM	5	32	1	38	5	0	3	8	1	46	11	58	6	0	6	12	116
07:45 AM	6	35	0	41	1	0	8	9	1	32	16	49	14	0	5	19	118
Total	17	121	6	144	15	1	18	34	7	173	58	238	33	1	22	56	472
08:00 AM	3	19	1	23	2	1	11	14	2	32	22	56	3	0	3	6	99
08:15 AM	4	20	0	24	1	0	8	9	0	23	12	35	6	0	3	9	77
08:30 AM	3	26	0	29	1	0	7	8	5	43	19	67	7	1	1	9	113
08:45 AM	9	28	0	37	3	1	6	10	2	85	16	103	14	0	6	20	170
Total	19	93	1	113	7	2	32	41	9	183	69	261	30	1	13	44	459
*** BREAK ***																	
04:00 PM	10	46	1	57	2	0	4	6	5	34	20	59	21	1	5	27	149
04:15 PM	5	50	2	57	2	0	3	5	6	42	21	69	22	0	5	27	158
04:30 PM	6	41	3	50	0	0	3	3	2	41	15	58	23	0	4	27	138
04:45 PM	14	53	3	70	4	1	4	9	4	47	16	67	24	0	4	28	174
Total	35	190	9	234	8	1	14	23	17	164	72	253	90	1	18	109	619
05:00 PM	7	52	3	62	0	0	0	0	6	27	17	50	24	0	5	29	141
05:15 PM	7	62	2	71	0	2	5	7	3	43	21	67	26	1	7	34	179
05:30 PM	9	53	2	64	0	0	6	6	4	44	16	64	19	1	3	23	157
05:45 PM	12	38	0	50	2	1	4	7	4	47	11	62	17	1	5	23	142
Total	35	205	7	247	2	3	15	20	17	161	65	243	86	3	20	109	619
06:00 PM	4	49	1	54	0	0	2	2	5	32	18	55	13	1	5	19	130
06:15 PM	5	67	0	72	2	0	3	5	3	38	13	54	18	1	11	30	161
06:30 PM	6	57	3	66	0	2	5	7	3	36	10	49	10	2	6	18	140
06:45 PM	4	31	3	38	2	0	7	9	3	25	13	41	18	0	4	22	110
Total	19	204	7	230	4	2	17	23	14	131	54	199	59	4	26	89	541
Grand Total	134	854	30	1018	43	10	105	158	66	897	343	1306	306	10	106	422	2904
Apprch %	13.2	83.9	2.9		27.2	6.3	66.5		5.1	68.7	26.3		72.5	2.4	25.1		
Total %	4.6	29.4	1	35.1	1.5	0.3	3.6	5.4	2.3	30.9	11.8	45	10.5	0.3	3.7	14.5	
Cars &	130	834	29	993	37	10	105	152	61	885	326	1272	293	10	103	406	2823
% Cars &	97	97.7	96.7	97.5	86	100	100	96.2	92.4	98.7	95	97.4	95.8	100	97.2	96.2	97.2
Trucks &	4	20	1	25	6	0	0	6	5	12	16	33	11	0	3	14	78
% Trucks &	3	2.3	3.3	2.5	14	0	0	3.8	7.6	1.3	4.7	2.5	3.6	0	2.8	3.3	2.7
Semis	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3
% Semis	0	0	0	0	0	0	0	0	0	0	0.3	0.1	0.7	0	0	0.5	0.1

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 2

	Front Street From North				Walden Way From East				Front Street From South				Walden Way 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	25	0	31	5	0	0	5	2	52	12	66	5	1	7	13	115
07:15 AM	0	29	5	34	4	1	7	12	3	43	19	65	8	0	4	12	123
07:30 AM	5	32	1	38	5	0	3	8	1	46	11	58	6	0	6	12	116
07:45 AM	6	35	0	41	1	0	8	9	1	32	16	49	14	0	5	19	118
Total Volume	17	121	6	144	15	1	18	34	7	173	58	238	33	1	22	56	472
% App. Total	11.8	84	4.2		44.1	2.9	52.9		2.9	72.7	24.4		58.9	1.8	39.3		
PHF	.708	.864	.300	.878	.750	.250	.563	.708	.583	.832	.763	.902	.589	.250	.786	.737	.959



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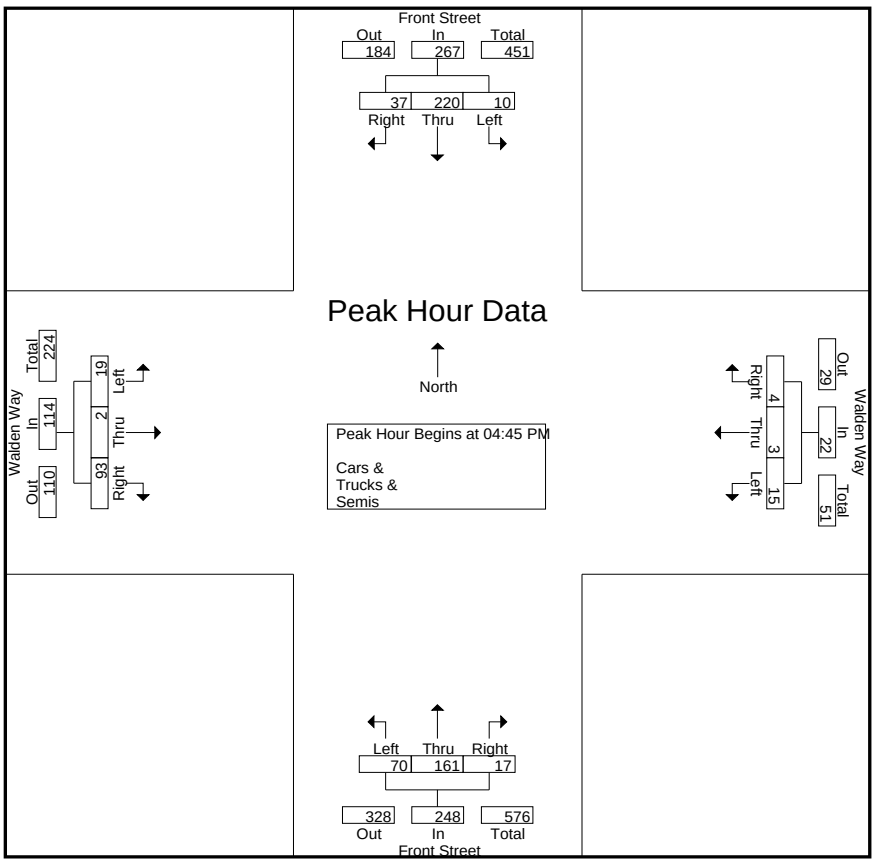
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 3

	Front Street From North				Walden Way From East				Front Street From South				Walden Way 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	53	3	70	4	1	4	9	4	47	16	67	24	0	4	28	174
05:00 PM	7	52	3	62	0	0	0	0	6	27	17	50	24	0	5	29	141
05:15 PM	7	62	2	71	0	2	5	7	3	43	21	67	26	1	7	34	179
05:30 PM	9	53	2	64	0	0	6	6	4	44	16	64	19	1	3	23	157
Total Volume	37	220	10	267	4	3	15	22	17	161	70	248	93	2	19	114	651
% App. Total	13.9	82.4	3.7		18.2	13.6	68.2		6.9	64.9	28.2		81.6	1.8	16.7		
PHF	.661	.887	.833	.940	.250	.375	.625	.611	.708	.856	.833	.925	.894	.500	.679	.838	.909



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Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 1

Groups Printed- Cars & - Trucks & - Semis

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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
06:30 AM	9	0	13	22	1	36	0	37	0	0	0	0	0	13	0	13	72
06:45 AM	8	0	11	19	0	59	0	59	0	0	0	0	0	15	0	15	93
Total	17	0	24	41	1	95	0	96	0	0	0	0	0	28	0	28	165
07:00 AM	10	0	8	18	1	61	0	62	0	0	0	0	0	21	1	22	102
07:15 AM	6	0	7	13	1	45	0	46	0	0	0	0	0	23	2	25	84
07:30 AM	7	0	6	13	2	52	0	54	0	0	0	0	0	29	0	29	96
07:45 AM	4	0	7	11	0	37	0	37	0	0	0	0	0	33	1	34	82
Total	27	0	28	55	4	195	0	199	0	0	0	0	0	106	4	110	364
08:00 AM	2	0	7	9	3	32	0	35	0	0	0	0	0	20	0	20	64
08:15 AM	5	0	5	10	0	22	0	22	0	0	0	0	0	16	1	17	49
08:30 AM	6	0	5	11	1	42	0	43	0	0	0	0	0	28	0	28	82
08:45 AM	1	0	3	4	2	89	0	91	0	0	0	0	0	26	2	28	123
Total	14	0	20	34	6	185	0	191	0	0	0	0	0	90	3	93	318
*** BREAK ***																	
04:00 PM	5	0	4	9	4	36	0	40	0	0	0	0	0	50	1	51	100
04:15 PM	4	0	1	5	11	32	0	43	0	0	0	0	0	44	10	54	102
04:30 PM	6	0	1	7	9	36	0	45	0	0	0	0	0	48	4	52	104
04:45 PM	4	0	1	5	6	46	0	52	0	0	0	0	0	63	7	70	127
Total	19	0	7	26	30	150	0	180	0	0	0	0	0	205	22	227	433
05:00 PM	4	0	3	7	1	30	0	31	0	0	0	0	0	67	8	75	113
05:15 PM	8	0	3	11	7	41	0	48	0	0	0	0	0	56	4	60	119
05:30 PM	5	0	3	8	8	36	0	44	0	0	0	0	0	56	8	64	116
05:45 PM	1	0	3	4	4	45	0	49	0	0	0	0	0	41	4	45	98
Total	18	0	12	30	20	152	0	172	0	0	0	0	0	220	24	244	446
06:00 PM	7	0	4	11	9	31	0	40	1	0	0	1	0	48	6	54	106
06:15 PM	7	0	4	11	8	43	0	51	0	0	0	0	0	67	7	74	136
06:30 PM	4	0	3	7	11	26	0	37	0	0	0	0	0	60	6	66	110
06:45 PM	4	0	2	6	8	26	0	34	0	0	0	0	0	31	7	38	78
Total	22	0	13	35	36	126	0	162	1	0	0	1	0	206	26	232	430
Grand Total	117	0	104	221	97	903	0	1000	1	0	0	1	0	855	79	934	2156
Apprch %	52.9	0	47.1		9.7	90.3	0		100	0	0		0	91.5	8.5		
Total %	5.4	0	4.8	10.3	4.5	41.9	0	46.4	0	0	0	0	0	39.7	3.7	43.3	
Cars &	117	0	101	218	93	892	0	985	1	0	0	1	0	837	79	916	2120
% Cars &	100	0	97.1	98.6	95.9	98.8	0	98.5	100	0	0	100	0	97.9	100	98.1	98.3
Trucks &	0	0	3	3	4	10	0	14	0	0	0	0	0	17	0	17	34
% Trucks &	0	0	2.9	1.4	4.1	1.1	0	1.4	0	0	0	0	0	2	0	1.8	1.6
Semis	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% Semis	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1	0.1

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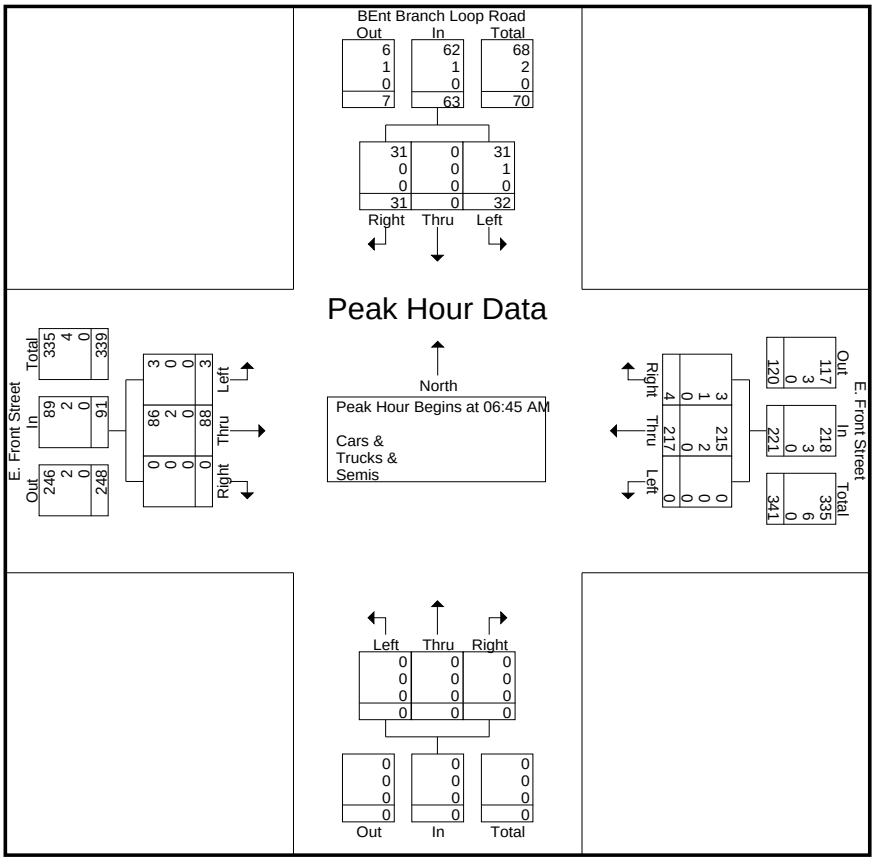
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 2

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	8	0	11	19	0	59	0	59	0	0	0	0	0	15	0	15	93
07:00 AM	10	0	8	18	1	61	0	62	0	0	0	0	0	21	1	22	102
07:15 AM	6	0	7	13	1	45	0	46	0	0	0	0	0	23	2	25	84
07:30 AM	7	0	6	13	2	52	0	54	0	0	0	0	0	29	0	29	96
Total Volume	31	0	32	63	4	217	0	221	0	0	0	0	0	88	3	91	375
% App. Total	49.2	0	50.8		1.8	98.2	0		0	0	0		0	96.7	3.3		
PHF	.775	.000	.727	.829	.500	.889	.000	.891	.000	.000	.000	.000	.000	.759	.375	.784	.919
Cars &	31	0	31	62	3	215	0	218	0	0	0	0	0	86	3	89	369
% Cars &	100	0	96.9	98.4	75.0	99.1	0	98.6	0	0	0	0	0	97.7	100	97.8	98.4
Trucks &	0	0	1	1	1	2	0	3	0	0	0	0	0	2	0	2	6
% Trucks &	0	0	3.1	1.6	25.0	0.9	0	1.4	0	0	0	0	0	2.3	0	2.2	1.6
Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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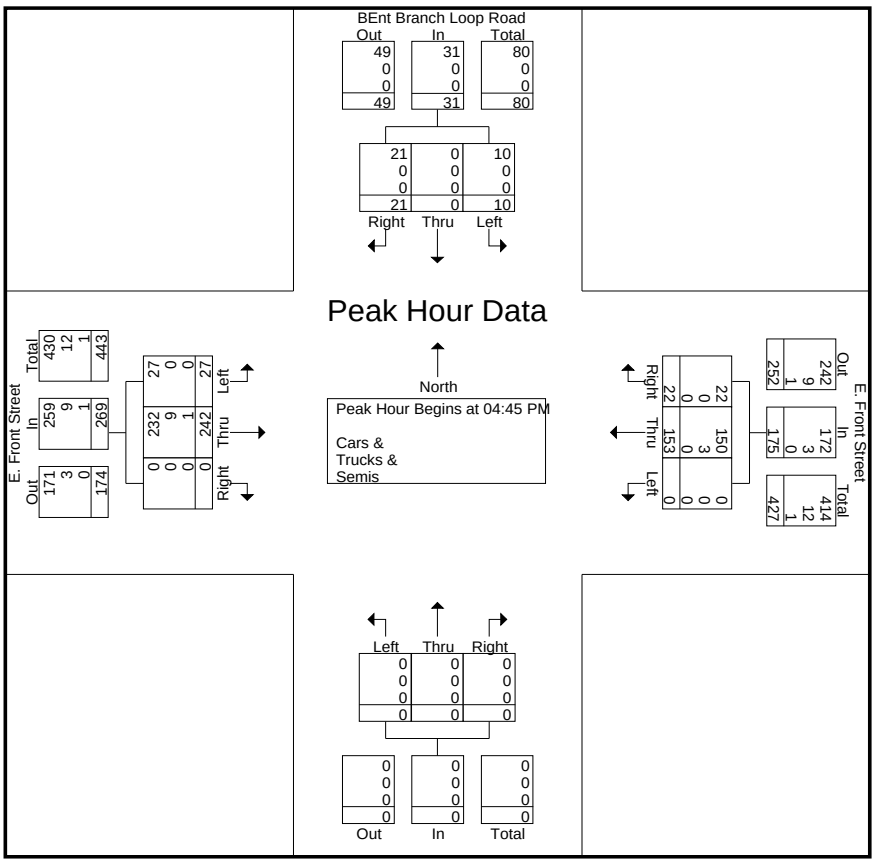
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 3

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	0	1	5	6	46	0	52	0	0	0	0	0	63	7	70	127
05:00 PM	4	0	3	7	1	30	0	31	0	0	0	0	0	67	8	75	113
05:15 PM	8	0	3	11	7	41	0	48	0	0	0	0	0	56	4	60	119
05:30 PM	5	0	3	8	8	36	0	44	0	0	0	0	0	56	8	64	116
Total Volume	21	0	10	31	22	153	0	175	0	0	0	0	0	242	27	269	475
% App. Total	67.7	0	32.3		12.6	87.4	0		0	0	0		0	90	10		
PHF	.656	.000	.833	.705	.688	.832	.000	.841	.000	.000	.000	.000	.000	.903	.844	.897	.935
Cars &	21	0	10	31	22	150	0	172	0	0	0	0	0	232	27	259	462
% Cars &	100	0	100	100	100	98.0	0	98.3	0	0	0	0	0	95.9	100	96.3	97.3
Trucks &	0	0	0	0	0	3	0	3	0	0	0	0	0	9	0	9	12
% Trucks &	0	0	0	0	0	2.0	0	1.7	0	0	0	0	0	3.7	0	3.3	2.5
Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0.4	0.2



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PH: 919 872-5115

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TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 1

Groups Printed- Cars & - Trucks & - Semis

	E. Main Street From North				Central Street From East				E. Main Street 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
06:30 AM	0	22	6	28	31	0	4	35	22	32	0	54	0	0	0	0	117
06:45 AM	0	16	7	23	40	0	16	56	16	42	0	58	0	0	0	0	137
Total	0	38	13	51	71	0	20	91	38	74	0	112	0	0	0	0	254
07:00 AM	0	31	18	49	43	0	13	56	21	48	0	69	0	0	0	0	174
07:15 AM	0	30	17	47	29	0	28	57	41	41	0	82	0	0	0	0	186
07:30 AM	0	38	32	70	36	0	27	63	54	44	0	98	0	0	0	0	231
07:45 AM	0	39	19	58	26	0	32	58	23	40	0	63	0	0	0	0	179
Total	0	138	86	224	134	0	100	234	139	173	0	312	0	0	0	0	770
08:00 AM	0	32	15	47	20	0	22	42	11	40	0	51	0	0	0	0	140
08:15 AM	0	28	16	44	24	0	14	38	7	40	0	47	0	0	0	0	129
08:30 AM	0	31	13	44	35	0	15	50	18	28	0	46	0	0	0	0	140
08:45 AM	0	31	19	50	49	0	14	63	11	48	0	59	0	0	0	0	172
Total	0	122	63	185	128	0	65	193	47	156	0	203	0	0	0	0	581
09:00 AM	0	1	0	1	0	0	3	3	1	2	0	3	0	0	0	0	7
*** BREAK ***																	
Total	0	1	0	1	0	0	3	3	1	2	0	3	0	0	0	0	7
*** BREAK ***																	
04:00 PM	0	56	41	97	31	0	46	77	36	45	0	81	0	0	0	0	255
04:15 PM	0	60	53	113	36	0	25	61	34	41	0	75	0	0	0	0	249
04:30 PM	0	55	41	96	27	0	19	46	12	57	0	69	0	0	0	0	211
04:45 PM	0	77	46	123	34	0	15	49	25	56	0	81	0	0	0	0	253
Total	0	248	181	429	128	0	105	233	107	199	0	306	0	0	0	0	968
05:00 PM	0	82	40	122	22	0	21	43	29	54	0	83	0	0	0	0	248
05:15 PM	0	74	32	106	26	0	29	55	33	59	0	92	0	0	0	0	253
05:30 PM	0	81	46	127	25	0	31	56	23	45	0	68	0	0	0	0	251
05:45 PM	0	73	32	105	30	0	19	49	27	43	0	70	0	0	0	0	224
Total	0	310	150	460	103	0	100	203	112	201	0	313	0	0	0	0	976
06:00 PM	0	61	34	95	14	0	20	34	25	45	0	70	0	0	0	0	199
06:15 PM	1	86	45	132	28	0	19	47	28	39	0	67	0	0	0	0	246
06:30 PM	0	71	49	120	18	0	18	36	27	32	0	59	0	0	0	0	215
06:45 PM	0	64	34	98	28	0	22	50	22	58	0	80	0	0	0	0	228
Total	1	282	162	445	88	0	79	167	102	174	0	276	0	0	0	0	888
Grand Total	1	1139	655	1795	652	0	472	1124	546	979	0	1525	0	0	0	0	4444
Apprch %	0.1	63.5	36.5		58	0	42		35.8	64.2	0		0	0	0		
Total %	0	25.6	14.7	40.4	14.7	0	10.6	25.3	12.3	22	0	34.3	0	0	0	0	
Cars &	1	1116	648	1765	646	0	463	1109	533	959	0	1492	0	0	0	0	4366
% Cars &	100	98	98.9	98.3	99.1	0	98.1	98.7	97.6	98	0	97.8	0	0	0	0	98.2
Trucks &	0	19	7	26	6	0	9	15	13	18	0	31	0	0	0	0	72
% Trucks &	0	1.7	1.1	1.4	0.9	0	1.9	1.3	2.4	1.8	0	2	0	0	0	0	1.6
Semis	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
% Semis	0	0.4	0	0.2	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1

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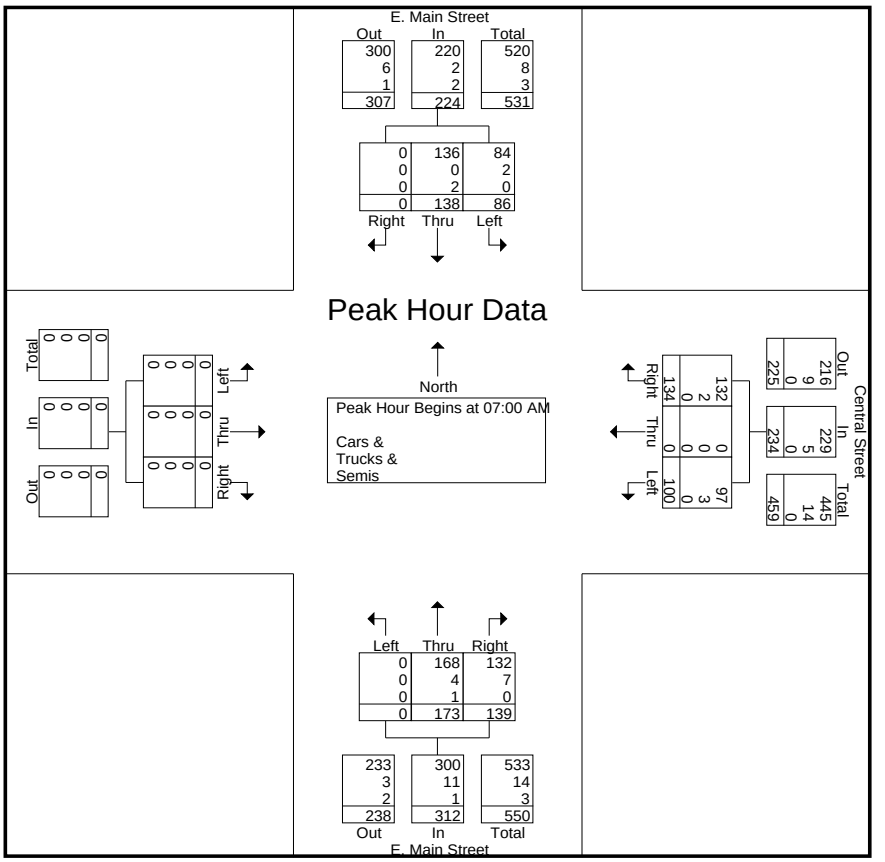
File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 2

	E. Main Street From North				Central Street From East				E. Main Street 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	31	18	49	43	0	13	56	21	48	0	69	0	0	0	0	174
07:15 AM	0	30	17	47	29	0	28	57	41	41	0	82	0	0	0	0	186
07:30 AM	0	38	32	70	36	0	27	63	54	44	0	98	0	0	0	0	231
07:45 AM	0	39	19	58	26	0	32	58	23	40	0	63	0	0	0	0	179
Total Volume	0	138	86	224	134	0	100	234	139	173	0	312	0	0	0	0	770
% App. Total	0	61.6	38.4		57.3	0	42.7		44.6	55.4	0		0	0	0		
PHF	.000	.885	.672	.800	.779	.000	.781	.929	.644	.901	.000	.796	.000	.000	.000	.000	.833
Cars &	0	136	84	220	132	0	97	229	132	168	0	300	0	0	0	0	749
% Cars &	0	98.6	97.7	98.2	98.5	0	97.0	97.9	95.0	97.1	0	96.2	0	0	0	0	97.3
Trucks &	0	0	2	2	2	0	3	5	7	4	0	11	0	0	0	0	18
% Trucks &	0	0	2.3	0.9	1.5	0	3.0	2.1	5.0	2.3	0	3.5	0	0	0	0	2.3
Semis	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% Semis	0	1.4	0	0.9	0	0	0	0	0	0.6	0	0.3	0	0	0	0	0.4



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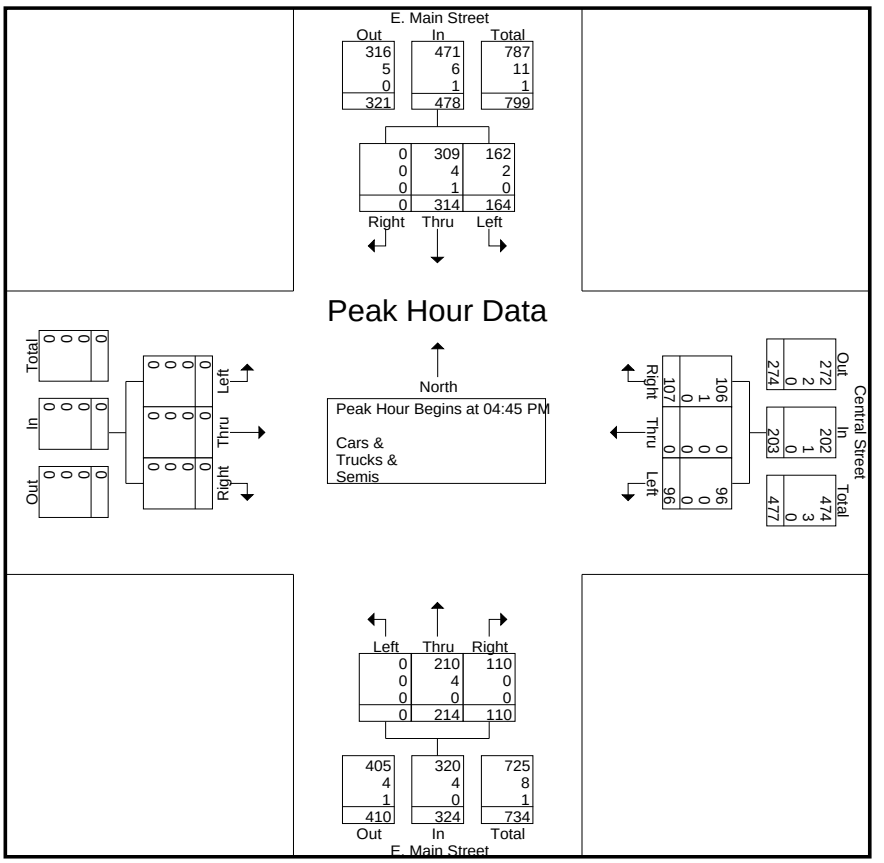
File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 3

	E. Main Street From North				Central Street From East				E. Main Street 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	77	46	123	34	0	15	49	25	56	0	81	0	0	0	0	253
05:00 PM	0	82	40	122	22	0	21	43	29	54	0	83	0	0	0	0	248
05:15 PM	0	74	32	106	26	0	29	55	33	59	0	92	0	0	0	0	253
05:30 PM	0	81	46	127	25	0	31	56	23	45	0	68	0	0	0	0	251
Total Volume	0	314	164	478	107	0	96	203	110	214	0	324	0	0	0	0	1005
% App. Total	0	65.7	34.3		52.7	0	47.3		34	66	0		0	0	0		
PHF	.000	.957	.891	.941	.787	.000	.774	.906	.833	.907	.000	.880	.000	.000	.000	.000	.993
Cars &	0	309	162	471	106	0	96	202	110	210	0	320	0	0	0	0	993
% Cars &	0	98.4	98.8	98.5	99.1	0	100	99.5	100	98.1	0	98.8	0	0	0	0	98.8
Trucks &	0	4	2	6	1	0	0	1	0	4	0	4	0	0	0	0	11
% Trucks &	0	1.3	1.2	1.3	0.9	0	0	0.5	0	1.9	0	1.2	0	0	0	0	1.1
Semis	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Semis	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1



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File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 1

Groups Printed- Cars & - Trucks & - Semis

	Central Street From North				E. Front Street From East				Central Street From South				E. Front 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
06:30 AM	0	5	0	5	0	9	32	41	7	2	17	26	9	7	1	17	89
06:45 AM	0	4	0	4	0	29	40	69	6	4	13	23	11	9	1	21	117
Total	0	9	0	9	0	38	72	110	13	6	30	49	20	16	2	38	206
07:00 AM	3	4	0	7	2	25	48	75	18	4	20	42	8	10	0	18	142
07:15 AM	2	5	0	7	0	29	29	58	13	4	42	59	23	16	0	39	163
07:30 AM	0	4	0	4	0	32	33	65	30	8	51	89	25	11	1	37	195
07:45 AM	1	2	0	3	0	14	28	42	19	7	14	40	29	23	2	54	139
Total	6	15	0	21	2	100	138	240	80	23	127	230	85	60	3	148	639
08:00 AM	0	5	2	7	3	15	18	36	13	4	7	24	17	10	4	31	98
08:15 AM	0	2	0	2	0	10	22	32	16	3	9	28	12	9	1	22	84
08:30 AM	0	3	0	3	1	13	44	58	17	7	7	31	6	15	2	23	115
*** BREAK ***																	
Total	0	10	2	12	4	38	84	126	46	14	23	83	35	34	7	76	297
*** BREAK ***																	
04:00 PM	0	4	0	4	5	23	38	66	34	21	22	77	32	19	4	55	202
04:15 PM	0	2	1	3	5	31	40	76	43	22	19	84	17	21	0	38	201
04:30 PM	0	0	0	0	2	23	30	55	38	7	10	55	13	20	2	35	145
04:45 PM	1	1	0	2	2	21	42	65	48	14	11	73	8	32	2	42	182
Total	1	7	1	9	14	98	150	262	163	64	62	289	70	92	8	170	730
05:00 PM	0	4	0	4	1	18	22	41	41	9	18	68	17	30	2	49	162
05:15 PM	0	3	0	3	2	26	28	56	32	5	23	60	27	38	3	68	187
05:30 PM	1	3	0	4	1	18	34	53	43	7	21	71	27	18	1	46	174
05:45 PM	1	5	0	6	1	24	27	52	34	8	17	59	18	16	2	36	153
Total	2	15	0	17	5	86	111	202	150	29	79	258	89	102	8	199	676
06:00 PM	0	2	0	2	0	24	18	42	32	4	25	61	19	22	2	43	148
06:15 PM	0	2	0	2	1	28	28	57	47	10	17	74	12	27	3	42	175
06:30 PM	0	2	0	2	1	20	19	40	47	6	23	76	11	20	6	37	155
06:45 PM	1	2	0	3	1	14	28	43	29	6	17	52	12	15	1	28	126
Total	1	8	0	9	3	86	93	182	155	26	82	263	54	84	12	150	604
Grand Total	10	64	3	77	28	446	648	1122	607	162	403	1172	353	388	40	781	3152
Apprch %	13	83.1	3.9		2.5	39.8	57.8		51.8	13.8	34.4		45.2	49.7	5.1		
Total %	0.3	2	0.1	2.4	0.9	14.1	20.6	35.6	19.3	5.1	12.8	37.2	11.2	12.3	1.3	24.8	
Cars &	8	61	3	72	28	443	645	1116	605	159	396	1160	349	379	39	767	3115
% Cars &	80	95.3	100	93.5	100	99.3	99.5	99.5	99.7	98.1	98.3	99	98.9	97.7	97.5	98.2	98.8
Trucks &	1	3	0	4	0	2	3	5	2	2	5	9	3	6	1	10	28
% Trucks &	10	4.7	0	5.2	0	0.4	0.5	0.4	0.3	1.2	1.2	0.8	0.8	1.5	2.5	1.3	0.9
Semis	1	0	0	1	0	1	0	1	0	1	2	3	1	3	0	4	9
% Semis	10	0	0	1.3	0	0.2	0	0.1	0	0.6	0.5	0.3	0.3	0.8	0	0.5	0.3

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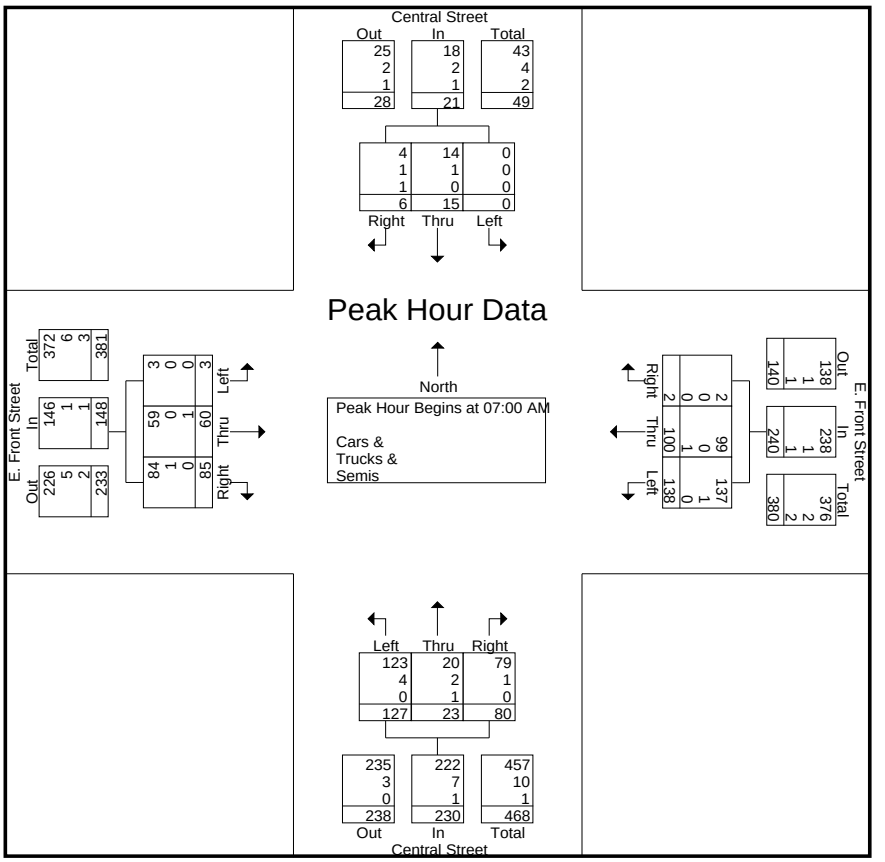
File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 2

	Central Street From North				E. Front Street From East				Central Street From South				E. Front 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	4	0	7	2	25	48	75	18	4	20	42	8	10	0	18	142
07:15 AM	2	5	0	7	0	29	29	58	13	4	42	59	23	16	0	39	163
07:30 AM	0	4	0	4	0	32	33	65	30	8	51	89	25	11	1	37	195
07:45 AM	1	2	0	3	0	14	28	42	19	7	14	40	29	23	2	54	139
Total Volume	6	15	0	21	2	100	138	240	80	23	127	230	85	60	3	148	639
% App. Total	28.6	71.4	0		0.8	41.7	57.5		34.8	10	55.2		57.4	40.5	2		
PHF	.500	.750	.000	.750	.250	.781	.719	.800	.667	.719	.623	.646	.733	.652	.375	.685	.819
Cars &	4	14	0	18	2	99	137	238	79	20	123	222	84	59	3	146	624
% Cars &	66.7	93.3	0	85.7	100	99.0	99.3	99.2	98.8	87.0	96.9	96.5	98.8	98.3	100	98.6	97.7
Trucks &	1	1	0	2	0	0	1	1	1	2	4	7	1	0	0	1	11
% Trucks &	16.7	6.7	0	9.5	0	0	0.7	0.4	1.3	8.7	3.1	3.0	1.2	0	0	0.7	1.7
Semis	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	4
% Semis	16.7	0	0	4.8	0	1.0	0	0.4	0	4.3	0	0.4	0	1.7	0	0.7	0.6



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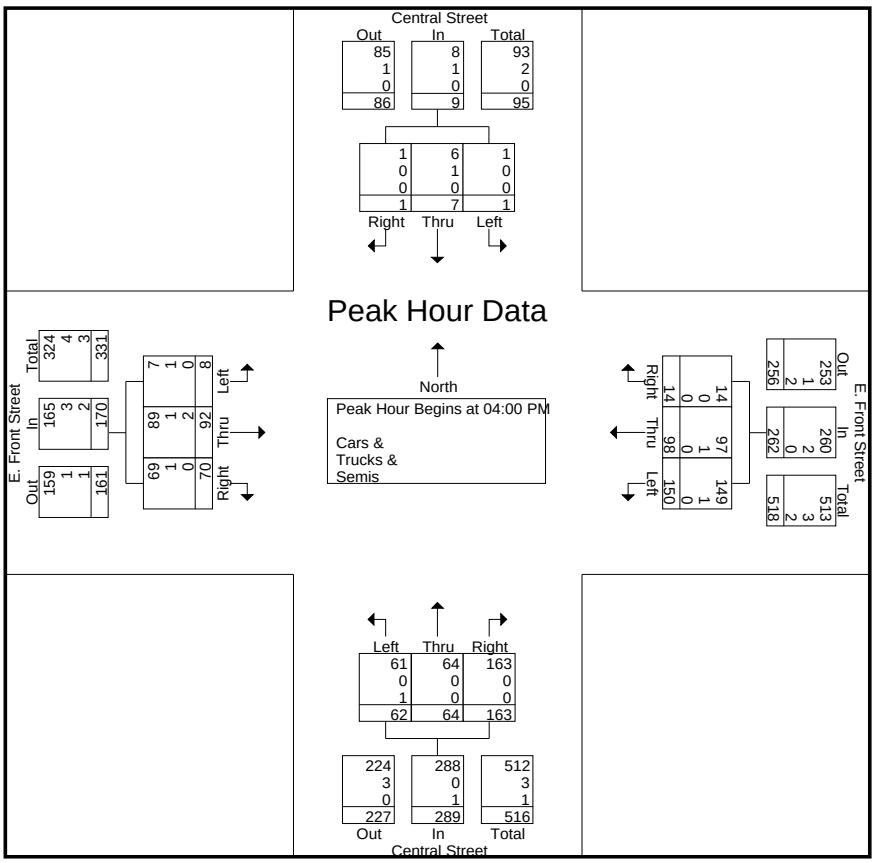
File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 3

	Central Street From North				E. Front Street From East				Central Street From South				E. Front 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	4	0	4	5	23	38	66	34	21	22	77	32	19	4	55	202
04:15 PM	0	2	1	3	5	31	40	76	43	22	19	84	17	21	0	38	201
04:30 PM	0	0	0	0	2	23	30	55	38	7	10	55	13	20	2	35	145
04:45 PM	1	1	0	2	2	21	42	65	48	14	11	73	8	32	2	42	182
Total Volume	1	7	1	9	14	98	150	262	163	64	62	289	70	92	8	170	730
% App. Total	11.1	77.8	11.1		5.3	37.4	57.3		56.4	22.1	21.5		41.2	54.1	4.7		
PHF	.250	.438	.250	.563	.700	.790	.893	.862	.849	.727	.705	.860	.547	.719	.500	.773	.903
Cars &	1	6	1	8	14	97	149	260	163	64	61	288	69	89	7	165	721
% Cars &	100	85.7	100	88.9	100	99.0	99.3	99.2	100	100	98.4	99.7	98.6	96.7	87.5	97.1	98.8
Trucks &	0	1	0	1	0	1	1	2	0	0	0	0	1	1	1	3	6
% Trucks &	0	14.3	0	11.1	0	1.0	0.7	0.8	0	0	0	0	1.4	1.1	12.5	1.8	0.8
Semis	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	3
% Semis	0	0	0	0	0	0	0	0	0	0	1.6	0.3	0	2.2	0	1.2	0.4



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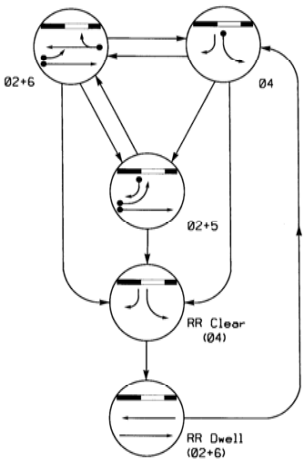
APPENDIX C

SIGNAL INFORMATION

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	02+6	04	CRR Min	CRR Ped	CRR Call	FLASH
21	C	G	R	R	G	Y	
22	G	G	R	R	G	Y	
41	R	R	G	G	R	R	
42	R	R	G	G	R	R	
61, 62	R	G	R	R	G	Y	
Sign B	OFF	OFF	OFF	ON	ON	*	
Sign C	OFF	OFF	OFF	ON	ON	*	

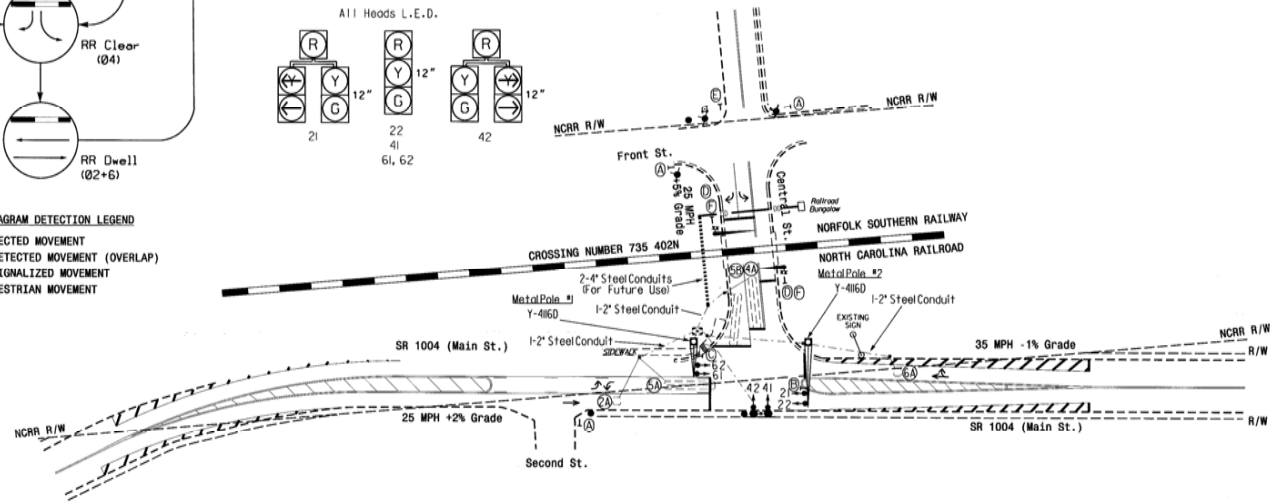
* See Note 5.

SIGNAL FACE I.D.

All Heads L.E.D.

OASIS 2070L 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	6X6	70	3	-	2	Y	Y	-	—	—	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	—	3	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	—	15	-	-
					2	Y	Y	-	—	—	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	—	15	-	-
6A	6X6	70	3	-	6	Y	Y	-	—	—	-	-



3 Phase Fully Actuated With Railroad Preemption (Isolated)

NOTES

1. Refer to "Roadway Standard Drawi NCDOT" dated July 2006 and "Standard Specifications for Roa and Structures" dated July 2006. work shall also be completed in accordance with North Carolina Railroad (NCRR) Specifications N and NCR 102.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 5 may be lagged.
4. Set all detector units to presen mode.
5. Ensure flashing operation does n alter operation of blankout sign
6. Program parent phases for Overla "P" for all phases used in norma operation.

LEGEND

PROPOSED		EXIST
	Traffic Signal Head	
	Modified Signal Head	N/
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Pedestrian Signal Pedestal	
	Metal Pole with Mastarm	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Steel Conduit	
N/A	4-in Underground Steel Conduit (2 Conduits)	
N/A	Right of Way	
	Directional Arrow	
N/A	Railroad Tracks	
N/A	Railroad Gate and Flasher	
(A)	"STOP" Sign (R1-1)	(A)
(B)	"NO LEFT TURN - TRAIN" L.E.D. Blankout Sign	(B)
(C)	"NO RIGHT TURN - TRAIN" L.E.D. Blankout Sign	(C)
(D)	"DO NOT STOP ON TRACKS" Sign (R8-8)	(D)
(E)	"DO NOT BLOCK INTERSECTION" Sign (R10-7)	(E)
(F)	"STOP HERE WHEN FLASHING" Sign (R8-10)	(F)

OASIS 2070L TIMING CHART

FEATURE	PHASE 2	4	5	6
Min Green 1 *	10	7	7	10
Extension 1 *	3.0	2.0	2.0	3.0
Max Green 1 *	45	25	15	45
Yellow Clearance	3.9	3.0	3.0	3.7
Red Clearance	1.1	2.1	1.8	1.3
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
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.

2070 RAIL PREEMPTION

Interval 1 - Track Clearance Green	20
Interval 1 - Track Clearance Yellow	3.0
Interval 1 - Track Clearance Red	2.1
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
Delay Time	0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	3.9
Red Clear Before Pre	1.1
Dwell Min Time	10
Ped Clear Through Yellow	N
Omit Overlaps	P

* Time defaults to time used for phase during normal operation.

Plan of Record

PREPARED BY: L. D. Young DATE: December 2010
REVIEWED BY: P. L. Alexander DATE: December 2010
SIGNATURE: DATE: 1/3/11
COMMENTS
Removed backplates.
This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from its original state.

PLAN OF RECORD

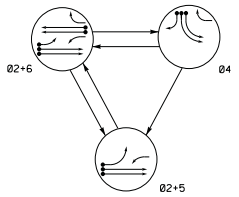
Prepared in the Offices of:
Traffic Engineering Branch, Mobility and Safety Division, NCDOT, Raleigh, NC
School of Transportation, Traffic Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1004 (Main Street) at Central Street

Division 4 Johnston County Clayton
PLAN DATE: March 2006 REVIEWED BY:
PREPARED BY: Sterling REVIEWED BY:
REVISIONS INIT. DATE
SCALE 0 50 1"=50'

PROJECT REFERENCE NO.	SHEET NO.
	Sig. 1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

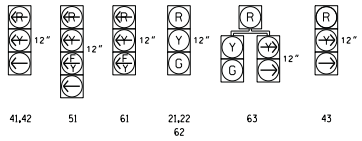
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	PHASE Ø4	PHASE Ø2+6
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.



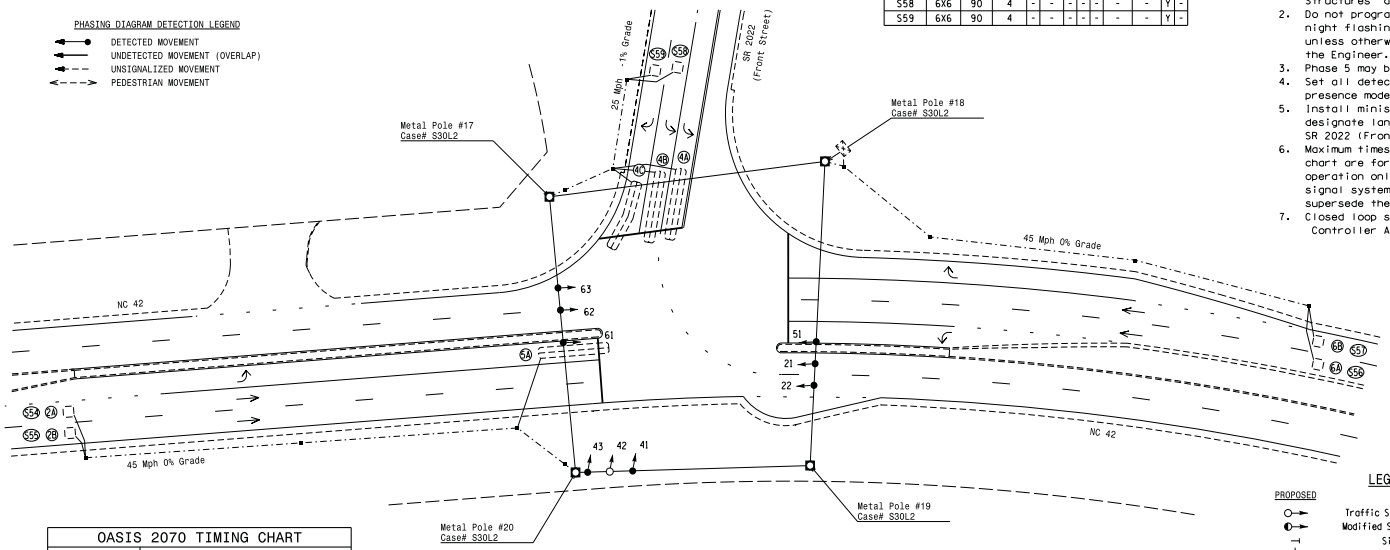
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FAIL 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:
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.S. Peedin, Jr REVIEWED BY:

SCALE 0 30 1"=30'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29904 JASON P. GALLOWAY
4/10/2015

SIG. INVENTORY NO. 04-1234

10-APR-2015 15:19
S:\NTS&SDM\TS Signals\Signal Design Sections\Eastern Region\div-04\04-1234\04-1234_sig_dan_2015mmdd.dgn
User: mmdd

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION

Traffic Impact Analysis

For

Hunt Property

Located in

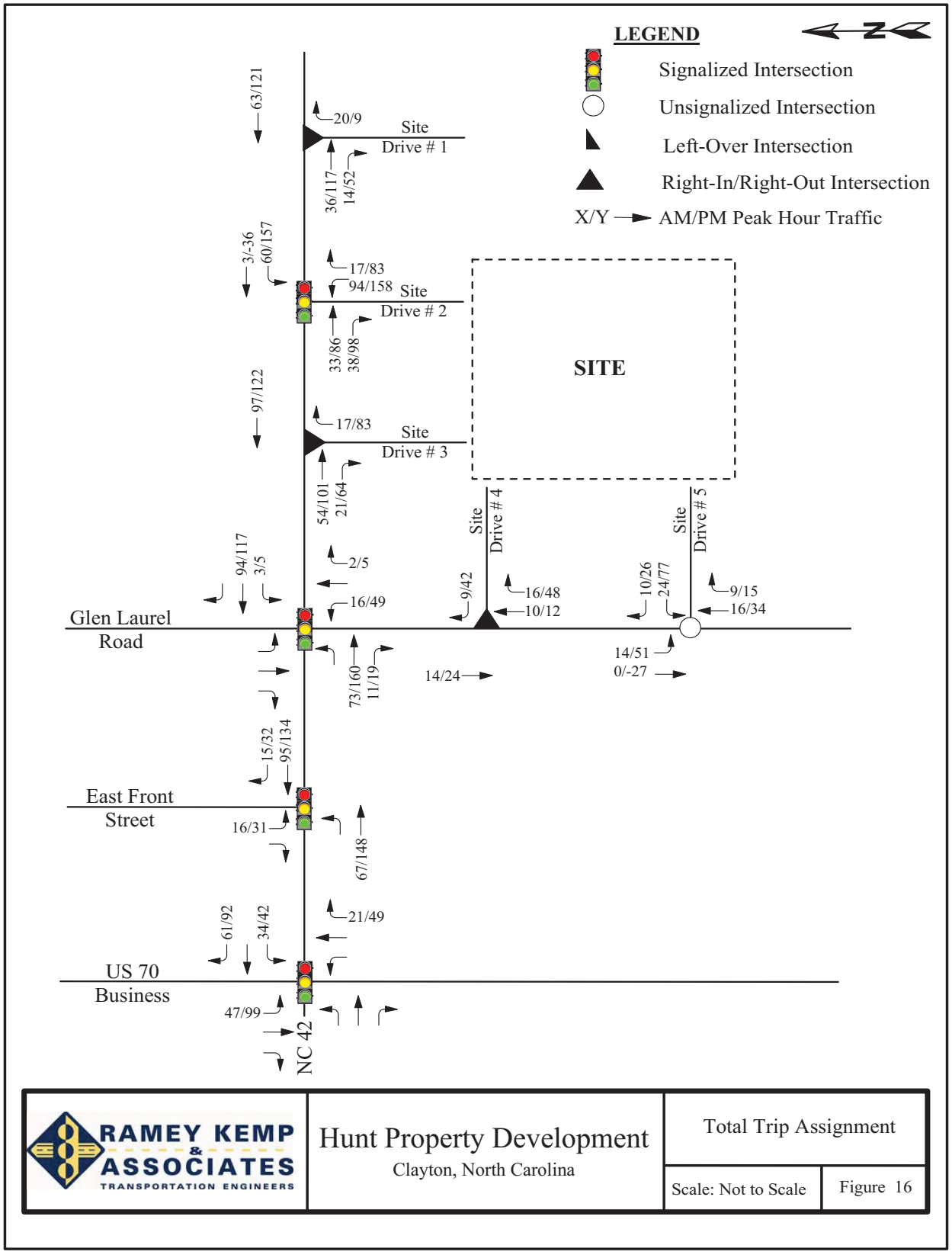
Clayton, North Carolina

Prepared For:
C. Brantley Tillman
Commercial Properties, Inc.
1004 Wake Forest Road
Raleigh, NC 27604

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
NC Corporate License # C-0910

November 2015

RKA Project #15074

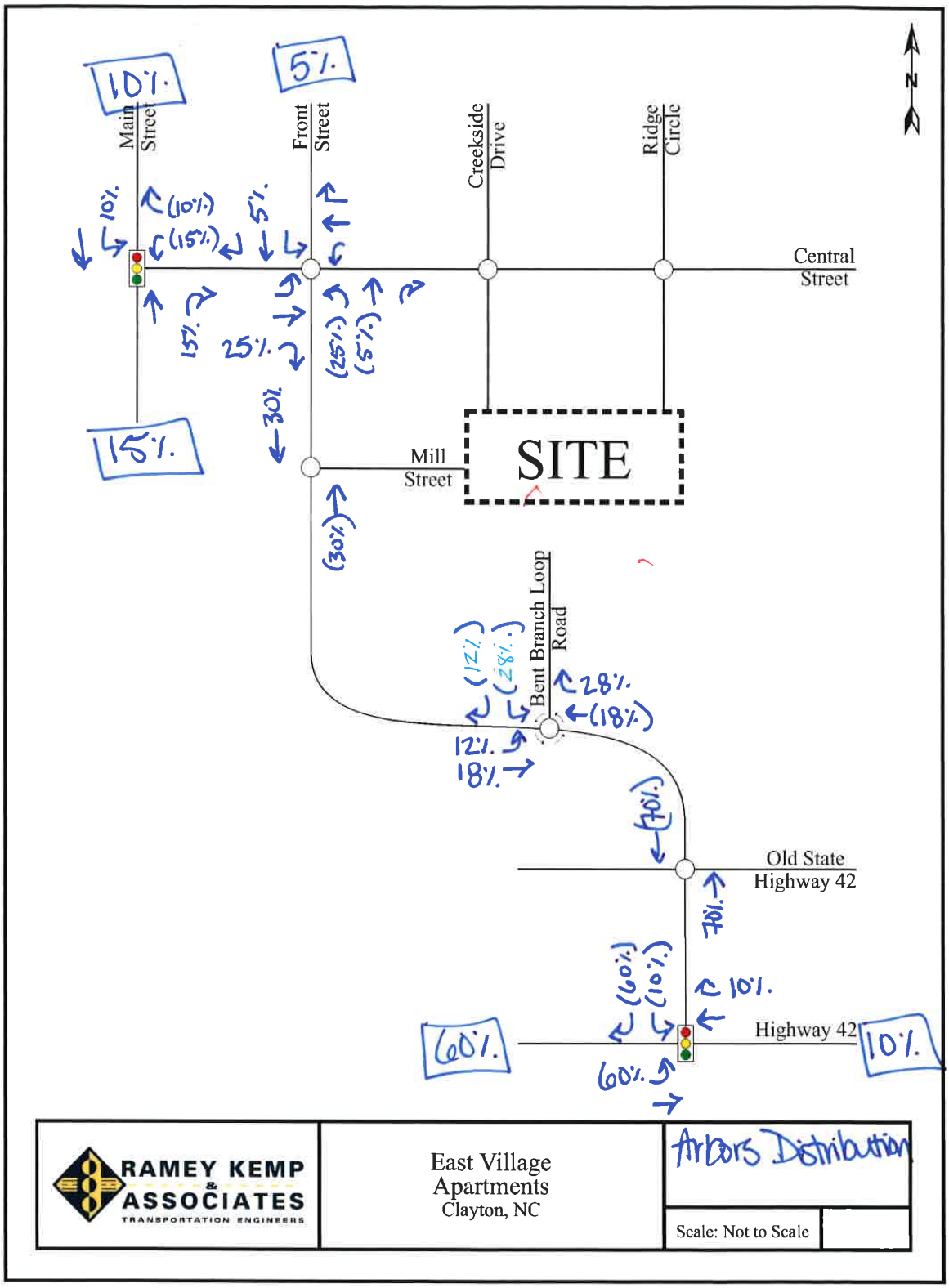


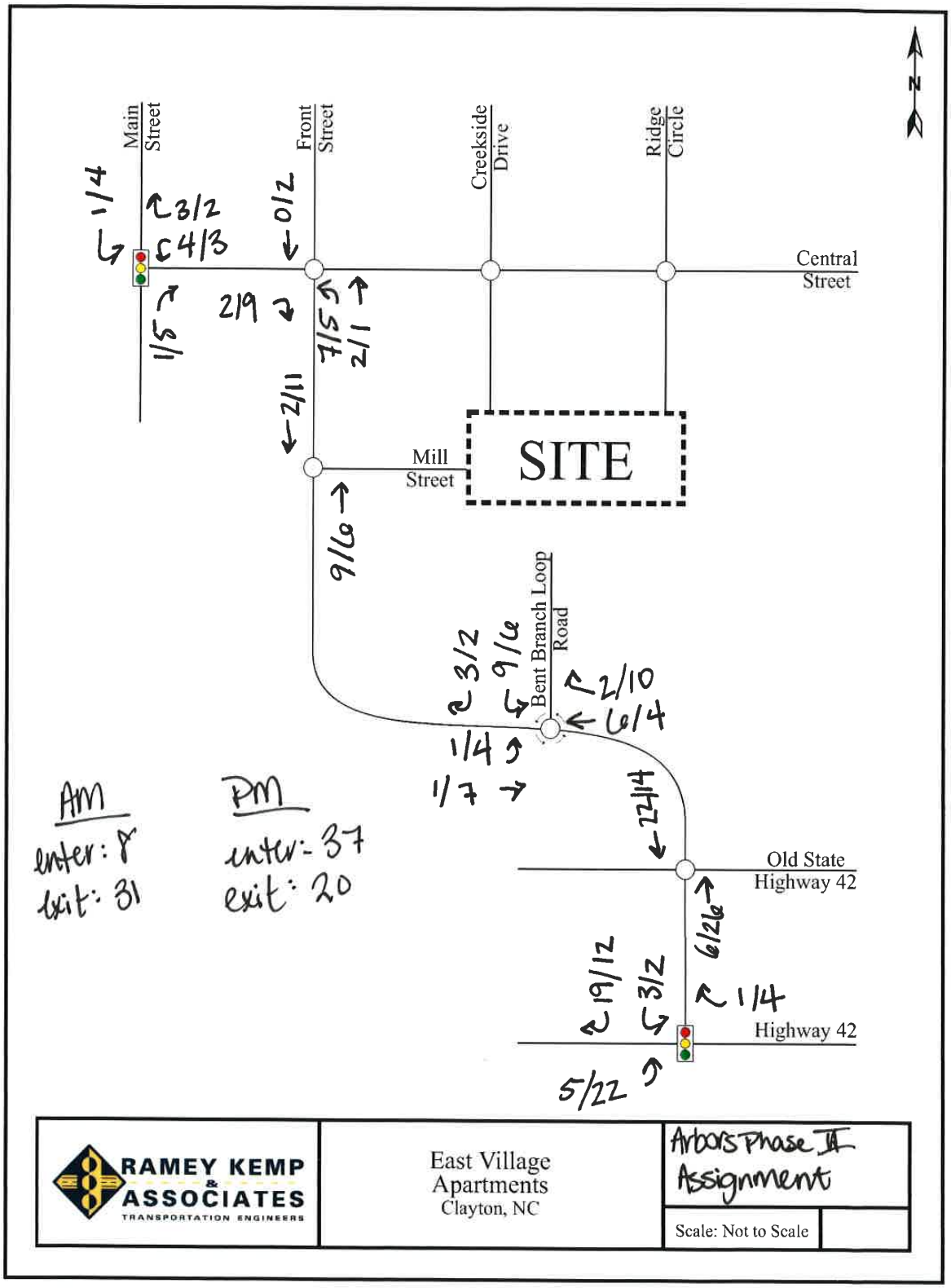
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

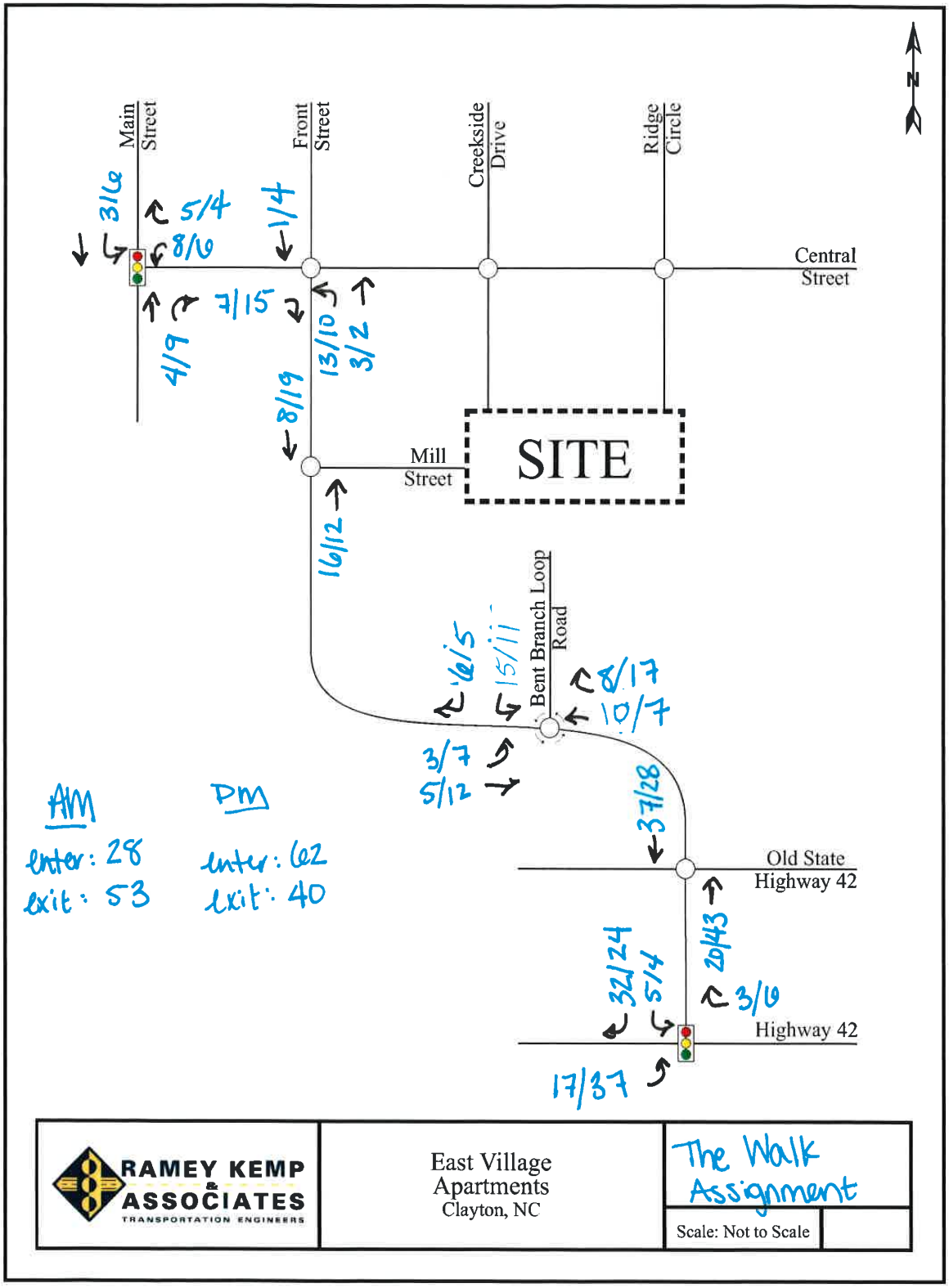
Hunt Property Development
Clayton, North Carolina

Total Trip Assignment

Scale: Not to Scale | Figure 16


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
10%
5%
15%
60%
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
Arbors Distribution
Scale: Not to Scale


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
1/4
3/2
4/3
0/2
2/9
1/5
7/5
2/1
2/11
9/6
3/2
9/6
2/10
6/4
1/4
1/7
22/4
6/26
1/4
19/12
3/2
5/22
AM
enter: 8
exit: 31
PM
enter: 37
exit: 20
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
Arbors Phase II
Assignment
Scale: Not to Scale


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
3/6
5/4
8/6
1/4
4/9
7/15
13/10
3/2
8/19
16/12
6/5
15/11
8/17
10/7
3/7
5/12
37/28
20/43
3/6
32/24
5/4
17/37
AM
enter: 28
exit: 53
PM
enter: 62
exit: 40
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
The Walk Assignment
Scale: Not to Scale

RAMEY KEMP & ASSOCIATES TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

September 4, 2015

Hubert G. Tolson, III
UHF Development Group, LLC
227 East Front Street
New Bern, NC 28560
P: 252-670-9370
E: hubie@uhfdevelopmentgroup.com

Subject: **Trip Generation Study for Arbors Phase 2**
Clayton, North Carolina

Dear Mr. Tolson:

This letter provides an updated trip generation for the East Village development located on the north side of Front Street west of NC 42 in Clayton. The trip generation update is being requested by the Town since the Arbors – Phase 2 proposes to expand the number of residential units at the property that was previously considered for commercial use.

A Traffic Impact Analysis (TIA) report was prepared for the overall development in January 2012 by Ramey Kemp & Associates, Inc. (RKA). The original TIA report included a mix of residential, office, and retail uses for the development. Single-family homes were assumed to be traditional and not age-restricted. Assumptions were made for commercial uses since exact land uses were not known when the TIA was completed. Refer to Table 1 for the total trips generated for the overall development as shown in the TIA report. Relevant pages from the TIA report are attached for reference.

Table 1
TIA Approved Trip Generation

Land Use	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
		Enter	Exit	Enter	Exit
Total Trips	6,237	179	229	304	308

* See attached trip generation table from TIA report

It is our understanding that the project is currently approved for two scenarios of residential development. Option 1 would allow 151 single-family homes + 57 townhomes + 192 apartments. Option 2 would allow 151 single-family homes + 37 additional single-family homes + 192 apartments. This study assumes the residential portion of the development will include a total of 300 residential units in addition to 264 apartments. The apartments would be increased by 72 units from 192 to 264 units. To be conservative, all 300 residential units are assumed to be detached instead of a mixture of single-family and townhomes. In addition, it is our understanding that the non-apartment residential units would be age-restricted to seniors. Commercial land uses are not known at this time.

Trips were generated for the updated land uses within the development using the ITE *Trip Generation Manual*, 9th Edition. Assumptions for the commercial land uses are the same as in the original TIA. Refer to Table 2 for the trip generation associated with the overall development.

Table 2
Future Overall Development Trip Generation – Updated Option

Land Use (ITE Code)	Density	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Senior Adult Housing – Detached (251) (ITE equation used)	300 units	1,257	28	53	62	40
Apartments (approved + 72 units) (210) (ITE equation used)	264 units (192 + 72)	1,723	27	106	106	57
Specialty Retail (826) (ITE equation used)	38,000 s.f.	1,663	0	0	50	63
General Office Building (710) (ITE equation used)	48,000 s.f.	752	93	13	22	110
High Turnover Sit Down Restaurant (932) (ITE rates used)	6,000 s.f.	763	36	29	35	24
Total – Option 1		**6,160**	**184**	**201**	**274**	**294**

Table 3 provides a comparison of the updated trip generation results for the development with the previously approved trip generation from the original TIA report.

Table 3
Trip Generation Comparison

Use Scenario	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)			PM Peak Hour Trips (vph)		
		Enter	Exit	Total	Enter	Exit	Total
Approved TIA	6,237	179	229	**408**	304	308	**612**
Updated Option	6,160	184	201	**385**	274	294	**568**

Conclusions

The updated land uses for the overall development are expected to generate fewer trips than the trip generation that was approved in the TIA report. The updated land uses include additional residential units and also assumes the single-family homes and townhomes are age-restricted. It should be noted that specific uses for the commercial portion of the development are unknown. The actual trips added to the roadway network will likely be less than shown in the tables above since the trip generation calculations do not consider reductions for internal capture trips between residential and commercial uses.

Please let us know if you have any questions regarding this information.

Sincerely,

NORTH CAROLINA PROFESSIONAL SEAL 026926 ENGINEER RYNAL G. STEPHENSON

9-4-15

Rynal Stephenson, P.E.
Regional Manager
RAMEY KEMP & ASSOCIATES, INC
NC Corporate License # C-0910

Attachment: TIA Report Pages

RAMEY KEMP ASSOCIATES

5. TRIP GENERATION

At full build out, the East Village development is expected to consist of approximately 141 single-family homes, 192 apartments, 48 townhomes, and commercial development along E. Front Street Extension. The commercial property located along E. Front Street Extension is currently zoned for neighborhood business uses. Based on discussions with the Town Planning staff, intense commercial development such as big-box retail space or grocery stores would not be allowed in this zoning. Based on uses allowed in this zoning, this study assumes the commercial property would be developed with 48,000 s.f. of office space, 38,000 s.f. of specialty retail space, and a 6,000 s.f. sit-down restaurant. The land use type and size of the commercial property uses were estimated for the purposes of this study. Refer to Appendix C for more information on the assumptions for the commercial property.

Average weekday daily, AM peak hour and PM peak hour trips for the proposed development were calculated utilizing methodology contained within the ITE *Trip Generation Manual*, 8th Edition. Refer to Table 2 for a summary of the trip generation results.

Table 2
East Village Site Trip Generation Table

Land Use	ITE Code	Size	24 Hour Volumes	AM Peak Hour Trips		PM Peak Hour Trips	
				Enter	Exit	Enter	Exit
Single-Family Detached Housing	210	141 Units	1,426	27	81	90	53
Apartments	220	192 Units	1,287	20	78	80	43
Townhomes	230	48 Units	340	5	24	22	11
Specialty Retail	814	38,000 sf	1,663	0	0	50	63
High Turnover Sit Down Restaurant	932	6,000 sf	763	36	33	39	27
General Office	710	48,000 sf	758	92	13	23	110
Total Trips			**6,237**	**179**	**229**	**304**	**308**

Parcel #	Approx. Size (Acres)
5	4.4
6	3.6
7	2.8
8	1.5
9	1.3
10	1.5
11	1.9
	17 AC TOTAL

17 AC
- 1.9 (not usable)
- 2.8 (restaurant)

12.3 AC (retail + office)

Assume 6AC Office @ 8,000 SF/AC = 48,000 sf
6.3 AC retail @ 6,000 sf/AC = 38,000 sf

HagerSmith
DESIGN PA

Architecture
Landscape Architecture
Planning
Interior Design

PO Box 1308
300 South Dawson Street
Raleigh, North Carolina 27602
Fax: 919.828.4050

919.821.5547 © Copyright 2010

CONSULTANTS

CONSULTANTS NAMES

SEALS

PROJECT

ARBORS AT EAST VILLAGE

CLIENT

CLAYTON MULTIFAMILY INVESTMENTS, LLC

DRAWING TITLE

EAST VILLAGE PLAN

REVISIONS		
NUMBER	DESCRIPTION	DATE

DRAWN BY JET
CHECKED BY JET
DATE ISSUED 8/19/10

L-100
1 OF

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

CENTRAL STREET

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	137	85	138	100	2	144	26	91	0	15	6
Future Vol, veh/h	3	137	85	138	100	2	144	26	91	0	15	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	152	94	153	111	2	160	29	101	0	17	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	247	0	0	637	626	199	690	672	112
Stage 1	-	-	-	-	-	-	206	206	-	419	419	-
Stage 2	-	-	-	-	-	-	431	420	-	271	253	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1319	-	-	390	401	842	359	377	941
Stage 1	-	-	-	-	-	-	796	731	-	612	590	-
Stage 2	-	-	-	-	-	-	603	589	-	735	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1319	-	-	337	351	842	268	330	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	351	-	268	330	-
Stage 1	-	-	-	-	-	-	794	730	-	611	517	-
Stage 2	-	-	-	-	-	-	508	516	-	620	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.7	29.3	14.4
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	428	1476	-	-	1319	-	-	405
HCM Lane V/C Ratio	0.678	0.002	-	-	0.116	-	-	0.058
HCM Control Delay (s)	29.3	7.4	0	-	8.1	0	-	14.4
HCM Lane LOS	D	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	4.9	0	-	-	0.4	-	-	0.2

Intersection												
Int Delay, s/veh	11.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	126	140	150	140	14	62	64	163	1	7	1
Future Vol, veh/h	8	126	140	150	140	14	62	64	163	1	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	140	156	167	156	16	69	71	181	1	8	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	171	0	0	296	0	0	737	740	218	859	810	163
Stage 1	-	-	-	-	-	-	236	236	-	497	497	-
Stage 2	-	-	-	-	-	-	501	504	-	362	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1406	-	-	1265	-	-	334	345	822	277	314	882
Stage 1	-	-	-	-	-	-	767	710	-	555	545	-
Stage 2	-	-	-	-	-	-	552	541	-	657	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1406	-	-	1265	-	-	288	292	822	156	266	882
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	292	-	156	266	-
Stage 1	-	-	-	-	-	-	761	704	-	551	465	-
Stage 2	-	-	-	-	-	-	463	462	-	457	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.1	29.4	19.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	457	1406	-	-	1265	-	-	266
HCM Lane V/C Ratio	0.703	0.006	-	-	0.132	-	-	0.038
HCM Control Delay (s)	29.4	7.6	0	-	8.3	0	-	19.1
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.4	0	-	-	0.5	-	-	0.1

Intersection												
Int Delay, s/veh	33.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	150	102	151	109	2	177	48	99	4	33	7
Future Vol, veh/h	3	150	102	151	109	2	177	48	99	4	33	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	167	113	168	121	2	197	53	110	4	37	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	280	0	0	710	689	223	770	745	122
Stage 1	-	-	-	-	-	-	230	230	-	458	458	-
Stage 2	-	-	-	-	-	-	480	459	-	312	287	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1464	-	-	1283	-	-	348	369	817	318	342	929
Stage 1	-	-	-	-	-	-	773	714	-	583	567	-
Stage 2	-	-	-	-	-	-	567	566	-	699	674	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1464	-	-	1283	-	-	279	316	817	214	293	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	279	316	-	214	293	-
Stage 1	-	-	-	-	-	-	771	713	-	582	487	-
Stage 2	-	-	-	-	-	-	447	486	-	559	673	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.7	84.6	18.4
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	1464	-	-	1283	-	-	317
HCM Lane V/C Ratio	1.008	0.002	-	-	0.131	-	-	0.154
HCM Control Delay (s)	84.6	7.5	0	-	8.2	0	-	18.4
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	11.8	0	-	-	0.5	-	-	0.5

Intersection												
Int Delay, s/veh	47.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	138	177	164	153	15	83	105	178	1	45	1
Future Vol, veh/h	9	138	177	164	153	15	83	105	178	1	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	153	197	182	170	17	92	117	198	1	50	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	187	0	0	350	0	0	840	823	252	972	913	178
Stage 1	-	-	-	-	-	-	272	272	-	543	543	-
Stage 2	-	-	-	-	-	-	568	551	-	429	370	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1387	-	-	1209	-	-	285	309	787	232	273	865
Stage 1	-	-	-	-	-	-	734	685	-	524	520	-
Stage 2	-	-	-	-	-	-	508	515	-	604	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1209	-	-	205	255	787	98	225	865
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	255	-	98	225	-
Stage 1	-	-	-	-	-	-	727	679	-	519	433	-
Stage 2	-	-	-	-	-	-	373	428	-	371	614	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.2	132.3	26.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	351	1387	-	-	1209	-	-	222
HCM Lane V/C Ratio	1.159	0.007	-	-	0.151	-	-	0.235
HCM Control Delay (s)	132.3	7.6	0	-	8.5	0	-	26.1
HCM Lane LOS	F	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	16.3	0	-	-	0.5	-	-	0.9

Intersection												
Int Delay, s/veh	57.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	163	105	160	149	2	190	48	102	4	33	7
Future Vol, veh/h	3	163	105	160	149	2	190	48	102	4	33	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	181	117	178	166	2	211	53	113	4	37	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	298	0	0	790	769	239	851	826	167
Stage 1	-	-	-	-	-	-	246	246	-	522	522	-
Stage 2	-	-	-	-	-	-	544	523	-	329	304	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1263	-	-	308	332	800	280	307	877
Stage 1	-	-	-	-	-	-	758	703	-	538	531	-
Stage 2	-	-	-	-	-	-	523	530	-	684	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1410	-	-	1263	-	-	240	280	800	181	259	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	280	-	181	259	-
Stage 1	-	-	-	-	-	-	756	701	-	536	449	-
Stage 2	-	-	-	-	-	-	402	448	-	541	661	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.3	156.4	20.6
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	1410	-	-	1263	-	-	279
HCM Lane V/C Ratio	1.211	0.002	-	-	0.141	-	-	0.175
HCM Control Delay (s)	156.4	7.6	0	-	8.3	0	-	20.6
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	16.7	0	-	-	0.5	-	-	0.6

Intersection												
Int Delay, s/veh	78											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	181	186	169	176	15	90	105	187	1	45	1
Future Vol, veh/h	9	181	186	169	176	15	90	105	187	1	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	201	207	188	196	17	100	117	208	1	50	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	212	0	0	408	0	0	929	912	304	1066	1007	204
Stage 1	-	-	-	-	-	-	324	324	-	579	579	-
Stage 2	-	-	-	-	-	-	605	588	-	487	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1358	-	-	1151	-	-	248	274	736	200	241	837
Stage 1	-	-	-	-	-	-	688	650	-	501	501	-
Stage 2	-	-	-	-	-	-	485	496	-	562	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1358	-	-	1151	-	-	170	221	736	72	194	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	221	-	72	194	-
Stage 1	-	-	-	-	-	-	681	644	-	496	408	-
Stage 2	-	-	-	-	-	-	346	404	-	327	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.1	230	31
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	1358	-	-	1151	-	-	190
HCM Lane V/C Ratio	1.396	0.007	-	-	0.163	-	-	0.275
HCM Control Delay (s)	230	7.7	0	-	8.7	0	-	31
HCM Lane LOS	F	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	22.2	0	-	-	0.6	-	-	1.1

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

MAIN STREET

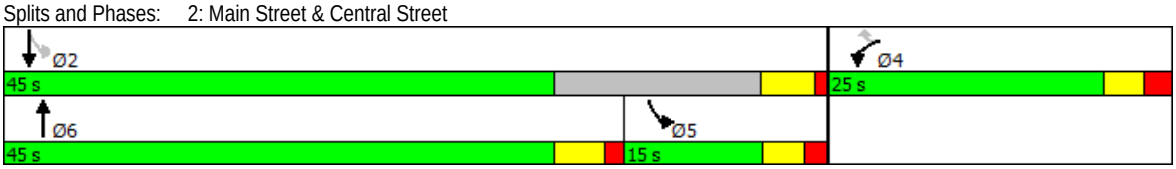
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	107	143	173	139	86	138
Future Volume (vph)	107	143	173	139	86	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.940			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1751	0	1770	1863
Flt Permitted	0.950				0.524	
Satd. Flow (perm)	1770	1583	1751	0	976	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	159	192	154	96	153
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	159	346	0	96	153
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.8	9.8	19.2		25.8	25.2
Actuated g/C Ratio	0.24	0.24	0.47		0.63	0.61
v/c Ratio	0.28	0.42	0.42		0.13	0.13
Control Delay	17.3	19.6	14.3		5.5	5.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	17.3	19.6	14.3		5.5	5.6
LOS	B	B	B		A	A
Approach Delay	18.6		14.3			5.6
Approach LOS	B		B			A

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 41
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 13.2 — Intersection LOS: B
Intersection Capacity Utilization 41.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



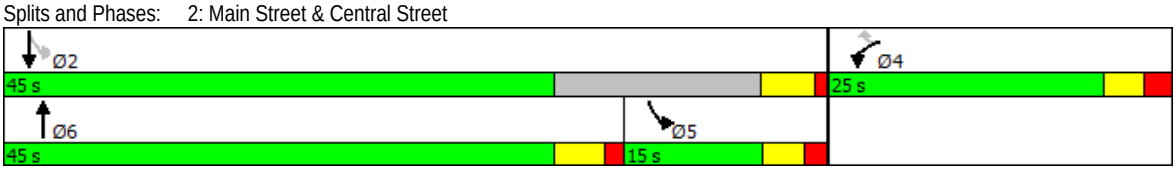
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	96	107	214	110	164	314
Future Volume (vph)	96	107	214	110	164	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.954			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1777	0	1770	1863
Flt Permitted	0.950				0.505	
Satd. Flow (perm)	1770	1583	1777	0	941	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	119	238	122	182	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	119	360	0	182	349
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	8.8	8.8	18.4		25.6	27.2
Actuated g/C Ratio	0.21	0.21	0.45		0.62	0.66
v/c Ratio	0.28	0.35	0.45		0.25	0.28
Control Delay	18.4	19.7	15.0		6.3	5.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	18.4	19.7	15.0		6.3	5.5
LOS	B	B	B		A	A
Approach Delay	19.1		15.0			5.8
Approach LOS	B		B			A
Queue Length 50th (ft)	22	25	74		17	35
Queue Length 95th (ft)	63	70	157		44	84
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	921	823	1624		853	1863
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.12	0.14	0.22		0.21	0.19

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 41.1
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 11.4 — Intersection LOS: B
Intersection Capacity Utilization 45.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



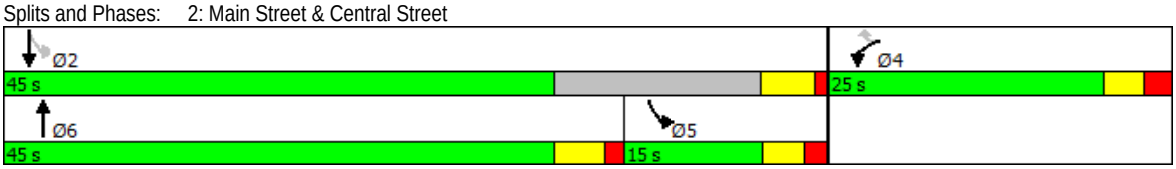
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	129	164	189	157	98	151
Future Volume (vph)	129	164	189	157	98	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.939			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1749	0	1770	1863
Flt Permitted	0.950				0.448	
Satd. Flow (perm)	1770	1583	1749	0	835	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	143	182	210	174	109	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	182	384	0	109	168
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	10.6	10.6	15.5		26.5	24.3
Actuated g/C Ratio	0.23	0.23	0.34		0.58	0.53
v/c Ratio	0.35	0.50	0.65		0.17	0.17
Control Delay	19.6	22.6	19.8		6.6	5.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	19.6	22.6	19.8		6.6	5.9
LOS	B	C	B		A	A
Approach Delay	21.3		19.8			6.2
Approach LOS	C		B			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	32	43	88		11	18
Queue Length 95th (ft)	86	109	185		34	49
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	830	742	1494		767	1824
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.17	0.25	0.26		0.14	0.09

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 45.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 45.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



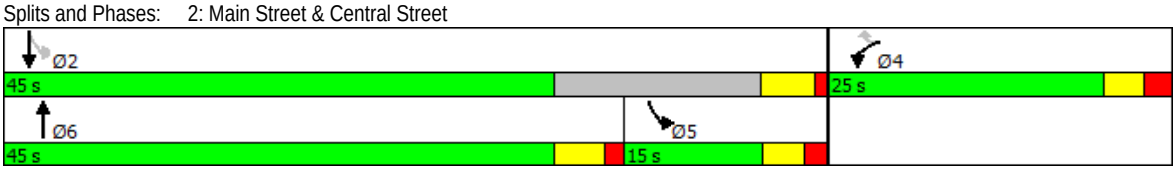
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	114	123	234	134	189	343
Future Volume (vph)	114	123	234	134	189	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.951			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1771	0	1770	1863
Flt Permitted	0.950				0.411	
Satd. Flow (perm)	1770	1583	1771	0	766	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		35			35
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		25.3			20.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	137	260	149	210	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	127	137	409	0	210	381
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.2	9.2	15.3		27.8	27.8
Actuated g/C Ratio	0.19	0.19	0.32		0.59	0.59
v/c Ratio	0.37	0.45	0.71		0.35	0.35
Control Delay	21.5	23.5	22.0		8.0	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	21.5	23.5	22.0		8.0	6.2
LOS	C	C	C		A	A
Approach Delay	22.5		22.0			6.9
Approach LOS	C		C			A
Queue Length 50th (ft)	29	32	90		21	42
Queue Length 95th (ft)	82	89	200		54	98
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	768	687	1528		715	1823
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.17	0.20	0.27		0.29	0.21

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 47.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



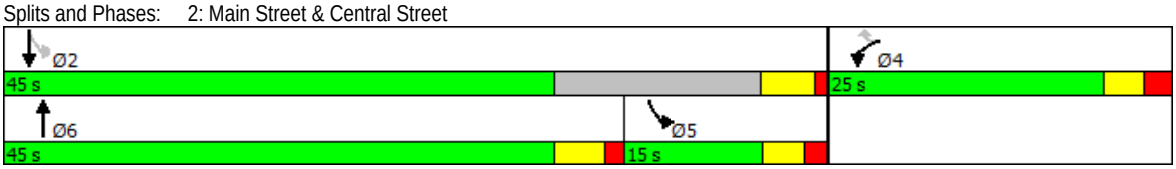
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	173	173	189	170	101	151
Future Volume (vph)	173	173	189	170	101	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.936			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1744	0	1770	1863
Flt Permitted	0.950				0.432	
Satd. Flow (perm)	1770	1583	1744	0	805	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	35		45			45
Link Distance (ft)	195		1300			1066
Travel Time (s)	3.8		19.7			16.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	192	192	210	189	112	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	192	399	0	112	168
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	11.2	11.2	16.5		27.7	25.3
Actuated g/C Ratio	0.24	0.24	0.35		0.58	0.53
v/c Ratio	0.46	0.52	0.66		0.18	0.17
Control Delay	22.0	23.7	20.2		6.9	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	22.0	23.7	20.2		6.9	6.0
LOS	C	C	C		A	A
Approach Delay	22.8		20.2			6.3
Approach LOS	C		C			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	47	48	95		12	19
Queue Length 95th (ft)	116	120	201		36	51
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	813	727	1437		750	1806
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.24	0.26	0.28		0.15	0.09

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 47.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.5 Intersection LOS: B
Intersection Capacity Utilization 48.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



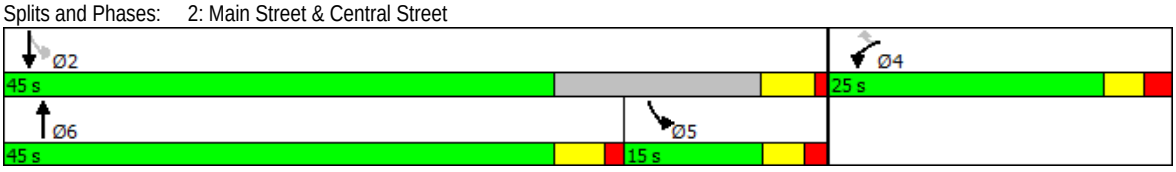
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	139	128	234	177	198	343
Future Volume (vph)	139	128	234	177	198	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.942			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1755	0	1770	1863
Flt Permitted	0.950				0.360	
Satd. Flow (perm)	1770	1583	1755	0	671	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		35			35
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		25.3			20.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	154	142	260	197	220	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	142	457	0	220	381
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.7	9.7	17.0		30.1	30.1
Actuated g/C Ratio	0.19	0.19	0.34		0.60	0.60
v/c Ratio	0.45	0.47	0.77		0.38	0.34
Control Delay	24.5	25.5	24.4		9.1	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	24.5	25.5	24.4		9.1	6.1
LOS	C	C	C		A	A
Approach Delay	25.0		24.4			7.2
Approach LOS	C		C			A
Queue Length 50th (ft)	38	35	107		23	43
Queue Length 95th (ft)	104	99	237		58	102
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	732	655	1443		664	1797
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.21	0.22	0.32		0.33	0.21

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 50.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 16.9 — Intersection LOS: B
Intersection Capacity Utilization 54.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

NC 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	48	532	0	1185	214	197	98
Future Volume (vph)	5	48	532	0	1185	214	197	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.160					0.950	
Satd. Flow (perm)	0	298	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	53	591	0	1317	238	219	109
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	59	591	0	1317	238	219	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
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)		20.0	90.0	90.0	90.0	20.0	20.0	20.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)		15.4%	69.2%	69.2%	69.2%	15.4%	15.4%	15.4%
Maximum Green (s)		13.6	83.5	83.5	83.5	13.8	13.8	13.8
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		Lead			Lag			
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)		2.0	3.0	3.0	3.0	2.0	2.0	2.0
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)		105.2	105.2		94.4	115.3	14.8	14.8
Actuated g/C Ratio		0.81	0.81		0.73	0.89	0.11	0.11
v/c Ratio		0.18	0.21		0.51	0.17	0.56	0.61
Control Delay		4.1	3.3		9.6	1.7	59.5	68.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		4.1	3.3		9.6	1.7	59.5	68.3
LOS		A	A		A	A	E	E
Approach Delay			3.3		8.4		62.4	
Approach LOS			A		A		E	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 40 (31%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	114	964	3	1063	240	280	61
Future Volume (vph)	4	114	964	3	1063	240	280	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.166		0.245			0.950	
Satd. Flow (perm)	0	309	3539	456	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	127	1071	3	1181	267	311	68
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	131	1071	3	1181	267	311	68
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		75.2	75.2	75.2	61.4	81.2	14.8	14.8
Actuated g/C Ratio		0.75	0.75	0.75	0.61	0.81	0.15	0.15
v/c Ratio		0.36	0.40	0.01	0.54	0.21	0.61	0.29
Control Delay		6.6	5.2	4.0	12.9	2.6	44.9	40.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		6.6	5.2	4.0	12.9	2.6	44.9	40.1
LOS		A	A	A	B	A	D	D
Approach Delay			5.4		11.0		44.0	
Approach LOS			A		B		D	
Queue Length 50th (ft)		18	104	0	207	28	97	39
Queue Length 95th (ft)		41	165	3	313	50	134	76
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		422	2677	344	2172	1327	599	276
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		0.31	0.40	0.01	0.54	0.20	0.52	0.25

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.9 Intersection LOS: B
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	74	648	0	1390	253	239	158
Future Volume (vph)	5	74	648	0	1390	253	239	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.090					0.950	
Satd. Flow (perm)	0	168	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	82	720	0	1544	281	266	176
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	88	720	0	1544	281	266	176
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	80.0	80.0	62.0	20.0	20.0	20.0
Total Split (%)	18.0%	18.0%	80.0%	80.0%	62.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	11.6	73.5	73.5	55.5	13.8	13.8	13.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		74.4	74.4		63.7	85.3	15.6	15.6
Actuated g/C Ratio		0.74	0.74		0.64	0.85	0.16	0.16
v/c Ratio		0.34	0.27		0.69	0.21	0.50	0.71
Control Delay		7.4	4.6		15.0	2.3	41.7	56.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		7.4	4.6		15.0	2.3	41.7	56.7

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS		A	A		B	A	D	E
Approach Delay			4.9		13.0		47.7	
Approach LOS			A		B		D	
Queue Length 50th (ft)		14	70		346	29	79	106
Queue Length 95th (ft)		24	83		409	47	121	#207
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300				200		
Base Capacity (vph)		333	2684		2254	1347	564	260
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		0.26	0.27		0.69	0.21	0.47	0.68

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 66.5% 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: 3: NC 42 & Old State Hwy 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	184	1201	3	1296	304	343	103
Future Volume (vph)	4	184	1201	3	1296	304	343	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.094		0.173			0.950	
Satd. Flow (perm)	0	175	3539	322	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	204	1334	3	1440	338	381	114
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	208	1334	3	1440	338	381	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		74.0	74.0	74.0	57.7	78.7	16.0	16.0
Actuated g/C Ratio		0.74	0.74	0.74	0.58	0.79	0.16	0.16
v/c Ratio		0.67	0.51	0.01	0.71	0.27	0.69	0.45
Control Delay		24.6	6.5	4.0	18.3	3.7	46.6	43.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.6	6.5	4.0	18.3	3.7	46.6	43.6
LOS		C	A	A	B	A	D	D
Approach Delay			8.9		15.5		45.9	
Approach LOS			A		B		D	
Queue Length 50th (ft)		50	161	0	331	47	119	66
Queue Length 95th (ft)		127	205	3	432	78	168	120
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		342	2633	239	2068	1267	598	276
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		0.61	0.51	0.01	0.70	0.27	0.64	0.41

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 68.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	78	648	0	1390	260	261	172
Future Volume (vph)	5	78	648	0	1390	260	261	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.086					0.950	
Satd. Flow (perm)	0	160	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	87	720	0	1544	289	290	191
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	93	720	0	1544	289	290	191
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	80.0	80.0	62.0	20.0	20.0	20.0
Total Split (%)	18.0%	18.0%	80.0%	80.0%	62.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	11.6	73.5	73.5	55.5	13.8	13.8	13.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		73.6	73.6		62.6	84.9	16.4	16.4
Actuated g/C Ratio		0.74	0.74		0.63	0.85	0.16	0.16
v/c Ratio		0.36	0.28		0.70	0.22	0.52	0.74
Control Delay		8.4	4.8		15.8	2.4	41.6	57.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		8.4	4.8		15.8	2.4	41.6	57.9

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS		A	A		B	A	D	E
Approach Delay			5.2		13.7		48.1	
Approach LOS			A		B		D	
Queue Length 50th (ft)		15	75		361	31	85	114
Queue Length 95th (ft)		29	82		426	54	132	#234
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300				200		
Base Capacity (vph)		327	2674		2216	1337	580	267
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		0.28	0.27		0.70	0.22	0.50	0.72

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 67.4% 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: 3: NC 42 & Old State Hwy 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	197	1201	3	1296	325	356	110
Future Volume (vph)	4	197	1201	3	1296	325	356	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.092		0.172			0.950	
Satd. Flow (perm)	0	171	3539	320	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	219	1334	3	1440	361	396	122
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	223	1334	3	1440	361	396	122
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		73.7	73.7	73.7	57.0	78.4	16.3	16.3
Actuated g/C Ratio		0.74	0.74	0.74	0.57	0.78	0.16	0.16
v/c Ratio		0.72	0.51	0.01	0.71	0.29	0.71	0.47
Control Delay		28.7	6.6	4.0	18.8	3.9	46.8	44.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	6.6	4.0	18.8	3.9	46.8	44.0
LOS		C	A	A	B	A	D	D
Approach Delay			9.8		15.8		46.1	
Approach LOS			A		B		D	
Queue Length 50th (ft)		62	164	0	345	55	123	71
Queue Length 95th (ft)		#143	205	3	432	85	173	128
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		336	2625	237	2044	1259	602	277
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		0.66	0.51	0.01	0.70	0.29	0.66	0.44

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 69.6% 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: 3: NC 42 & Front Street

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

OLD STATE NC 42 / WALDEN WAY

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	1	33	18	1	15	58	197	7	6	244	17
Future Vol, veh/h	22	1	33	18	1	15	58	197	7	6	244	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1	37	20	1	17	64	219	8	7	271	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	655	650	145	501	655	223	290	0	0	227	0	0
Stage 1	294	294	-	352	352	-	-	-	-	-	-	-
Stage 2	361	356	-	149	303	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	365	387	877	467	385	816	1270	-	-	1340	-	-
Stage 1	691	669	-	664	631	-	-	-	-	-	-	-
Stage 2	657	628	-	839	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	339	362	877	425	360	816	1270	-	-	1340	-	-
Mov Cap-2 Maneuver	339	362	-	425	360	-	-	-	-	-	-	-
Stage 1	651	665	-	625	594	-	-	-	-	-	-	-
Stage 2	605	592	-	798	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	12.2	1.8	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1270	-	-	532	535	1340	-	-
HCM Lane V/C Ratio	0.051	-	-	0.117	0.071	0.005	-	-
HCM Control Delay (s)	8	0	-	12.7	12.2	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0.2	0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	2	93	15	3	4	70	267	17	10	233	37
Future Vol, veh/h	19	2	93	15	3	4	70	267	17	10	233	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	2	103	17	3	4	78	297	19	11	259	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	768	773	150	615	784	306	300	0	0	316	0	0
Stage 1	302	302	-	462	462	-	-	-	-	-	-	-
Stage 2	466	471	-	153	322	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	305	329	870	389	324	733	1260	-	-	1243	-	-
Stage 1	683	664	-	579	564	-	-	-	-	-	-	-
Stage 2	576	559	-	835	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	281	301	870	319	296	733	1260	-	-	1243	-	-
Mov Cap-2 Maneuver	281	301	-	319	296	-	-	-	-	-	-	-
Stage 1	632	657	-	536	522	-	-	-	-	-	-	-
Stage 2	526	517	-	725	643	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	16	1.6	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1260	-	-	629	351	1243	-	-
HCM Lane V/C Ratio	0.062	-	-	0.201	0.07	0.009	-	-
HCM Control Delay (s)	8	0	-	12.2	16	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.2	0	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1	36	20	1	16	63	256	8	7	342	19
Future Vol, veh/h	24	1	36	20	1	16	63	256	8	7	342	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	40	22	1	18	70	284	9	8	380	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	844	839	201	635	846	289	401	0	0	293	0	0
Stage 1	406	406	-	429	429	-	-	-	-	-	-	-
Stage 2	438	433	-	206	417	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	269	301	807	377	298	749	1156	-	-	1267	-	-
Stage 1	593	597	-	603	583	-	-	-	-	-	-	-
Stage 2	597	581	-	777	590	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	246	277	807	336	274	749	1156	-	-	1267	-	-
Mov Cap-2 Maneuver	246	277	-	336	274	-	-	-	-	-	-	-
Stage 1	550	592	-	560	541	-	-	-	-	-	-	-
Stage 2	540	539	-	731	585	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.3	14.1	1.6	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1156	-	-	418	438	1267	-	-
HCM Lane V/C Ratio	0.061	-	-	0.162	0.094	0.006	-	-
HCM Control Delay (s)	8.3	0	-	15.3	14.1	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	2	102	16	3	4	76	393	19	11	328	40
Future Vol, veh/h	21	2	102	16	3	4	76	393	19	11	328	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	113	18	3	4	84	437	21	12	364	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1031	1038	204	824	1049	447	409	0	0	458	0	0
Stage 1	411	411	-	616	616	-	-	-	-	-	-	-
Stage 2	620	627	-	208	433	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	199	230	803	278	227	611	1148	-	-	1101	-	-
Stage 1	589	594	-	477	481	-	-	-	-	-	-	-
Stage 2	475	475	-	775	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	205	803	217	202	611	1148	-	-	1101	-	-
Mov Cap-2 Maneuver	179	205	-	217	202	-	-	-	-	-	-	-
Stage 1	531	586	-	430	434	-	-	-	-	-	-	-
Stage 2	422	428	-	654	573	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	21.6	1.3	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1148	-	-	492	242	1101	-	-
HCM Lane V/C Ratio	0.074	-	-	0.282	0.106	0.011	-	-
HCM Control Delay (s)	8.4	0	-	15.2	21.6	8.3	0.1	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2	0.4	0	-	-

Intersection												
Int Delay, s/veh	2.5											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	1	36	20	1	16	63	267	8	7	378	19
Future Vol, veh/h	24	1	36	20	1	16	63	267	8	7	378	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	40	22	1	18	70	297	9	8	420	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	897	892	221	667	898	301	441	0	0	306	0	0
Stage 1	446	446	-	441	441	-	-	-	-	-	-	-
Stage 2	451	446	-	226	457	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	247	281	783	358	278	738	1117	-	-	1253	-	-
Stage 1	562	573	-	594	576	-	-	-	-	-	-	-
Stage 2	587	573	-	757	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	225	258	783	317	255	738	1117	-	-	1253	-	-
Mov Cap-2 Maneuver	225	258	-	317	255	-	-	-	-	-	-	-
Stage 1	519	568	-	549	532	-	-	-	-	-	-	-
Stage 2	528	529	-	711	562	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	14.6	1.6	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1117	-	-	390	417	1253	-	-
HCM Lane V/C Ratio	0.063	-	-	0.174	0.099	0.006	-	-
HCM Control Delay (s)	8.4	0	-	16.2	14.6	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	2	102	16	3	4	76	427	19	11	348	40
Future Vol, veh/h	21	2	102	16	3	4	76	427	19	11	348	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	113	18	3	4	84	474	21	12	387	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1091	1097	216	873	1110	485	431	0	0	496	0	0
Stage 1	433	433	-	654	654	-	-	-	-	-	-	-
Stage 2	658	664	-	219	456	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	180	212	789	257	209	581	1127	-	-	1066	-	-
Stage 1	572	581	-	455	462	-	-	-	-	-	-	-
Stage 2	452	457	-	764	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	187	789	199	185	581	1127	-	-	1066	-	-
Mov Cap-2 Maneuver	160	187	-	199	185	-	-	-	-	-	-	-
Stage 1	513	572	-	408	414	-	-	-	-	-	-	-
Stage 2	399	410	-	642	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	23.3	1.2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1127	-	-	461	222	1066	-	-
HCM Lane V/C Ratio	0.075	-	-	0.301	0.115	0.011	-	-
HCM Control Delay (s)	8.5	0	-	16.1	23.3	8.4	0.1	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	0.4	0	-	-

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

BENT BRANCH LOOP ROAD

MOVEMENT SUMMARY

Site: 101 [Existing (2018) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	256	2.0	0.168	3.6	LOS A	1.0	7.0	0.14	0.34	57.5
6	R2	4	2.0	0.168	9.3	LOS A	1.0	7.0	0.14	0.34	57.9
Approach		260	2.0	0.168	3.7	LOS A	1.0	7.0	0.14	0.34	57.5
North: Bent Branch Loop Road											
7	L2	34	2.0	0.055	4.4	LOS A	0.3	1.9	0.37	0.57	53.2
9	R2	33	2.0	0.055	10.2	LOS B	0.3	1.9	0.37	0.57	55.0
Approach		66	2.0	0.055	7.3	LOS A	0.3	1.9	0.37	0.57	54.1
West: Front Street											
10	L2	3	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	56.4
11	T1	247	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	58.2
Approach		251	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	58.2
All Vehicles		577	2.0	0.168	4.0	LOS A	1.0	7.0	0.12	0.37	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Existing (2018) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	298	2.0	0.201	3.5	LOS A	1.2	8.8	0.12	0.36	57.4
6	R2	24	2.0	0.201	9.2	LOS A	1.2	8.8	0.12	0.36	57.7
Approach		322	2.0	0.201	4.0	LOS A	1.2	8.8	0.12	0.36	57.4
North: Bent Branch Loop Road											
7	L2	11	2.0	0.028	4.6	LOS A	0.1	1.0	0.40	0.58	52.3
9	R2	22	2.0	0.028	10.3	LOS B	0.1	1.0	0.40	0.58	54.1
Approach		33	2.0	0.028	8.5	LOS A	0.1	1.0	0.40	0.58	53.5
West: Front Street											
10	L2	28	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	56.0
11	T1	284	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	57.8
Approach		313	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	57.6
All Vehicles		667	2.0	0.201	4.0	LOS A	1.2	8.8	0.13	0.36	57.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Background (2021) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	313	2.0	0.216	3.6	LOS A	1.3	9.5	0.19	0.36	57.2
6	R2	16	2.0	0.216	9.4	LOS A	1.3	9.5	0.19	0.36	57.5
Approach		329	2.0	0.216	3.9	LOS A	1.3	9.5	0.19	0.36	57.2
North: Bent Branch Loop Road											
7	L2	62	2.0	0.092	4.7	LOS A	0.5	3.3	0.42	0.58	53.3
9	R2	45	2.0	0.092	10.4	LOS B	0.5	3.3	0.42	0.58	55.2
Approach		107	2.0	0.092	7.1	LOS A	0.5	3.3	0.42	0.58	54.1
West: Front Street											
10	L2	7	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	56.2
11	T1	294	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	57.9
Approach		301	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	57.9
All Vehicles		737	2.0	0.216	4.2	LOS A	1.3	9.5	0.18	0.38	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Background (2021) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	373	2.0	0.272	3.6	LOS A	1.8	13.0	0.16	0.39	56.9
6	R2	57	2.0	0.272	9.3	LOS A	1.8	13.0	0.16	0.39	57.3
Approach		430	2.0	0.272	4.3	LOS A	1.8	13.0	0.16	0.39	57.0
North: Bent Branch Loop Road											
7	L2	29	2.0	0.055	5.0	LOS A	0.3	2.0	0.47	0.60	52.8
9	R2	32	2.0	0.055	10.7	LOS B	0.3	2.0	0.47	0.60	54.6
Approach		61	2.0	0.055	7.9	LOS A	0.3	2.0	0.47	0.60	53.7
West: Front Street											
10	L2	43	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	55.6
11	T1	363	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	57.3
Approach		406	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	57.1
All Vehicles		897	2.0	0.272	4.3	LOS A	1.8	13.0	0.20	0.39	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Combined (2021) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	326	2.0	0.224	3.6	LOS A	1.4	10.1	0.19	0.36	57.2
6	R2	16	2.0	0.224	9.4	LOS A	1.4	10.1	0.19	0.36	57.5
Approach		341	2.0	0.224	3.9	LOS A	1.4	10.1	0.19	0.36	57.2
North: Bent Branch Loop Road											
7	L2	62	2.0	0.094	4.9	LOS A	0.5	3.4	0.45	0.60	53.2
9	R2	45	2.0	0.094	10.6	LOS B	0.5	3.4	0.45	0.60	55.1
Approach		107	2.0	0.094	7.3	LOS A	0.5	3.4	0.45	0.60	54.0
West: Front Street											
10	L2	7	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	56.2
11	T1	332	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	57.9
Approach		339	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	57.9
All Vehicles		787	2.0	0.224	4.2	LOS A	1.4	10.1	0.18	0.38	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Combined (2021) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	411	2.0	0.294	3.6	LOS A	2.0	14.6	0.17	0.38	57.0
6	R2	57	2.0	0.294	9.3	LOS A	2.0	14.6	0.17	0.38	57.3
Approach		468	2.0	0.294	4.3	LOS A	2.0	14.6	0.17	0.38	57.0
North: Bent Branch Loop Road											
7	L2	29	2.0	0.056	5.1	LOS A	0.3	2.1	0.48	0.61	52.7
9	R2	32	2.0	0.056	10.8	LOS B	0.3	2.1	0.48	0.61	54.6
Approach		61	2.0	0.056	8.1	LOS A	0.3	2.1	0.48	0.61	53.7
West: Front Street											
10	L2	43	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	55.5
11	T1	384	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	57.3
Approach		427	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	57.1
All Vehicles		956	2.0	0.294	4.3	LOS A	2.0	14.6	0.20	0.39	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

CREEKSIDE DRIVE

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	257	8	4	284	4	27	4	4	4	4	4
Future Vol, veh/h	4	257	8	4	284	4	27	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	286	9	4	316	4	30	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	320	0	0	294	0	0	630	628	290	630	630	318
Stage 1	-	-	-	-	-	-	299	299	-	327	327	-
Stage 2	-	-	-	-	-	-	331	329	-	303	303	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1240	-	-	1268	-	-	394	400	749	394	399	723
Stage 1	-	-	-	-	-	-	710	666	-	686	648	-
Stage 2	-	-	-	-	-	-	682	646	-	706	664	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1240	-	-	1268	-	-	386	397	749	386	396	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	397	-	386	396	-
Stage 1	-	-	-	-	-	-	707	663	-	683	645	-
Stage 2	-	-	-	-	-	-	670	643	-	694	661	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	14.7	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	410	1240	-	-	1268	-	-	462
HCM Lane V/C Ratio	0.095	0.004	-	-	0.004	-	-	0.029
HCM Control Delay (s)	14.7	7.9	0	-	7.8	0	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	0.8											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	343	26	4	345	4	15	4	4	4	4	4
Future Vol, veh/h	4	343	26	4	345	4	15	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	381	29	4	383	4	17	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	410	0	0	803	801	396	803	813	386
Stage 1	-	-	-	-	-	-	404	404	-	394	394	-
Stage 2	-	-	-	-	-	-	399	397	-	409	419	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1170	-	-	1149	-	-	302	318	653	302	313	662
Stage 1	-	-	-	-	-	-	623	599	-	631	605	-
Stage 2	-	-	-	-	-	-	627	603	-	619	590	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1149	-	-	295	315	653	295	311	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	315	-	295	311	-
Stage 1	-	-	-	-	-	-	621	597	-	628	603	-
Stage 2	-	-	-	-	-	-	616	601	-	608	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	16.8	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	1170	-	-	1149	-	-	370
HCM Lane V/C Ratio	0.077	0.004	-	-	0.004	-	-	0.036
HCM Control Delay (s)	16.8	8.1	0	-	8.1	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

EAST RIDGE CIRCLE

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	249	8	4	262	4	22	4	4	4	4	4
Future Vol, veh/h	4	249	8	4	262	4	22	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	277	9	4	291	4	24	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	296	0	0	286	0	0	597	594	281	596	596	293
Stage 1	-	-	-	-	-	-	290	290	-	302	302	-
Stage 2	-	-	-	-	-	-	307	304	-	294	294	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1265	-	-	1276	-	-	415	418	758	415	417	746
Stage 1	-	-	-	-	-	-	718	672	-	707	664	-
Stage 2	-	-	-	-	-	-	703	663	-	714	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1265	-	-	1276	-	-	407	415	758	407	414	746
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	415	-	407	414	-
Stage 1	-	-	-	-	-	-	715	669	-	704	661	-
Stage 2	-	-	-	-	-	-	691	660	-	702	667	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	14	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	435	1265	-	-	1276	-	-	483
HCM Lane V/C Ratio	0.077	0.004	-	-	0.003	-	-	0.028
HCM Control Delay (s)	14	7.9	0	-	7.8	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	317	26	4	332	4	13	4	4	4	4	4
Future Vol, veh/h	4	317	26	4	332	4	13	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	352	29	4	369	4	14	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	373	0	0	381	0	0	760	758	367	760	770	371
Stage 1	-	-	-	-	-	-	376	376	-	380	380	-
Stage 2	-	-	-	-	-	-	384	382	-	380	390	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1185	-	-	1177	-	-	323	336	678	323	331	675
Stage 1	-	-	-	-	-	-	645	616	-	642	614	-
Stage 2	-	-	-	-	-	-	639	613	-	642	608	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1177	-	-	316	333	678	316	328	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	316	333	-	316	328	-
Stage 1	-	-	-	-	-	-	642	614	-	639	612	-
Stage 2	-	-	-	-	-	-	628	611	-	631	606	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.8	14.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1185	-	-	1177	-	-	390
HCM Lane V/C Ratio	0.066	0.004	-	-	0.004	-	-	0.034
HCM Control Delay (s)	15.8	8	0	-	8.1	0	-	14.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

MILL STREET

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	13	328	8	3	295
Future Vol, veh/h	27	13	328	8	3	295
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	30	14	364	9	3	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	698	364	0	0	364	0
Stage 1	364	-	-	-	-	-
Stage 2	334	-	-	-	-	-
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	407	681	-	-	1195	-
Stage 1	703	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	406	681	-	-	1195	-
Mov Cap-2 Maneuver	406	-	-	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	467	1195	-
HCM Lane V/C Ratio	-	-	0.095	0.003	-
HCM Control Delay (s)	-	-	13.5	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	7	375	25	9	391
Future Vol, veh/h	15	7	375	25	9	391
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	17	8	417	28	10	434

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	871	417	0	0	417	0
Stage 1	417	-	-	-	-	-
Stage 2	454	-	-	-	-	-
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	322	636	-	-	1142	-
Stage 1	665	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	318	636	-	-	1142	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	378	1142	-
HCM Lane V/C Ratio	-	-	0.065	0.009	-
HCM Control Delay (s)	-	-	15.2	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

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 SITE PLAN APPLICATION

Pursuant to Article 7, Section 155.707 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Planning Board to approve a Major Site Plan application. Please complete all fields in this application and submit to the Planning Department with all required materials.

Application fee: $500.00 + $5.00 per acre. *All fees are due when the application is submitted.*

SITE INFORMATION

☒ New Major Site Plan ☐ Major Modification to an approved site plan
Project Modified: _____

Name of Project: Spinning Mill Lofts at East Village **Acreage of Property:** 24.50

County Tag #: See Attachment **NC PIN:** See Attachment

Address/Location: 300 Mill St., Clayton, NC

Existing Use: Vacant Manufacturing Bldg. and Office **Proposed Use:** Apartments

Zoning District: Existing: O&I; B-1; B-3; RE Proposed: B2 - Neighborhood Business

Is project within a Planned Development? ☒ No ☐ Yes (list): _____

Is project within an Overlay District? ☐ No ☒ Yes (list): Watershed Protection

FOR OFFICE USE ONLY

Date Received: RECEIVED APR 02 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: $0 File Number: 2018-64-SP

Spinning Mill Lofts at East Village

County Tag #	NC PIN	Deed	Page
05037009T	1669.18-30-2104	3322	198
05037008V	1669.18-30-5328	3322	196
05037009W	1669.18-30-8385	3322	198
05037009U	1669.18-30-4740	3322	196
5037011	1668.06-48-6538	4099	330
05H03197H	1669.18-40-2748	3371	449

PROPERTY OWNER INFORMATION

Name: WBB, LLC; HCY, LLC; SCA Ventures, LLC; East Village Investments, LLC

Mailing Address: 132 Citation Lane, Smithfield, NC and 227 E. Front St. New Bern, NC 28560-2145

Phone Number: 919-938-1086; 252-670-9370 **Fax:** N/A

Email Address: Hubie@uhfdevelopmentgroup.com

APPLICANT INFORMATION

Applicant: Bass, Nixon and Kennedy, Inc. Consulting Engineers

Mailing Address: 6310 Chapel Hill Rd, Ste, 250, Raleigh, NC 27607

Phone Number: 919-851-4422 **Fax:** 919-851-8968

Contact Person: Marty D. Bizzell, PE

Email Address: marty.bizzell@bnkinc.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany a Major Site Plan application.

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: 2/14/18	☑	☐			
2. I have referenced the *Plan Requirements Checklist* and used this as a guide	☑				
3. Site Plan Review Fee ($500 + $5/acre)	☑				
4. Completed application	☑				
5. Owner's Consent Form	☑	☐			
6. Plan sets meeting the requirements listed in the *Plan Requirements Checklist*	◉	☐			
7. Copy of plan sets in .PDF on USB flash drive	◉	☐			
8. Adjacent property owners list	◉	☐			
9. Wastewater allocation request OR verification of wastewater allocation	◉	☐			
10. Signed and sealed traffic impact analysis (2 copies) *(required for projects which generate at least 100 vehicle trips at peak hour. See §155.708 of the UDC)*	☐	☐			
11. Neighborhood meeting notice letter (1 copy)* *See sample letter and meeting requirements included in this packet* **Not required for subdivisions that are part of an approved planned development*	☐	☐			
12. Neighborhood meeting summary form (1 copy) * *Included in this packet* **Not required for subdivisions that are part of an approved planned development*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.				

EXPLANATION OF PROJECT

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

Project includes the renovation of the Historic Clayton Spinning Mill Building. The existing mill building will be converted to a loft apartment building which will house 25 loft apartments. In addition, 8 new market rate apartments will be constructed on the surrounding properties to the south and east of the mill building containing 230 new market rate apartments. There will also be a portion of the existing building that will be utilized for a small coffee shop or restaurant.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Planning Board of the Town of Clayton to approve the subject Major Site Plan. 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.

Marty D. Bizzell	Marty D. Bizzell	3/30/18
Print Name	***Signature of Applicant***	***Date***

TOWN OF CLAYTON
Engineering & Inspections
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: Spinning Mill Lofts at East Village **Address or PIN #:** 1669.06-48-6538

AGENT/APPLICANT INFORMATION:

Marty D. Bizzell, PE
(Name - type, print clearly)

6310 Chapel Hill Rd., Ste. 250
(Address)
Raleigh, NC 27607
(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 below)***:

Rezoning
Special Use Permit
Major Site Plan

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:

East Village Investments, LLC
(Name - type, print clearly)

227 E. Front Street
(Address)

(Owner's Signature)

New Bern, NC 28560-2145
(City, State, Zip)

STATE OF NC
COUNTY OF Wake

Sworn and subscribed before me Raye W. Taylor, a Notary Public for the above State and County, this the 2nd day of April, 2018.

SEAL

RAYE W. TAYLOR NOTARY PUBLIC WAKE COUNTY, NC
October 27, 2019

Raye W. Taylor
Notary Public
My Commission Expires: March 27, 2020

BASS, NIXON & KENNEDY, INC., CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
919/851-4422 FAX 919/851-8968 BNK@BNKinc.com

May 4, 2018

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: May 16, 2018 Meeting Time: 7:00PM

Meeting Location: The Arbors at East Village Apts. Clubhouse
50 Bentbranch Loop, Clayton

Type of Application: Rezoning, Special Use Permit and Site Plan.

Project/proposal property address: 300 Mill St., Clayton

Description of project/proposal: Residential apartments and amenities

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map at a scale that is appropriate to the project and shows neighboring properties and roads.
3. A map, drawing, or other depiction of the proposed land use change or development proposal.

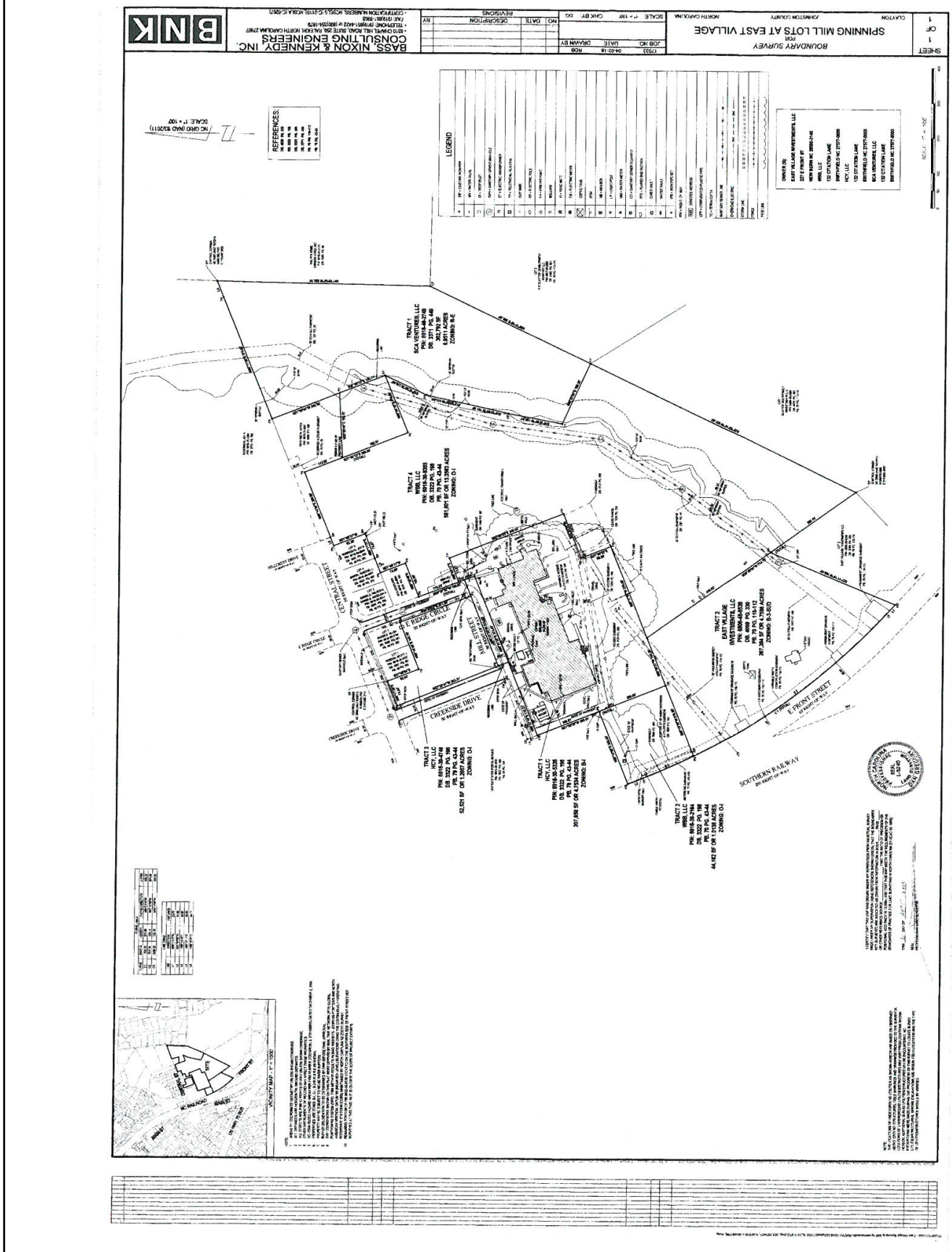
A map is enclosed with this letter showing the location of the property that is subject to this application for land use change and/or development proposal.

If you have any questions prior to or after this meeting, you may contact us at 919-851-4422. You may also contact the Planning Department at 919-553-5002.

Sincerely,

Marty D. Bizzell, PE
Bass, Nixon & Kennedy, Inc

Cc: Town of Clayton Planning Dept.


SHEET 1 OF 1
BOUNDARY SURVEY
FOR
SPINNING MILL LOTS AT EAST VILLAGE
CLAYTON
JOHNSTON COUNTY
NORTH CAROLINA
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
BNK
LEGEND
REFERENCES
OWNER (S)
EAST VILLAGE INVESTMENTS, LLC
227 E FRONT ST
PIN#: 15-5-2
DB: 6000 PG: 338
132 CITATION LANE
SMITHFIELD NC 27577-6000
HCV, LLC
132 CITATION LANE
SMITHFIELD NC 27577-6000
BCA VENTURES, LLC
132 CITATION LANE
SMITHFIELD NC 27577-6000
TRACT 1
BCA VENTURES, LLC
PIN: 15-5-2
DB: 3371 PG: 440
357,790 SF
8.2137 ACRES
ZONING: R-E
TRACT 4
WBB, LLC
PIN: 15-5-2
DB: 3322 PG: 196
PB: 79 PG: 43-44
581,697 SF OR 13.3533 ACRES
ZONING: CH
TRACT 2
EAST VILLAGE INVESTMENTS, LLC
PIN: 15-5-2
DB: 6000 PG: 338
PB: 79 PG: 116-112
267,306 SF OR 4.7788 ACRES
ZONING: B-1/CD
TRACT 3
HCV, LLC
PIN: 15-5-2
DB: 3322 PG: 196
PB: 79 PG: 43-44
51,501 SF OR 1.2067 ACRES
ZONING: CH
TRACT 1
HCV, LLC
PIN: 15-5-2
DB: 3322 PG: 196
PB: 79 PG: 43-44
267,306 SF OR 4.7788 ACRES
ZONING: CH
TRACT 2
WBB, LLC
PIN: 15-5-2
DB: 3322 PG: 196
PB: 79 PG: 43-44
44,162 SF OR 1.1938 ACRES
ZONING: CH
CREEKSIDE DRIVE
CREEK RIDGE CIRCLE
CENTRAL STREET
HILLCREST DRIVE
E FRONT STREET
SOUTHERN RAILWAY
VICINITY MAP
SITE
NC 210 ROAD
SCALE
DATE
DRAWN BY
CHK BY
JOB NO
REVISIONS
DESCRIPTION
NO
DATE
BY

ADJACENT PROPERTY OWNERS LIST

Project Name: Spinning Mill Lofts at East Village (Page 1 of 2)

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
1669.18-30-1510	United States Postal Service	3980 Dekalb Tech. Parkway S240, Atlanta, GA 30340-2778
1669.18-30-3737	Scott J. Perdun	111 Central Street, Clayton, N.C. 27520-2004
1669.18-30-3799	Allen Rhodes	P.O. Box 973, Greenboro, NC 27402-0973
1669.18-30-2808	John R. & Elaine W. Johnson	155 Richard Dr., Garner, NC 27529-6717
1669.18-30-6834	SCA Ventures, LLC	132 Citation Lane, Smithfield, NC 27577
1669.18-30-5814	Nelson K. & Angelina A. Daniels	401 Central Street, Clayton, NC 27520
166.18-30-5887	Raechel L. Marsh	409 Central Street, Clayton, NC 27520-2006
1669.18-30-6849	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-9081	Joyce Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-7006	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-31-1477	Harvey B. & Mildred S. Gordon	133 Plantation Cir S., Ponte Vedra Beach, FL 32082
1669.18-41-1304	Joy R. Roberson	P.O. Box 865, Clayton, NC 27528
1669.18-41-7775	Walden Homeowners Assoc., Inc.	2044 Deer Trail, Clayton, NC 27527
1669.18-41-6242	Jerry D. & Leetha House	2025 Deer Trail, Clayton, NC 27527
1669.18-41-5034	Hamilton Family Trust	2021 Deer Trail, Clayton, NC 27527
1669.18-40-5883	Anthony R. Tuel	2017 Deer Trl., Clayton, NC 27527-9181
1668.07-59-0985	TH Clayton Development Co., LLC	P.O. Box 566, Greenville, NC 27835-0566

ADJACENT PROPERTY OWNERS LIST

Project Name: Spinning Mill Lofts at East Village (Page 2 of 2)

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

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PARCEL NUMBER	NAME	ADDRESS
1668.06-49-3499	Clayton Multi Family Investments, LLC	P.O Box 566, Greenville, NC 27835-0566
1668.06-39-9260	East Village Investments, LLC	227 E. Front St., New Bern, NC 28560-2145
	North Carolina Railroad	2809 Highwoods Blvd., Raleigh, NC 27604

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Spinning Mill Lofts at East Village

Application: Rezoning, Special Use and Major Site Plan

Location/Date: The Arbors Apts. Clubhouse - May 16, 2018

	NAME	ADDRESS
1	Angelina Daniels	401 Central St, Clayton, NC 27520
2	Marcia Wolfe	141 East Ridge Circle, Clayton, NC 27520
3		2021 Deer Trl
4	Allen Rhodes	508 #3 O Ferrell ST Greensboro, NC 27405
5	Jerry House	2025 Deer Trl
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NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Spinning Mill Lofts at East Village

Date of Mailing: May 4, 2018

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:

Printed Name: Marty D. Bizzell Signature: _____

Date of Meeting: May 16th Time of Meeting: 7:00

Location of Meeting: The Arbors Apartments Clubhouse

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.*

Five property owners attended the meeting held at the Arbors Apts. Clubhouse on May 16th at 7:00 p.m. An overview of the project was given by Marty Bizzell, Engineer for the project and Thomas Taft, Jr., developer. Several items were discussed including bldg. elevations, landscaping and traffic patterns. It was explained that the existing mill building will be renovated into 25 loft apartments. Stormwater ponds locations were discussed along with locations of Neuse Riparian buffers. There was some discussion about whether the adjacent house on E. Ridge Circle (PIN: 166918-30-6834) would remain or be demolished. It was explained the parcel is not part of the project and will remain. Property owners seemed pleased with the project at the meeting adjourned at approximately 8:30 p.m.

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

SYMBOLS AND ABBREVIATIONS

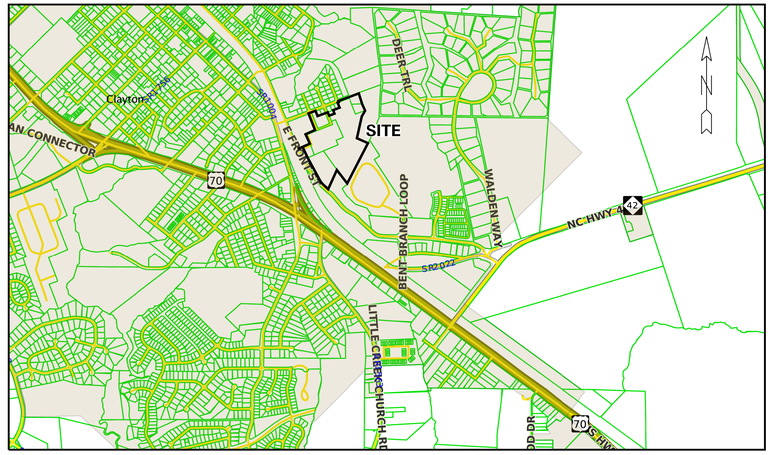
ABC	AGGREGATE BASE COURSE
ALUM	ALUMINUM
ASSY	ASSEMBLY
B-B	BACK TO BACK
BOA	BLOW-OFF ASSEMBLY
C&G	CURB AND GUTTER
CFS	CUBIC FEET PER SECOND
CI	CURB INLET
C/L	CENTER LINE
CO	CLEAN OUT
COM	COMMUNICATION
CONC	CONCRETE
CT	COURT
CU	COPPER
DCV	DOUBLE CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE
DEFL	DEFLECTION
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DRAIN	DRAINAGE
DR	DRIVE
EASE	EASEMENT
ELEC	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FES	FLARED END SECTION
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FEET
FT/SEC	FEET PER SEC
GALV	GALVANIZED
GV	GATE VALVE
HCR	HANDICAP RAMP
INV	INVERT
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
OHE	OVERHEAD ELECTRIC
PAVE	PAVEMENT
PERM	PERMANENT
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
S	SLOPE
SS	SANITARY SEWER
STA	STATION
T	TANGENT
TDD	TEMPORARY DIVERSION DITCH
TELE	TELEPHONE
TSB	TEMPORARY SEDIMENT BASIN
TSD	TEMPORARY SLOPE DRAIN
UG	UNDERGROUND
W	WIDTH
W/L	WATER LINE
WM	WATER METER
YI	YARD INLET

	EXISTING CURB INLET
	EXISTING DROP INLET / YARD INLET
	EXISTING FLARED END SECTION
	EXISTING FIRE HYDRANT
	EXISTING BLOW-OFF ASSEMBLY
	EXISTING GATE VALVE
	EXISTING REDUCER
	EXISTING WATER METER
	EXISTING MANHOLE / JUNCTION BOX
	EXISTING CLEAN OUT
	EXISTING POWER POLE
	EXISTING GUY WIRE
	EXISTING TELEPHONE PEDESTAL
	EXISTING LIGHT POLE / AREA LIGHT
	EXISTING SIGN
	NEW CURB INLET
	NEW GRATE INLET/YARD INLET
	NEW FLARED END SECTION
	NEW FIRE HYDRANT
	NEW BLOW-OFF ASSEMBLY
	NEW GATE VALVE
	NEW REDUCER
	NEW WATER METER
	NEW TEE
	NEW PLUG
	NEW MANHOLE
	NEW CLEAN OUT
	NEW SIGN
	IRON PIPE
	BENCHMARK
3	STORM STRUCTURE LABEL
	BLOCK AND GRAVEL INLET PROTECTION
	SILT FENCE INLET PROTECTION
	EXCAVATED INLET PROTECTION
	SEDIMENT BASIN
	RISER BASIN
	ROCK DAM
— G —	EXISTING GAS LINE
— COM —	EXISTING COMMUNICATIONS LINE
— UT —	EXISTING UNDERGROUND TELEPHONE
— UE —	EXISTING UNDERGROUND ELECTRIC
— OHE —	EXISTING OVERHEAD ELECTRIC
— W —	EXISTING WATER LINE
FM	EXISTING SANITARY SEWER FORCE MAIN
— SS —	EXISTING SANITARY SEWER
	EXISTING STORM DRAINAGE
	NEW STORM DRAINAGE
	STREAM
	NEW WATER LINE
	NEW SANITARY SEWER
FM	NEW SANITARY SEWER FORCE MAIN
G	NEW GAS MAIN
GL	GRASSED LINED DITCH/CHANNEL
JM	JUTE MATTING LINED DITCH/CHANNEL
P	PYRAMAT LINED DITCH/CHANNEL
C	LIMITS OF CUT SLOPE
F	LIMITS OF FILL SLOPE
	SILT FENCE
TF	TREE FENCE
	COMBINATION SILT/ TREE FENCE
	DIVERSION DITCH

SPINNING MILL LOFTS AT EAST VILLAGE

MAJOR SITE PLAN

JOHNSTON COUNTY NORTH CAROLINA



VICINITY MAP

NOT TO SCALE

DEVELOPER:

SPINNINNG MILL INVESTMENTS, LLC
P.O. BOX 566
GREENVILLE, NC 27835
TELEPHONE: (252) 752–7101

PREPARED BY:

BNK

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
5316 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
TELEPHONE: (919)851–4422 or (800)354–1879
FAX: (919)851–8968
www.BNKinc.com
CERTIFICATION NUMBERS: NCBELS (C–0110)
NCBOLA (C–0267)

ENGINEERS:
BASS, NIXON AND KENNEDY, INC.
6310 CHAPEL HILL ROAD, SUITE 250
RALEIGH, NORTH CAROLINA 27607
TELEPHONE: (919) 851–4422
FAX: (919) 851–8968

CONTACT: MARTY D. BIZZELL, PE, CPESC
EMAIL: MARTY.BIZZELL@BNKINC.COM

SHEET INDEX

SHEET No.	SHEET TITLE
—	COVER SHEET
C1.0	EXISTING CONDITIONS PLAN
C1.1	OVERALL SITE PLAN
C1.2	SITE PLAN
C1.3	SITE PLAN
C2.1	UTILITY PLAN
C2.2	UTILITY PLAN
C2.3	OFF SITE SANITARY SEWER PLAN
C3.1	GRADING PLAN
C3.2	GRADING PLAN
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN – NORTH
L1.2	LANDSCAPE PLAN – SOUTH
1.A1.10	BUILDING TYPE I ELEVATION
1.A1.11	BUILDING TYPE I ELEVATION
1.A2.03	BUILDING TYPE II ELEVATION
1.A2.08	BUILDING TYPE 2.1 ELEVATION
1.A2.09	BUILDING TYPE 2.1 ELEVATION
1.A3.03	BUILDING TYPE 3.0 ELEVATION
1.A3.12	BUILDING TYPE 3.1 ELEVATION
1.A3.24	BUILDING TYPE 3.2 ELEVATION
1.A5.10	GARAGE TYPE 1 ELEVATIONS
1.A5.11	GARAGE TYPE 2 ELEVATIONS
1.A5.12	GARAGE TYPE 3 ELEVATIONS
1.A6.00	COMPACTOR PLAN AND ELEVATION
1.A7.00	POOLSIDE GRILLING STATIONS
CB1	COLOR BOARD 1
A1.1	BUILDING PLAN
A1.2	BUILDING PLAN
A1.3	POOL–HOUSE – BUILDING PLAN – ELEVATIONS
A3.1	BUILDING ELEVATIONS
A3.2	BUILDING ELEVATIONS
A3.3	BUILDING ELEVATIONS

Received by Town of Clayton
9/19/2018

CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPALITY STANDARDS, SPECIFICATIONS, AND DETAILS. WORK IN THIS PROJECT SHALL ALSO CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.

3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE–CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1–800–632–4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.

6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

7. A PRE–CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEERING DIVISION.

8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.

9. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND APPLICABLE MUNICIPALITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

10. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

11. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D698. STONE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST AS SET OUT IN ASTM STANDARD D1557. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.

12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY

13. THE CONTRACTOR SHALL REVIEW, VERIFY AND COORDINATE ALL DIMENSIONS SHOWN ON PLANS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER PRIOR TO STARTING PROJECT.

14. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

15. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE, VOL. I–C ACCESSIBILITY CODE.

16. OWNER SHALL PROVIDE FENCING AND OTHER SAFETY MEASURES NECESSARY IN AND AROUND ANY PROPOSED STORMWATER MANAGEMENT MEASURES (PONDS, WETLANDS, ETC.) OBTAINING PROPER PERMITS SHALL BE THE RESPONSIBILITY OF THE OWNER.

17. RETAINING WALLS EXCEEDING 30 INCHES IN HEIGHT SHALL INCLUDE FALL PROTECTION IN THE FORM OF A HANDRAIL OR FENCING ON THE HIGH SIDE OF THE RETAINING WALL.

18. PROPER COMPACTION OF ALL FILL SOILS PLACED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION SHALL BE ADEQUATE TO SUPPORT THE PROPOSED USE OF AREAS IN WHICH FILL SOILS ARE PLACED. THE CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO TEST AND VERIFY THAT COMPACTION IS ADEQUATE FOR THE PROPOSED USE OF IN THE AREA OF FILL PLACEMENT.

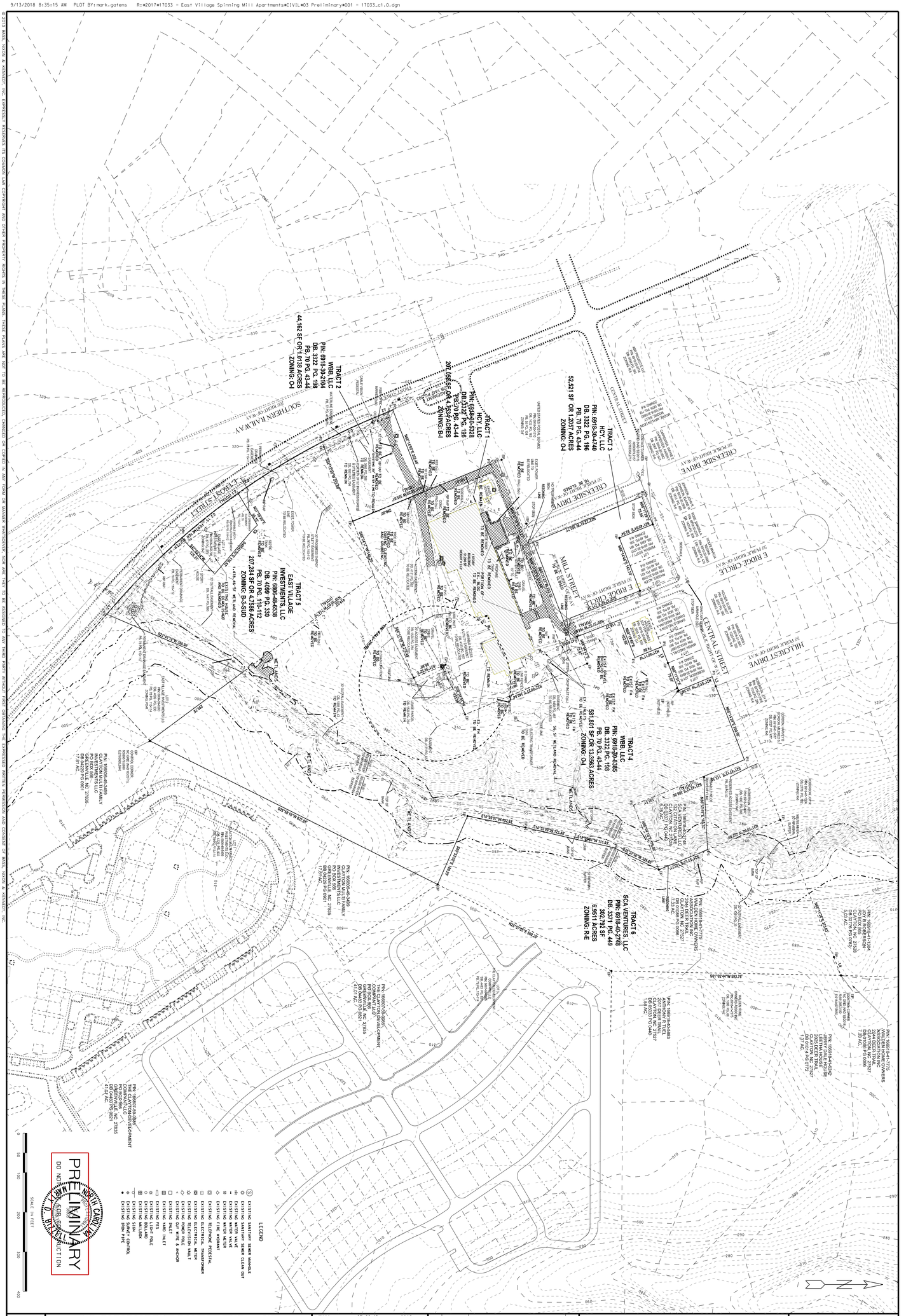
19. ALL ASPECTS OF THIS PROJECT SHALL BE IN FULL COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR NOTES ANY ASPECTS OF THE PROJECT WHICH ARE NOT IN COMPLIANCE, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY FURTHER WORK BEING PERFORMED. ANY WORK PERFORMED AFTER THE CONTRACTOR NOTES SUCH A NON COMPLIANCE IS SUBJECT TO REMOVAL AND REPAIR AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR OR OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO TEST ALL EMBANKMENTS AND FILL PLACEMENT FOR PROPER COMPACTION. PROPER COMPACTION SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS OR THESE PLANS, WHICHEVER IS MORE STRINGENT. EMBANKMENTS FOR PONDS SHALL BE PLACED IN 6 INCH LOOSE LAYERS AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR – TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE AT ALL PHASES OF INSTALLATION AND SHALL RETAIN WITH GEOTECHNICAL TESTING DATA. THE CONTRACTOR SHALL ALSO RETAIN ALL SHIPPING RECORDS AND SPECIFICATIONS FOR THE OUTLET STRUCTURE MATERIALS AND STRUCTURES. ALL OF THE ABOVE DATA MAY BE REQUIRED AS PART OF THE MUNICIPALITY AS–BUILT PROCESS AND SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST. THE CONTRACTOR AND OWNER SHALL HAVE DOCUMENTATION OF THESE TESTS AVAILABLE UPON REQUEST.

21. RETAINING WALLS SHOWN HEREIN SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER WITH EXPERIENCE DESIGNING RETAINING WALLS. AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION OF RETAINING WALLS, THE CONTRACTOR SHALL CONTACT THE OWNER'S GEOTECHNICAL ENGINEER TO SCHEDULE AND COORDINATE ALL APPROPRIATE INSPECTIONS, TESTING, AND VERIFICATION NECESSARY DURING RETAINING WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTION, TESTING AND VERIFICATION FOR THE DURATION OF RETAINING WALL CONSTRUCTION. PROPER SCHEDULING, EXECUTION, AND RECORD KEEPING FOR ALL REQUIRED INSPECTIONS, TESTING, AND VERIFICATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH RECORDS SHALL BE RETAINED AND SHALL BE PROVIDED TO THE OWNER AND BASS, NIXON & KENNEDY, INC. ALL MONITORING, TESTING, AND VERIFICATION SHALL CONFORM TO THE MOST RECENT VERSION OF THE NC BUILDING CODE CHAPTER 18, SECTION 1806 OR THE WALL DESIGN ENGINEER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

NOT PERMITTED FOR CONSTRUCTION

9/18/2018 3:22:50 PM PLOT By:mark.ogiens R:\2017\17033 – East Village Spinning Mill Apartments\CIVIL\03 Preliminary\17033_cover .dgn



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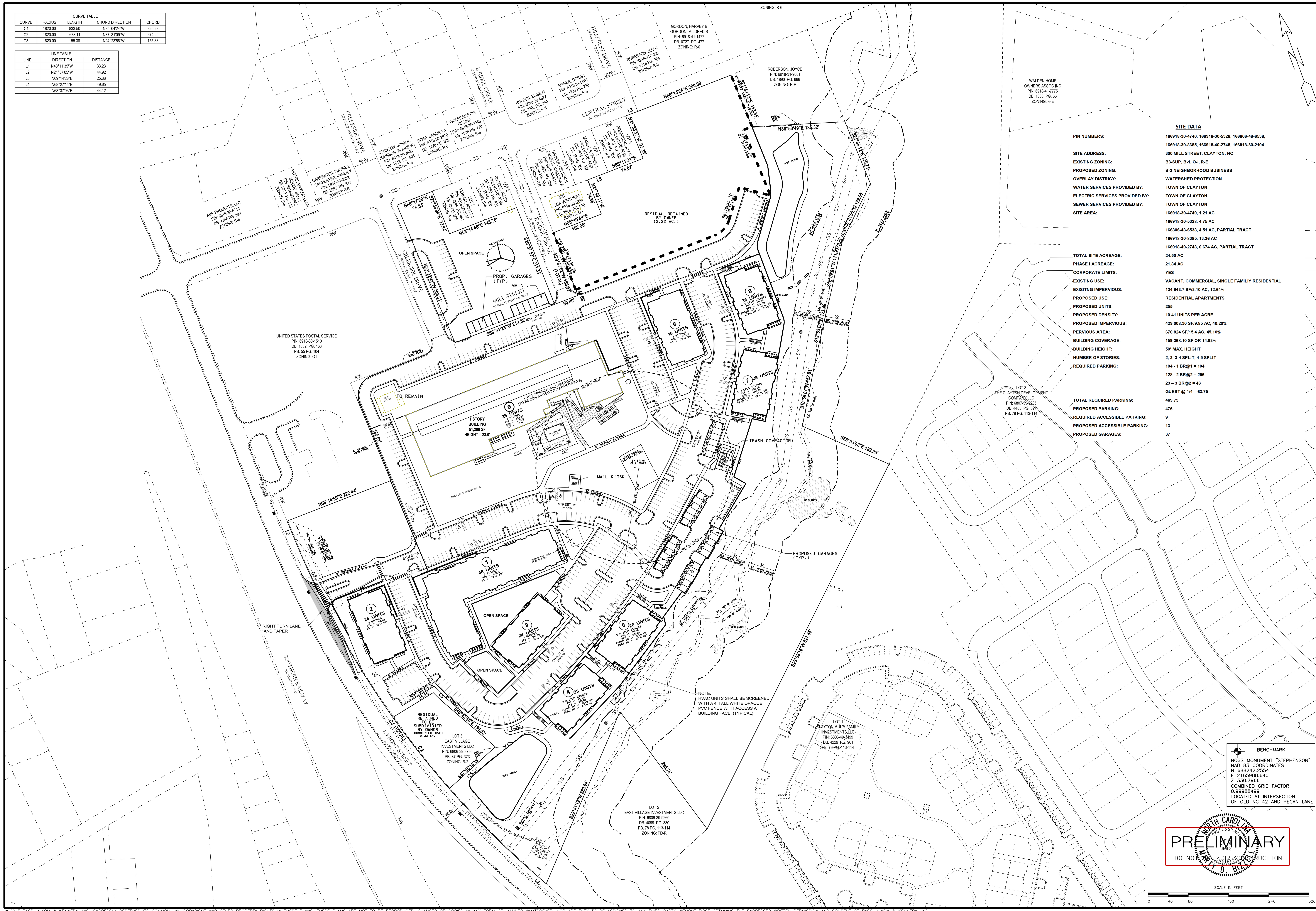
NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C1	1820.00	833.50	N35°04'24"W	826.23
C2	1820.00	678.11	N37°31'09"W	674.20
C3	1820.00	155.38	N24°23'58"W	155.33

LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	N48°11'35"W	33.23
L2	N21°57'05"W	44.92
L3	N69°14'28"E	25.88
L4	N68°27'14"E	49.65
L5	N68°37'03"E	44.12



SITE DATA

PIN NUMBERS:	166918-30-4740, 166918-30-5328, 166806-48-6538,
	166918-30-8385, 166918-40-2748, 166918-30-2104
SITE ADDRESS:	300 MILL STREET, CLAYTON, NC
EXISTING ZONING:	B3-SUP, B-1, O-I, R-E
PROPOSED ZONING:	B-2 NEIGHBORHOOD BUSINESS
OVERLAY DISTRICY:	WATERSHED PROTECTION
WATER SERVICES PROVIDED BY:	TOWN OF CLAYTON
ELECTRIC SERVICES PROVIDED BY:	TOWN OF CLAYTON
SEWER SERVICES PROVIDED BY:	TOWN OF CLAYTON
SITE AREA:	166918-30-4740, 1.21 AC
	166918-30-5328, 4.75 AC
	166806-48-6538, 4.51 AC, PARTIAL TRACT
	166918-30-8385, 13.36 AC
	166918-40-2748, 0.674 AC, PARTIAL TRACT
TOTAL SITE ACREAGE:	24.50 AC
PHASE I ACREAGE:	21.84 AC
CORPORATE LIMITS:	YES
EXISTING USE:	VACANT, COMMERCIAL, SINGLE FAMILIY RESIDENTIAL
EXISITNG IMPERVIOUS:	134,943.7 SF/3.10 AC, 12.64%
PROPOSED USE:	RESIDENTIAL APARTMENTS
PROPOSED UNITS:	255
PROPOSED DENSITY:	10.41 UNITS PER ACRE
PROPOSED IMPERVIOUS:	429,008.30 SF/9.85 AC, 40.20%
PERVIOUS AREA:	670,824 SF/15.4 AC, 45.10%
BUILDING COVERAGE:	159,368.10 SF OR 14.93%
BUILDING HEIGHT:	50' MAX. HEIGHT
NUMBER OF STORIES:	2, 3, 3-4 SPLIT, 4-5 SPLIT
REQUIRED PARKING:	104 - 1 BR@1 = 104
	128 - 2 BR@2 = 256
	23 – 3 BR@2 = 46
	GUEST @ 1/4 = 63.75
TOTAL REQUIRED PARKING:	469.75
PROPOSED PARKING:	476
REQUIRED ACCESSIBLE PARKING:	9
PROPOSED ACCESSIBLE PARKING:	13
PROPOSED GARAGES:	37

BENCHMARK
NCGS MONUMENT "STEPHENSON"
NAD 83 COORDINATES
N 688242.2554
E 2165988.640
Z 330.7966
COMBINED GRID FACTOR
0.99988499
LOCATED AT INTERSECTION OF OLD NC 42 AND PECAN LANE

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

BNK
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

OVERALL PRELIMINARY SITE PLAN

SCALE: 1" = 80' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET C1.1

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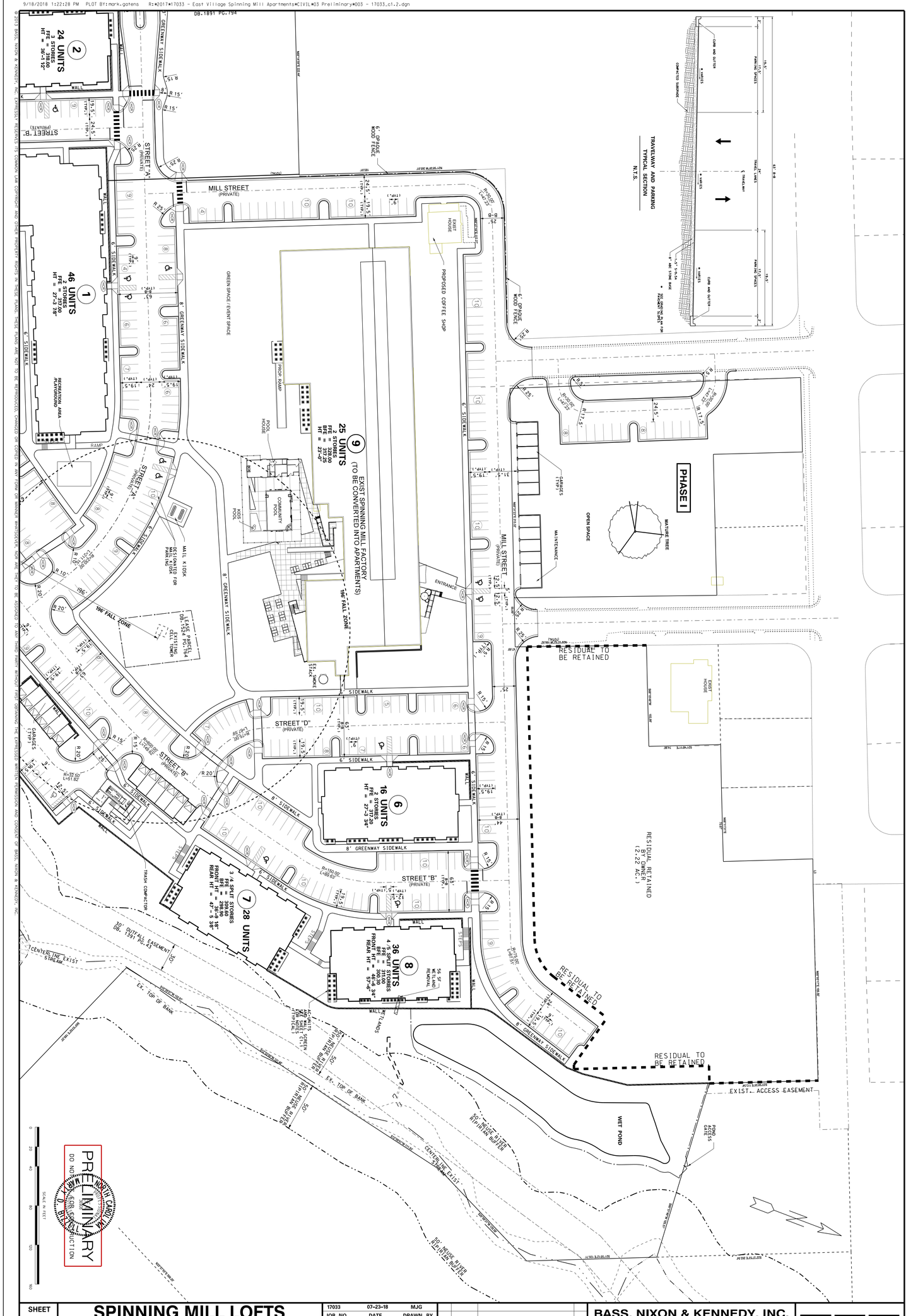
9/18/2018 2:04:46 PM PLOT BY: mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*002 - 17033_c1.1.dgn



SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C1.2	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	PRELIMINARY SITE PLAN		
		SCALE: 1" = 40' HORZ		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)
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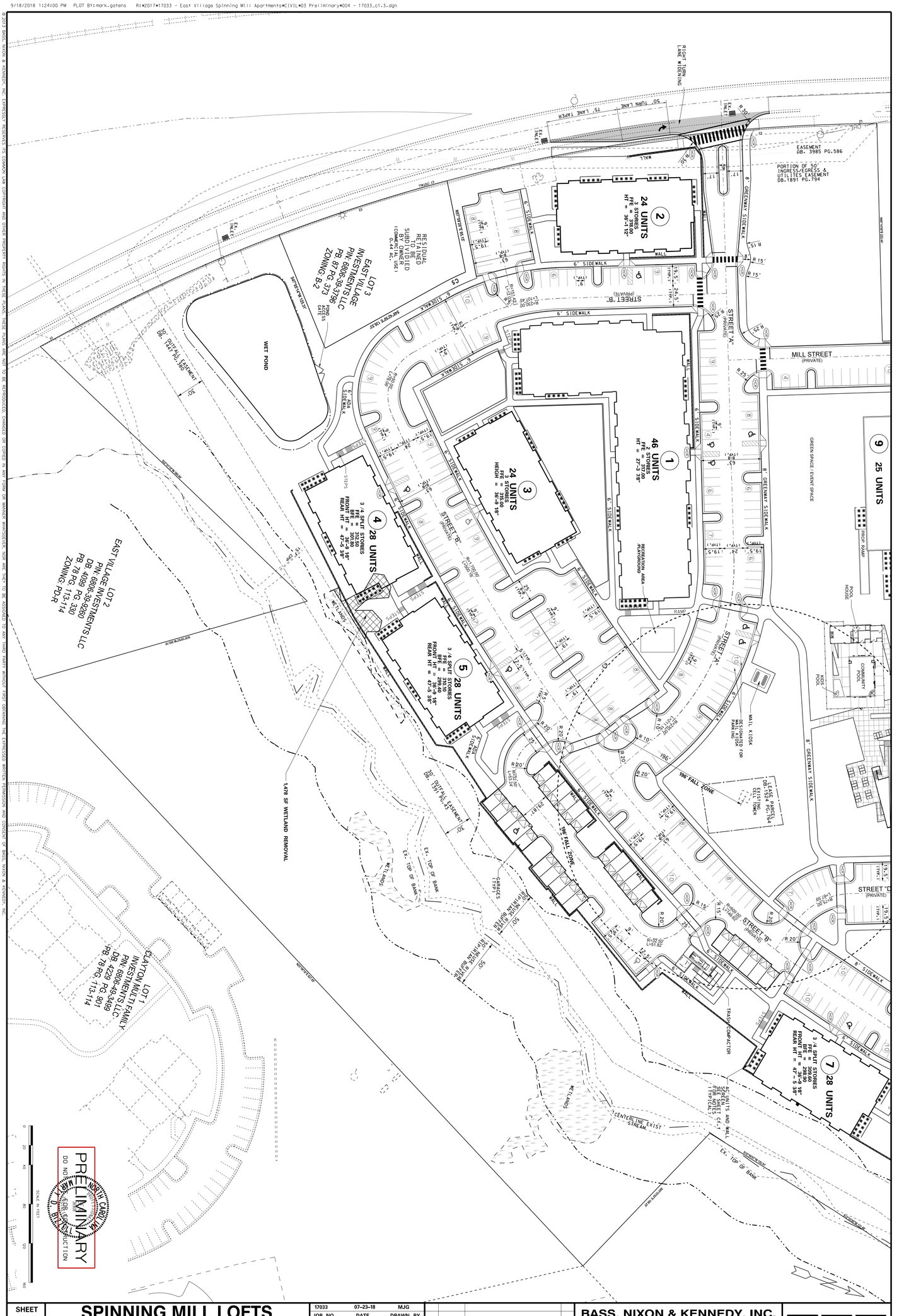

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033 07-23-18 MJG JOB NO. DATE DRAWN BY	BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS
C1.3	PHASE I PRELIMINARY SUBMITTAL TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	PRELIMINARY SITE PLAN SCALE: 1" = 40' HORZ	6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

UTILITY NOTES

SANITARY SEWER:

BACKWATER VALVES SHALL BE PROVIDED FOR ALL UNITS WITH FINAL FLOOR ELEVATIONS OF BUILDINGS LESS THAN 1' ABOVE THE NEXT UPSTREAM MANHOLE, OR CONNECTING MANHOLE WHERE THERE IS NO UPSTREAM MANHOLE.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN NON-TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING (MINIMUM COVER SHALL BE NO LESS THAN 3').

MINIMUM SLOPE FOR 4" AND 6" SANITARY SEWER COLLECTION LINES SHALL BE NO LESS THAN 0.08% WITH CLEAN-OUTS EVERY 75 LINEAL FEET.

MAINTAIN 24" VERTICAL SEPARATION FROM STORM SEWER OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM WATER MAINS OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING.

IF SANITARY AND STORM SEWERS CROSS WITH LESS THAN 24" VERTICAL SEPARATION, A CONCRETE CRADLE OF FLOWABLE FILL SHALL BE INSTALLED TO THE SPRINGLINE OF BOTH PIPES. THE CRADLE SHALL BE THE FULL WIDTH OF THE PIPE TRENCH, WITH A MINIMUM OF 12" BEYOND THE OUTSIDE EDGES OF THE LARGER PIPE. THE LOWER PIPE SHALL HAVE 1" THICK COMPRESSIBLE JOINT MATERIAL BETWEEN THE CRADLE AND THE PIPE. THE MINIMUM VERTICAL PIPE SEPARATION WITH A CRADLE IS 6".

CLEAN-OUTS IN TRAFFIC AREAS SHALL BE TRAFFIC BEARING ACCORDING TO TOWN OF CLAYTON DETAILS. MANHOLES 0-12' DEEP SHALL BE 4'-0" DIAMETER MANHOLES. MANHOLES GREATER THAN 12' DEEP SHALL BE 5'-0" DIAMETER MANHOLES WITH AN EXTENDED BASE PER THE TOWN OF CLAYTON STANDARDS.

WATER:

MINIMUM COVER OF 3' TO BE PROVIDED.

MAINTAIN 18" VERTICAL SEPARATION FROM STORM SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM SANITARY SEWER MAINS. IF WATER MAIN CROSSES OVER THE SANITARY SEWER MAIN BUT HAS LESS THAN 18" CLEAR, THEN DIP IS REQUIRED FOR BOTH THE WATER MAIN AND SEWER MAIN WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF POINT OF CROSSING. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

IF THE WATER MAIN IS NOT AT LEAST 18" ABOVE THE STORM PIPE, OR IF IT CROSSES UNDER THE STORM PIPE, THEN THE WATER MAIN MUST BE DIP FOR 10 FEET ON EACH SIDE OF THE CROSSING.

PRESSURE REDUCING VALVES SHALL BE PROVIDED IF PRESSURE IS IN EXCESS OF 80 PSI.

GENERAL:

ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHTS-OF-WAY TO BE OWNED, OPERATED, AND MAINTAINED BY THE TOWN OF CLAYTON

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.

ALL UNDERGROUND UTILITIES ARE APPROXIMATELY LOCATED. ACTUAL LOCATION AND DEPTH TO BE CONFIRMED IN THE FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCY.

BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY CITY OR NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, THE FOLLOWING PROCEDURES SHOULD BE UNDERTAKEN:

CITY RIGHT-OF-WAY - CONTACT LOCAL AUTHORITIES TRAFFIC ENGINEERING DEPT. FOR INFORMATION ON DETOURS, OPEN CUTTING OF STREETS OR FOR ANYCONSTRUCTION WITHIN RIGHT-OF-WAY.

NCDOT RIGHT-OF-WAY - CONTACT PROJECT ENGINEERS AND OBTAIN ALL PERMITS AND ENCROACHMENTS. (CROSS-CHECK PLANS WITH SPECIAL PROVISIONS, KEEP COPIES ON CONSTRUCTION SITE, ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER)

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0287)

NO.	DATE	DESCRIPTION	BY
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1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

17033 JOB NO.
07-23-18 DATE
MJG DRAWN BY

UTILITY PLAN

SCALE: 1" = 40' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

SHEET C2.1

9/18/2018 1:25:09 PM PLOT BY: mark.gaines R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\006 - 17033_c2.1.dgn

NOTES:

1. THE SITE LAYOUT AND BUILDING INFORMATION FOR SPINNING MILLS APARTMENTS WAS PROVIDED BY PLANWORK ARCHITECTS AND ROSS DECEKARD ARCHITECTS.
2. BACKFLOW PREVENTION DEVICES FOR THE DOMESTIC WATER AND FIRE SERVICES (WHERE APPLICABLE) FOR EACH BUILDING SHALL BE LOCATED INSIDE THE BUILDINGS. A DOUBLE CHECK VALVE ASSEMBLY (DVCA) BACKFLOW PREVENTOR IS REQUIRED FOR THE DOMESTIC SERVICES; A REDUCED PRESSURE ZONE (RPZ) IS REQUIRED FOR THE POOL SERVICE; AND A REDUCED PRESSURE DETECTOR DEVICE (RPDA) IS REQUIRED FOR THE FIRE SPRINKLER SERVICES. THE DEVICE MUST BE LISTED ON THE USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
3. THE POOL HOUSE WILL INCLUDE A 2" WATER SERVICE WITH A 2" WATER METER.THE BACKFLOW BREVENTION DEVICES FOR THE WATER SERVICES SHALL BE LOCATED INSIDE THE BUILDINGS. THE POOL HOUSE WILL INCLUDE A 4" SEWER SERVICE.
4. ALL APARTMENT BUILDINGS WILL INCLUDE A 4" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR FIRE PROTECTION AND A 2" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR DOMESTIC SERVICE. A 2" WATER METER SHALL BE PROVIDED ON THE DOMESTIC SERVICE. BACKFLOW PREVENTION DEVICES FOR BOTH THE DOMESTIC AND FIRE SERVICES SHALL BE LOCATED INSIDE BUILDINGS. A 6" SEWER SERVICE WILL BE PROVIDED FOR ALL APARTMENT BUILDINGS.
5. THE CONTRACTOR MAY USE PVC C-900, CLASS 150 , DR 18 PIPE FOR THE WATERLINE INSTALLATION IN LIEU OF USING DIP AS SHOWN ON THESE DRAWINGS. ONLY DIP SHALL BE USED FOR THE WATER MAIN IN THE LOCATIONS NOTED ON THE PLANS AND BE ACCORDANCE WITH THE UTILITY NOTES INCLUDED ON THIS SHEET. ALL MATERIALS FURNISHED AND WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND NCDENR STANDARDS SPECIFICATIONS.
6. GROUNDWATER WELL(S) SHALL BE USED FOR PROVIDING SITE IRRIGATION. THERE SHALL BE NO CONNECTIONS BETWEEN THE IRRIGATION SYSTEM AND ANY OF THE WATER MAINS OR SERVICES CONNECTED TO THE PUBLIC MAINS.
7. ALL FIRE HYDRANT LEGS ARE TO BE CONSTRUCTED USING DUCTILE IRON PIPE.
8. ALL APARTMENT BUILDINGS WILL BE SPRINKLERED AND KNOX BOXES SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON REQUIREMENTS. THE KNOX BOX LOCATIONS, TYPE, ETC. SHALL BE COORDINATED WITH THE TOWN OF CLAYTON FIRE MARSHAL. CONTACT TONY ATKINSON AT (919)553-1577.
9. FDC CONNECTIONS AND ALARM PANELS SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON FIRE MARSHAL REQUIREMENTS. CONTACT TONY ATKINSON AT (919)553-1577. FDC CONNECTIONS SHALL BE LOCATED WITHIN 100-FEET OF A FIRE HYDRANT.
10. ALL 1" AND 2" WATER SERVICES SHALL INCLUDE TAPPING THE WATER MAIN FOR INSTALLATION FOR THE SERVICE IN ACCORDANCE WITH THE TOWN OF CLAYTON STANDARDS AND DETAILS. ALL 4" FIRE SERVICES SHALL BE INSTALLED WITH AN 8"x 4" TEE, A 4" STAINLESS STEEL TAPPING SLEEVE AND VALVE MAY BE USED IF THE FIRE SERVICE CONNECTION IS MADE AFTER INSTALLATION OF THE WATER MAIN.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 30850 MARY D. BRADSHAW
PRELIMINARY
DO NOT USE FOR CONSTRUCTION

SCALE IN FEET
0 20 40 80 120 160

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1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO. 17033 | DATE 07-23-18 | DRAWN BY MJG

UTILITY PLAN

SCALE: 1" = 40' HORZ

SHEET C2.2

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON | JOHNSTON COUNTY | NORTH CAROLINA

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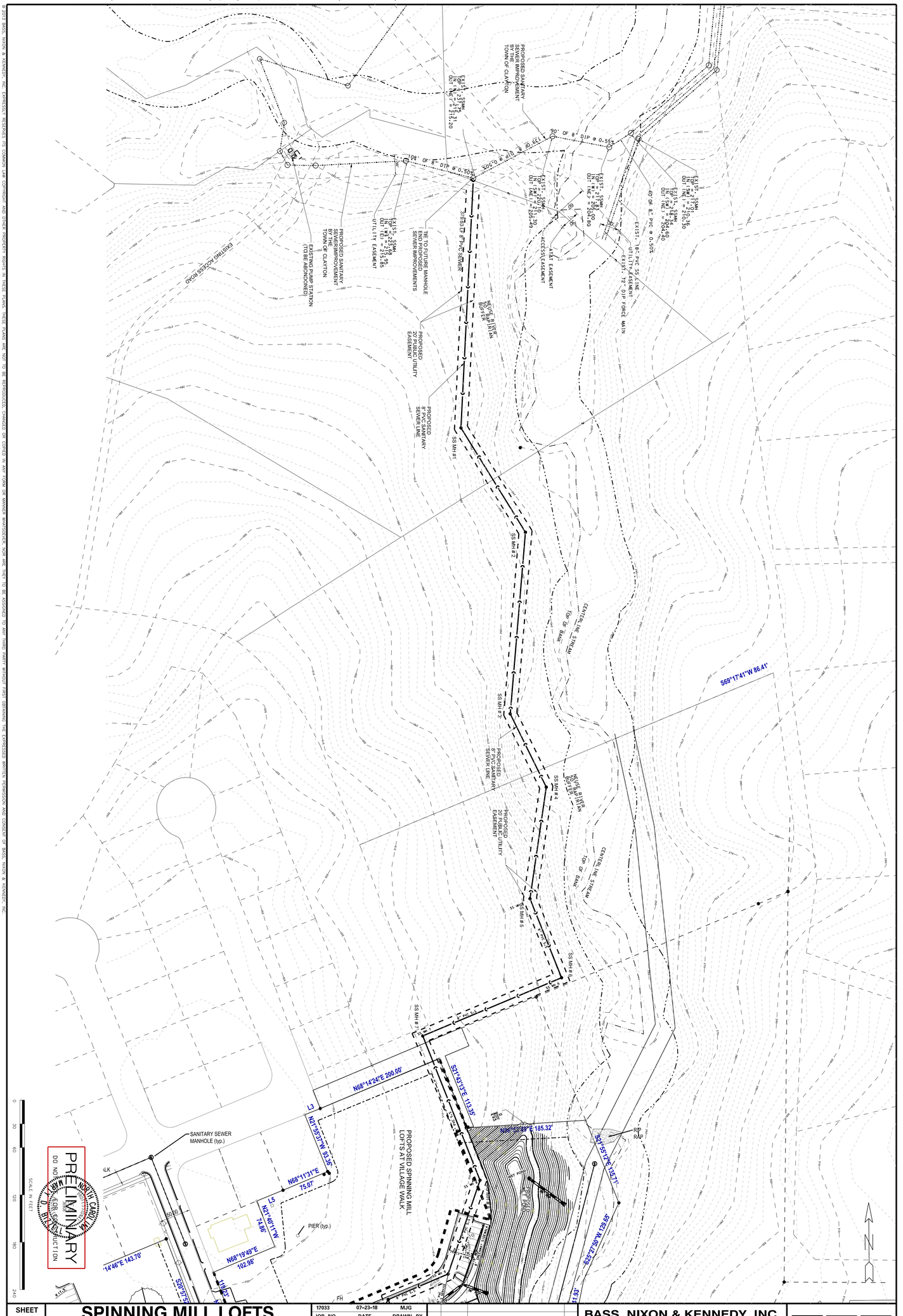
8/16/2018 4:47:44 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\009 - 17033_c2.4.dgn



SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C2.3	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	OFF SITE SANITARY SEWER PLAN		
		SCALE: 1" = 60' HORZ.		

NO.	DATE	DESCRIPTION	BY
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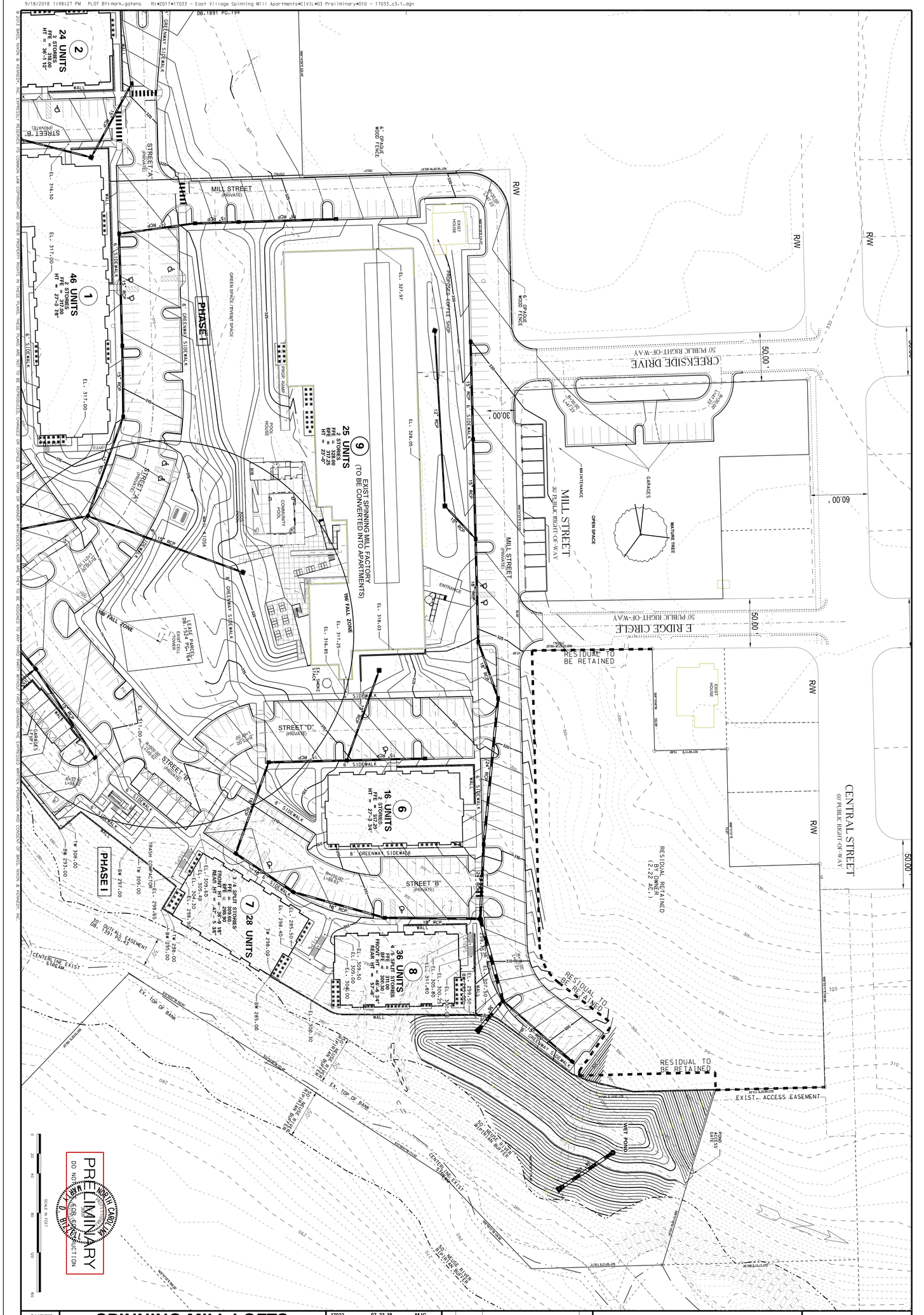

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SHEET	SPINNING MILL LOFTS AT EAST VILLAGE						
C3.1	PHASE I PRELIMINARY SUBMITTAL						
	TOWN OF CLAYTON	JOHNSTON COUNTY	NORTH CAROLINA				

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

GRADING AND DRAINAGE PLAN

SCALE: 1" = 40' HORZ

NO.	DATE	DESCRIPTION	BY
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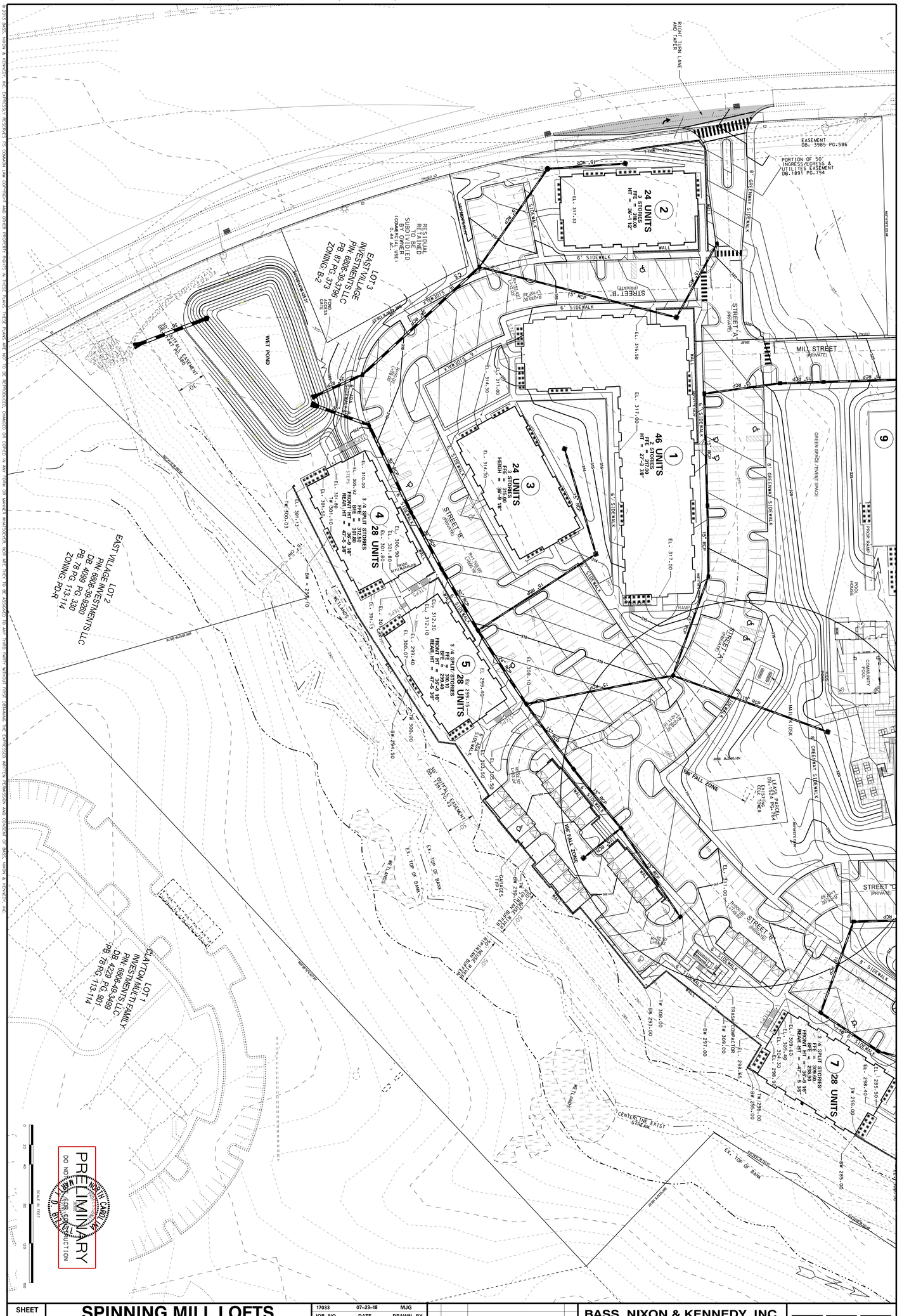

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C3.2	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	GRADING AND DRAINAGE PLAN		
		SCALE: 1" = 40' HORZ		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
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		REVISIONS	

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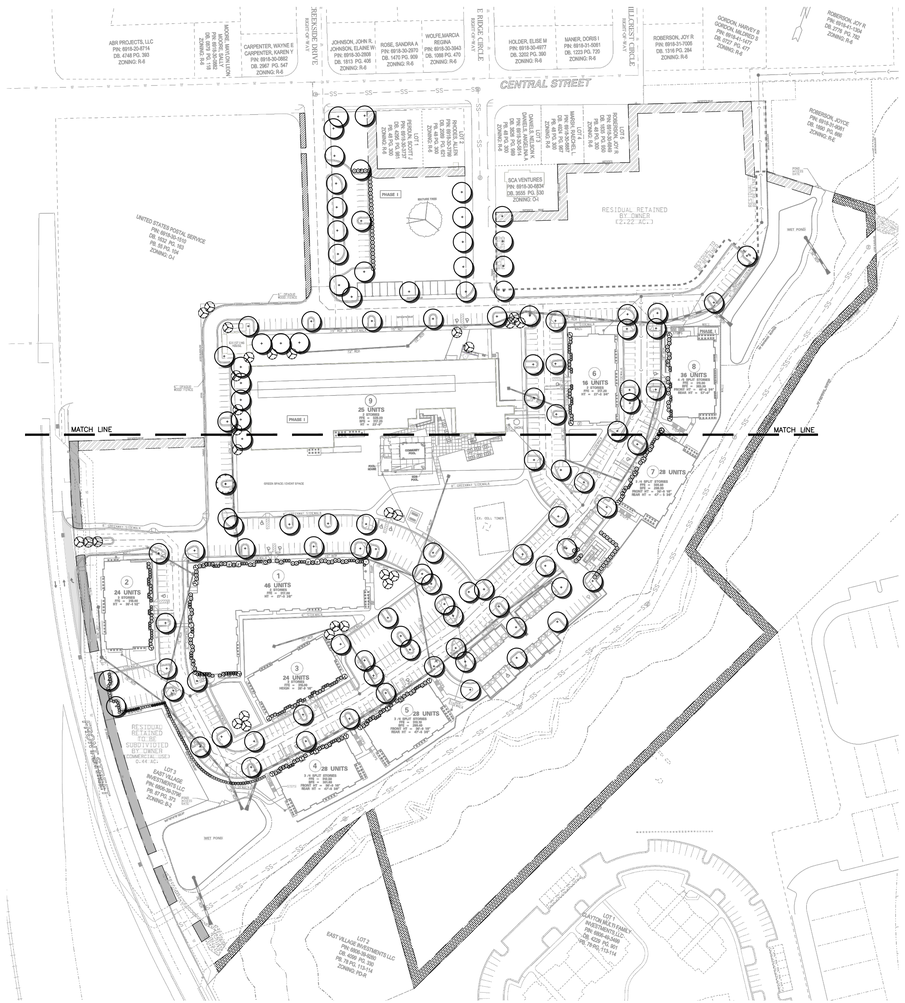

GENERAL NOTES

1. A/C UNITS, TRANSFORMERS AND OTHER MECHANICAL OR UTILITY EQUIPMENT, NOT SHOWN ON THE PLAN, SHALL BE SCREENED FROM VIEW BY THE ADDITION OF WAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
3. MULCH SHALL BE 3" DEEP SHREDDED HARDWOOD UNLESS OTHERWISE NOTED.
4. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST AND ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES BETWEEN PLANT LIST AND PLANTING PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
5. ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
7. B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
8. ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
10. ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
11. MULCH EDGES AND PROPOSED PLANTINGS SHALL NOT DISTURB ANY EXISTING GROUPS OF TREES TO REMAIN. EDGES ARE SHOWN FOR APPROXIMATION ONLY, BUT ARE TO INDICATE SMOOTH, CLEAN CURVES.
12. CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL WAX MYRTLES @ 24" HT. – 5' OC.
13. TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (C.O.). THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A (C.O.).
15. REQUIRED PLANTING AREAS SHALL INCORPORATE EXISTING NATURAL VEGETATION TO THE MAXIMUM EXTENT FEASIBLE.

LANDSCAPE REQUIREMENTS:

Site Landscaping

20% OF TOTAL LOT AREA SHALL BE LANDSCAPED AT A RATE OF (1) CANOPY TREE, (1) UNDERSTORY TREE, AND (2) SHRUBS PER 1,000 SF. 24.5 acres (1,067,220 s.f.)

1,067,220 SF x .20 = 213,444 S.F.
213,444/1,000 = 214
214 CANOPY TREES REQUIRED: 158 NEW + APPROXIMATELY 2500 EXISTING PROVIDED
214 UNDERSTORY TREES REQUIRED: 79 NEW + APPROXIMATELY 135 EXISTING PROVIDED
SHRUBS REQUIRED: 213,444/500 = 428 SHRUBS REQUIRED/ 732 PROVIDED

Streetyard Plantings

FRONT STREET: 800/40 = 20 TREES REQUIRED/PROVIDED
CENTRAL STREET: 80/40 = 2 TREES REQUIRED/PROVIDED
CREEKSIDE DRIVE: 250/40 = 7 TREES REQUIRED/PROVIDED
EAST RIDGE CIRCLE: 343/40 = 9 TREES REQUIRED/PROVIDED

Streetyard Buffer Plantings: Front Street: 800 LF

15' WIDE TYPE 'B' STSREET BUFFER ALONG FRONT STREET
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
800/100 x 2 = 16 CANOPY TREES REQUIRED/PROVIDED
800/100 x 2 = 16 UNDERSTORY TREES REQUIRED/PROVIDED
800/100 x 16 = 128 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 1,224 LF

15' WIDE TYPE 'B' BUFFER ALTERNATIVE 2
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
1,224/100 x 2 = 25 CANOPY TREES REQUIRED/PROVIDED
1,224/100 x 2 = 25 UNDERSTORY TREES REQUIRED/PROVIDED
1,224/100 x 16 = 196 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 290 LF

10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
291/100 x 2 = 6 CANOPY TREES REQUIRED/PROVIDED
290/100 x 3 = 9 UNDERSTORY TREES REQUIRED/PROVIDED
290/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 371 LF

A SIX FOOT OPAQUE WOOD FENCE IS PROPOSED BETWEEN THE PERIMETER DRIVE AROUND THE EXISTING MILL BUILDING AND THE USPS SITE. THE EXISTING DRIVE DOES NOT PROVIDE ENOUGH SPACE TO PLANT THE BUFFER ALONG THE PROPERTY LINE. THE TREES THAT WOULD TYPICALLY BE PLANTED IN THE BUFFER WILL BE PLANTED ELSEWHERE ON SITE.
10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
371/100 x 2 = 8 CANOPY TREES REQUIRED/PROVIDED
371/100 x 3 =12 UNDERSTORY TREES REQUIRED/PROVIDED
371/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 2,343 LF

EXISTING VEGETATION EXCEEDS PERFORMANCE STANDARDS FOR BUFFER. SEE SAMPLE AREA ON PLAN.

PLANT LEGEND

- CANOPY/SHADE TREE
- UNDERSTORY TREE
- LARGE SHRUB
- SMALL SHRUB

PRELIMINARY

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

SCALE IN FEET
0 50 100 200 300 400

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY GPW

LANDSCAPE PLAN NORTH

SCALE: 1" = 100'

SPINNING MILL LOFTS
AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.0

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

K:\2017\17033 - East Village Spinning Mill Apartments\CAD\L1.0 Preliminary\17033 - Landscape.dwg, 4/19/2018 2:23:29 PM, mark.gaskins, \\bnkfs\data\Projects\Mark.Gaskins\17033 - Landscape.dwg

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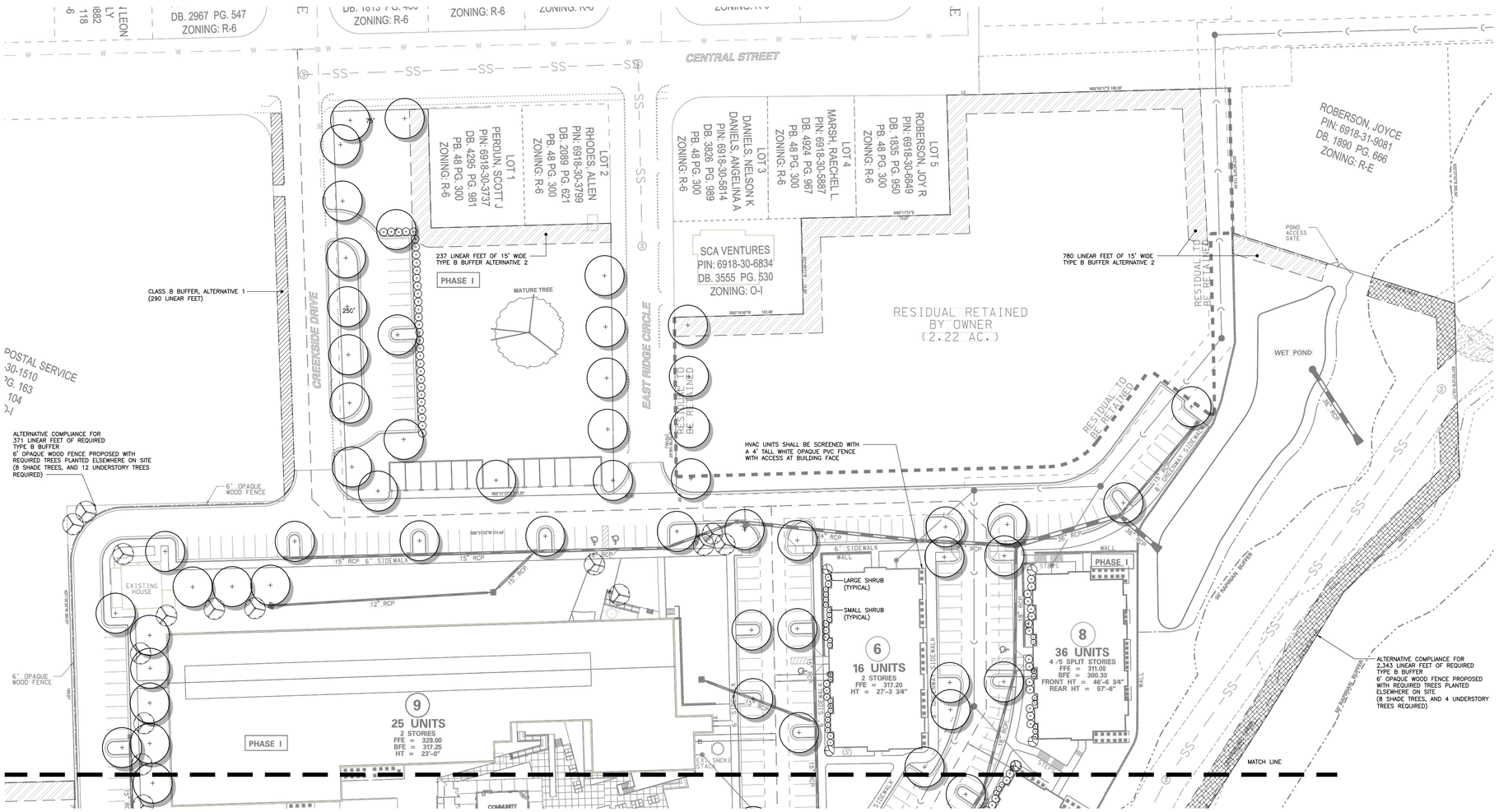
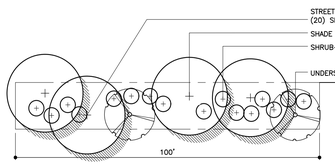
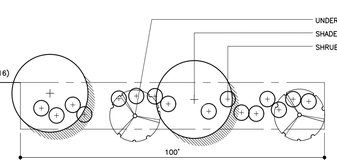
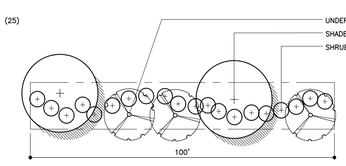




15' CLASS 'B' BUFFER
ALTERNATIVE 2 (800 LF)
FRONT STREET



15' CLASS 'B' BUFFER
ALTERNATIVE 2 (1,224 LF)



10' CLASS 'B' BUFFER
ALTERNATIVE 1 (290 LF)

PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	QUAN.	CAL	HT	ROOT	REMARKS
	SHADE TREES						
AR	Acer rubrum 'Somerset'	Red maple		2.5"	10'	B&B	
AS	Acer saccharum	Sugar Maple		2.5"	10'	B&B	
CB	Carpinus betula	European Hornbeam		2.5"	10'	B&B	
LT	Liriodendron tulipifera	Tulip Poplar		2.5"	10'	B&B	
QC	Quercus coccinea	Scarlett Oak		2.5"	10'	B&B	
QN	Quercus nuttalli	Nuttall oak		2.5"	10'	B&B	
QV	Quercus virginiana	Live Oak		2.5"	10'	B&B	
UP	Ulmus parvifolia	Chinese lacebark elm		2.5"	10'	B&B	
ZS	Zelkova serrata	Village Green Zelkova		2.5"	10'	B&B	
	UNDERSTORY TREES						
CC	Cercis canadensis 'Forest Pansy'	Eastern Redbud		2"	8'	B&B	
CF	Cornus florida	Dogwood		2"	8'	B&B	Buffer Tree
LCS	Lagerstroemia 'Centennial Spirit'	Crape Myrtle			8'	B&B	
MG	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia			8'	B&B	
NS	Syssa sylvatica	Tepelo		2"	8'	B&B	Buffer Tree
	SHRUBS						
BM	Buxus microphylla 'Winter Green'	Wintergreen Boxwood			12"	Cont	
IL	Ilex latifolia	Lustreleaf Holly			48"	Cont	
INS	Ilex x 'Nellie R Stevens'	Nellie Stevens Holly			48"		
LC	Loropetalum chinensis 'Chang's Ruby'	Loropetalum			12"	Cont	
OH	Osmanthus heterophyllus 'rotundifoli	Holly Osmanthus			24"	Cont	Buffer Shrub
PJ	Pieris japonica 'Mountain Snow"	Japanese Pieris			12"	Cont	
PT	Pittosporum tobira 'Tall 'N Tuff'	Pittosporum			24"	Cont	Buffer Shrub
RR	Rosa 'Double Red'	Double Knockout Rose			12"	Cont	
VD	Viburnum davidii	David Viburnum			12"	Cont	

NO WETLANDS EXIST ON-SITE

NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF CLAYTON AND NCDOT

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

PRELIMINARY

SCALE IN FEET
0 20 40 80 120 160

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NO.	DATE	REVISIONS	BY
1	04-30-18	PER ToC COMMENTS	GW

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY: GPW | SCALE: 1" = 40'

LANDSCAPE PLAN NORTH

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.1

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

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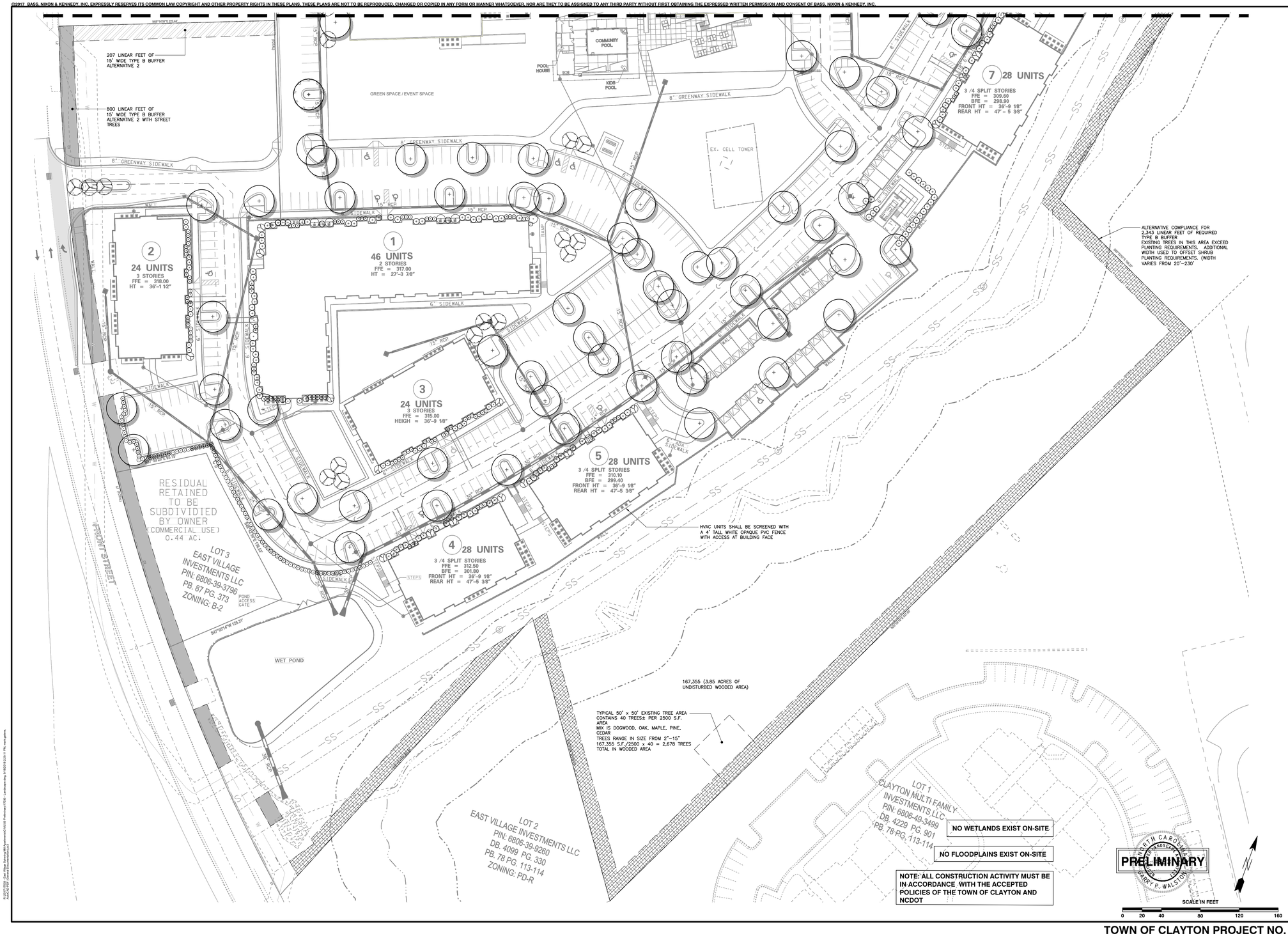

BNK

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NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO.	DATE	DRAWN BY
03-17033	04-02-18	GPW

LANDSCAPE PLAN
SOUTH

SCALE: 1" = 40' CHK BY: GPW

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.2

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TOWN OF CLAYTON PROJECT NO. 2018-64-SP

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - FRONT ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - LEFT ELEVATION

Scale: 3/32" = 1'-0"

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes.
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RALEIGH, N.C.

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			09-18-18

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 1 Elevations
--

SHEET NUMBER:
1.A1.10

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - REAR ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - RIGHT ELEVATION

Scale: 3/32" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			09-18-18

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Bldg Type 1 Elevations

--

SHEET NUMBER:

1.A1.11

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

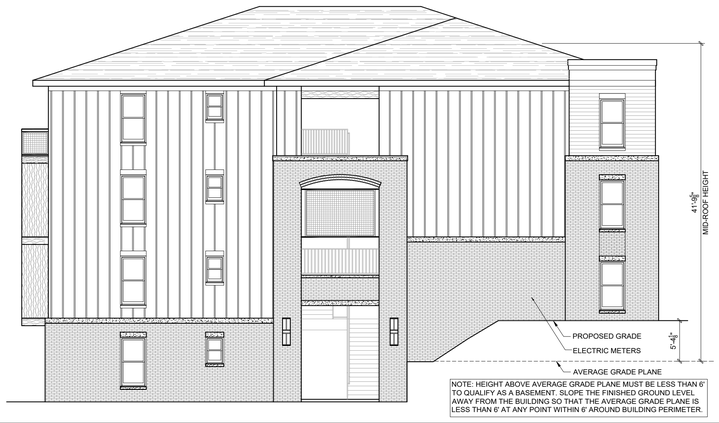
SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 2 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

2 BLDG TYPE 2 - REAR ELEVATION

Scale: 1/8" = 1'-0"



NOTE: HEIGHT ABOVE AVERAGE GRADE PLANE MUST BE LESS THAN 6' TO QUALIFY AS A BASEMENT. SLOPE THE FINISHED GROUND LEVEL AWAY FROM THE BUILDING SO THAT THE AVERAGE GRADE PLANE IS LESS THAN 6' AT ANY POINT WITHIN 6' AROUND BUILDING PERIMETER.

3 BLDG TYPE 2 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

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NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18
ISSUE DATE:	
REVISIONS	
NUMBER / DATE / INITIALS	DESCRIPTION

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Bldg Type 2 Elevations
--

SHEET NUMBER:

1.A2.03

1 BLDG TYPE 2.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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- = CORRUGATED METAL SIDING
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ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

3 BLDG TYPE 2.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	DESCRIPTION
			INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1 Elevations

SHEET NUMBER:
1.A2.08

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

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ELEVATION GENERAL NOTES

ROOFS

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ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 2.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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RALEIGH, NC NORTH CAROLINA

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

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REVISIONS	NUMBER	DATE	DESCRIPTION
	INITIALS		

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1
Elevations

SHEET NUMBER:
1.A2.09

1 BLDG TYPE 3 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 3 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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Civil Submission
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Clayton NC

PRELIMINARY
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PROGRESS DATE:	09-18-18		
ISSUE DATE:		DESCRIPTION	
REVISIONS	NO.	DATE	INITIALS
	1		
	2		
	3		

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3 Elevations
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SHEET NUMBER:
1.A3.03

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

2 BLDG TYPE 3.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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PLANWORX ARCHITECTURE, P.A. CERT. NO. 50909 REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE: Bldg Type 3.1 Elevations

SHEET NUMBER: 1.A3.12

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.2 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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RALEIGH, NC NORTH CAROLINA

Civil Submission

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Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE: 09-18-18
ISSUE DATE:

REVISIONS		
NUMBER	DATE	DESCRIPTION
		INITIALS

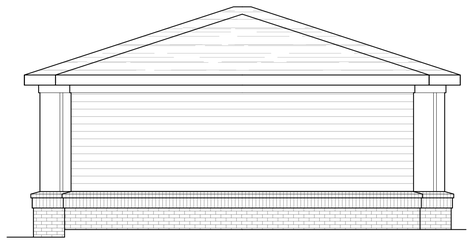
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3.2
Elevations

SHEET NUMBER:
1.A3.24

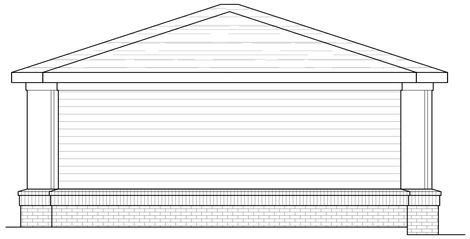
1 GARAGE TYPE 1 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 1 - RIGHT ELEVATION

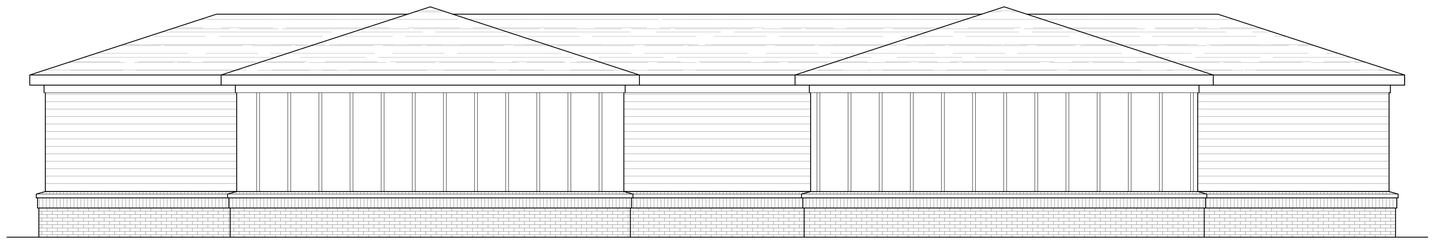
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 1 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH
COLORS/MATERIALS OF PRIMARY
APARTMENT BUILDINGS



4 GARAGE TYPE 1 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Clayton NC

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PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS
09-18-18	DESCRIPTION		

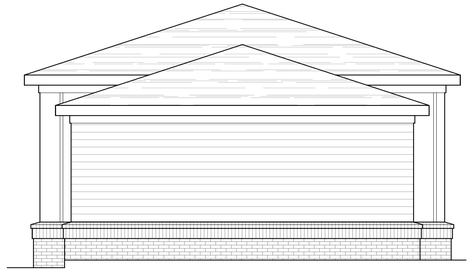
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 1
Elevations

SHEET NUMBER:
1.A5.10

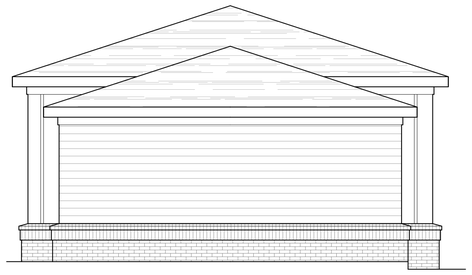
1 GARAGE TYPE 2 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 2 - RIGHT ELEVATION

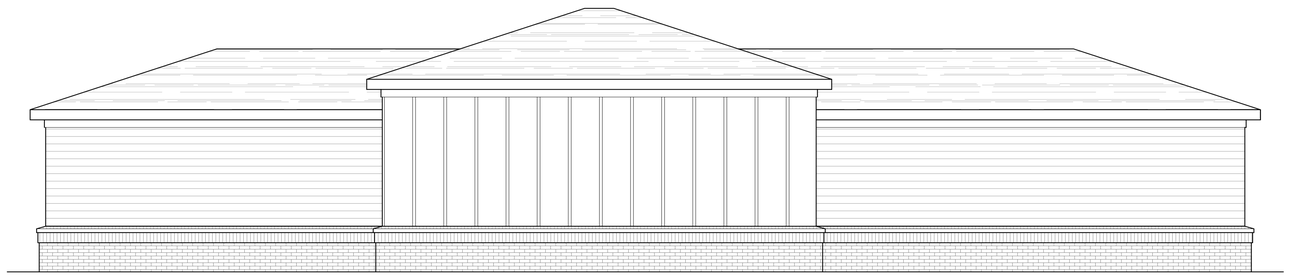
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 2 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS



4 GARAGE TYPE 2 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS
09-18-18	DESCRIPTION		

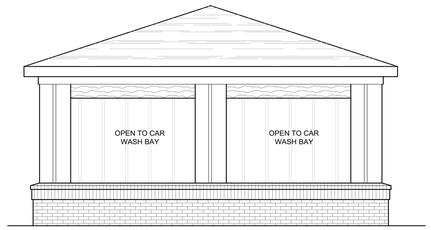
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 2 Elevations

SHEET NUMBER:
1.A5.11

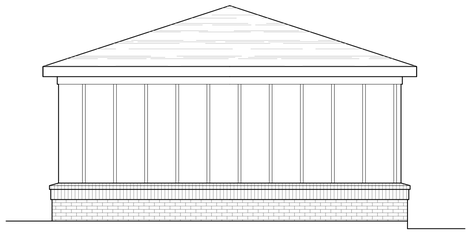
1 GARAGE TYPE 3 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 3 - RIGHT ELEVATION

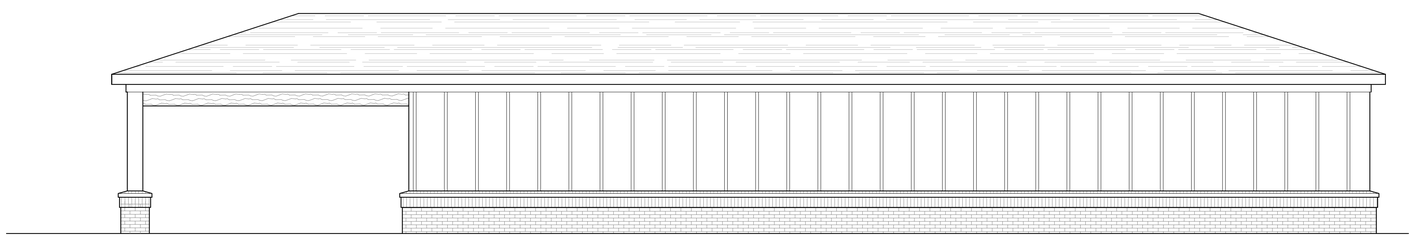
Scale: 1/4" = 1'-0"



COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS

3 GARAGE TYPE 3 - LEFT ELEVATION

Scale: 1/4" = 1'-0"



4 GARAGE TYPE 3 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

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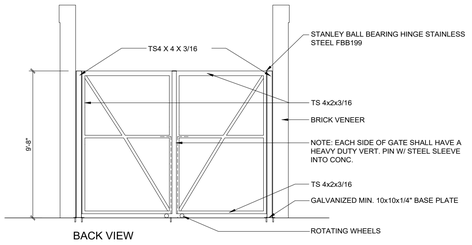
09-18-18			
PROGRESS DATE:			
ISSUE DATE:			
REVISIONS			
NUMBER	DATE	DESCRIPTION	INITIALS

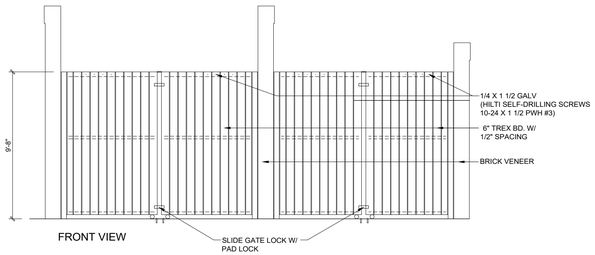
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 3 Elevations

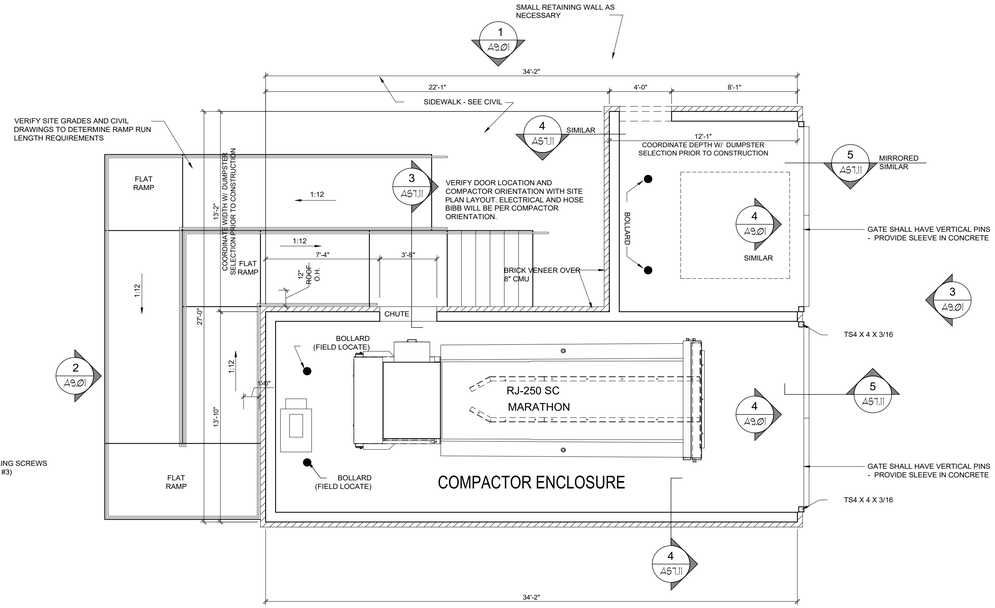
SHEET NUMBER:
1.A5.12



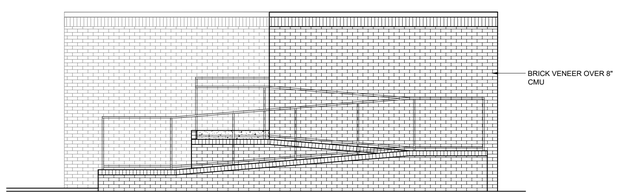
4 GATE DETAIL BACK VIEW
1/4"=1'-0"



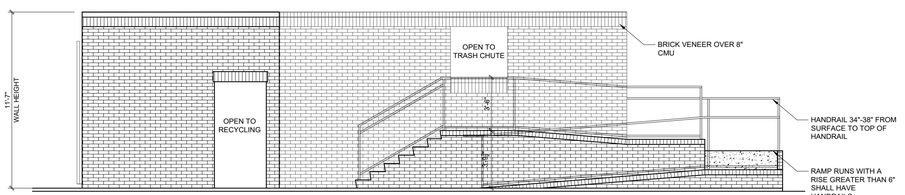
3 GATE DETAIL FRONT VIEW
1/4"=1'-0"



5 TRASH COMPACTOR ENCLOSURE PLAN
1/4"=1'-0"



2 TRASH COMPACTOR REAR ELEVATION
1/4"=1'-0"



1 TRASH COMPACTOR SIDE ELEVATION
1/4"=1'-0"

1 TRASH COMPACTOR - PLAN AND ELEVATIONS

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

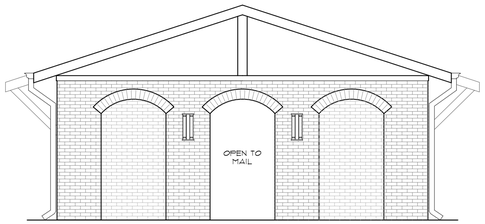
PROGRESS DATE: 09-18-18
ISSUE DATE:
REVISIONS

NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE: Compactor Plan and Elevations

SHEET NUMBER: 1.A6.00



3 TYPICAL SIDE ELEVATION

Scale: 1/4" = 1'-0"

ARCHITECTURAL PLANS
EXTERIOR MATERIALS

- ASPHALT SHINGLE ROOF
- STANDING SEAM METAL ROOF
- FIBER CEMENT SIDING
- FIBER CEMENT VERTICAL SIDING PANELS W/ FIBER CEMENT BATTENS
- CULTURED STONE VENEER
- STONE HEADER

ELEVATION GENERAL NOTES

ROOFS

IF USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

PAINT ALL ROOF PENETRATIONS TO MATCH SHINGLE COLOR

ROOF VENTILATION

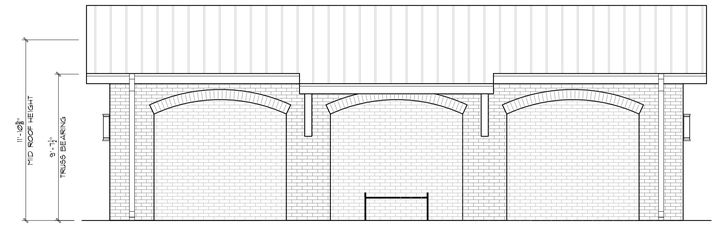
SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

SQUARE FOOTAGE

MAIL BOX BAY SHELL (74sf x 2) =	148
TOTAL COVERED AREA =	748

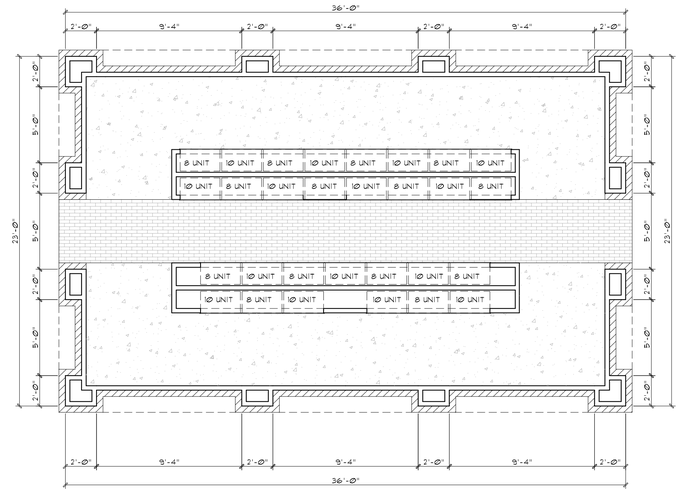
- GENERAL NOTES

Scale: 1/4" = 1'-0"



2 FRONT/REAR ELEVATION

Scale: 1/4" = 1'-0"



1 FLOOR PLAN

Scale: 1/4" = 1'-0"

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Civil Submission

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Clayton NC

PRELIMINARY
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PROGRESS DATE:	09-18-18		
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION / INITIALS

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Mail Kiosk Plan and Elevations

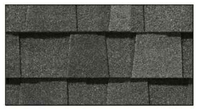
SHEET NUMBER:

1.A7.00

= FIBER CEMENT BOARD & BATTEN
SW6250 GRANITE PEAK

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD
GRAIN USED AS BASIS OF DESIGN

= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)



= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW6148 WOOL SKEIN

= CORRUGATED METAL PANELING

= BRICK SOLDIER

= PRE-CAST CONCRETE HEADER

1 COLOR SCHEME 1
Scale:

= FIBER CEMENT BOARD & BATTEN
SW6244 NAVAL

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD
GRAIN USED AS BASIS OF DESIGN

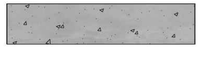
= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)

= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW9170 ACIER

= CORRUGATED METAL PANELING

= BRICK SOLDIER



= PRE-CAST CONCRETE HEADER

2 COLOR SCHEME 2
Scale:

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CERT. NO. 50909
N.C.
RALEIGH, NC

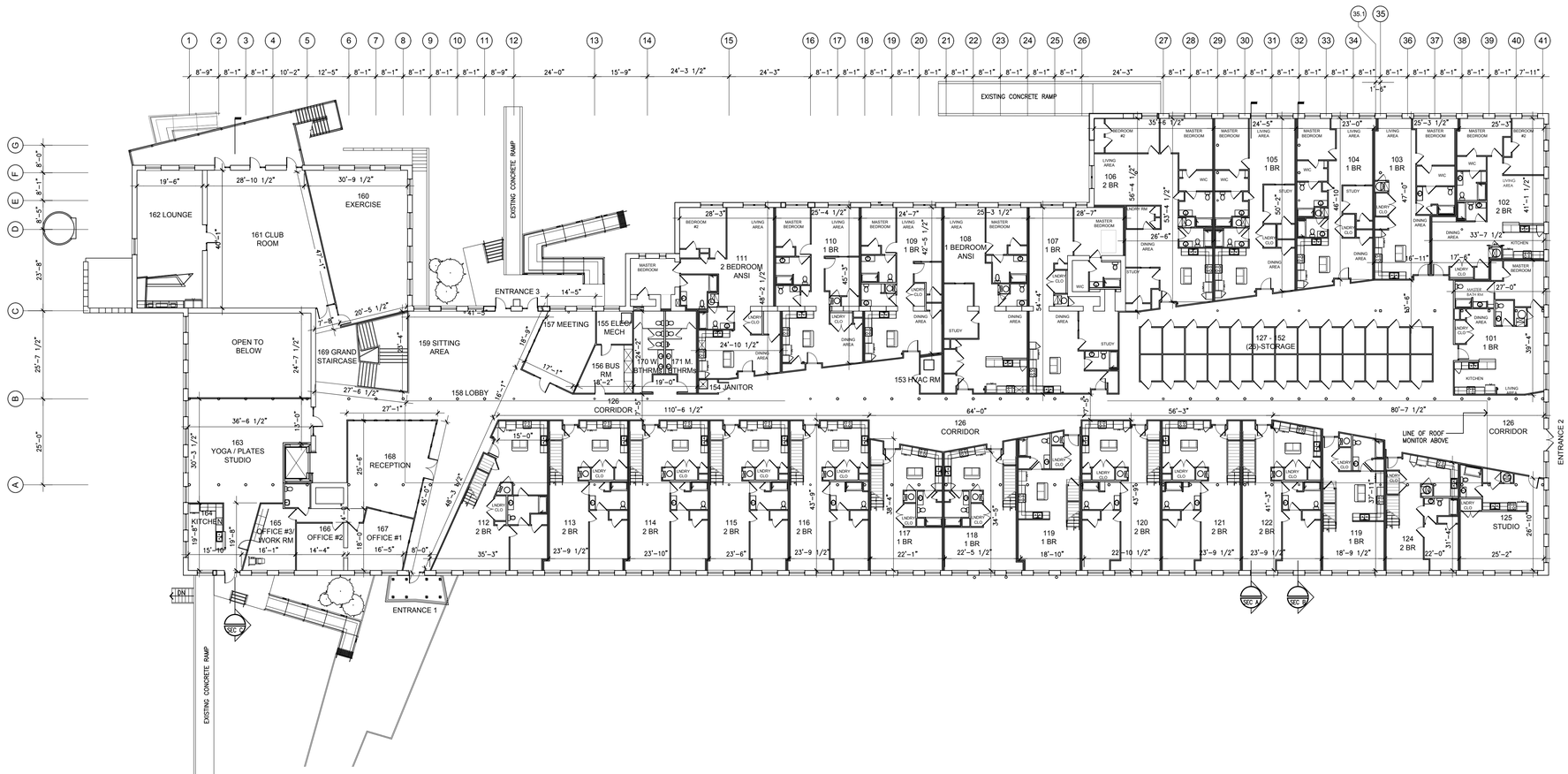
Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18
ISSUE DATE:	
REVISIONS	

NUMBER	DATE	INITIALS	DESCRIPTION

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -
SHEET TITLE:
Color Board 1
--
SHEET NUMBER:
CB1



1 Main Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.1

SHEET OF TOTAL SHEETS IN SET:
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CHECKED BY: -

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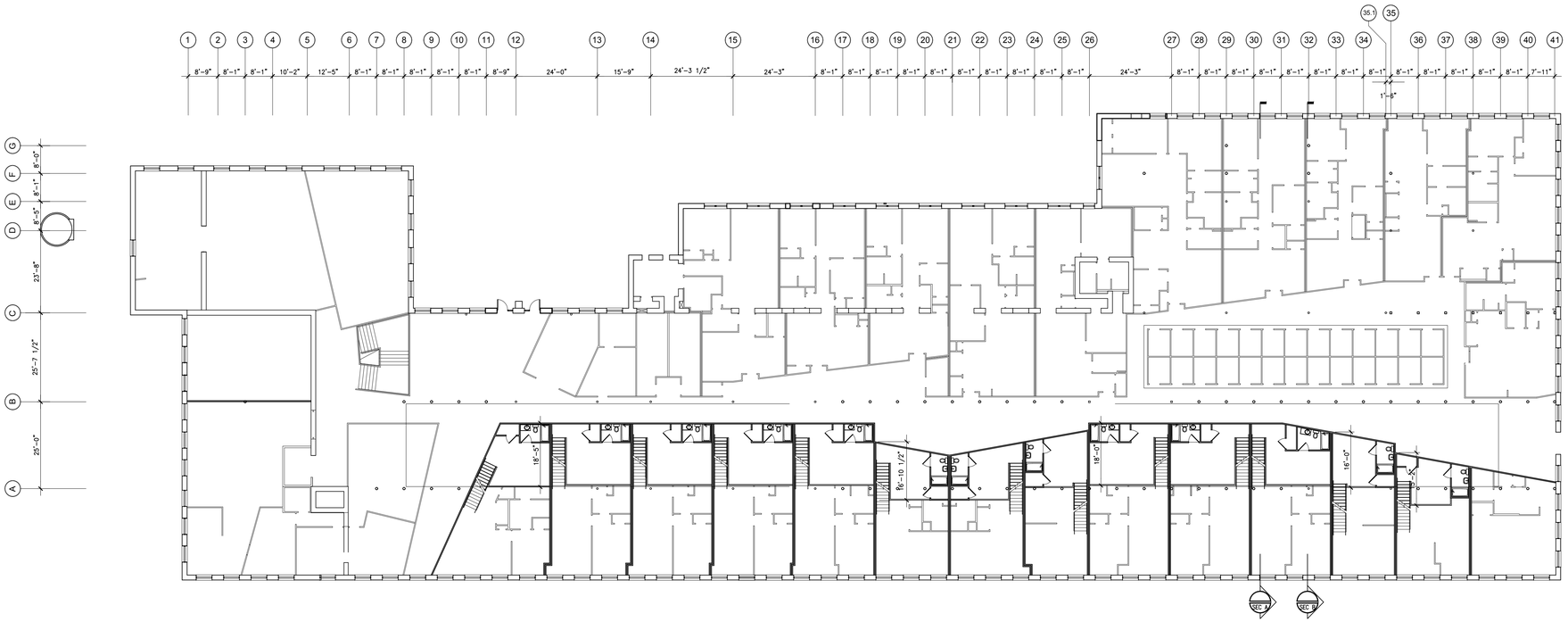
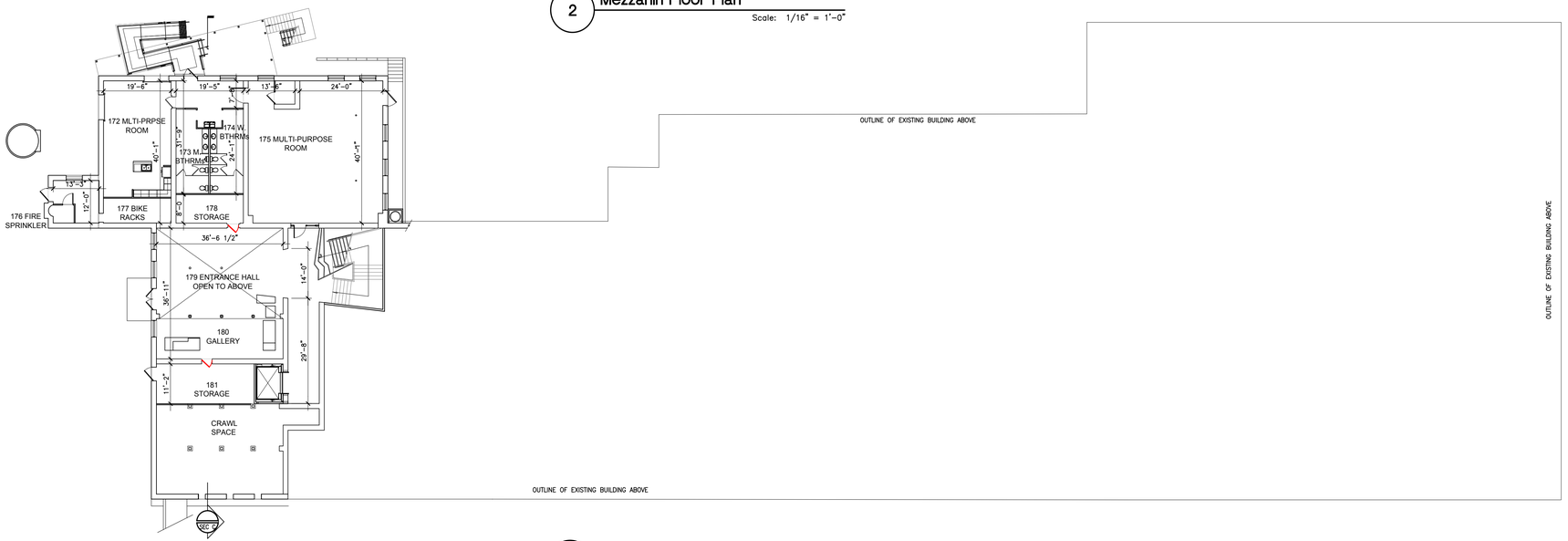


2 Mezzanin Floor Plan

Scale: 1/16" = 1'-0"



1 Basement Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.2

SHEET OF DRAWN BY: -
TOTAL SHEETS IN SET: CHECKED BY: -

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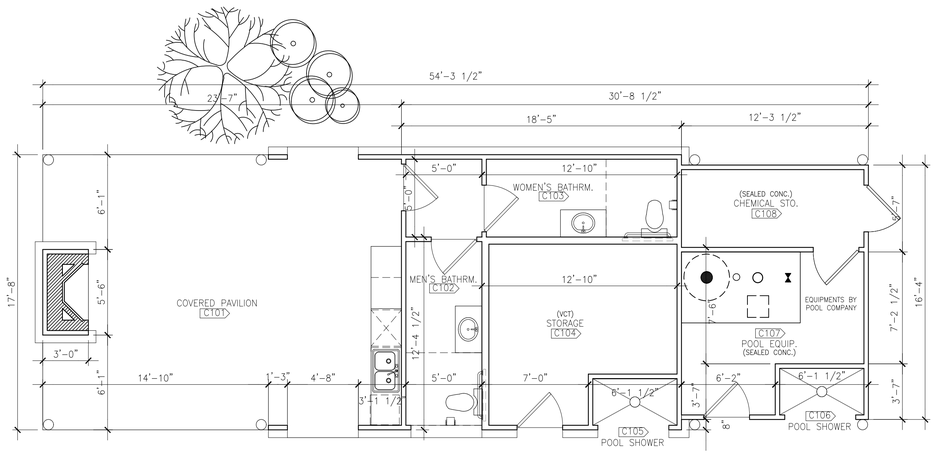
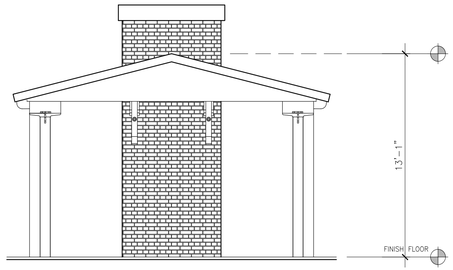


1 **Building Plan**
Scale: 1/4"=1'-0"

ELEVATION KEY

- BRICK VENEER SIMILAR TO EXISTING BUILDING
- EIFS - EXTERIOR INSULATION & FINISHING SYSTEM, COLOR TO BE LIGHT GREY
- ASPHALT SHINGLES

NOTE: BUILDING TO BE TYPE VB CONSTRUCTION



2 **Side Elevation**
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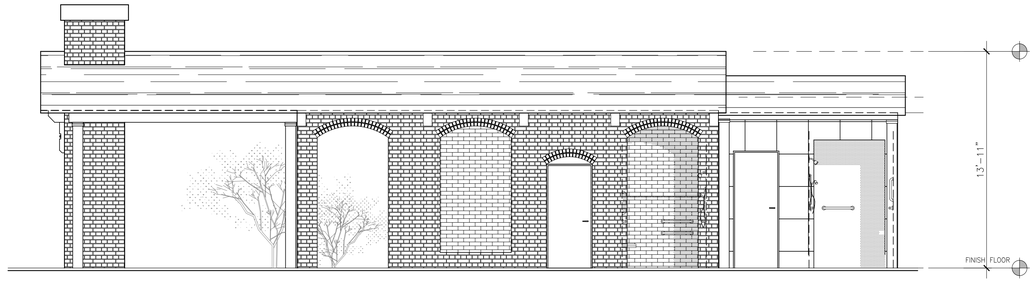

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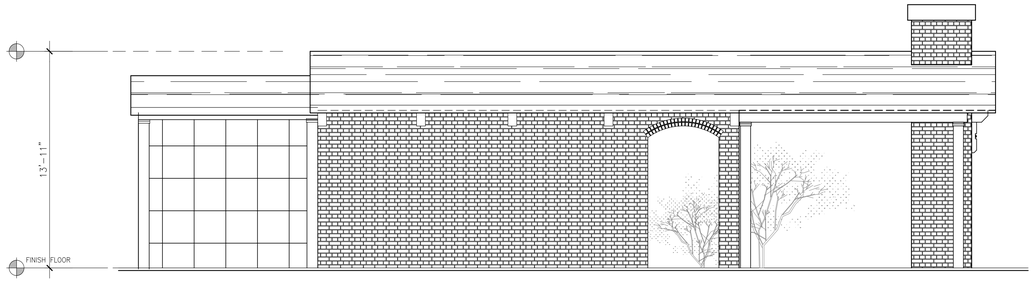

4 **Building Rear Elevation**
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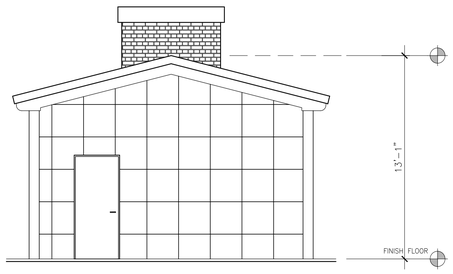

5 **Side Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

1 April 27, 2018
Review Comments

DATE: April 9, 2018
ISSUED FOR: Review

Pool House
- Building Plan
- Elevations

A 1.3

SHEET OF
TOTAL SHEETS IN SET:
DRAWN BY: -
CHECKED BY: -

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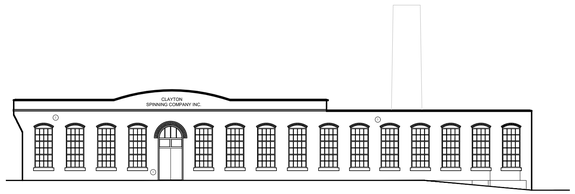
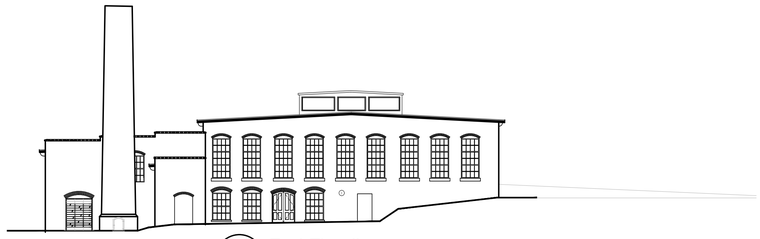


1 West Elevation

Scale: 1/16" = 1'-0"



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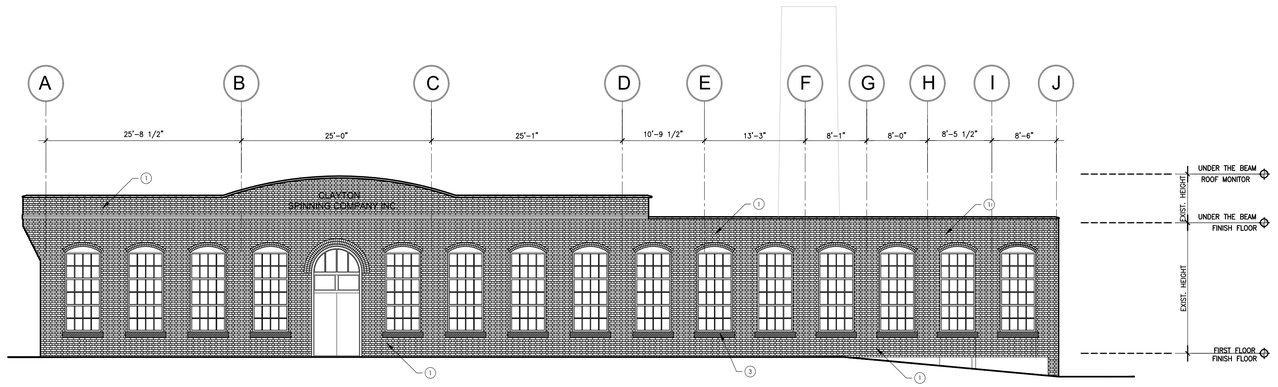
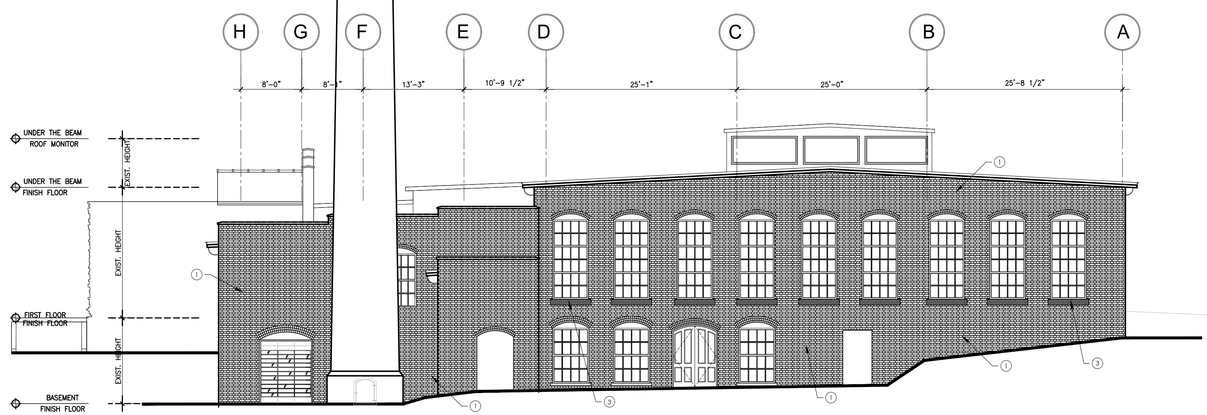


3 West Elevation

Scale: 1/8" = 1'-0"



4 East Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠1 September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.1

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Imanirad
Plotted Date: Sep 18, 2018 - 6:03pm

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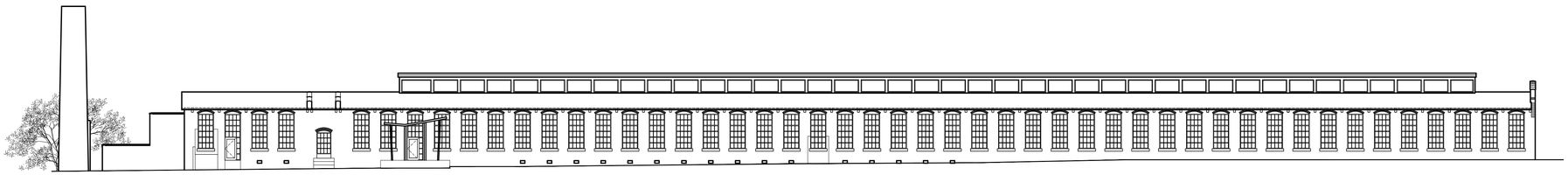

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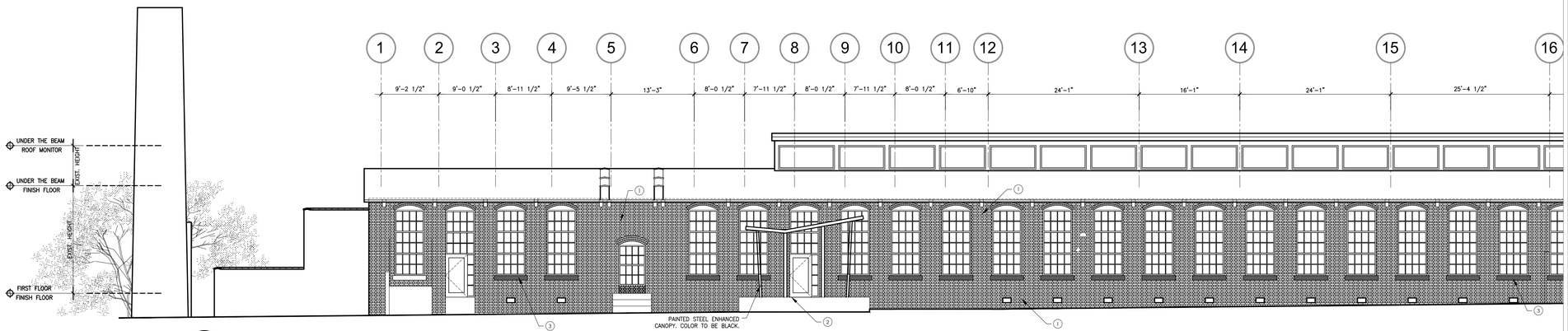

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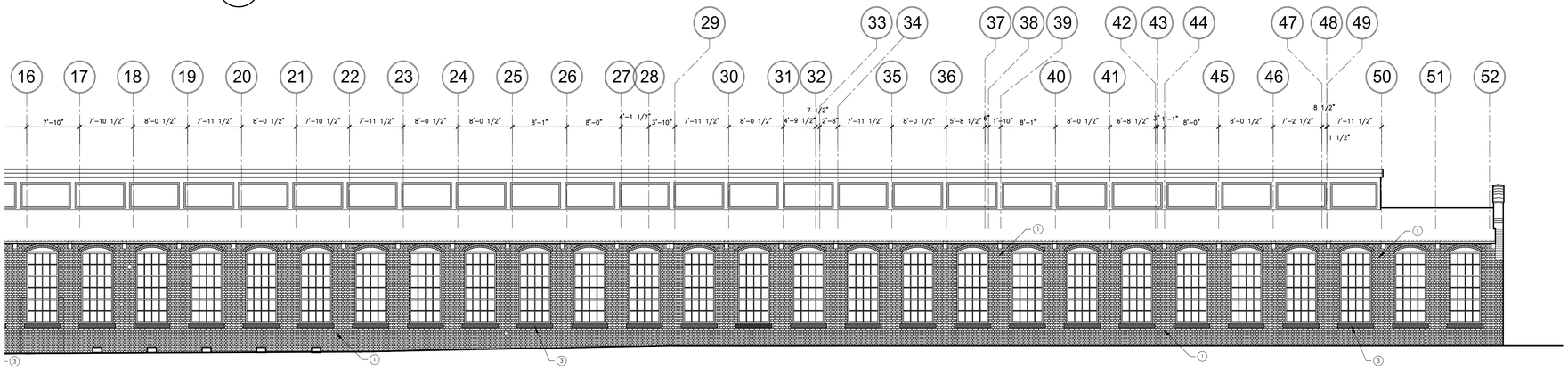

3 Partial North Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

1 September 18, 2018 Plan Review

DATE: April 2 , 2018
ISSUED FOR: Review

Building Elevations

A 3.2

DRAWN BY:
CHECKED BY: JTL

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Plotted Date: Sep 18, 2018 - 6:04pm

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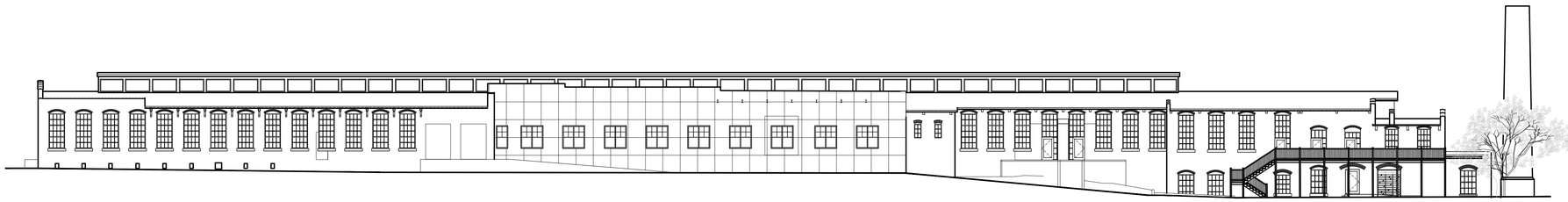

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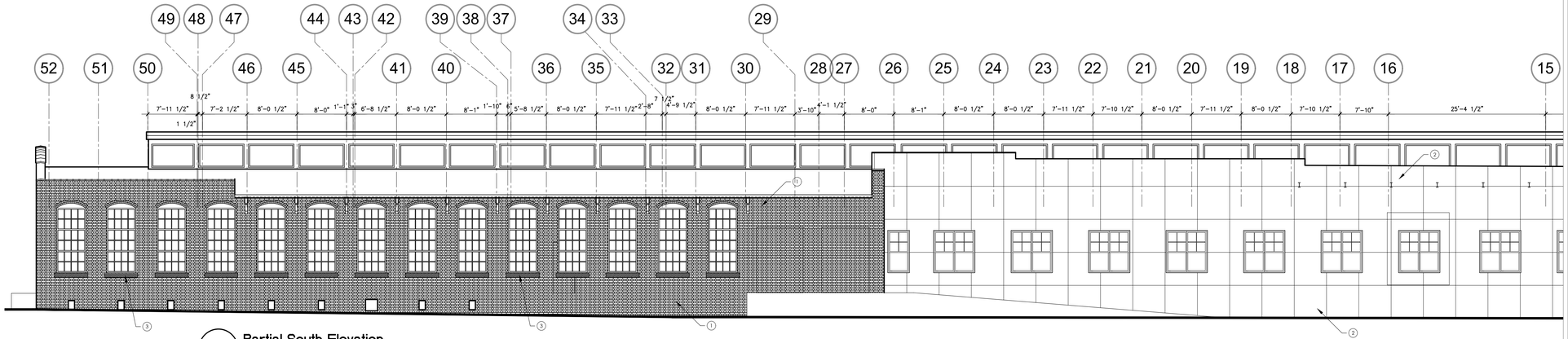

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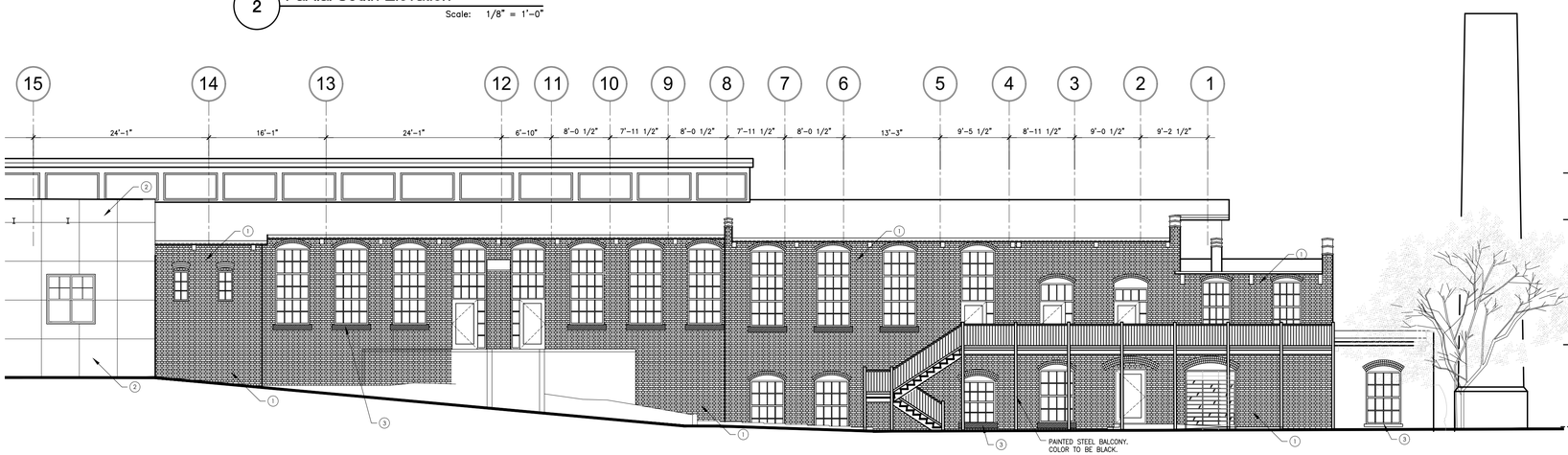

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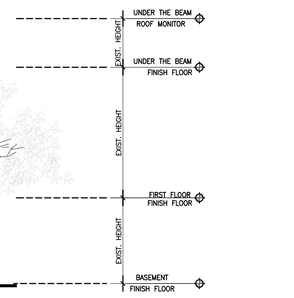

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠1 September 18, 2018 Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.3

DRAWN BY:
CHECKED BY: JTL

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Plotted Date: Sep 18, 2018 - 6:05pm

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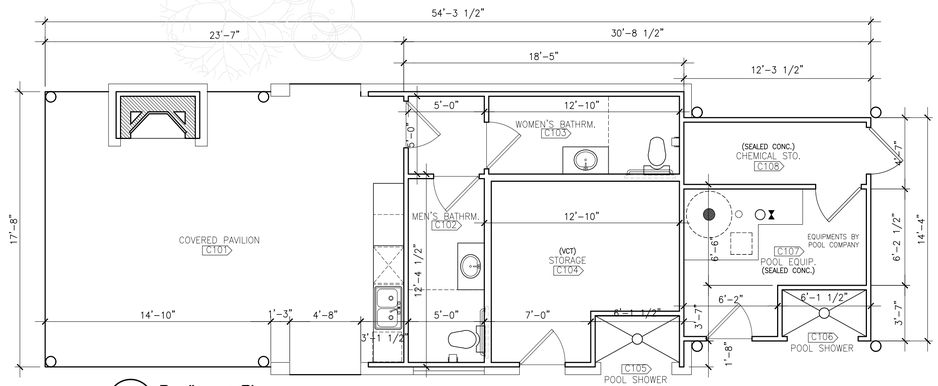

1 **Poolhouse Plan**
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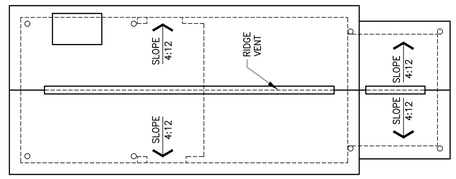
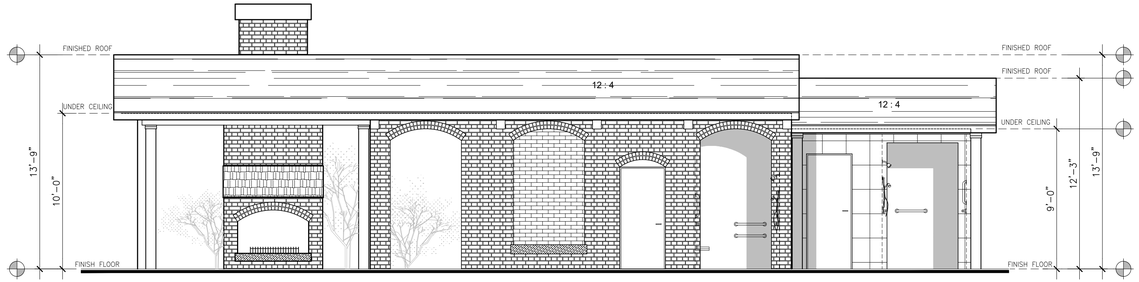


2 **Roof Plan**
Scale: 1/4"=1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.
4. ASPHALT SHINGLES, COLOR TO MATCH THE ADJACENT MATERIAL



3 **Front Elevation**
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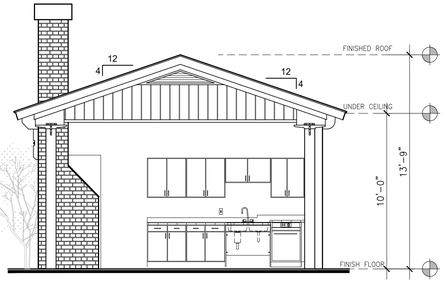

4 **Left Elevation**
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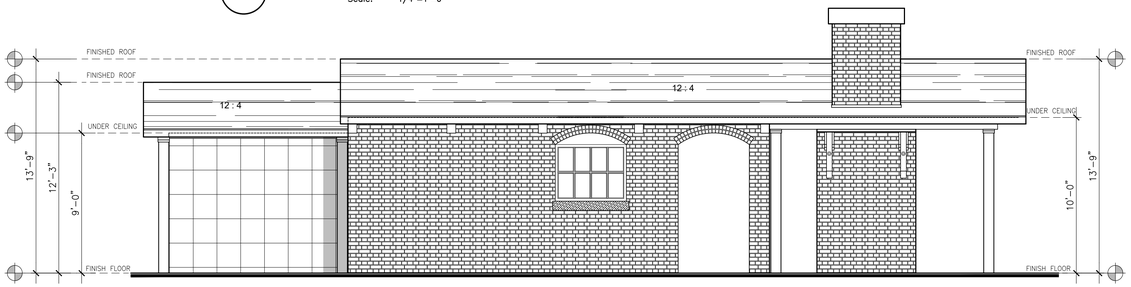

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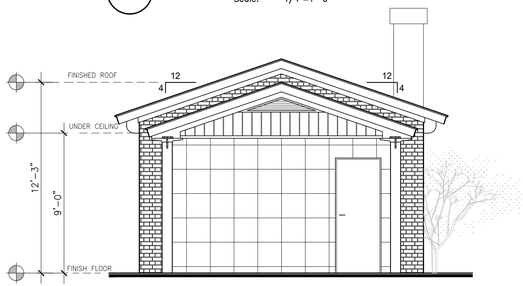

6 **Right Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠ September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Poolhouse

A 3.4

DRAWN BY:
CHECKED BY: JTL

Architecture ■ Planning ■ Interiors ■
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Plotted Date: Sep 18, 2018 - 6:02pm

SYMBOLS AND ABBREVIATIONS

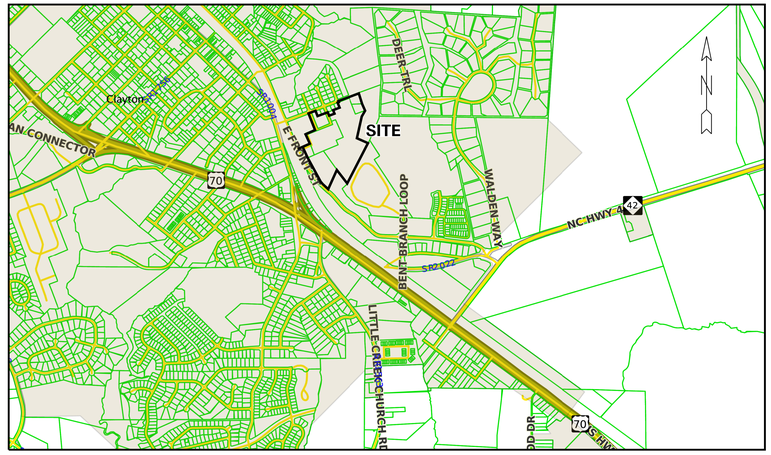
ABC	AGGREGATE BASE COURSE
ALUM	ALUMINUM
ASSY	ASSEMBLY
B-B	BACK TO BACK
BOA	BLOW-OFF ASSEMBLY
C&G	CURB AND GUTTER
CFS	CUBIC FEET PER SECOND
CI	CURB INLET
C/L	CENTER LINE
CO	CLEAN OUT
COM	COMMUNICATION
CONC	CONCRETE
CT	COURT
CU	COPPER
DCV	DOUBLE CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE
DEFL	DEFLECTION
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DRAIN	DRAINAGE
DR	DRIVE
EASE	EASEMENT
ELEC	ELECTRIC
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FES	FLARED END SECTION
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FEET
FT/SEC	FEET PER SEC
GALV	GALVANIZED
GV	GATE VALVE
HCR	HANDICAP RAMP
INV	INVERT
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
OHE	OVERHEAD ELECTRIC
PAVE	PAVEMENT
PERM	PERMANENT
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
S	SLOPE
SS	SANITARY SEWER
STA	STATION
T	TANGENT
TDD	TEMPORARY DIVERSION DITCH
TELE	TELEPHONE
TSB	TEMPORARY SEDIMENT BASIN
TSD	TEMPORARY SLOPE DRAIN
UG	UNDERGROUND
W	WIDTH
W/L	WATER LINE
WM	WATER METER
YI	YARD INLET

EXISTING CURB INLET
EXISTING DROP INLET / YARD INLET
EXISTING FLARED END SECTION
EXISTING FIRE HYDRANT
EXISTING BLOW-OFF ASSEMBLY
EXISTING GATE VALVE
EXISTING REDUCER
EXISTING WATER METER
EXISTING MANHOLE / JUNCTION BOX
EXISTING CLEAN OUT
EXISTING POWER POLE
EXISTING GUY WIRE
EXISTING TELEPHONE PEDESTAL
EXISTING LIGHT POLE / AREA LIGHT
EXISTING SIGN
NEW CURB INLET
NEW GRATE INLET/YARD INLET
NEW FLARED END SECTION
NEW FIRE HYDRANT
NEW BLOW-OFF ASSEMBLY
NEW GATE VALVE
NEW REDUCER
NEW WATER METER
NEW TEE
NEW PLUG
NEW MANHOLE
NEW CLEAN OUT
NEW SIGN
IRON PIPE
BENCHMARK
STORM STRUCTURE LABEL
BLOCK AND GRAVEL INLET PROTECTION
SILT FENCE INLET PROTECTION
EXCAVATED INLET PROTECTION
SEDIMENT BASIN
RISER BASIN
ROCK DAM
EXISTING GAS LINE
EXISTING COMMUNICATIONS LINE
EXISTING UNDERGROUND TELEPHONE
EXISTING UNDERGROUND ELECTRIC
EXISTING OVERHEAD ELECTRIC
EXISTING WATER LINE
EXISTING SANITARY SEWER FORCE MAIN
EXISTING SANITARY SEWER
EXISTING STORM DRAINAGE
NEW STORM DRAINAGE
STREAM
NEW WATER LINE
NEW SANITARY SEWER
NEW SANITARY SEWER FORCE MAIN
NEW GAS MAIN
GRASSED LINED DITCH/CHANNEL
JUTE MATTING LINED DITCH/CHANNEL
PYRAMAT LINED DITCH/CHANNEL
LIMITS OF CUT SLOPE
LIMITS OF FILL SLOPE
SILT FENCE
TREE FENCE
COMBINATION SILT/ TREE FENCE
DIVERSION DITCH

SPINNING MILL LOFTS AT EAST VILLAGE

MAJOR SITE PLAN

JOHNSTON COUNTY NORTH CAROLINA



VICINITY MAP

NOT TO SCALE

DEVELOPER:

SPINNINNG MILL INVESTMENTS, LLC
P.O. BOX 566
GREENVILLE, NC 27835
TELEPHONE: (252) 752–7101

PREPARED BY:

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CONSULTING ENGINEERS
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TELEPHONE: (919)851–4422 or (800)354–1879
FAX: (919)851–8968
www.BNKinc.com
CERTIFICATION NUMBERS: NCBELS (C–0110)
NCBOLA (C–0267)

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FAX: (919) 851–8968

CONTACT: MARTY D. BIZZELL, PE, CPESC
EMAIL: MARTY.BIZZELL@BNKINC.COM

SHEET INDEX

SHEET No.	SHEET TITLE
—	COVER SHEET
C1.0	EXISTING CONDITIONS PLAN
C1.1	OVERALL SITE PLAN
C1.2	SITE PLAN
C1.3	SITE PLAN
C2.1	UTILITY PLAN
C2.2	UTILITY PLAN
C2.3	OFF SITE SANITARY SEWER PLAN
C3.1	GRADING PLAN
C3.2	GRADING PLAN
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN – NORTH
L1.2	LANDSCAPE PLAN – SOUTH
1.A1.10	BUILDING TYPE I ELEVATION
1.A1.11	BUILDING TYPE I ELEVATION
1.A2.03	BUILDING TYPE II ELEVATION
1.A2.08	BUILDING TYPE 2.1 ELEVATION
1.A2.09	BUILDING TYPE 2.1 ELEVATION
1.A3.03	BUILDING TYPE 3.0 ELEVATION
1.A3.12	BUILDING TYPE 3.1 ELEVATION
1.A3.24	BUILDING TYPE 3.2 ELEVATION
1.A5.10	GARAGE TYPE 1 ELEVATIONS
1.A5.11	GARAGE TYPE 2 ELEVATIONS
1.A5.12	GARAGE TYPE 3 ELEVATIONS
1.A6.00	COMPACTOR PLAN AND ELEVATION
1.A7.00	POOLSIDE GRILLING STATIONS
CB1	COLOR BOARD 1
A1.1	BUILDING PLAN
A1.2	BUILDING PLAN
A1.3	POOL–HOUSE – BUILDING PLAN – ELEVATIONS
A3.1	BUILDING ELEVATIONS
A3.2	BUILDING ELEVATIONS
A3.3	BUILDING ELEVATIONS

CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPALITY STANDARDS, SPECIFICATIONS, AND DETAILS. WORK IN THIS PROJECT SHALL ALSO CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.

3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE–CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1–800–632–4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.

6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

7. A PRE–CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEERING DIVISION.

8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.

9. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND APPLICABLE MUNICIPALITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

10. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

11. MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D698. STONE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST AS SET OUT IN ASTM STANDARD D1557. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.

12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY

13. THE CONTRACTOR SHALL REVIEW, VERIFY AND COORDINATE ALL DIMENSIONS SHOWN ON PLANS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER PRIOR TO STARTING PROJECT.

14. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

15. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE, VOL. I–C ACCESSIBILITY CODE.

16. OWNER SHALL PROVIDE FENCING AND OTHER SAFETY MEASURES NECESSARY IN AND AROUND ANY PROPOSED STORMWATER MANAGEMENT MEASURES (PONDS, WETLANDS, ETC.) OBTAINING PROPER PERMITS SHALL BE THE RESPONSIBILITY OF THE OWNER.

17. RETAINING WALLS EXCEEDING 30 INCHES IN HEIGHT SHALL INCLUDE FALL PROTECTION IN THE FORM OF A HANDRAIL OR FENCING ON THE HIGH SIDE OF THE RETAINING WALL.

18. PROPER COMPACTION OF ALL FILL SOILS PLACED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION SHALL BE ADEQUATE TO SUPPORT THE PROPOSED USE OF AREAS IN WHICH FILL SOILS ARE PLACED. THE CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO TEST AND VERIFY THAT COMPACTION IS ADEQUATE FOR THE PROPOSED USE OF IN THE AREA OF FILL PLACEMENT.

19. ALL ASPECTS OF THIS PROJECT SHALL BE IN FULL COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR NOTES ANY ASPECTS OF THE PROJECT WHICH ARE NOT IN COMPLIANCE, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY FURTHER WORK BEING PERFORMED. ANY WORK PERFORMED AFTER THE CONTRACTOR NOTES SUCH A NON COMPLIANCE IS SUBJECT TO REMOVAL AND REPAIR AT THE CONTRACTOR'S EXPENSE.

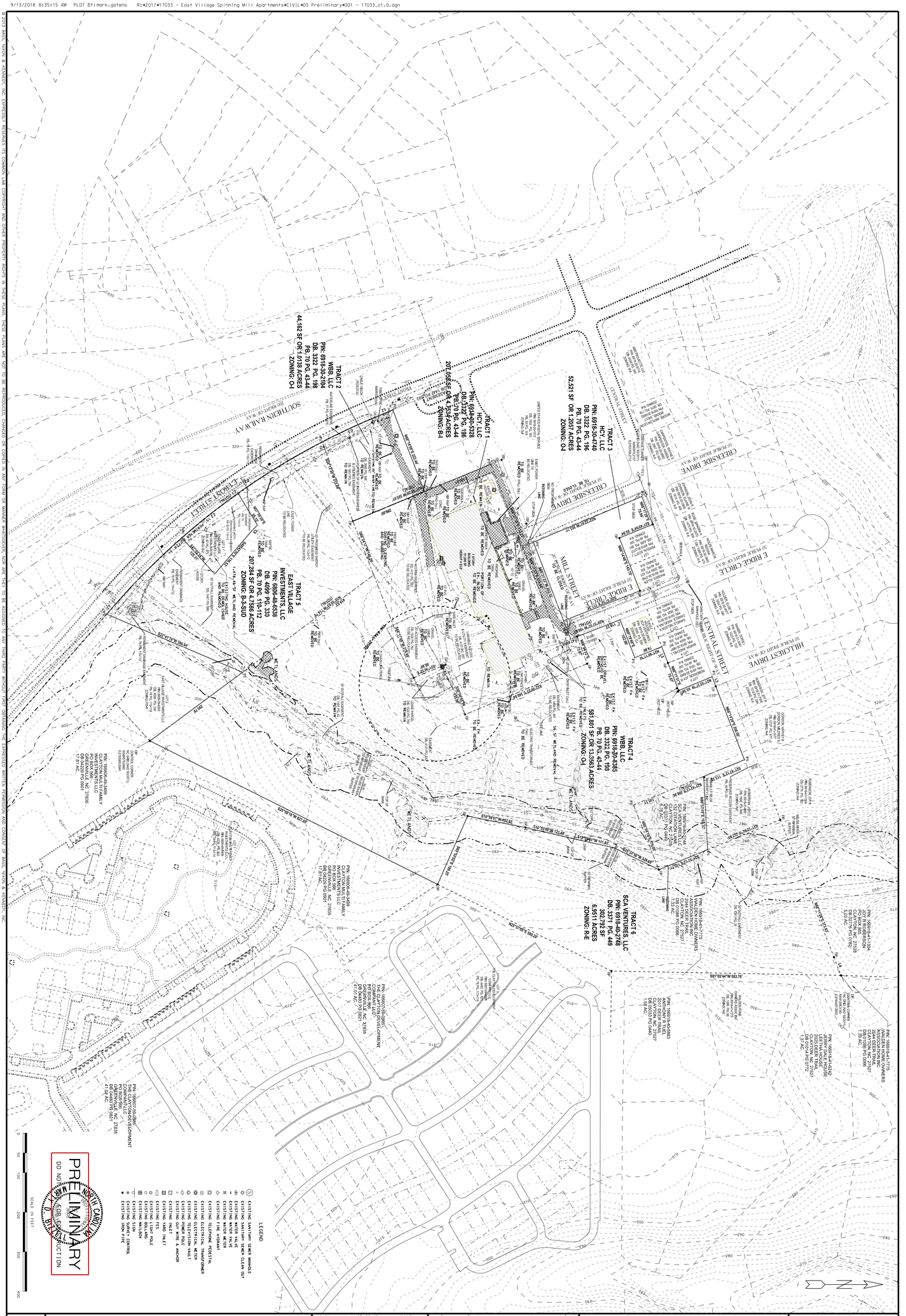
20. THE CONTRACTOR OR OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO TEST ALL EMBANKMENTS AND FILL PLACEMENT FOR PROPER COMPACTION. PROPER COMPACTION SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS OR THESE PLANS, WHICHEVER IS MORE STRINGENT. EMBANKMENTS FOR PONDS SHALL BE PLACED IN 6 INCH LOOSE LAYERS AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR – TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE AT ALL PHASES OF INSTALLATION AND SHALL RETAIN WITH GEOTECHNICAL TESTING DATA. THE CONTRACTOR SHALL ALSO RETAIN ALL SHIPPING RECORDS AND SPECIFICATIONS FOR THE OUTLET STRUCTURE MATERIALS AND STRUCTURES. ALL OF THE ABOVE DATA MAY BE REQUIRED AS PART OF THE MUNICIPALITY AS–BUILT PROCESS AND SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST. THE CONTRACTOR AND OWNER SHALL HAVE DOCUMENTATION OF THESE TESTS AVAILABLE UPON REQUEST.

21. RETAINING WALLS SHOWN HEREIN SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER WITH EXPERIENCE DESIGNING RETAINING WALLS. AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION OF RETAINING WALLS, THE CONTRACTOR SHALL CONTACT THE OWNER'S GEOTECHNICAL ENGINEER TO SCHEDULE AND COORDINATE ALL APPROPRIATE INSPECTIONS, TESTING, AND VERIFICATION NECESSARY DURING RETAINING WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTION, TESTING AND VERIFICATION FOR THE DURATION OF RETAINING WALL CONSTRUCTION. PROPER SCHEDULING, EXECUTION, AND RECORD KEEPING FOR ALL REQUIRED INSPECTIONS, TESTING, AND VERIFICATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH RECORDS SHALL BE RETAINED AND SHALL BE PROVIDED TO THE OWNER AND BASS, NIXON & KENNEDY, INC. ALL MONITORING, TESTING, AND VERIFICATION SHALL CONFORM TO THE MOST RECENT VERSION OF THE NC BUILDING CODE CHAPTER 18, SECTION 1806 OR THE WALL DESIGN ENGINEER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

NOT PERMITTED FOR CONSTRUCTION

9/18/2018 3:22:50 PM PLOT By:mark.ogiens R:\2017\17033 – East Village Spinning Mill Apartments\CIVIL\03 Preliminary\17033_cover .dgn

9/13/2018 8:35:15 AM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\001 - 17033_c1.0.dgn



SHEET	**SPINNING MILL LOFTS AT EAST VILLAGE**	17033 07-23-18 MJG
C1.0	**PHASE I PRELIMINARY SUBMITTAL**	JOB NO. DATE DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	**EXISTING CONDITIONS AND DEMOLITION PLAN**
		SCALE: 1" = 100' HORZ.

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

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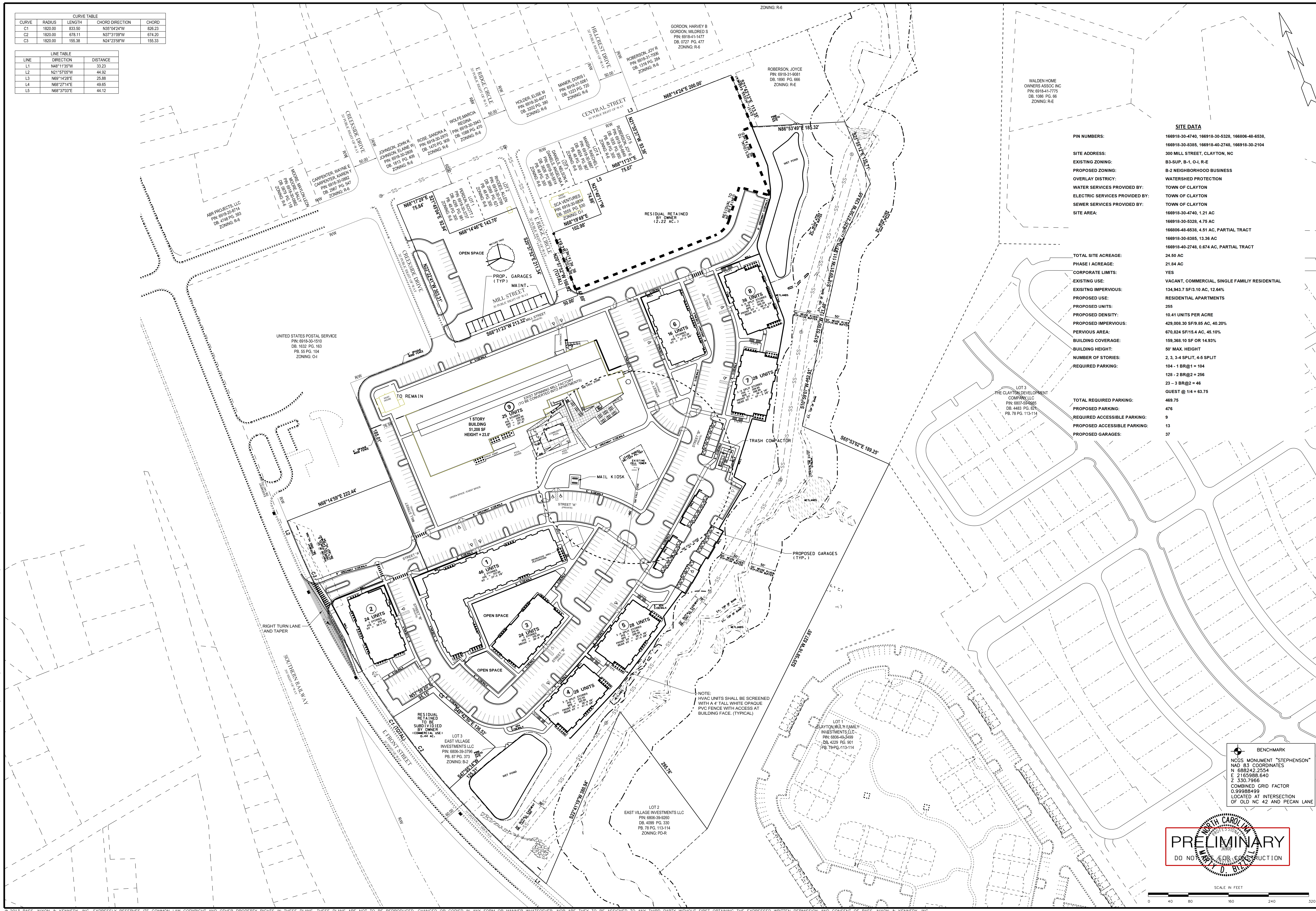
CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD DIRECTION	CHORD
C1	1820.00	833.50	N35°04'24"W	826.23
C2	1820.00	678.11	N37°31'09"W	674.20
C3	1820.00	155.38	N24°23'58"W	155.33

LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	N48°11'35"W	33.23
L2	N21°57'05"W	44.92
L3	N69°14'28"E	25.88
L4	N68°27'14"E	49.65
L5	N68°37'03"E	44.12



SITE DATA

PIN NUMBERS:	166918-30-4740, 166918-30-5328, 166806-48-6538, 166918-30-8385, 166918-40-2748, 166918-30-2104
SITE ADDRESS:	300 MILL STREET, CLAYTON, NC
EXISTING ZONING:	B3-SUP, B-1, O-I, R-E
PROPOSED ZONING:	B-2 NEIGHBORHOOD BUSINESS
OVERLAY DISTRICY:	WATERSHED PROTECTION
WATER SERVICES PROVIDED BY:	TOWN OF CLAYTON
ELECTRIC SERVICES PROVIDED BY:	TOWN OF CLAYTON
SEWER SERVICES PROVIDED BY:	TOWN OF CLAYTON
SITE AREA:	166918-30-4740, 1.21 AC 166918-30-5328, 4.75 AC 166806-48-6538, 4.51 AC, PARTIAL TRACT 166918-30-8385, 13.36 AC 166918-40-2748, 0.674 AC, PARTIAL TRACT
TOTAL SITE ACREAGE:	24.50 AC
PHASE I ACREAGE:	21.84 AC
CORPORATE LIMITS:	YES
EXISTING USE:	VACANT, COMMERCIAL, SINGLE FAMILIY RESIDENTIAL
EXISITNG IMPERVIOUS:	134,943.7 SF/3.10 AC, 12.64%
PROPOSED USE:	RESIDENTIAL APARTMENTS
PROPOSED UNITS:	255
PROPOSED DENSITY:	10.41 UNITS PER ACRE
PROPOSED IMPERVIOUS:	429,008.30 SF/9.85 AC, 40.20%
PERVIOUS AREA:	670,824 SF/15.4 AC, 45.10%
BUILDING COVERAGE:	159,368.10 SF OR 14.93%
BUILDING HEIGHT:	50' MAX. HEIGHT
NUMBER OF STORIES:	2, 3, 3-4 SPLIT, 4-5 SPLIT
REQUIRED PARKING:	104 - 1 BR@1 = 104 128 - 2 BR@2 = 256 23 – 3 BR@2 = 46 GUEST @ 1/4 = 63.75
TOTAL REQUIRED PARKING:	469.75
PROPOSED PARKING:	476
REQUIRED ACCESSIBLE PARKING:	9
PROPOSED ACCESSIBLE PARKING:	13
PROPOSED GARAGES:	37

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NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

OVERALL PRELIMINARY SITE PLAN

SCALE: 1" = 80' HORZ

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

SHEET C1.1

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

9/18/2018 2:04:46 PM PLOT BY: mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*002 - 17033_c1.1.dgn

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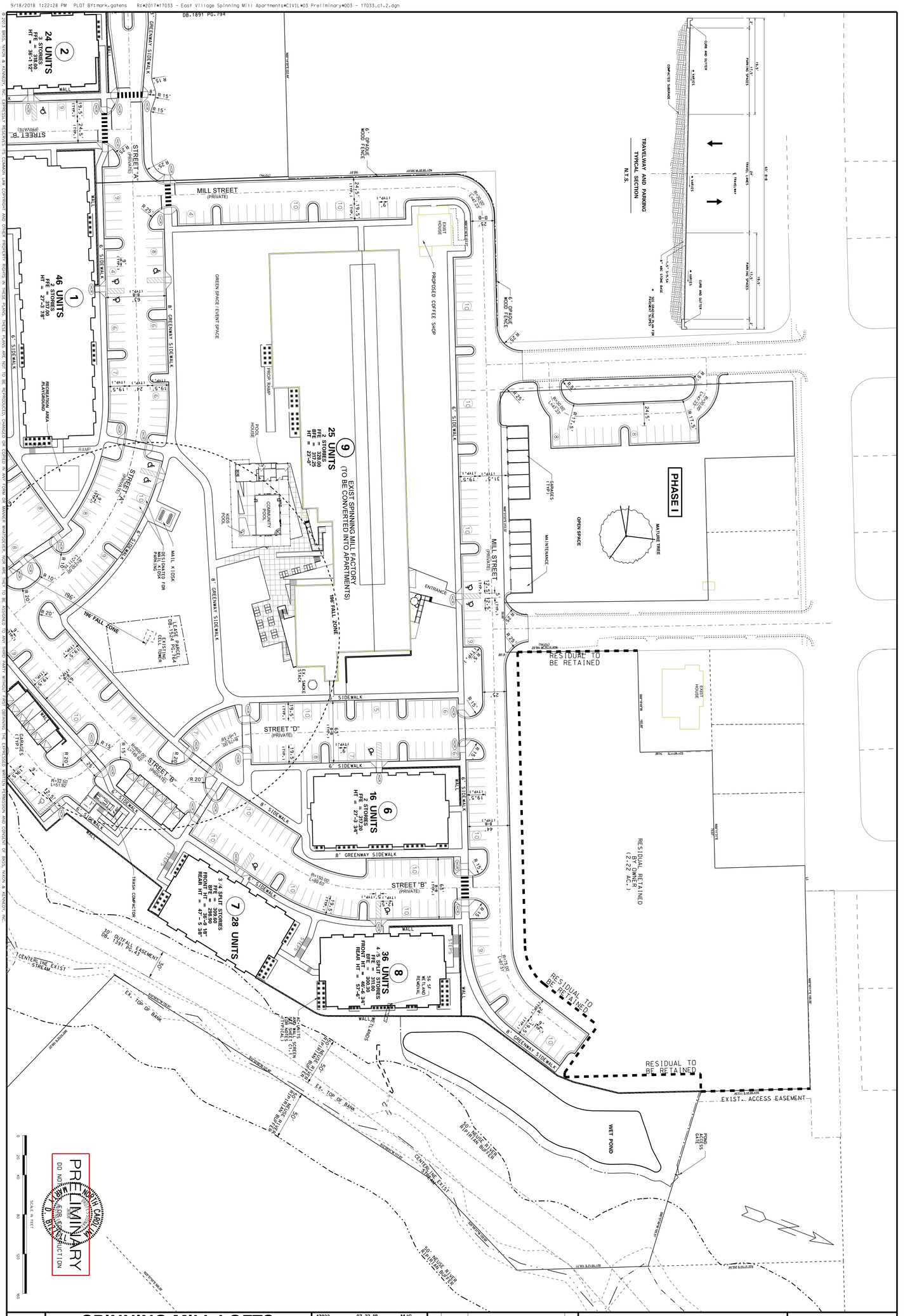

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE						
C1.2	PHASE I PRELIMINARY SUBMITTAL						
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA						
		17033	07-23-18	MJG			
		JOB NO.	DATE	DRAWN BY			
		PRELIMINARY SITE PLAN					
		SCALE: 1" = 40' HORZ					

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

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9/18/2018 1:24:00 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\004 - 17033_ct.3.dgn

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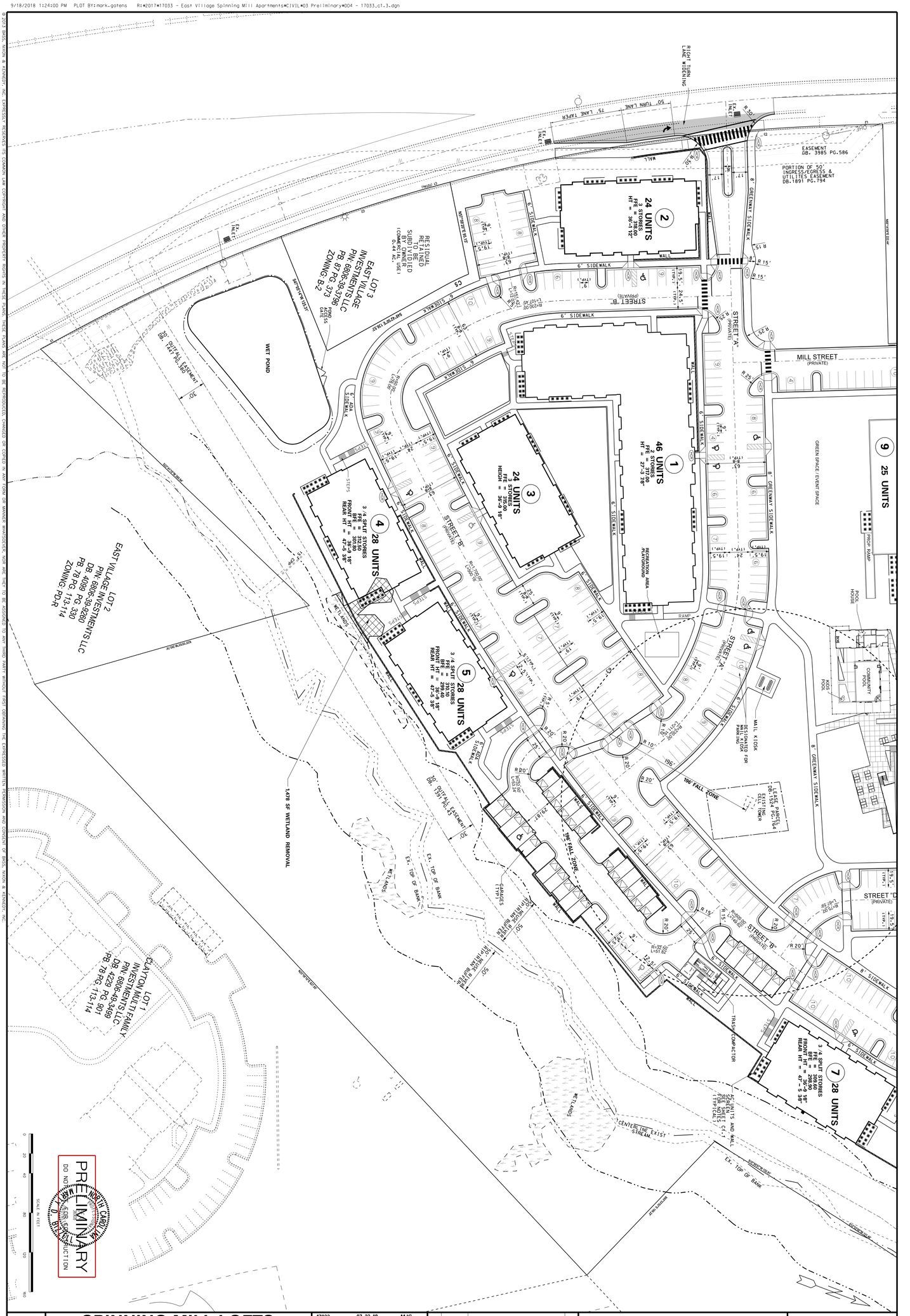

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	07-23-18	MJG
C1.3	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	PRELIMINARY SITE PLAN		
		SCALE: 1" = 40' HORZ		

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)
BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

UTILITY NOTES

SANITARY SEWER:

BACKWATER VALVES SHALL BE PROVIDED FOR ALL UNITS WITH FINAL FLOOR ELEVATIONS OF BUILDINGS LESS THAN 1' ABOVE THE NEXT UPSTREAM MANHOLE, OR CONNECTING MANHOLE WHERE THERE IS NO UPSTREAM MANHOLE.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN NON-TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING.

MINIMUM COVER OF 3' TO BE PROVIDED FOR ALL COLLECTION LINES 4" AND LARGER IN TRAFFIC AREAS. IF LESS THAN 3', DUCTILE IRON PIPE SHALL BE REQUIRED IN CLASS 1 BEDDING (MINIMUM COVER SHALL BE NO LESS THAN 3').

MINIMUM SLOPE FOR 4" AND 6" SANITARY SEWER COLLECTION LINES SHALL BE NO LESS THAN 0.08% WITH CLEAN-OUTS EVERY 75 LINEAL FEET.

MAINTAIN 24" VERTICAL SEPARATION FROM STORM SEWER OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM WATER MAINS OR SPECIFY DUCTILE IRON PIPE FOR SANITARY SEWER. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING.

IF SANITARY AND STORM SEWERS CROSS WITH LESS THAN 24" VERTICAL SEPARATION, A CONCRETE CRADLE OF FLOWABLE FILL SHALL BE INSTALLED TO THE SPRINGLINE OF BOTH PIPES. THE CRADLE SHALL BE THE FULL WIDTH OF THE PIPE TRENCH, WITH A MINIMUM OF 12" BEYOND THE OUTSIDE EDGES OF THE LARGER PIPE. THE LOWER PIPE SHALL HAVE 1" THICK COMPRESSIBLE JOINT MATERIAL BETWEEN THE CRADLE AND THE PIPE. THE MINIMUM VERTICAL PIPE SEPARATION WITH A CRADLE IS 6".

CLEAN-OUTS IN TRAFFIC AREAS SHALL BE TRAFFIC BEARING ACCORDING TO TOWN OF CLAYTON DETAILS. MANHOLES 0-12' DEEP SHALL BE 4'-0" DIAMETER MANHOLES. MANHOLES GREATER THAN 12' DEEP SHALL BE 5'-0" DIAMETER MANHOLES WITH AN EXTENDED BASE PER THE TOWN OF CLAYTON STANDARDS.

WATER:

MINIMUM COVER OF 3' TO BE PROVIDED.

MAINTAIN 18" VERTICAL SEPARATION FROM STORM SEWER. ALSO MAINTAIN 10 FEET HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION FROM SANITARY SEWER MAINS. IF WATER MAIN CROSSES OVER THE SANITARY SEWER MAIN BUT HAS LESS THAN 18" CLEAR, THEN DIP IS REQUIRED FOR BOTH THE WATER MAIN AND SEWER MAIN WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF POINT OF CROSSING. IF WATER MAIN PASSES UNDER SANITARY SEWER, BOTH WATER AND SEWER SHALL BE DUCTILE IRON PIPE AND INSTALLED TO WATER LINE SPECIFICATIONS FOR 10' EACH SIDE OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

IF THE WATER MAIN IS NOT AT LEAST 18" ABOVE THE STORM PIPE, OR IF IT CROSSES UNDER THE STORM PIPE, THEN THE WATER MAIN MUST BE DIP FOR 10 FEET ON EACH SIDE OF THE CROSSING.

PRESSURE REDUCING VALVES SHALL BE PROVIDED IF PRESSURE IS IN EXCESS OF 80 PSI.

GENERAL:

ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHTS-OF-WAY TO BE OWNED, OPERATED, AND MAINTAINED BY THE TOWN OF CLAYTON

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.

ALL UNDERGROUND UTILITIES ARE APPROXIMATELY LOCATED. ACTUAL LOCATION AND DEPTH TO BE CONFIRMED IN THE FIELD BY CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCY.

BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY CITY OR NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, THE FOLLOWING PROCEDURES SHOULD BE UNDERTAKEN:

CITY RIGHT-OF-WAY - CONTACT LOCAL AUTHORITIES TRAFFIC ENGINEERING DEPT. FOR INFORMATION ON DETOURS, OPEN CUTTING OF STREETS OR FOR ANYCONSTRUCTION WITHIN RIGHT-OF-WAY.

NCDOT RIGHT-OF-WAY - CONTACT PROJECT ENGINEERS AND OBTAIN ALL PERMITS AND ENCROACHMENTS. (CROSS-CHECK PLANS WITH SPECIAL PROVISIONS, KEEP COPIES ON CONSTRUCTION SITE, ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER)

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
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TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO. 17033
DATE 07-25-18
DRAWN BY MJG

SCALE: 1" = 40' HOR.Z

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

UTILITY PLAN

SHEET C2.1

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

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9/18/2018 1:25:09 PM PLOT BY: mark.gaines R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\C06 - 17033_c2.1.dgn

NOTES:

1. THE SITE LAYOUT AND BUILDING INFORMATION FOR SPINNING MILLS APARTMENTS WAS PROVIDED BY PLANWORK ARCHITECTS AND ROSS DECEKARD ARCHITECTS.
2. BACKFLOW PREVENTION DEVICES FOR THE DOMESTIC WATER AND FIRE SERVICES (WHERE APPLICABLE) FOR EACH BUILDING SHALL BE LOCATED INSIDE THE BUILDINGS. A DOUBLE CHECK VALVE ASSEMBLY (DVCA) BACKFLOW PREVENTOR IS REQUIRED FOR THE DOMESTIC SERVICES; A REDUCED PRESSURE ZONE (RPZ) IS REQUIRED FOR THE POOL SERVICE; AND A REDUCED PRESSURE DETECTOR DEVICE (RPDA) IS REQUIRED FOR THE FIRE SPRINKLER SERVICES. THE DEVICE MUST BE LISTED ON THE USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
3. THE POOL HOUSE WILL INCLUDE A 2" WATER SERVICE WITH A 2" WATER METER.THE BACKFLOW BREVENTION DEVICES FOR THE WATER SERVICES SHALL BE LOCATED INSIDE THE BUILDINGS. THE POOL HOUSE WILL INCLUDE A 4" SEWER SERVICE.
4. ALL APARTMENT BUILDINGS WILL INCLUDE A 4" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR FIRE PROTECTION AND A 2" WATER SERVICE FROM THE WATER MAIN TO THE BUILDING FOR DOMESTIC SERVICE. A 2" WATER METER SHALL BE PROVIDED ON THE DOMESTIC SERVICE. BACKFLOW PREVENTION DEVICES FOR BOTH THE DOMESTIC AND FIRE SERVICES SHALL BE LOCATED INSIDE BUILDINGS. A 6" SEWER SERVICE WILL BE PROVIDED FOR ALL APARTMENT BUILDINGS.
5. THE CONTRACTOR MAY USE PVC C-900, CLASS 150 , DR 18 PIPE FOR THE WATERLINE INSTALLATION IN LIEU OF USING DIP AS SHOWN ON THESE DRAWINGS. ONLY DIP SHALL BE USED FOR THE WATER MAIN IN THE LOCATIONS NOTED ON THE PLANS AND BE ACCORDANCE WITH THE UTILITY NOTES INCLUDED ON THIS SHEET. ALL MATERIALS FURNISHED AND WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE TOWN OF CLAYTON AND NCDENR STANDARDS SPECIFICATIONS.
6. GROUNDWATER WELL(S) SHALL BE USED FOR PROVIDING SITE IRRIGATION. THERE SHALL BE NO CONNECTIONS BETWEEN THE IRRIGATION SYSTEM AND ANY OF THE WATER MAINS OR SERVICES CONNECTED TO THE PUBLIC MAINS.
7. ALL FIRE HYDRANT LEGS ARE TO BE CONSTRUCTED USING DUCTILE IRON PIPE.
8. ALL APARTMENT BUILDINGS WILL BE SPRINKLERED AND KNOX BOXES SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON REQUIREMENTS. THE KNOX BOX LOCATIONS, TYPE, ETC. SHALL BE COORDINATED WITH THE TOWN OF CLAYTON FIRE MARSHAL. CONTACT TONY ATKINSON AT (919)553-1577.
9. FDC CONNECTIONS AND ALARM PANELS SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF CLAYTON FIRE MARSHAL REQUIREMENTS. CONTACT TONY ATKINSON AT (919)553-1577. FDC CONNECTIONS SHALL BE LOCATED WITHIN 100-FEET OF A FIRE HYDRANT.
10. ALL 1" AND 2" WATER SERVICES SHALL INCLUDE TAPPING THE WATER MAIN FOR INSTALLATION FOR THE SERVICE IN ACCORDANCE WITH THE TOWN OF CLAYTON STANDARDS AND DETAILS. ALL 4" FIRE SERVICES SHALL BE INSTALLED WITH AN 8"x 4" TEE, A 4" STAINLESS STEEL TAPPING SLEEVE AND VALVE MAY BE USED IF THE FIRE SERVICE CONNECTION IS MADE AFTER INSTALLATION OF THE WATER MAIN.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 30850 MARK D. BASS
PRELIMINARY
DO NOT USE FOR CONSTRUCTION

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)364-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

JOB NO. 17033 | DATE 07-23-18 | DRAWN BY MJG

SCALE: 1" = 40' HORZ

UTILITY PLAN

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON — JOHNSTON COUNTY — NORTH CAROLINA

SHEET C2.2

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

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9/18/2018 2:53:15 PM PLOT BY:mark.gotens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\07 - 17033_c2.2.dgn

8/16/2018 4:47:44 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\009 - 17033_c2.4.dgn

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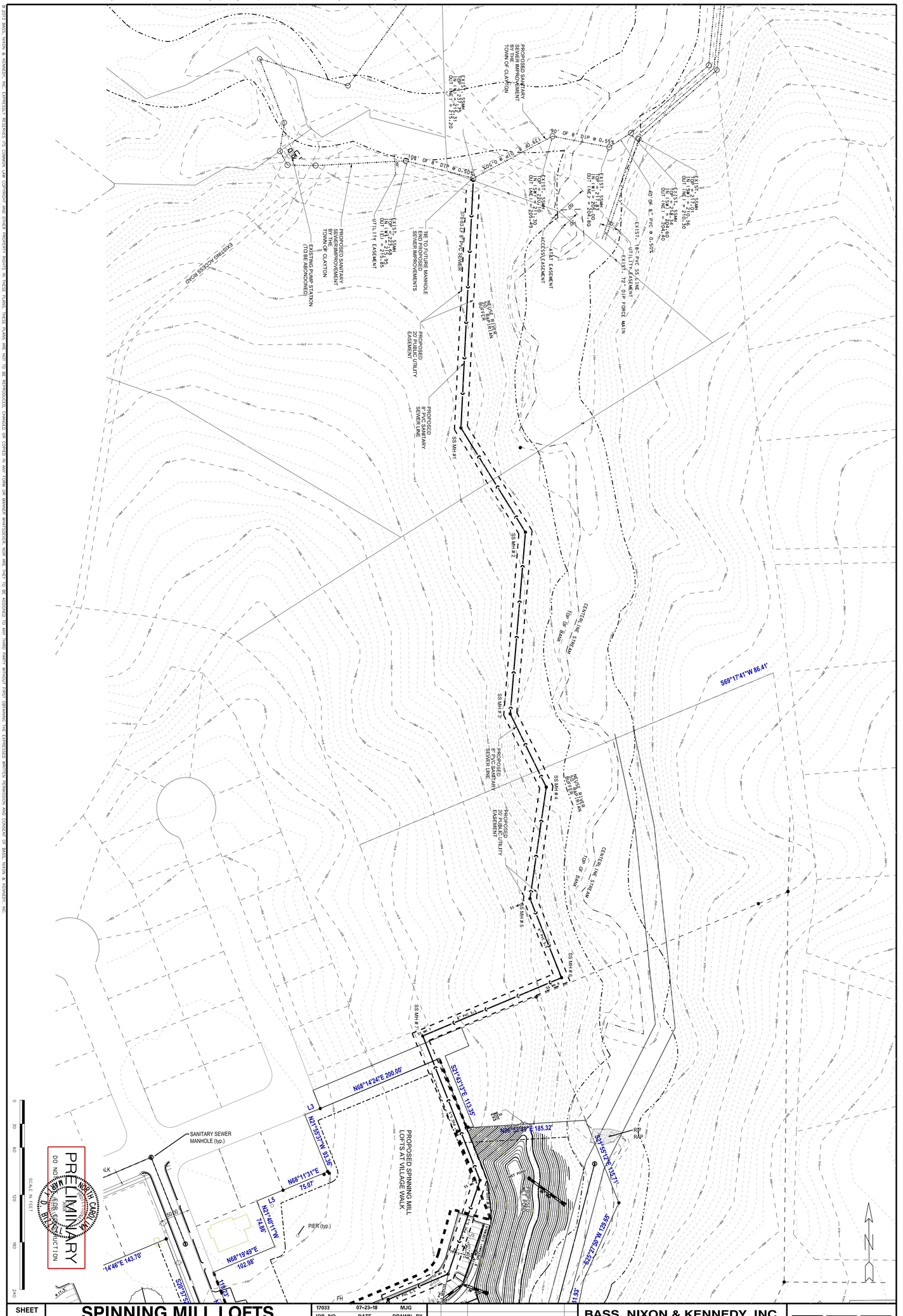

SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033 07-23-18 MJG
C2.3	PHASE I PRELIMINARY SUBMITTAL	JOB NO. DATE DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	OFF SITE SANITARY SEWER PLAN
		SCALE: 1" = 60' HORZ.

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)
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SHEET	SPINNING MILL LOFTS AT EAST VILLAGE				BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS
C3.1	PHASE I PRELIMINARY SUBMITTAL				6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA				TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
					CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

JOB NO.	DATE	DRAWN BY
17033	07-23-18	MJG

GRADING AND DRAINAGE PLAN

SCALE: 1" = 40' HORZ

NO.	DATE	DESCRIPTION	BY
3	8-17-18	T.O. CLAYTON COMMENTS	MG
2	7-23-18	T.O. CLAYTON COMMENTS	MG
1	4-27-18	T.O. CLAYTON COMMENTS	MG

REVISIONS

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9/18/2018 1:49:34 PM PLOT BY:mark.gatens R:\2017\17033 - East Village Spinning Mill Apartments\CIVIL\03 Preliminary\011 - 17033_c3.2.dgn

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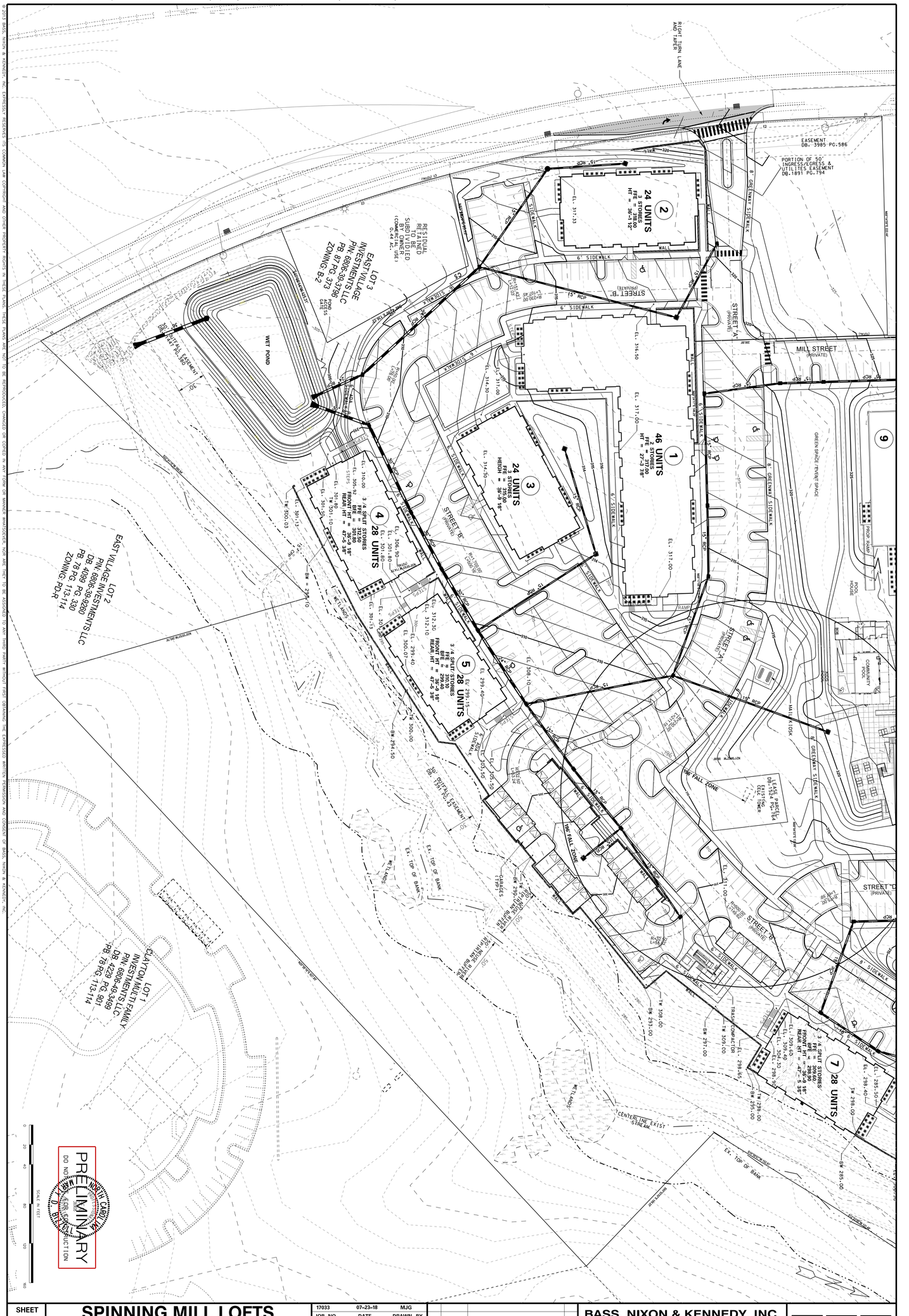
RIGHT TURN LANE AND TAPER
EASEMENT DB. 3985 PG.586
PORTION OF 50' INGRESS/EGRESS & UTILITIES EASEMENT DB.1891 PG.794
24 UNITS 3 STORIES FFE = 318.00 HT = 36'-1 12"
RESIDUAL REMAINING PARCEL TO BE RETAINED BY OWNER (CONVEYED TO HOA) 0.44 AC.±
EAST LOT 3 VILLAGE INVESTMENTS LLC PIN 169806-38-4376 DB 6918 PG 316 ZONING: PDR
WET POND
STREET 'B' (PRIVATE)
STREET 'A' (PRIVATE)
MILL STREET (PRIVATE)
46 UNITS 2 STORIES FFE = 317.00 HT = 27'-3 3/8"
24 UNITS 3 STORIES FFE = 314.50 HEIGH = 36'-9 1/8"
28 UNITS 3 STORIES FFE = 310.00 FRONT HT = 36'-9 1/8" REAR HT = 47'-5 3/8"
28 UNITS 3 STORIES FFE = 312.30 FRONT HT = 36'-9 1/8" REAR HT = 47'-5 3/8"
28 UNITS 3 STORIES FFE = 308.00 FRONT HT = 36'-9 1/8" REAR HT = 47'-5 3/8"
EAST VILLAGE INVESTMENTS LLC PIN: 6806-39-8880 DB 6918 PG. 300 PB. 78 PG. 113-114 ZONING: PDR
LOT 2
CLAYTON MULT FAMILY INVESTMENTS LLC PIN 6806-49-5469 DB 4228 PG 981 PB 181 PG 113-114
LOT 1
GREENWAY SIDEWALK
PROP RAMP
POOL HOUSE
COMMUNITY POOL
PROP. PARKING
GREEN SPACE/ PKWAY SPACE
HIKE & BIKE TRAIL
HIKE & BIKE TRAIL
HIKE & BIKE TRAIL
HIKE FALL ZONE
HIKE FALL ZONE
DUKE ENERGY PARCEL DB.1524 PG.784
CELL TOWER
TRASH COMPACTOR
TRASH COMPACTOR
Ex. TOP OF BANK
Ex. TOP OF BANK
CENTERLINE EXIST STREAM
CENTERLINE EXIST STREAM
WETLANDS
WETLANDS
WETLANDS

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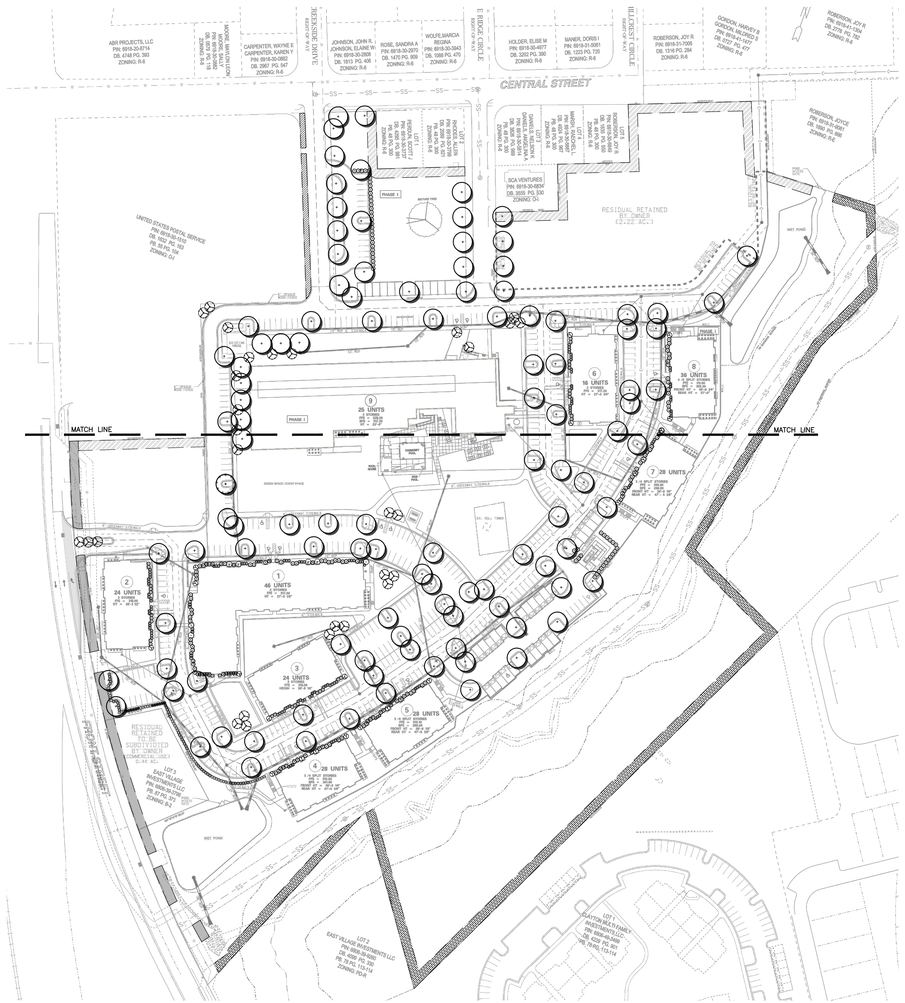

GENERAL NOTES

1. A/C UNITS, TRANSFORMERS AND OTHER MECHANICAL OR UTILITY EQUIPMENT, NOT SHOWN ON THE PLAN, SHALL BE SCREENED FROM VIEW BY THE ADDITION OF WAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
3. MULCH SHALL BE 3" DEEP SHREDDED HARDWOOD UNLESS OTHERWISE NOTED.
4. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST AND ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES BETWEEN PLANT LIST AND PLANTING PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
5. ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
7. B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
8. ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
10. ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
11. MULCH EDGES AND PROPOSED PLANTINGS SHALL NOT DISTURB ANY EXISTING GROUPS OF TREES TO REMAIN. EDGES ARE SHOWN FOR APPROXIMATION ONLY, BUT ARE TO INDICATE SMOOTH, CLEAN CURVES.
12. CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL WAX MYRTLES @ 24" HT. – 5' OC.
13. TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (C.O.). THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A (C.O.).
15. REQUIRED PLANTING AREAS SHALL INCORPORATE EXISTING NATURAL VEGETATION TO THE MAXIMUM EXTENT FEASIBLE.

LANDSCAPE REQUIREMENTS:

Site Landscaping

20% OF TOTAL LOT AREA SHALL BE LANDSCAPED AT A RATE OF (1) CANOPY TREE, (1) UNDERSTORY TREE, AND (2) SHRUBS PER 1,000 SF. 24.5 acres (1,067,220 s.f.)

1,067,220 SF x .20 = 213,444 S.F.
213,444/1,000 = 214
214 CANOPY TREES REQUIRED: 158 NEW + APPROXIMATELY 2500 EXISTING PROVIDED
214 UNDERSTORY TREES REQUIRED: 79 NEW + APPROXIMATELY 135 EXISTING PROVIDED
SHRUBS REQUIRED: 213,444/500 = 428 SHRUBS REQUIRED/ 732 PROVIDED

Streetyard Plantings

FRONT STREET: 800/40 = 20 TREES REQUIRED/PROVIDED
CENTRAL STREET: 80/40 = 2 TREES REQUIRED/PROVIDED
CREEKSIDE DRIVE: 250/40 = 7 TREES REQUIRED/PROVIDED
EAST RIDGE CIRCLE: 343/40 = 9 TREES REQUIRED/PROVIDED

Streetyard Buffer Plantings: Front Street: 800 LF

15' WIDE TYPE 'B' STSREET BUFFER ALONG FRONT STREET
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
800/100 x 2 = 16 CANOPY TREES REQUIRED/PROVIDED
800/100 x 2 = 16 UNDERSTORY TREES REQUIRED/PROVIDED
800/100 x 16 = 128 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 1,224 LF

15' WIDE TYPE 'B' BUFFER ALTERNATIVE 2
15' WIDTH REQUIRES (2) CANOPY TREES, (2) UNDERSTORY TREES AND (16) SHRUBS PER 100 LF
1,224/100 x 2 = 25 CANOPY TREES REQUIRED/PROVIDED
1,224/100 x 2 = 25 UNDERSTORY TREES REQUIRED/PROVIDED
1,224/100 x 16 = 196 SHRUBS REQUIRED/PROVIDED

Perimeter Buffer Plantings: 290 LF

10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
291/100 x 2 = 6 CANOPY TREES REQUIRED/PROVIDED
290/100 x 3 = 9 UNDERSTORY TREES REQUIRED/PROVIDED
290/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 371 LF

A SIX FOOT OPAQUE WOOD FENCE IS PROPOSED BETWEEN THE PERIMETER DRIVE AROUND THE EXISTING MILL BUILDING AND THE USPS SITE. THE EXISTING DRIVE DOES NOT PROVIDE ENOUGH SPACE TO PLANT THE BUFFER ALONG THE PROPERTY LINE. THE TREES THAT WOULD TYPICALLY BE PLANTED IN THE BUFFER WILL BE PLANTED ELSEWHERE ON SITE.
10' WIDE TYPE 'B' BUFFER ALTERNATIVE 1
10' WIDTH REQUIRES (2) CANOPY TREES, (3) UNDERSTORY TREES AND (20) SHRUBS PER 100 LF
371/100 x 2 = 8 CANOPY TREES REQUIRED/PROVIDED
371/100 x 3 =12 UNDERSTORY TREES REQUIRED/PROVIDED
371/100 x 20 = 58 SHRUBS REQUIRED/PROVIDED

Alternate Compliance for Type 'B' Perimeter: 2,343 LF

EXISTING VEGETATION EXCEEDS PERFORMANCE STANDARDS FOR BUFFER. SEE SAMPLE AREA ON PLAN.

PLANT LEGEND

- CANOPY/SHADE TREE
- UNDERSTORY TREE
- LARGE SHRUB
- SMALL SHRUB

PRELIMINARY

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

SCALE IN FEET
0 50 100 200 300 400

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-1422 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY GPW

LANDSCAPE PLAN NORTH

SCALE: 1" = 100'

SPINNING MILL LOFTS
AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.0

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K:\2017\17033 - East Village Spinning Mill Apartments\CAD\L1.0 Preliminary\17033 - Landscape.dwg, 4/19/2018 2:23:39 PM, mark.gaskins,
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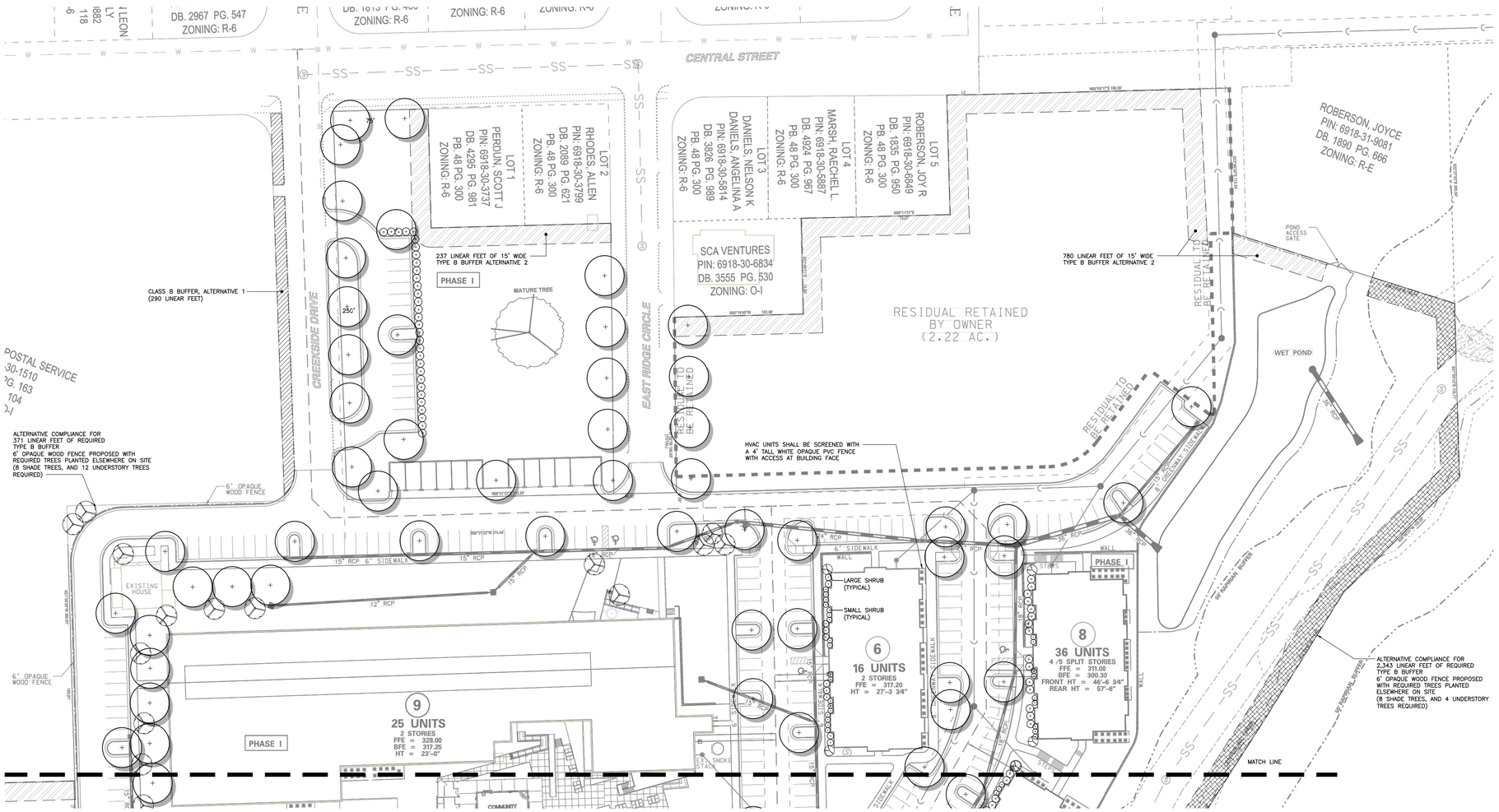
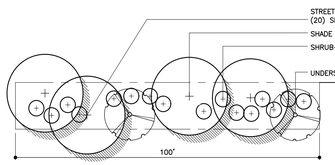
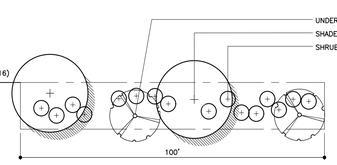
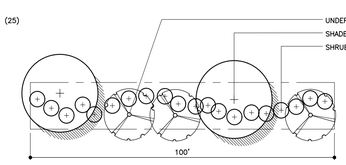




15' CLASS 'B' BUFFER ALTERNATIVE 2 (800 LF) FRONT STREET



15' CLASS 'B' BUFFER ALTERNATIVE 2 (1,224 LF)



10' CLASS 'B' BUFFER ALTERNATIVE 1 (290 LF)

PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	QUAN.	CAL	HT	ROOT	REMARKS
	SHADE TREES						
AR	Acer rubrum 'Somerset'	Red maple		2.5"	10'	B&B	
AS	Acer saccharum	Sugar Maple		2.5"	10'	B&B	
CB	Carpinus betula	European Hornbeam		2.5"	10'	B&B	
LT	Liriodendron tulipifera	Tulip Poplar		2.5"	10'	B&B	
QC	Quercus coccinea	Scarlett Oak		2.5"	10'	B&B	
QN	Quercus nuttalli	Nuttall oak		2.5"	10'	B&B	
QV	Quercus virginiana	Live Oak		2.5"	10'	B&B	
UP	Ulmus parvifolia	Chinese lacebark elm		2.5"	10'	B&B	
ZS	Zelkova serrata	Village Green Zelkova		2.5"	10'	B&B	
	UNDERSTORY TREES						
CC	Cercis canadensis 'Forest Pansy'	Eastern Redbud		2"	8'	B&B	
CF	Cornus florida	Dogwood		2"	8'	B&B	Buffer Tree
LCS	Lagerstroemia 'Centennial Spirit'	Crape Myrtle			8'	B&B	
MG	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia			8'	B&B	
NS	Syssa sylvatica	Tepelo		2"	8'	B&B	Buffer Tree
	SHRUBS						
BM	Buxus microphylla 'Winter Green'	Wintergreen Boxwood			12"	Cont	
IL	Ilex latifolia	Lustreleaf Holly			48"	Cont	
INS	Ilex x 'Nellie R Stevens'	Nellie Stevens Holly			48"		
LC	Loropetalum chinensis 'Chang's Ruby'	Loropetalum			12"	Cont	
OH	Osmanthus heterophyllus 'rotundifoli	Holly Osmanthus			24"	Cont	Buffer Shrub
PJ	Pieris japonica 'Mountain Snow"	Japanese Pieris			12"	Cont	
PT	Pittosporum tobira 'Tall 'N Tuff'	Pittosporum			24"	Cont	Buffer Shrub
RR	Rosa 'Double Red'	Double Knockout Rose			12"	Cont	
VD	Viburnum davidii	David Viburnum			12"	Cont	

NO WETLANDS EXIST ON-SITE

NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF CLAYTON AND NCDOT

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT HARRY P. WALSTON

PRELIMINARY

SCALE IN FEET
0 20 40 80 120 160

BASS, NIXON & KENNEDY, INC.
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NO.	DATE	REVISIONS	BY
1	04-30-18	PER ToC COMMENTS	GW

JOB NO. 03-17033 | DATE 04-02-18 | DRAWN BY GPW | CHK BY: GPW | SCALE: 1" = 40'

LANDSCAPE PLAN NORTH

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.1

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

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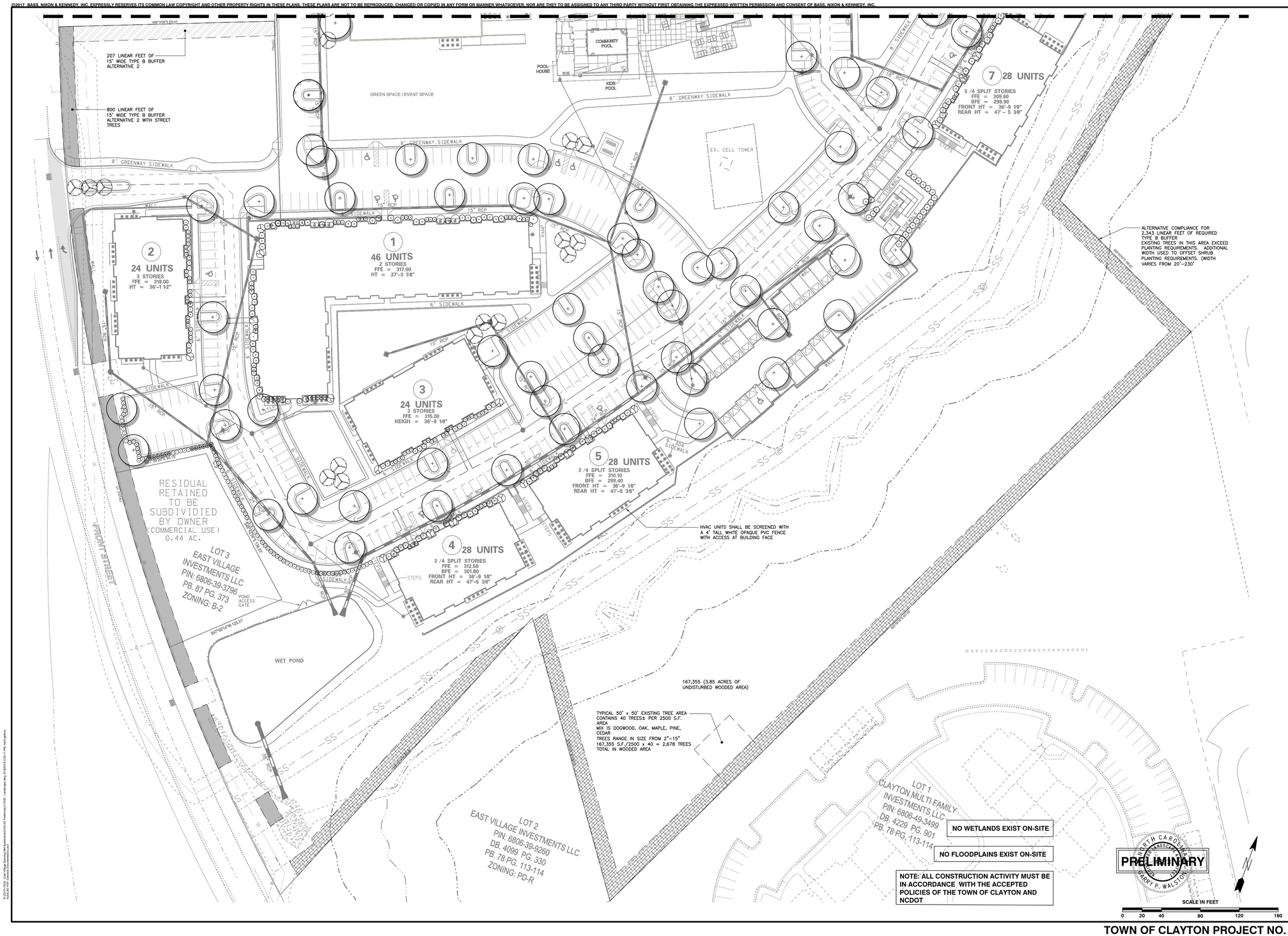

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TELEPHONE: (919)851-4422 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
1	04-30-18	PER ToC COMMENTS	GW

REVISIONS

JOB NO.	DATE	DRAWN BY
03-17033	04-02-18	GPW

LANDSCAPE PLAN SOUTH

SCALE: 1" = 40' CHK BY: GPW

SPINNING MILL LOFTS AT EAST VILLAGE
PHASE I PRELIMINARY SUBMITTAL
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

SHEET L1.2

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

TOWN OF CLAYTON PROJECT NO. 2018-64-SP

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - FRONT ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - LEFT ELEVATION

Scale: 3/32" = 1'-0"

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes.
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CERT. NO. 50909
N.C.
RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
			09-18-18

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 1 Elevations
--

SHEET NUMBER:
1.A1.10

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 1 - REAR ELEVATION

Scale: 3/32" = 1'-0"

2 BLDG TYPE 1 - RIGHT ELEVATION

Scale: 3/32" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Bldg Type 1 Elevations
--

SHEET NUMBER:

1.A1.11

1 BLDG TYPE 2 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

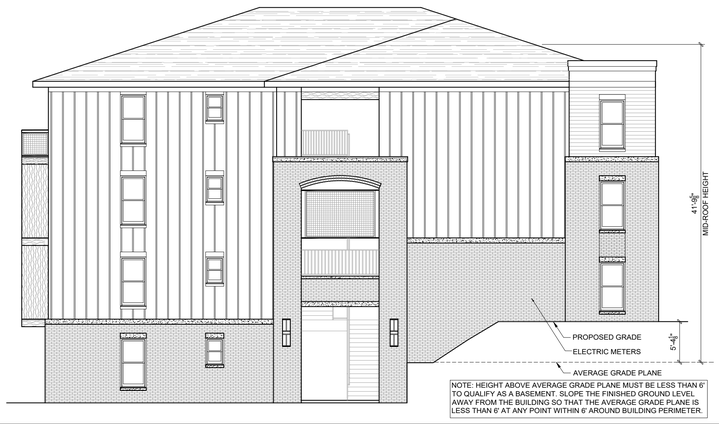
* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 2 - REAR ELEVATION

Scale: 1/8" = 1'-0"



3 BLDG TYPE 2 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submittal
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:	09-18-18		
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2 Elevations
--

SHEET NUMBER:
1.A2.03

1 BLDG TYPE 2.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

NOTE: HEIGHT ABOVE AVERAGE GRADE PLANE MUST BE LESS THAN 6' TO QUALIFY AS A BASEMENT. SLOPE THE FINISHED GROUND LEVEL AWAY FROM THE BUILDING SO THAT THE AVERAGE GRADE PLANE IS LESS THAN 6' AT ANY POINT WITHIN 6' AROUND BUILDING PERIMETER.

3 BLDG TYPE 2.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
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PROGRESS DATE:	09-18-18
ISSUE DATE:	
REVISIONS	
NUMBER	DATE	INITIALS	DESCRIPTION

PROJECT NO: 003417

DRAWN BY: JK

CHECKED BY: -

SHEET TITLE:

Bldg Type 2.1 Elevations

SHEET NUMBER:

1.A2.08

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL: ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
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- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

* USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 2.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:		09-18-18	
ISSUE DATE:			
REVISIONS	NUMBER	DATE	DESCRIPTION
	INITIALS		

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 2.1
Elevations

SHEET NUMBER:
1.A2.09

1 BLDG TYPE 3 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

2 BLDG TYPE 3 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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Civil Submission
Spinning Mill Apartments
Clayton NC

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PROGRESS DATE:	09-18-18
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REVISIONS	

NO.	BY	DESCRIPTION	INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3 Elevations
--

SHEET NUMBER:
1.A3.03

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.1 - FRONT ELEVATION

Scale: 1/8" = 1'-0"

2 BLDG TYPE 3.1 - TYPICAL SIDE ELEVATION (LEFT SHOWN)

Scale: 1/8" = 1'-0"

3 BLDG TYPE 3.1 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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Civil Submission

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Clayton NC

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PROGRESS DATE:			
ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	INITIALS	DESCRIPTION

PROJECT NO: 003417

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SHEET TITLE: Bldg Type 3.1 Elevations

SHEET NUMBER: 1.A3.12

EXTERIOR MATERIALS LEGEND * SEE COLOR BOARD FOR COLOR SELECTIONS

- = FIBER CEMENT BOARD & BATTEN EXPOSURE PER ELEVATIONS
- = FIBER CEMENT PANEL- ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN
- = BRICK VENEER
- = ASPHALT SHINGLES
- = MITERED, ARTISAN, HORIZONTAL SIDING
- = CORRUGATED METAL SIDING
- = PRE-CAST CONCRETE HEADER/SILL
- = BRICK SOLDIER

ELEVATION GENERAL NOTES

ROOFS

★ USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

ROOF VENTILATION

SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

1 BLDG TYPE 3.2 - REAR ELEVATION

Scale: 1/8" = 1'-0"

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RESIDENT N.C.
RALEIGH, NC

Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			09-18-18
REVISIONS	NUMBER	DATE	DESCRIPTION

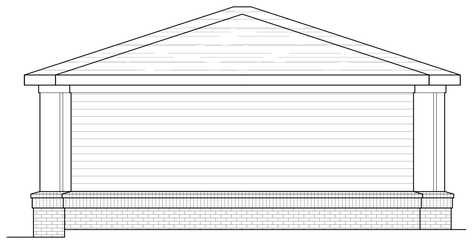
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Bldg Type 3.2 Elevations

SHEET NUMBER:
1.A3.24

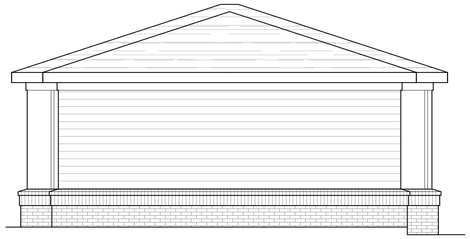
1 GARAGE TYPE 1 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 1 - RIGHT ELEVATION

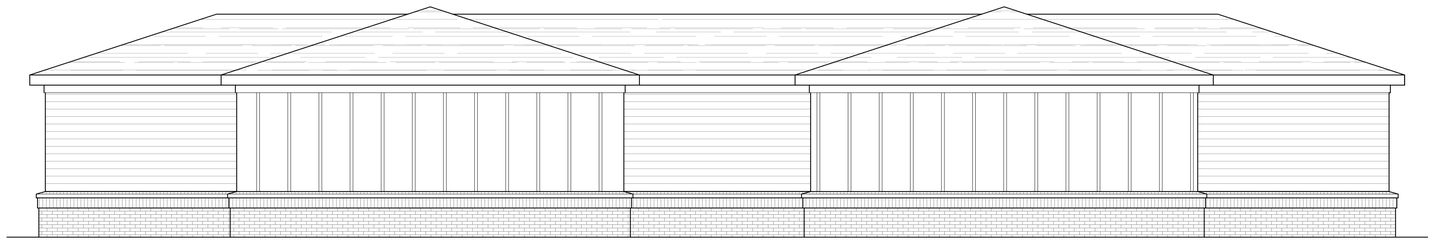
Scale: 1/4" = 1'-0"



3 GARAGE TYPE 1 - LEFT ELEVATION

Scale: 1/4" = 1'-0"

COLOR OF MATERIALS TO MATCH
COLORS/MATERIALS OF PRIMARY
APARTMENT BUILDINGS



4 GARAGE TYPE 1 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

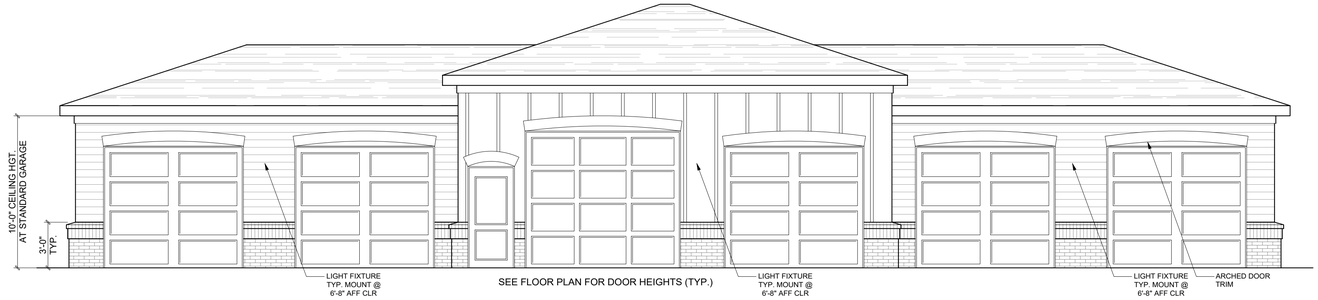
PRELIMINARY
NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION
			09-18-18

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

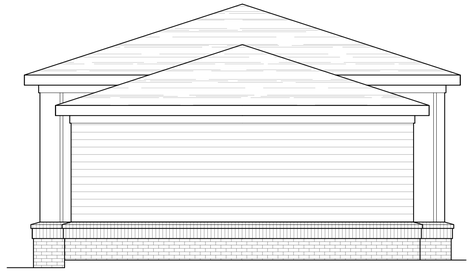
SHEET TITLE:
Garage Type 1
Elevations

SHEET NUMBER:
1.A5.10



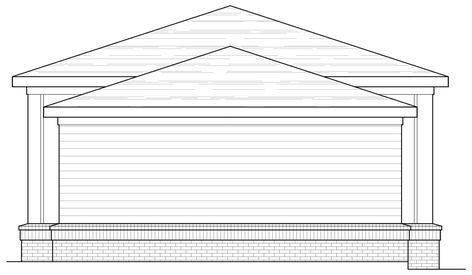
1 GARAGE TYPE 2 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 2 - RIGHT ELEVATION

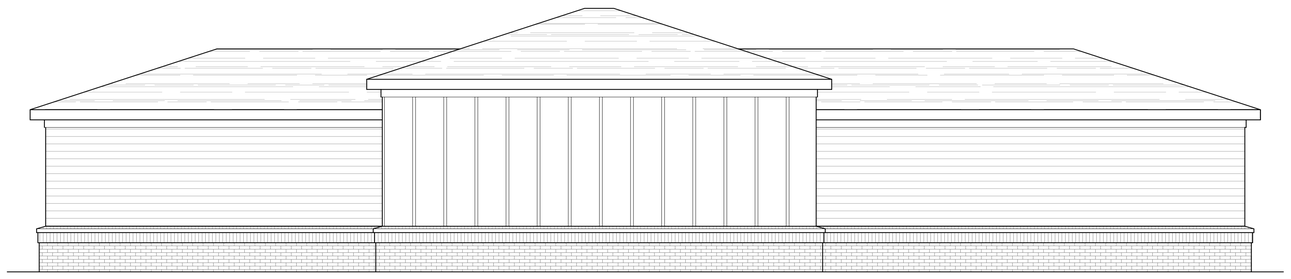
Scale: 1/4" = 1'-0"



COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS

3 GARAGE TYPE 2 - LEFT ELEVATION

Scale: 1/4" = 1'-0"



4 GARAGE TYPE 2 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY NOT FOR CONSTRUCTION

09-18-18	DESCRIPTION

PROGRESS DATE:
ISSUE DATE:
REVISIONS

NUMBER	DATE	INITIALS

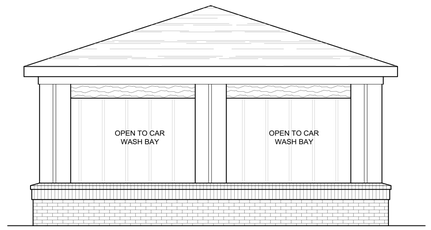
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 2 Elevations

SHEET NUMBER:
1.A5.11

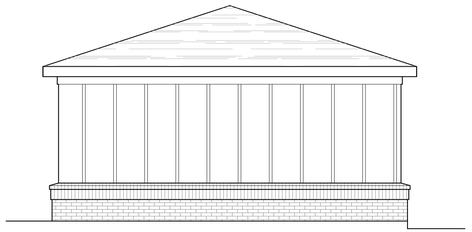
1 GARAGE TYPE 3 - FRONT ELEVATION

Scale: 1/4" = 1'-0"



2 GARAGE TYPE 3 - RIGHT ELEVATION

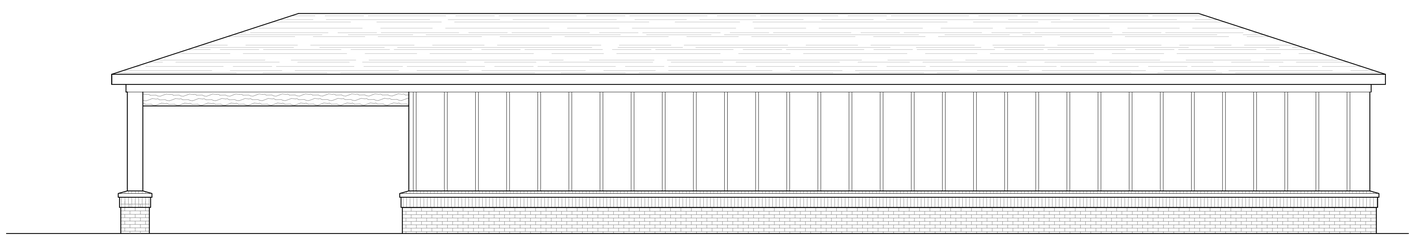
Scale: 1/4" = 1'-0"



COLOR OF MATERIALS TO MATCH COLORS/MATERIALS OF PRIMARY APARTMENT BUILDINGS

3 GARAGE TYPE 3 - LEFT ELEVATION

Scale: 1/4" = 1'-0"



4 GARAGE TYPE 3 - REAR ELEVATION

Scale: 1/4" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

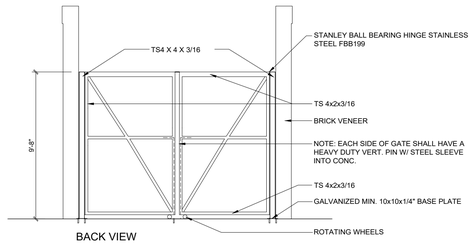
PRELIMINARY NOT FOR CONSTRUCTION

09-18-18			
PROGRESS DATE:			
ISSUE DATE:			
REVISIONS			
NUMBER	DATE	DESCRIPTION	INITIALS

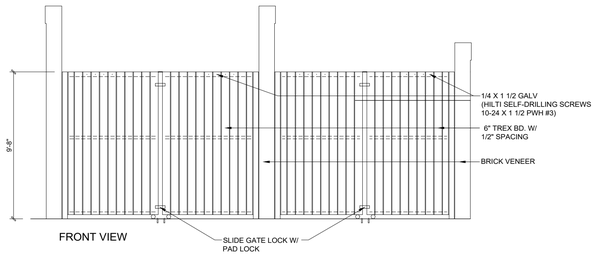
PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Garage Type 3 Elevations

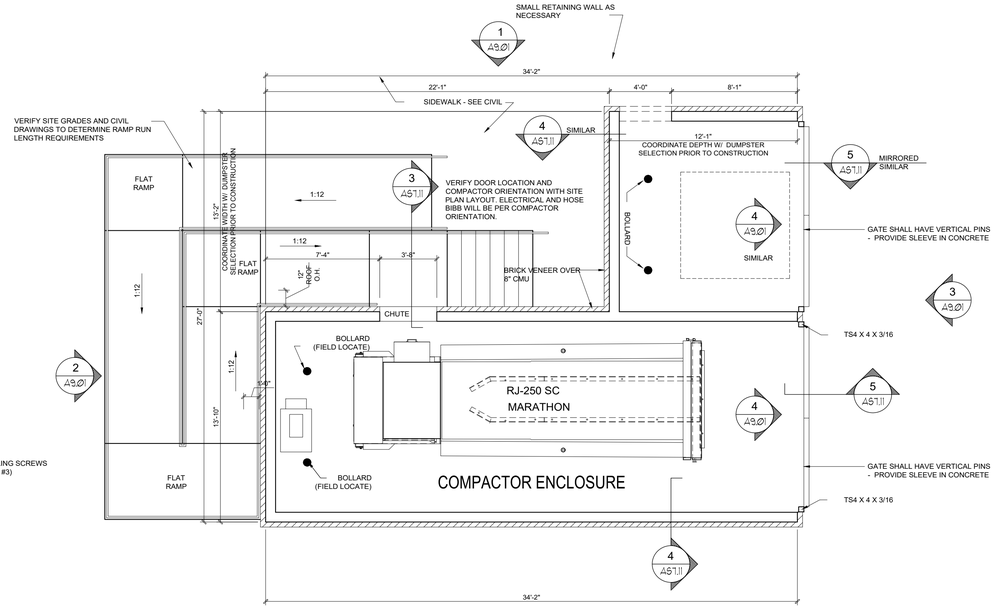
SHEET NUMBER:
1.A5.12



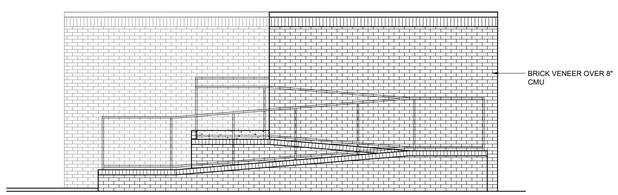
4 GATE DETAIL BACK VIEW
1/4"=1'-0"



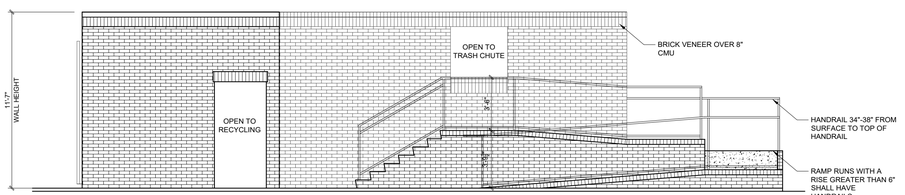
3 GATE DETAIL FRONT VIEW
1/4"=1'-0"



5 TRASH COMPACTOR ENCLOSURE PLAN
1/4"=1'-0"



2 TRASH COMPACTOR REAR ELEVATION
1/4"=1'-0"



1 TRASH COMPACTOR SIDE ELEVATION
1/4"=1'-0"

1 TRASH COMPACTOR - PLAN AND ELEVATIONS

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Civil Submission

Spinning Mill Apartments

Clayton NC

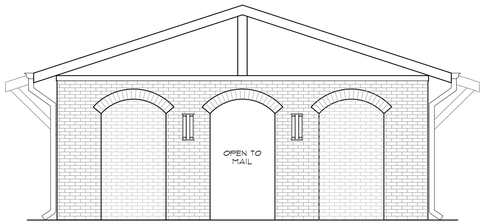
PRELIMINARY NOT FOR CONSTRUCTION

PROGRESS DATE:			
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS
		09-18-18	
		DESCRIPTION	

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: -

SHEET TITLE:
Compactor Plan and Elevations

SHEET NUMBER:
1.A6.00



3 TYPICAL SIDE ELEVATION

Scale: 1/4" = 1'-0"

ARCHITECTURAL PLANS
EXTERIOR MATERIALS

- ASPHALT SHINGLE ROOF
- STANDING SEAM METAL ROOF
- FIBER CEMENT SIDING
- FIBER CEMENT VERTICAL SIDING PANELS W/ FIBER CEMENT BATTENS
- CULTURED STONE VENEER
- STONE HEADER

ELEVATION GENERAL NOTES

ROOFS

IF USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.

PAINT ALL ROOF PENETRATIONS TO MATCH SHINGLE COLOR

ROOF VENTILATION

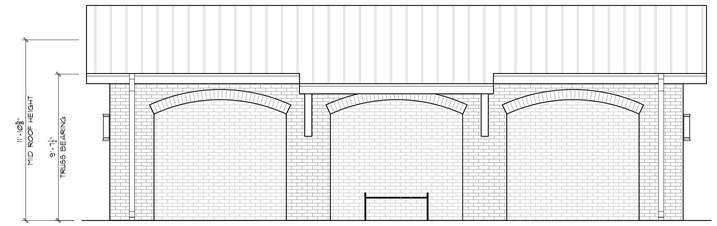
SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATION REQUIREMENTS.

SQUARE FOOTAGE

MAIL BOX BAY SHELL (74sf x 2) =	148
TOTAL COVERED AREA =	748

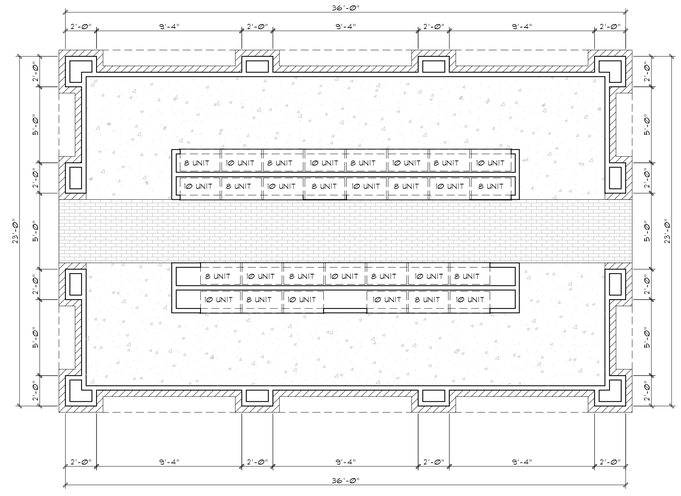
- GENERAL NOTES

Scale: 1/4" = 1'-0"



2 FRONT/REAR ELEVATION

Scale: 1/4" = 1'-0"



1 FLOOR PLAN

Scale: 1/4" = 1'-0"

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Civil Submission

Spinning Mill Apartments

Clayton NC

PRELIMINARY
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PROGRESS DATE:			09-18-18
ISSUE DATE:			
REVISIONS	NUMBER	DATE	INITIALS

DESCRIPTION

PROJECT NO: 003417

DRAWN BY: JK

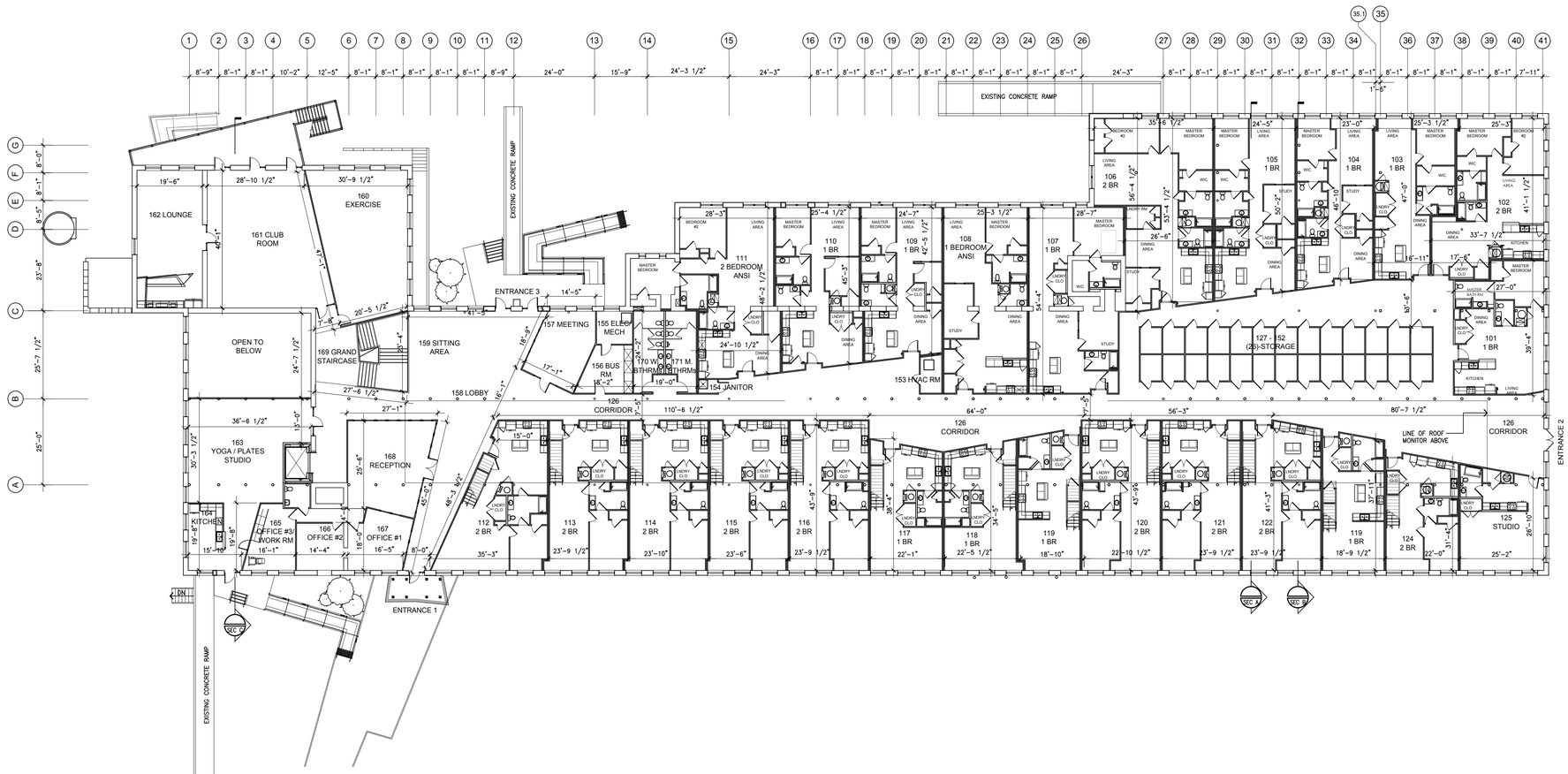
CHECKED BY: -

SHEET TITLE:

Mail Kiosk Plan and Elevations

SHEET NUMBER:

1.A7.00



1 Main Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.1

SHEET OF
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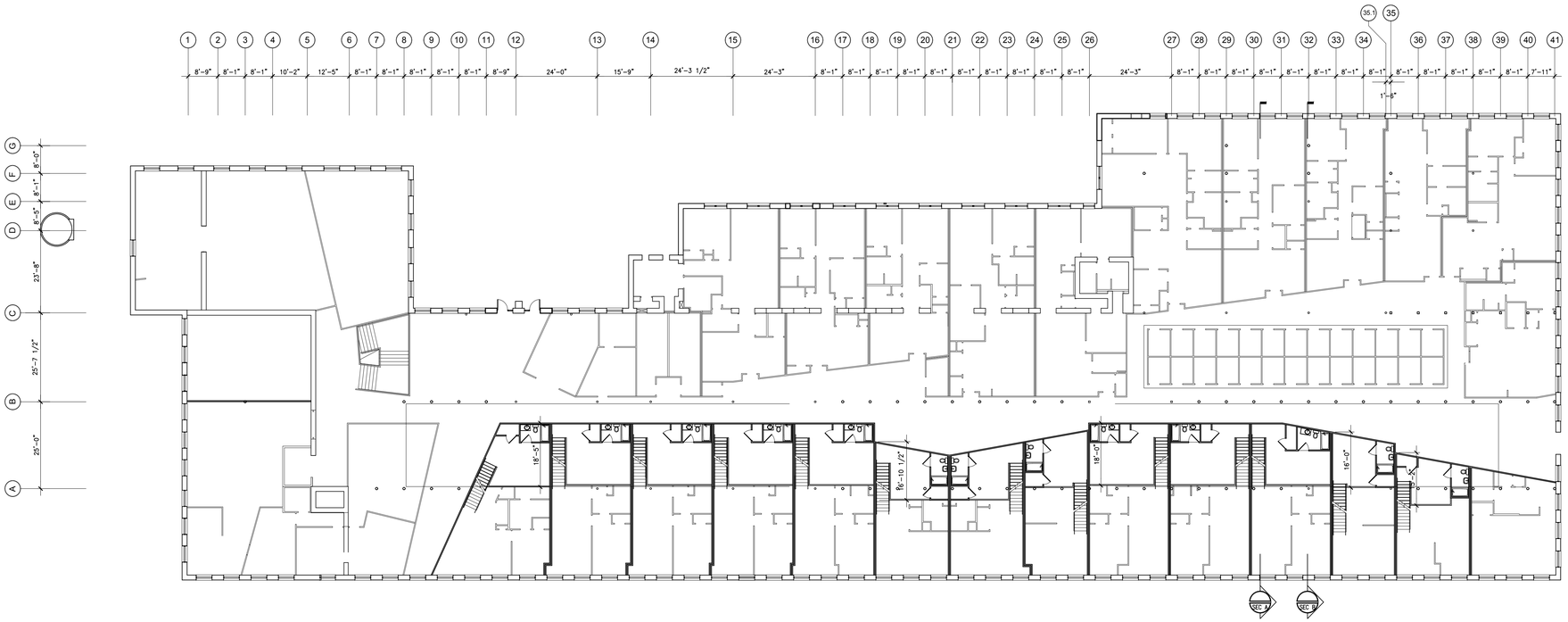
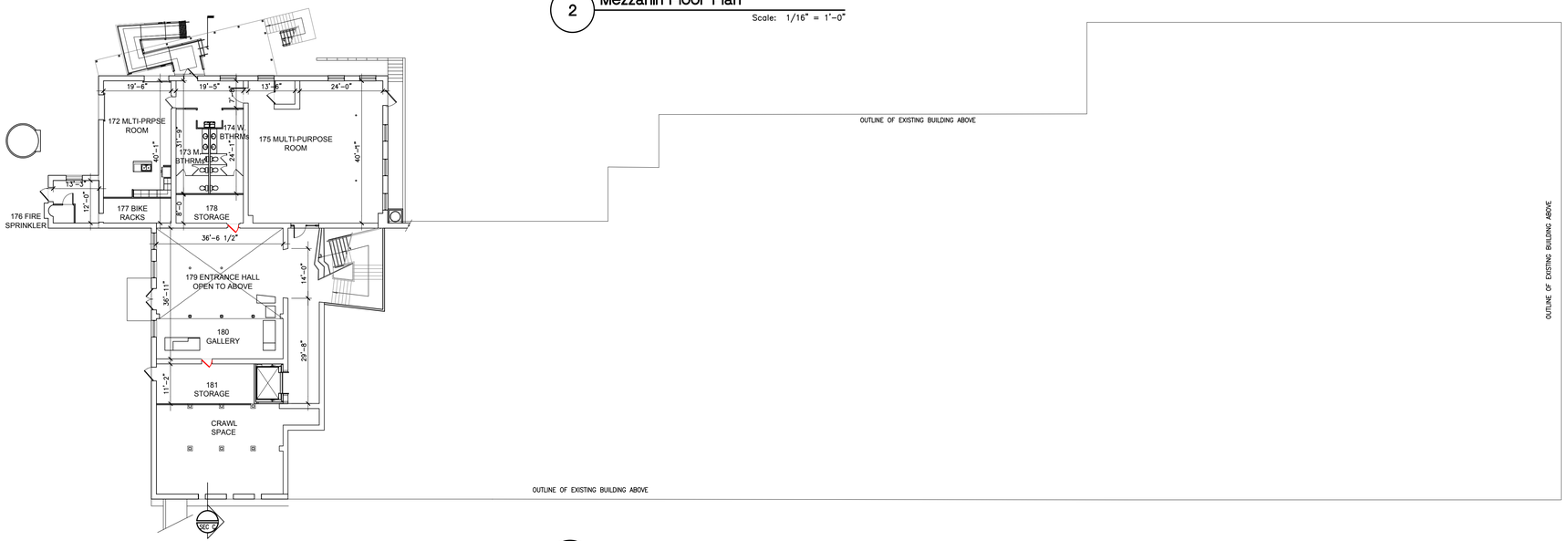


2 Mezzanin Floor Plan

Scale: 1/16" = 1'-0"



1 Basement Floor Plan

Scale: 1/16" = 1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

DATE: April 2, 2018
ISSUED FOR: Review

Building Plan

A 1.2

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TOTAL SHEETS IN SET: CHECKED BY: -

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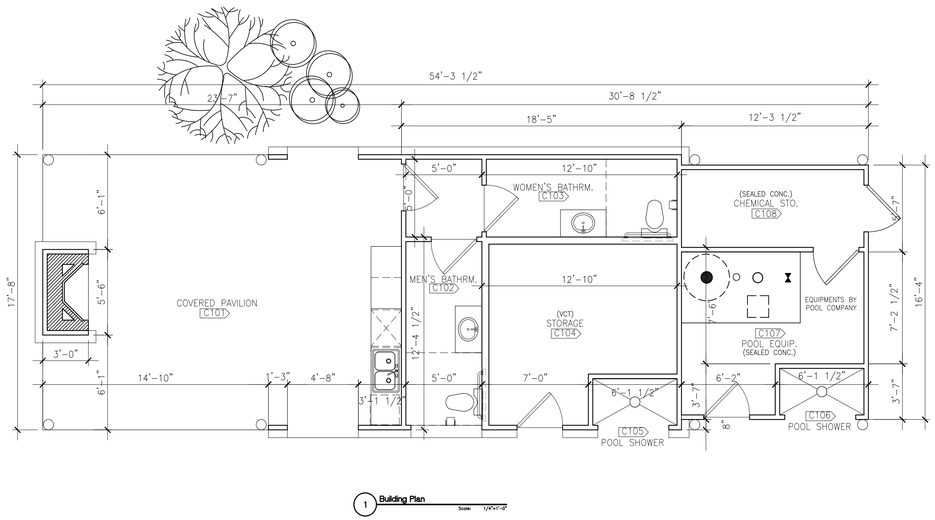


1 **Building Plan**
Scale: 1/4"=1'-0"

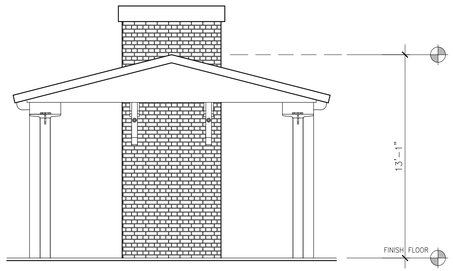
ELEVATION KEY

BRICK VENEER SIMILAR TO EXISTING BUILDING

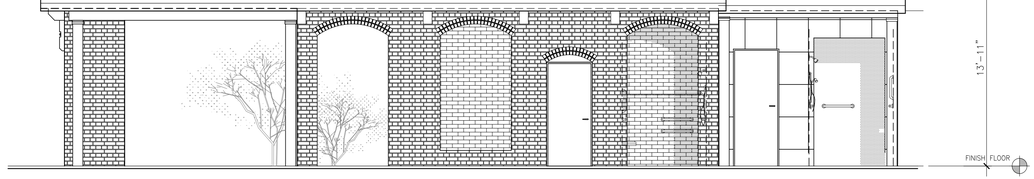
EIFS - EXTERIOR INSULATION & FINISHING SYSTEM, COLOR TO BE LIGHT GREY

ASPHALT SHINGLES

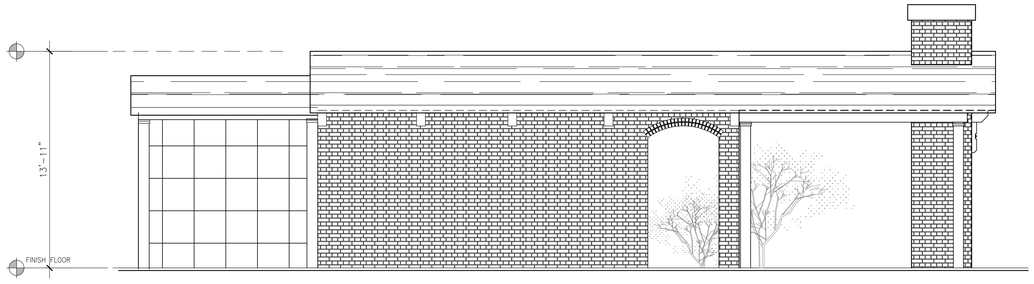
NOTE: BUILDING TO BE TYPE VB CONSTRUCTION



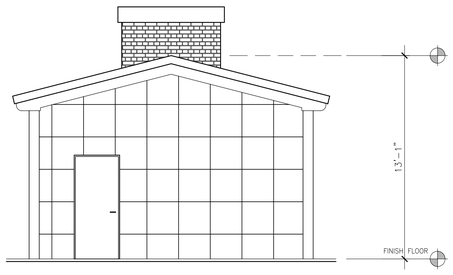
2 **Side Elevation**
Scale: 1/4"=1'-0"



3 **Building Front Elevation**
Scale: 1/4"=1'-0"



4 **Building Rear Elevation**
Scale: 1/4"=1'-0"



5 **Side Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

1 April 27, 2018
Review Comments

DATE: April 9, 2018
ISSUED FOR: Review

Pool House
- Building Plan
- Elevations

A 1.3

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Phone: 919.875.0001

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Planning
Interiors
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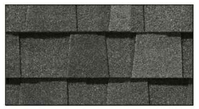
= FIBER CEMENT BOARD & BATTEN
SW6250 GRANITE PEAK

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)



= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW6148 WOOL SKEIN

= CORRUGATED METAL PANELING

= BRICK SOLDIER

= PRE-CAST CONCRETE HEADER

1 COLOR SCHEME 1

Scale:

= FIBER CEMENT BOARD & BATTEN
SW6244 NAVAL

= FIBER CEMENT PANEL-
ALLURA, CEDAR NO GROVE, WOOD GRAIN USED AS BASIS OF DESIGN

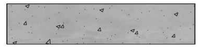
= BRICK VENEER
CANYON CREEK (TRIANGLE BRICK)

= ASPHALT SHINGLES
GEORGETOWN GREY (CERTAINTEED)

= MITERED, ARTISAN,
HORIZONTAL SIDING
SW9170 ACIER

= CORRUGATED METAL PANELING

= BRICK SOLDIER



= PRE-CAST CONCRETE HEADER

2 COLOR SCHEME 2

Scale:

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Civil Submission
Spinning Mill Apartments
Clayton NC

PRELIMINARY
NOT FOR CONSTRUCTION

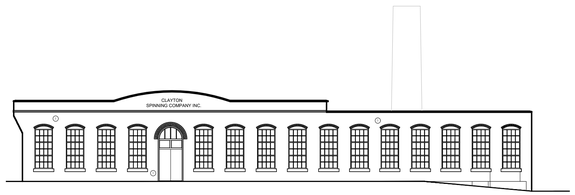
PROGRESS DATE:	09-18-18
ISSUE DATE:	
REVISIONS	

NUMBER	DATE	DESCRIPTION	INITIALS

PROJECT NO: 003417
DRAWN BY: JK
CHECKED BY: --

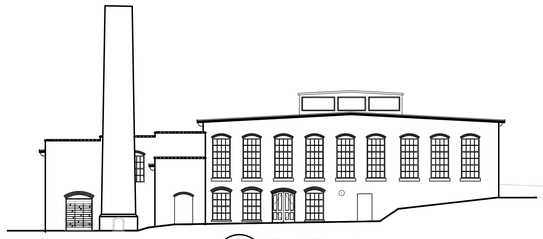
SHEET TITLE:
Color Board 1
--

SHEET NUMBER:
CB1



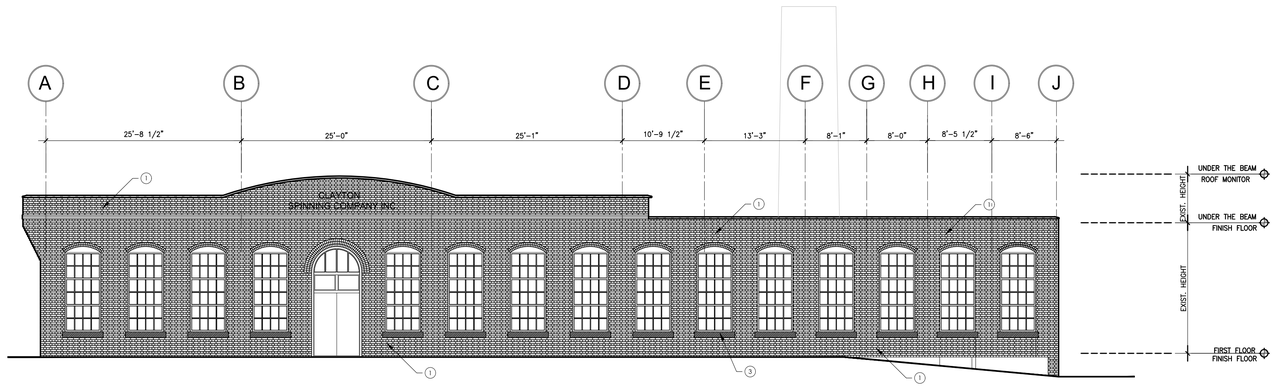
1 West Elevation

Scale: 1/16" = 1'-0"



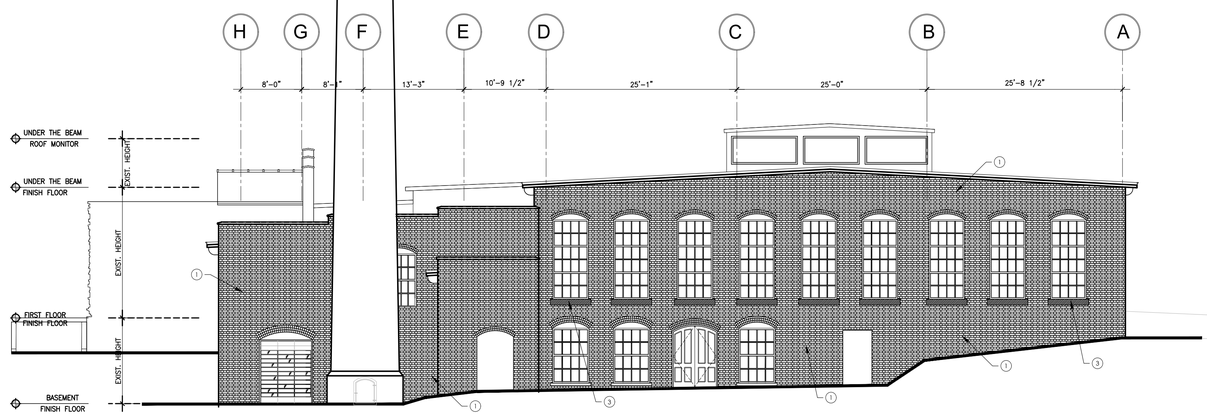
2 East Elevation

Scale: 1/16" = 1'-0"



3 West Elevation

Scale: 1/8" = 1'-0"



4 East Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

1 September 18, 2018 Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.1

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Imanirad
Plotted Date: Sep 18, 2018 - 6:03pm

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Street Address: 4010 Wake Forest Road, Raleigh, North Carolina 27609
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Fax: 919.875.9200
Phone: 919.875.0001

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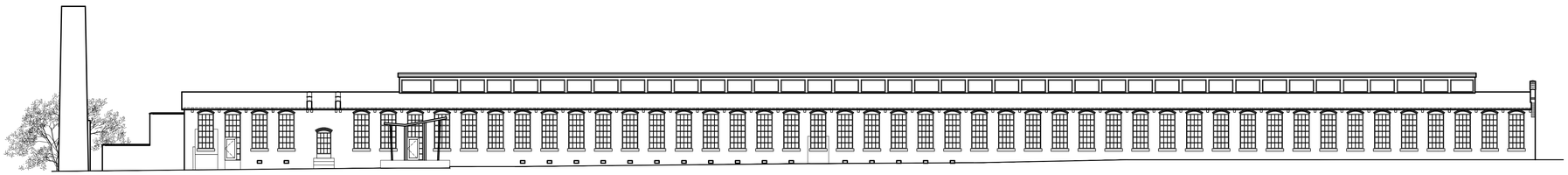

1 North Elevation

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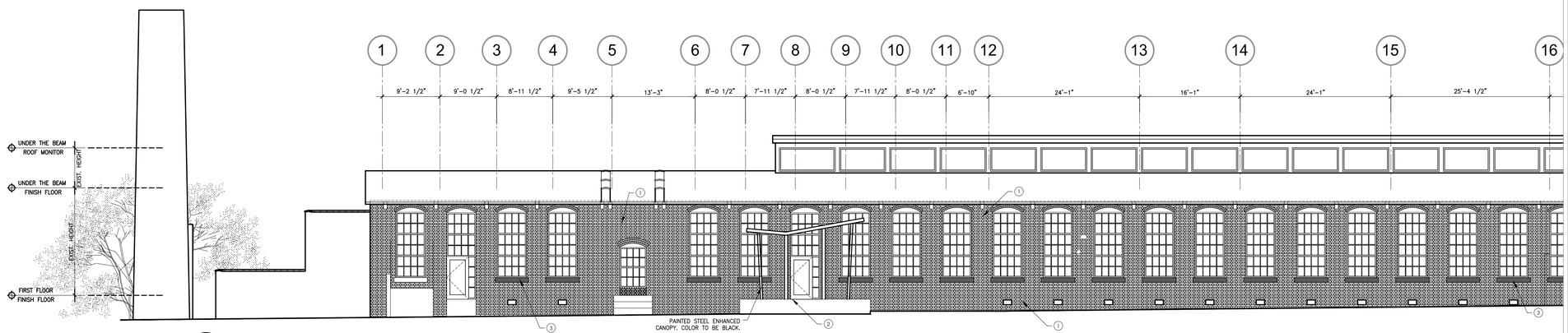
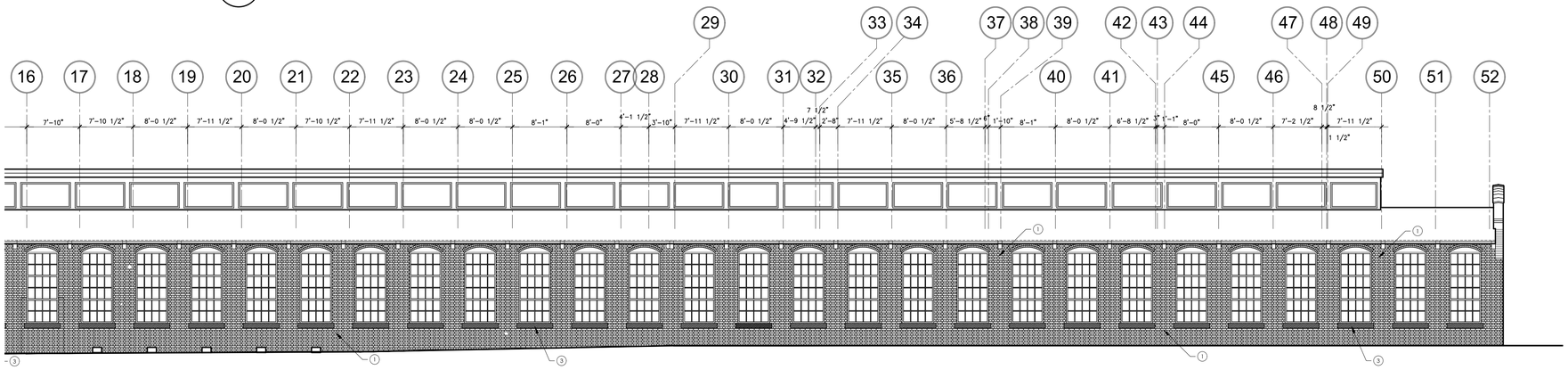


2 Partial North Elevation

Scale: 1/8" = 1'-0"



3 Partial North Elevation

Scale: 1/8" = 1'-0"

ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠1 September 18, 2018 Plan Review

DATE: April 2 , 2018
ISSUED FOR: Review

Building Elevations

A 3.2

DRAWN BY:
CHECKED BY: JTL

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Plotted Date: Sep 18, 2018 - 6:04pm

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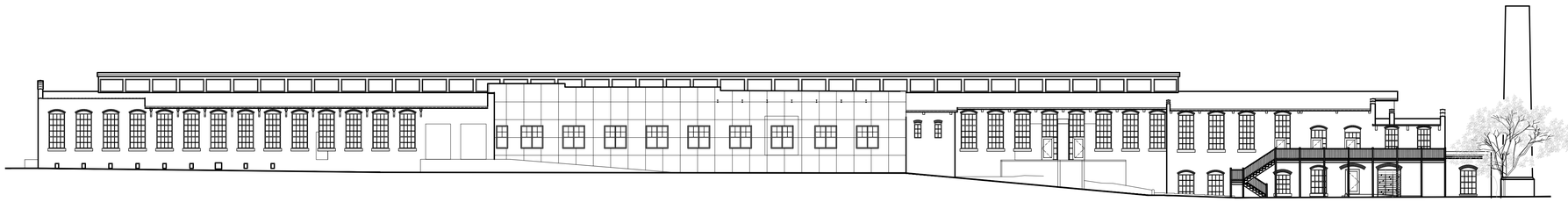
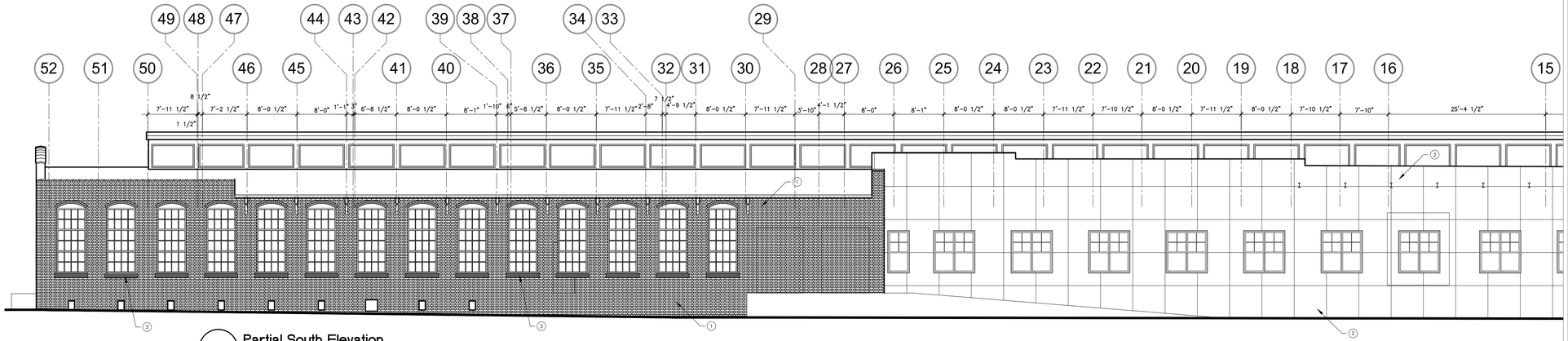


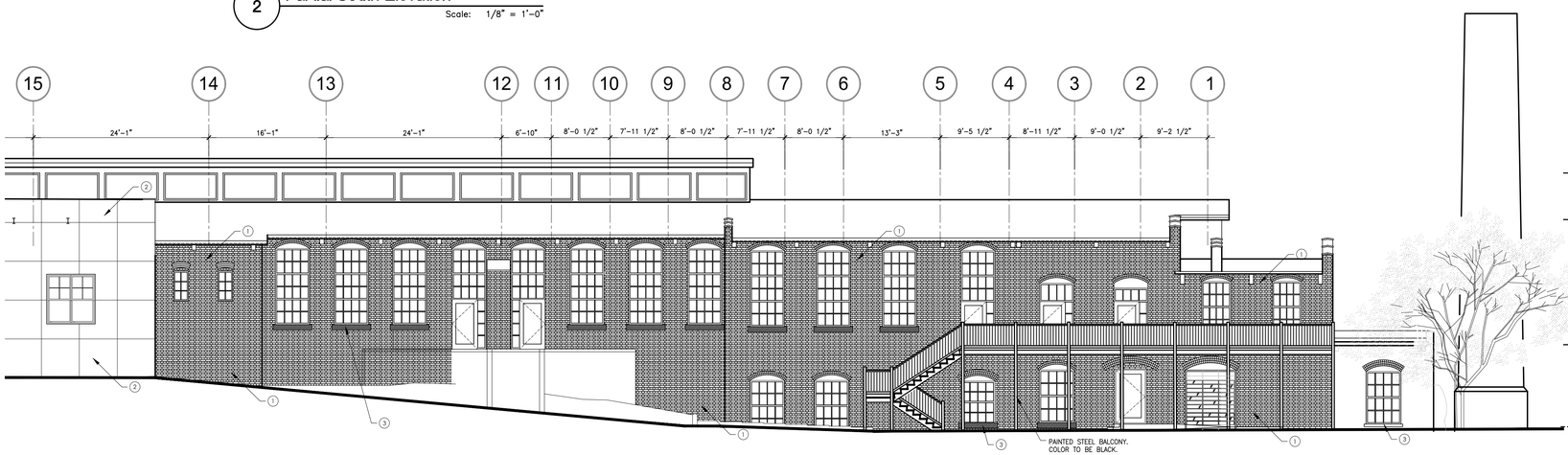
1 South Elevation

Scale: 1/16" = 1'-0"



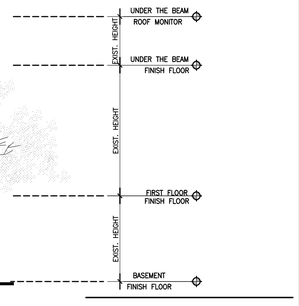
2 Partial South Elevation

Scale: 1/8" = 1'-0"



3 Partial South Elevation

Scale: 1/8" = 1'-0"



ELEVATION KEY

1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton, North Carilina

17-701.00

⚠1 September 18, 2018 Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Building Elevations

A 3.3

DRAWN BY:
CHECKED BY: JTL

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Plotted by: S.Umanrad
Plotted Date: Sep 18, 2018 - 6:05pm

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Phone: 919.875.0001

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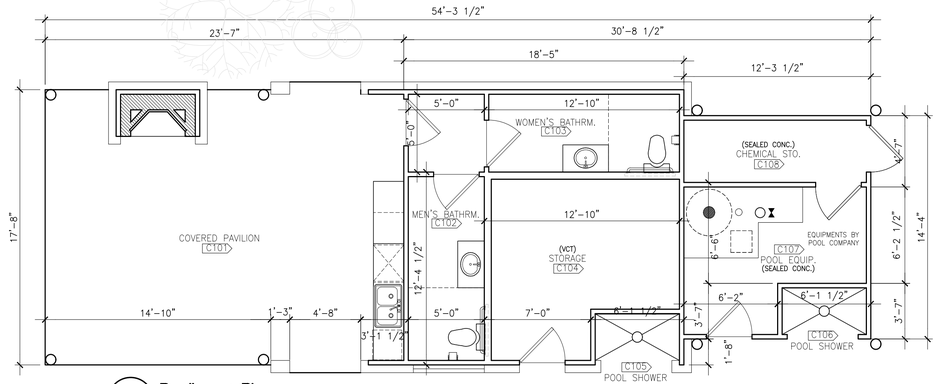
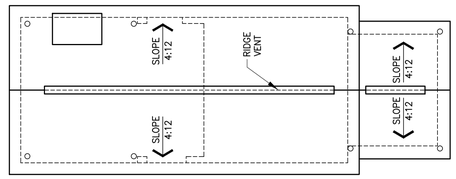


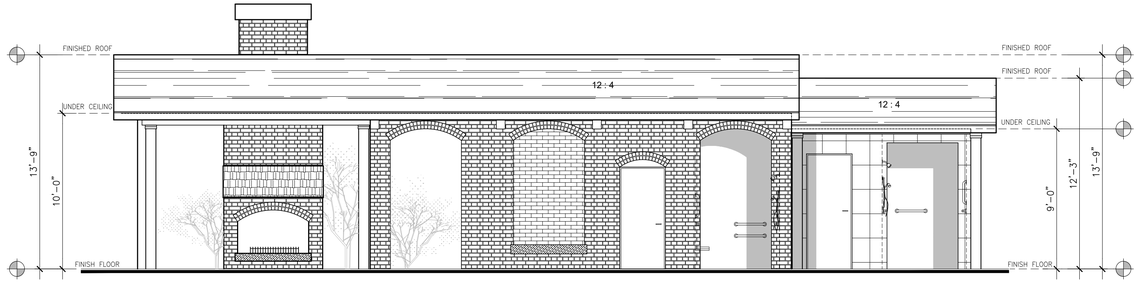
1 **Poolhouse Plan**
Scale: 1/4"=1'-0"



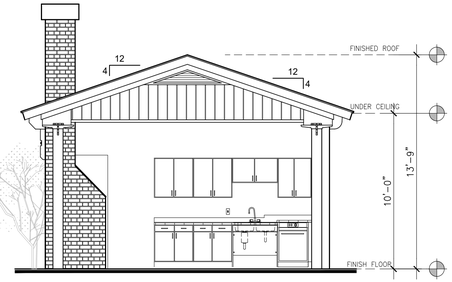
2 **Roof Plan**
Scale: 1/4"=1'-0"

ELEVATION KEY

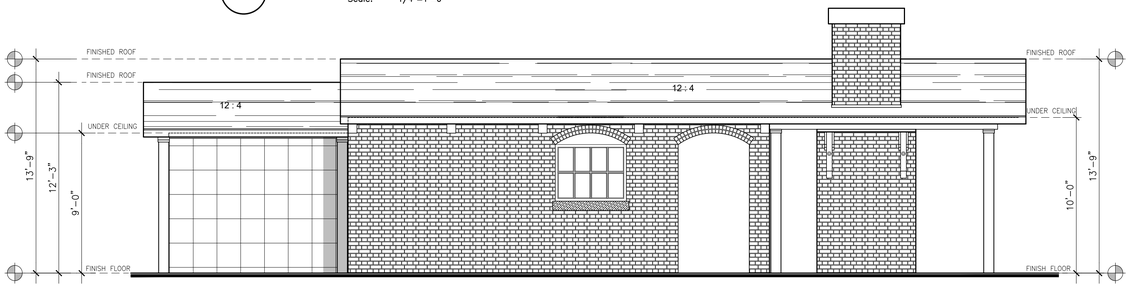
1. COLOR RED COMMON BRICK.
2. PARGE COAT OVER EXISTING CMU WITH SCORED REVEALS. COLOR TO BE LIGHT GREY.
3. PRECAST CONCRETE.
4. ASPHALT SHINGLES, COLOR TO MATCH THE ADJACENT MATERIAL



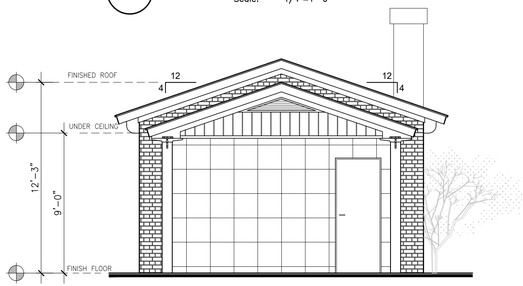
3 **Front Elevation**
Scale: 1/4"=1'-0"



4 **Left Elevation**
Scale: 1/4"=1'-0"



5 **Rear Elevation**
Scale: 1/4"=1'-0"



6 **Right Elevation**
Scale: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Clayton Spinning Mill

Clayton,
North Carilina

17-701.00

⚠1 September 18, 2018
Plan Review

DATE: April 2, 2018
ISSUED FOR: Review

Poolhouse

A 3.4

DRAWN BY:
CHECKED BY: JTL

Drawing File: G:\2017 Projects\700-HISTORIC\17-701.00 Clayton, NC - Clayton Spinning Mill\Cadd\Arch\18-19-2018\17-701.00_A3.4.dwg
Plotted by: S.Umanrad
Plotted Date: Sep 18, 2018 - 6:02pm

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Architecture ■ Planning ■ Interiors ■
Ross/Deckard Architects

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-64-SP
Project Name: Spinning Mill Apartments Major Site Plan

NC PIN / Tag #:	166918-30-2104 / 05037009T, 166918-30-5328 / 05037008V, 166918-30-8385 / 05037009W, 166918-30-4740 / 05037009U, 166806-48-6538 / 05037011, 166918-40-2748 / 05H03197H
Overlay:	Watershed Protection Overlay
Applicant:	Bass, Nixon, and Kennedy, Inc.
Owner:	WBB LLC, HCY LLC, SCA Ventures LLC, East Village Investments LLC
Location:	Located off Front Street and Central Street

Public Noticing:

- Neighborhood meeting held on May 16, 2018
- Sign posted prior to July 13, 2018

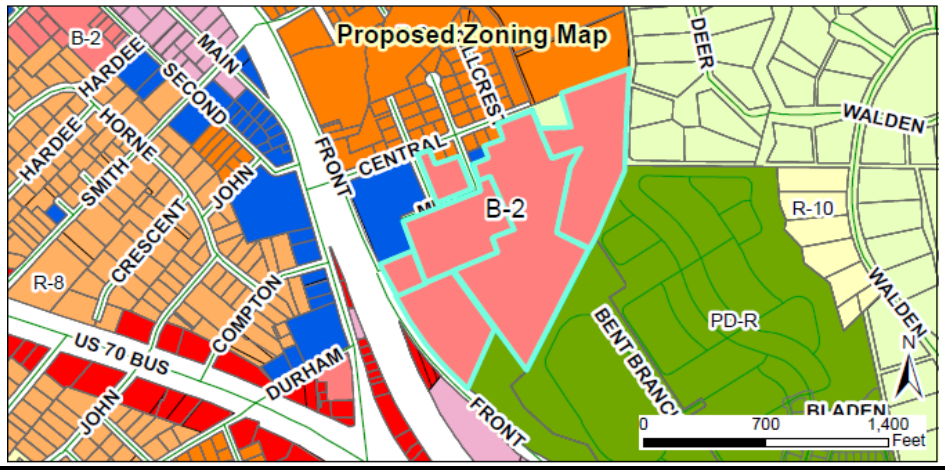
REQUEST: The applicant is requesting major site plan approval to develop 255 apartment units on the subject properties, zoned B-2. A Special Use Permit application is running concurrently with this request (2018-65-SUP).

SITE DATA:

Acreage: 24.50 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-6 (R-6) / Office Institutional (O-I)	Single-family residential / Post Office
South	Planned Development Residential (PD-R)	Apartments, single-family residential
East	Residential-10 (R-10) and Planned Development Residential (PD-R)	Single-family residential
West	Office Institutional (O-I)	Railroad ROW/ Single-family residential



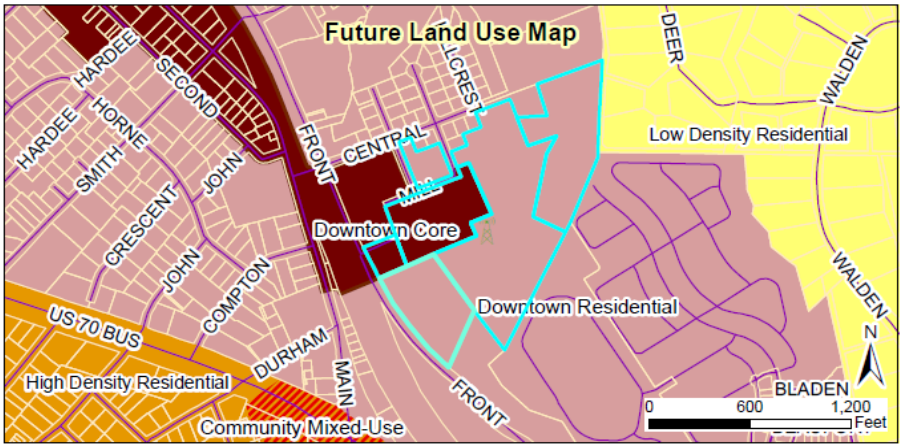
DEVELOPMENT DATA:

Proposed Uses:	Apartments (255 units)
Proposed Density:	11.68 units/acre
Buildings:	8 new buildings, plus 1 existing building to be utilized
Impervious Surface:	54.9%
Required Parking:	470 spaces 1 space per 1 bedroom units (104 units)= 104 spaces 2 spaces per 2 bedroom units (128 units)= 256 spaces 2 spaces per 3 bedroom units (23 units)= 46 spaces 1 guest space per 4 units= 64 spaces
Proposed Parking:	476 Spaces
Access/Streets:	One access point off Front Street and two access point off Central Street

STAFF ANALYSIS:

Overview
The applicant is requesting major site plan approval to develop 255 apartment units on the subject property, which was recently rezoned to B-2. The proposed use is permitted within the Neighborhood Business zoning district, subject to issuance of a Special Use Permit. As such, the applicant has submitted a Special Use Permit application to run concurrently with the major site plan.

Eight new apartment buildings are proposed as a part of this development. The applicant is also proposing to renovate the existing Spinning Mill located on the property to house 25 apartment units. The amenity center will be located at the Spinning Mill and will include a community pool and green space/event space. Additional open space will be located throughout the site. The site will also include 6' sidewalk throughout, as well as 8' greenway that runs through the site to the north ultimately ending in the northwest corner of the site for connection to future adjacent development.



Consistency with Adopted Plans:

- **Comprehensive Plan 2040**
  The proposed development is consistent with the comprehensive plan 2040, which designates this land as partially "Downtown Core" and primarily "Downtown Residential". Downtown residential typically consists of single-family residential per the comprehensive plan 2040. However, the proposed use is consistent with the existing development patter in the area which includes apartments directly adjacent to the south.

- **Unified Development Code**
  The proposed development is consistent with the Unified Development Code (UDC).

Landscaping and Buffering
The proposed development meets the minimum requirement for 20% of the site interior to be landscaped. Street trees are provided along all rights-of-way, with a required Class "B" buffer provided along Front Street. Additionally, a Class "B" landscape buffer is provided along the perimeter of the entire site. However, the applicant is proposing an alternative landscape buffer for a portion of the perimeter (2.343 linear feet, to the east behind building #8). Due to the proximity to a riparian buffer, the applicant does not feel that the required plantings of a Class "B" buffer will fit in this area. As such, the applicant is requesting an alternative landscape buffer to install a 6' opaque wood fence in this location with the required plantings located elsewhere on the site. Alternative landscape buffers may only be permitted via Planning Board approval, per the Unified Development Code.

Mail Kiosks
One centralized mail kiosk location is proposed just south of the existing Spinning Mill building, where the amenities will be located. Handicap parking is available for the mail kiosks. This kiosk will be further reviewed by the Town Inspections department during building permit review to ensure applicable requirements of NC State Building Code are met.

Access/Streets
The site will have access off Front Street via a divided driveway. Additional access will be provided into the site via an existing access point off Central Street to the North.

Multi-Modal Access
Sidewalk (6') is proposed throughout the development to allow safe pedestrian access from all apartment buildings to amenities, mail kiosks, and dumpsters. Additionally, the applicant is providing 8' greenway throughout the northern portion of the development, which will ultimately end to the northwest to connect to future adjacent development.

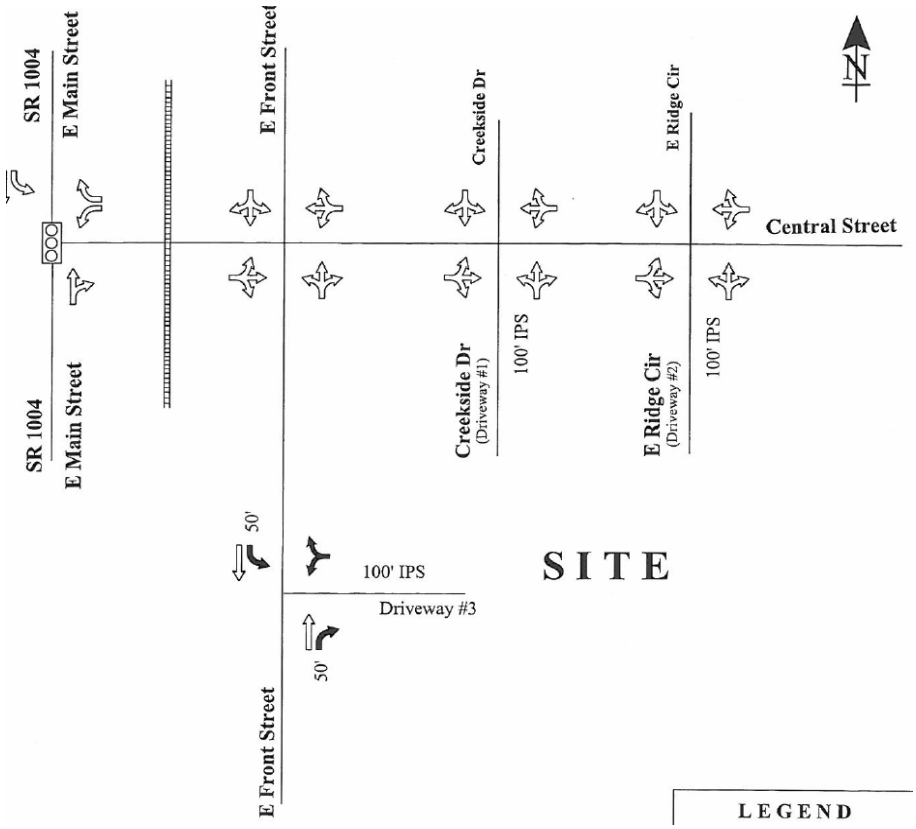
Garbage / Recycling
One centralized trash compactor is located on the site, to the southeast between building #7 and #5. Sidewalk connections are provided in this area to ensure pedestrian accessibility to the trash compactor. Additionally, parking is provided nearby to ensure vehicular access and handicap accessibility.

Traffic Impact Analysis
A Traffic Impact Analysis was submitted prepared by Ramey Kemp and Associates dated June 2018. The TIA states that 1,900 total site trips are expected to be generate from this development during a typical 24-hour weekday period. It is anticipated that 116 trips will occur during the AM peak hour and 136 trips will occur during the PM peak hour.

NCDOT Congestion Management has reviewed this application and the associated TIA. NCDOT concurs with the findings of the TIA, and recommends to the Town that the following additional improvements be made:

1. A 100' internal protected stem at all site driveway entrances.
2. 150' of storage on the left turn lane, at E Front Street entering into the main driveway entrance.
3. 150' storage on the northbound approach to the intersection of Front Street and Central Street.

Staff has reviewed the TIA and NCDOT's recommendations internally. Due to the proximity of the Railroad ROW along Front Street, the applicant is not be permitted by NCRR to encroach into the ROW for any roadway improvements. As such, staff does not recommend a left-turn lane on Front Street turning into the development nor a left-turn lane at the intersection with Central Street be required. NCDOT is aware of the site restrictions due to the proximity to the NCRR and concurs with staff's recommendations. Instead, staff recommends that a 100' internal protected stem be provided at all site driveway entrances and a right-turn lane into the site off Front Street be provided with 50' taper (as required from the TIA).



Watershed Protection Overlay

The proposed development is located entirely within the Watershed Protection Overlay. Proposed multi-family residential development in this overlay is limited to 24% of impervious surface area unless storm water quality mitigation structures are installed and maintained by the property owner. Two wet pond detention areas are provided onsite for stormwater controls.

Wastewater Allocation Request

A wastewater allocation request of 65,960 gallons per day has been submitted for review. The Town Engineer has reviewed this request. The request will proceed to Town Council for final approval, subject to the approval of this application as well as the associated Special Use Permit application.

Architecture/Design

The new buildings proposed within the development will consist of fiber cement siding, with brick veneer features. The buildings will vary in the number of stories, but all will feature balconies on the front and rear upper floors. The existing Spinning Mill will be renovated to accommodate the apartment units, but the applicant is not proposing changes to the design of the exterior building in order to maintain the historic character.

CONSIDERATIONS:

- This request is subject to approval of 2018-65-SUP.
- The Planning Board shall make a final decision regarding Major Site Plans.

APPROVAL CRITERIA:

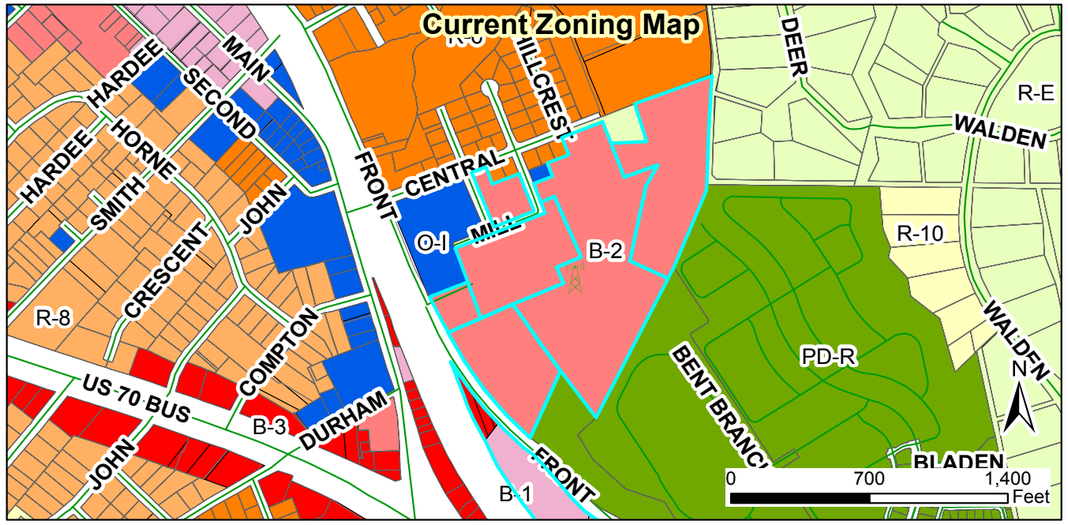
The applicant has addressed the Major Site Plan Approval Criteria outlined in the Unified Development Code. The applicant's responses are incorporated into the record as an attachment to the Staff Report.

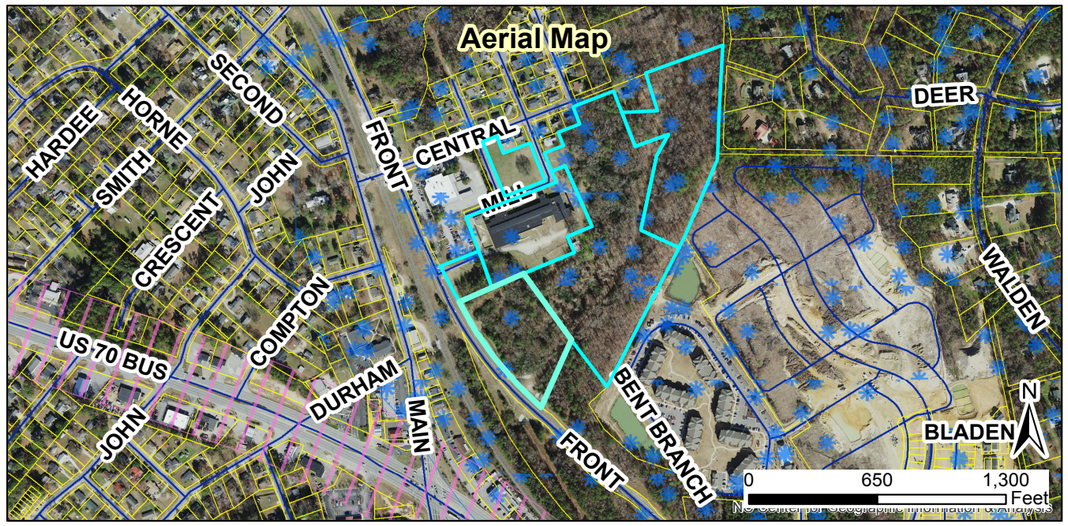
STAFF RECOMMENDATION:

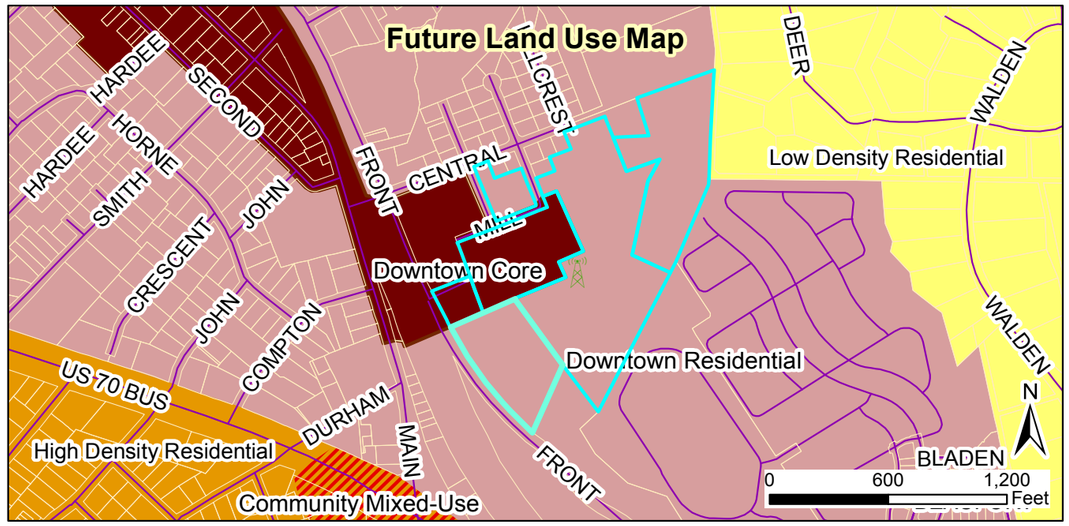
Staff recommends ***approval*** of the proposed major site plan. This approval shall be contingent upon approval of the associated special use permit (2017-65-SUP) granted by Town Council.

ATTACHMENTS:

1) Staff report maps
2) Application
3) Neighborhood Meeting Materials
4) Site Plan
5) Traffic Impact Analysis
6) NCDOT Letter- TIA
7) Wastewater Allocation Request







Request:
2018-64-SP and 2018-65-SUP

Applicant: Bass, Nixon, and Kennedy, Inc.
Property Owners: WBB LLC; HCY LLC; SCA Ventures LLC; East Village Investments LLC
Parcel ID: 166918-30-2104; 166918-30-5328; 166918-30-8385; 166918-30-4740; 166806-48-6538 (portion north of Front Street; 166918-40-2748
Tag #: 05037009t; 05037008v; 05037009w; 05037009u; 05037011 (portion north of Front Street); 05h03197h

Staff Report Map

05/03/2018

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\2018\2018-65-SUP Spinning Mill Lofts at East Village\Maps\Map 2018-66-RZ Spinning Mill Lofts at East Village.mxd

Legend

- 100-yr Flood Zone
- Thoroughfare Overlay
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

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

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.

Application MUST be completed and sealed by a registered engineer unless otherwise approved by staff.

SITE INFORMATION

Name of Project: Spinning Mill Lofts at East Village **Acreage of Property:** 24.50

County Tag Number: See Attached **NC PIN:** See Attached

Address/Location: 300 Mill Street

Zoning District: Existing: O&I; B-1; B-3; RE Proposed: B2 - Neighborhood Business

Town Limits / ETJ: ☑ Town Limits ☐ ETJ (Extra-Territorial Jurisdiction)

APPLICANT INFORMATION – Applicant must be a registered engineer unless otherwise approved by Town Engineer

Applicant: Bass, Nixon and Kennedy, Inc.

Mailing Address: 6310 Chapel Hill Rd., Ste. 250, Raleigh, NC 27607

Phone Number: 919-851-4422 **Fax:** 919-851-8968

Contact Person: Marty D. Bizzell, PE

Email Address: marty.bizzell@bnkinc.com

PROPERTY OWNER INFORMATION

Name: WBB, LLC; HCY, LLC; SCA Ventures, LLC; East Village Investments, LLC

Mailing Address: 132 Citation Lane, Smithfield, NC and 227 E. Front St. New Bern, NC 28560-2145

Phone Number: 919-938-1086; 252-670-9370 **Fax:** N/A

Email Address: thomas@tfonc.com

FOR OFFICE USE ONLY

Date Received: RECEIVED APR 30 2018 TOWN OF CLAYTON PLANNING DEPARTMENT File Number: _____ Associated Project Number: _____

Spinning Mill Lofts at East Village

County Tag #:

05037009T; 05037008V; 05037009W; 05037009U: 05037011; 05H03197H

NC PIN:

1669.18-30-2104; 1669.18-30-5328; 1669.18-30-8385; 1669.18-30-4740; 1668.06-48-6538; 1669.18-40-2748

PROJECT INFORMATION

Use: ☑ **New** ☐ **Expanded** ☑ **Change** **Use Type:** ☑ **Residential** ☑ **Non-Residential**

Proposed Use(s): Apartments/Restaurant **Existing Use(s):** Vacant

Invoice shall be mailed to the following:

Developer Name: Spinning Mill Investments, LLC

Mailing Address: P.O. Box 566, Greenville, NC 27835

Phone Number: 252-752-7101 **Fax Number:** N/A

Email Address: thomas@tfonc.com

ALLOCATION REQUEST

- *Use additional sheets if necessary.*
- *Provide any documentation supporting/justifying the request as an attachment.*
- *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			
>3 Bedroom Units			
Total		------	

Multi-Family	# of Units	GPD per Unit	Total Requested GPD
1-2 Bedroom Units	232	240	55,682
3 Bedroom Units	23	360	8,280
>3 Bedroom Units			
Total		------	63,960

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
Restaurant/Coffee Shop	gal/seat	50	40	2,000
Total		50	------	2,000

TOTAL REQUESTED GALLONS PER DAY: 65,960

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.

Marty D. Bizzell, PE		4/26/18
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.

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

Establishment Type	Daily Flow Rate
Parks, Recreation, Camp Grounds, R-V Parks and other Outdoor Activity Facilities	
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite
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

SPINNING MILL LOFTS

SEWER CALCUI

APARTMENT BUILDING	1-Bedroom		2-Bedroom	
ID	# of Units	Flow (240 GPD/Unit)	# of Units	Flow (240 GPD
1	24	5,760	22	5,280
2	6	1,440	12	2,880
3	6	1,440	12	2,880
4	14	3,360	14	3,360
5	14	3,360	14	3,360
6	4	960	8	1,920
7	6	1,440	16	3,840
8	18	4,320	18	4,320
9	12	2,880	12	2,880
Restaurant/Coffee Shop	50 Seats	40 gal/seat		
Totals				

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

July 19, 2018

Traffic Impact Analysis Review Report

Spinning Mill Lofts at East Village

TIA Project: SC-2018-088
Division: 4
County: Johnston
Description: Spinning Mill Lofts at East Village on E Front St at Central St in Clayton

NORTH CAROLINA PROFESSIONAL SEAL 18080 ENGINEER JAMES H. DUNLOP

19 July 2018

James H. Dunlop, P. E.
Congestion Management Engineer

Solomon Mengesha
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/

Spinning Mill Lofts at East Village		
SC-2018-088	Johnston County	07/19/2018

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 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.

Date Initially Received by CMS	07/06/2018	Date of Site Plan Prepared by Bass, Nixon and Kennedy, Inc	04/02/2018
Date of Preliminary Review Letter Accepting TIA for Review	07/19/2018	Date of Sealed TIA Prepared by Ramey Kemp & Associates, Inc	06/11/2018

Proposed Development

According to the TIA, the proposed Spinning Mill Lofts at East Village is to be located on E Front St at Central St in Clayton, Johnston County. The TIA states the development is to be constructed by 2021 and is to consist of the following:

Land Use	Land Use Code	Size
Multifamily Housing (Low Rise)	220	2 Dwelling Units

Trip Generation - Unadjusted Volumes During a Typical Weekday
Based on appropriate methodology outlined in the *ITE Trip Generation Manual, 9th Ed.*

	IN	OUT	TOTAL
AM Peak Hour	27	89	116
PM Peak Hour	86	50	136
Daily Trips			**1,900**

Requested Access Points

Driveway	Public Roadway	Access Type
Site Driveway #1 (Creekside Dr)	Central Street	All-Movement
Site Driveway #2 (E Ridge Cir)	Central Street	All -Movement
Site Driveway #3	E Front Street	All-Movement

TIP Projects in Study Area

None In Area

General Reference

For reference to various documents applicable to this review please reference the following link: *http://www.ncdot.org/doh/preconstruct/traffic/teppl/Topics/C-37/C-37.html*

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) 773-2800.

Recommendations

LEGEND

❶ Improvement by Developer. Congestion Management concurs with recommendation.
❷ Improvement by Developer. Additional or modified recommendation.

Central St and E Front St) Intersection

TIA (page 31) suggested that additional stop control will be necessary to achieve significant improvements of LOS. Due to the close proximity to the railroad, any improvements at this location required approval from NCDOT Rail Division.

Central St and Creekside Dr (Site Driveway #1) Intersection

- **NB Site Driveway #1**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Thru/Right Lane ❶
  - 100' Internal Protected Stem ❷

Central St and E Ridge Cir (Site Driveway #2) Intersection

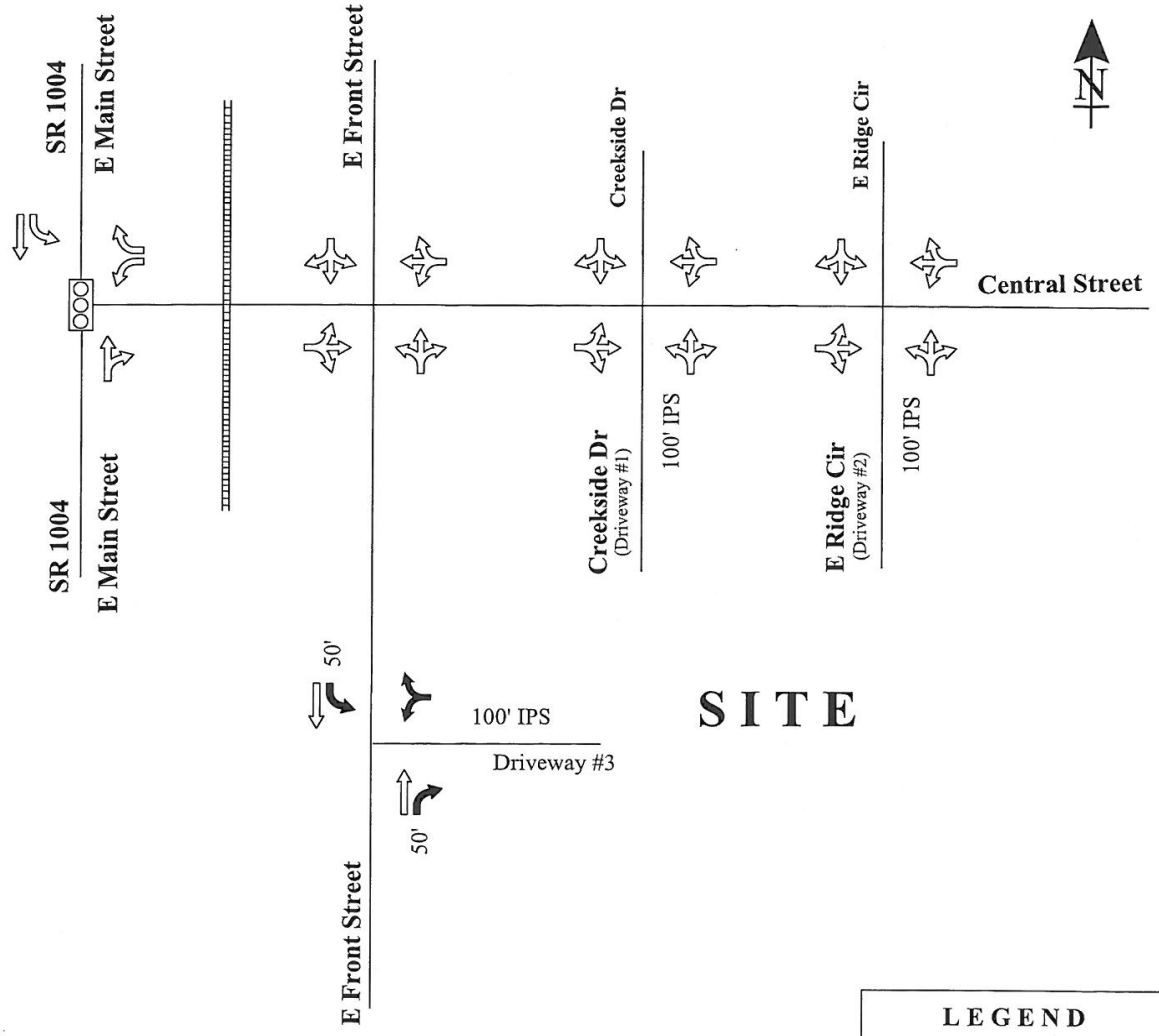
- **NB Site Driveway #2**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Thru/Right Lane ❶
  - 100' Internal Protected Stem ❷

E Front St and Site Driveway #3 Intersection

- **NB E Front St**
  - 50' Right-Turn Lane ❶
- **SB E Front St**
  - 50' Left-Turn Lane ❶
- **EB Site Driveway #3**
  - Two-lane cross-section: one ingress, one egress ❶
  - Egress: Left/Right Lane ❶
  - 100' Internal Protected Stem ❷

No other improvements are recommended for site traffic.

Spinning Mill Lofts at East Village
SC-2018-088



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

DELIVERY VIA EMAIL

July 23, 2018

Samantha L. Wullenwaber, MPA
Planning Director - Town of Clayton
PO Box 879
Clayton, NC 27528

COUNTY: Johnston

SUBJECT: **TIA Review of Proposed Spinning Mill Lofts at East Village**

Dear Ms. Wullenwaber,

Highway Division Four (Division) has reviewed the Traffic Impact Analysis (TIA) for the subject development and offers the following comments. These comments are in addition to any requirements that are included in the attached Traffic Impact Analysis Review Report performed by the Congestion Management Section of the Transportation Mobility and Safety Division of NCDOT. All requirements or recommendations included herein are based off current Department policies. 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.

GENERAL COMMENTS

- Lane Closures for required improvement construction on NCDOT ROW will only be permitted under restricted hours due to heavy traffic volumes in the vicinity of the proposed development. These restrictions will be determined during the driveway permitting application and approval.

INTERSECTIONS / SITE ACCESSES AND ASSOCIATED IMPROVEMENTS

The following comments are in addition to individual intersection improvements recommended by the TIA and TIA Review Report and are considered necessary for consistency with local District and Division policy. If an intersection is not listed herein, then the Division concurs with the TIA Review Report recommendations.

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

E Front Street & Site Driveway Intersection

- E Front Street is a non-State maintained road. If NCDOT maintained Front Street we would require 150' of storage on the left turn lane. NCDOT suggests the Town of Clayton to still require this storage.

E Front Street & Central Street Intersection

- E Front Street and Central Street are both non-State maintained roads. If NCDOT maintained Front Street and Central Street, we would require a left turn lane with 150' of storage on the NB approach. If the tapers for any turn lane overlap, NCDOT requires the entire section to be widened to three lanes on all NCDOT roads. NCDOT suggests the Town of Clayton to still require this turn lane. NCDOT does not recommend additional stop control, due to the proximity of the railroad.

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, PE
District Engineer

cc: Ronnie Keeter, PE - Division Engineer
Andy Brown, PE - Division Traffic Engineer
Solomon Mengesha – Congestion Management Project Design Engineer
Caroline Bojarski, EI– Ramey Kemp and Associates
Driveway Permit File

Traffic Impact Analysis
Spinning Mill Loft at East Village
Clayton, NC

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

TRAFFIC IMPACT ANALYSIS

FOR

SPINNING MILL LOFTS AT EAST VILLAGE

LOCATED

IN

CLAYTON, NC

Prepared For:
Bass, Nixon, & Kennedy, Inc.
6310 Chapel Hill Road, Suite 250
Raleigh, NC

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

June 2018

RKA Project No. 18129

Prepared By: CB

Reviewed By: JR

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1. Site Location and Study Area 1
1.2. Proposed Land Use and Site Access 2
1.3. Adjacent Land Uses 2
1.4. Existing Roadways 2
2. EXISTING (2018) PEAK HOUR CONDITIONS 7
2.1. Existing (2018) Peak Hour Traffic 7
2.2. Analysis of Existing (2018) Peak Hour Traffic 7
3. BACKGROUND (2021) PEAK HOUR CONDITIONS 9
3.1. Ambient Traffic Growth 9
3.2. Adjacent Development Traffic 9
3.3. Future Roadway Improvements 10
3.4. Background (2021) Peak Hour Traffic Volumes 10
3.5. Analysis of Background (2021) Peak Hour Traffic Conditions 10
4. SITE TRIP GENERATION AND DISTRIBUTION 14
4.1. Trip Generation 14
4.2. Site Trip Distribution and Assignment 14
5. COMBINED (2021) TRAFFIC CONDITIONS 17
5.1. Combined (2021) Peak Hour Traffic Volumes 17
5.2. Analysis of Combined (2021) Peak Hour Traffic 17
6. TRAFFIC ANALYSIS PROCEDURE 19
6.1. Adjustments to Analysis Guidelines 19
7. CAPACITY ANALYSIS 20
7.1. Front Street and Central Street 20
7.2. Central Street and Main Street 22
7.3. Front Street and NC 42 23
7.4. Front Street and Old State NC 42 / Walden Way 24
7.5. Front Street and Bent Branch Loop Road 25
7.6. Central Street and Creekside Drive (Site Drive 1) 26
7.7. Central Street and East Ridge Circle (Site Drive 2) 27

7.8. Front Street and Mill Street (Site Drive 3) 28

8. CONCLUSIONS 30

9. RECOMMENDATIONS 32

LIST OF FIGURES

Figure 1 – Site Location Map 4

Figure 2 – Preliminary Site Plan 5

Figure 3 – Existing Lane Configurations 6

Figure 4 – Existing (2018) Peak Hour Traffic 8

Figure 5 – Projected (2021) Peak Hour Traffic 11

Figure 6 – Adjacent Development Trips 12

Figure 7 – Background (2021) Peak Hour Traffic 13

Figure 8 –Site Trip Distribution 15

Figure 9 –Site Trip Assignment 16

Figure 10 – Combined (2021) Peak Hour Traffic 18

Figure 11 – Recommended Lane Configurations 33

LIST OF TABLES

Table 1: Existing Roadway Inventory 3

Table 2: Trip Generation Summary 14

Table 3: Highway Capacity Manual – Levels-of-Service and Delay 19

Table 4: Analysis Summary of Front Street and Central Street 20

Table 5: Analysis Summary of Central Street and Main Street 22

Table 6: Analysis Summary of Front Street and NC 42 23

Table 7: Analysis Summary of Front Street and Old State NC 42 / Walden Way 24

Table 8: Analysis Summary of Front Street and Bent Branch Loop Road 25

Table 9: Analysis Summary of Central Street and Creekside Drive 26

Table 10: Analysis Summary of Central Street and East Ridge Circle 27

Table 11: Analysis Summary of Front Street and Mill Street 28

TECHNICAL APPENDIX

Appendix A:	Scoping Information
Appendix B:	Traffic Counts
Appendix C:	Signal Plans
Appendix D:	Adjacent Development Information
Appendix E:	Capacity Calculations – Front Street and Central Street
Appendix F:	Capacity Calculations – Central Street and Main Street
Appendix G:	Capacity Calculations – Front Street and NC 42
Appendix H:	Capacity Calculations – Front Street and Old State NC 42 / Walden Way
Appendix I:	Capacity Calculations – Front Street and Bent Branch Loop Road
Appendix J:	Capacity Calculations – Central Street and Creekside Drive
Appendix K:	Capacity Calculations – Central Street and East Ridge Circle
Appendix L:	Capacity Calculations – Front Street and Mill Street

TRAFFIC IMPACT ANALYSIS
SPINNING MILL LOFTS AT EAST VILLAGE
CLAYTON, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Spinning Mill Lofts at East Village development to be located south of Central Street and east of Front Street in Clayton, North Carolina. 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 Spinning Mill Lofts at East Village development is a residential development that is expected to re-develop the existing Clayton Spinning Mill. For the purpose of the TIA, the site is analyzed with 255 low-rise apartment units and is expected to be completed in 2021.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2018) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located south of Central Street and east of Front Street 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:

- Front Street and Central Street
- Front Street and Old State NC 42 / Walden Way

- Front Street and NC 42
- Central Street and Main Street
- Front Street and Bent Branch Loop Road
- Central Street and Creekside Drive
- Central Street and East Ridge Circle
- Front Street and Mill Street

Refer to Appendix A for the NCDOT Scoping Checklist and the approved Memorandum of Understanding (MOU).

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2021, is assumed to consist of 255 low-rise apartment units. Site access is proposed via the two existing full movement intersections on Central Street and one existing full movement intersection on Front Street. 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.

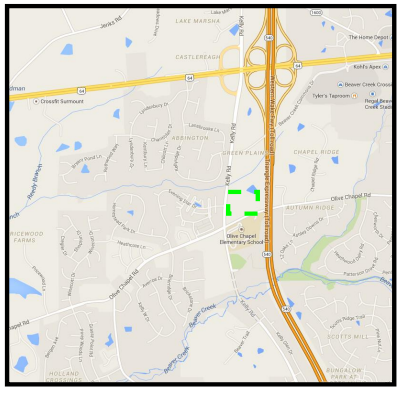
1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information was collected through field reconnaissance by Ramey Kemp & Associates, Inc. (RKA). Table 1 provides a summary of the field data collected. Refer to Figure 3 for an illustration of the existing lane configurations within the study area.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	Maintained By	AADT* (vpd)
Front Street	N/A	2-lane undivided	35 mph	Town	5,900
Central Street	N/A	2-lane undivided	25 mph	Town	5,800
NC 42	NC 42	4-lane divided	45 mph	NCDOT	23,000**
Old NC 42	Old NC-42	2-lane undivded	35 mph (assumed)	NCDOT	2,300
Main Street	SR 1004	2-lane undivided	35 mph	NCDOT	7,700**
Bent Branch Loop Road	N/A	2-lane undivided	25 mph (assumed)	Private	800
Creekside Drive	N/A	2-lane undivided	25 mph (assumed)	Private	N/A
East Ridge Circle	N/A	2-lane undivided	25 mph (assumed)	Private	N/A
Mill Street	N/A	2-lane undivided	25 mph (assumed)	Private	N/A

* AADT based on the traffic counts from 2018 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.
** 2015 AADT based on the NCDOT Traffic Volumes Map



N

LEGEND

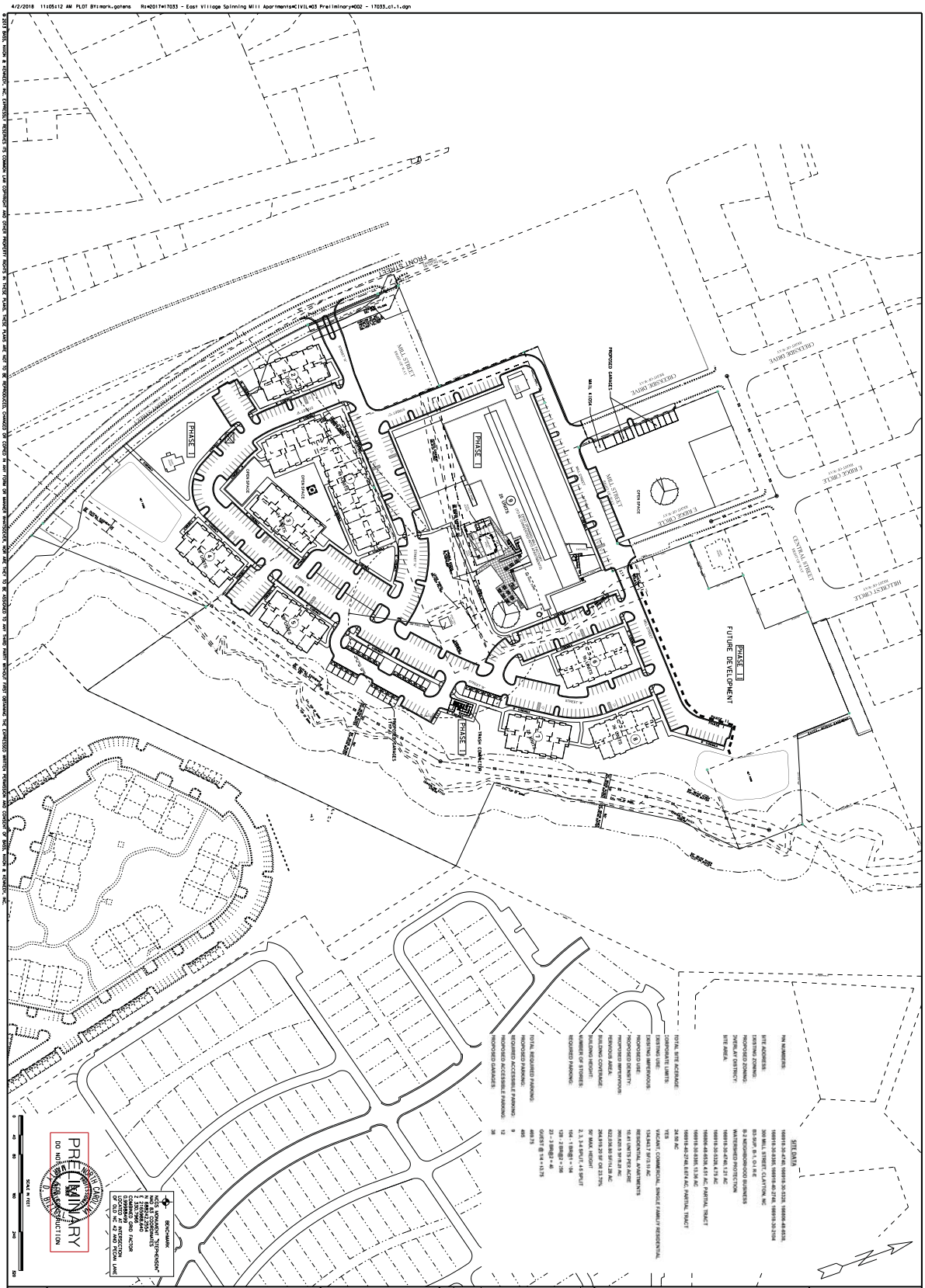
- Proposed Site Location
- Study Intersection
- Study Area

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts at East Village
Clayton, NC

Site Location Map

Scale: Not to Scale | Figure 1



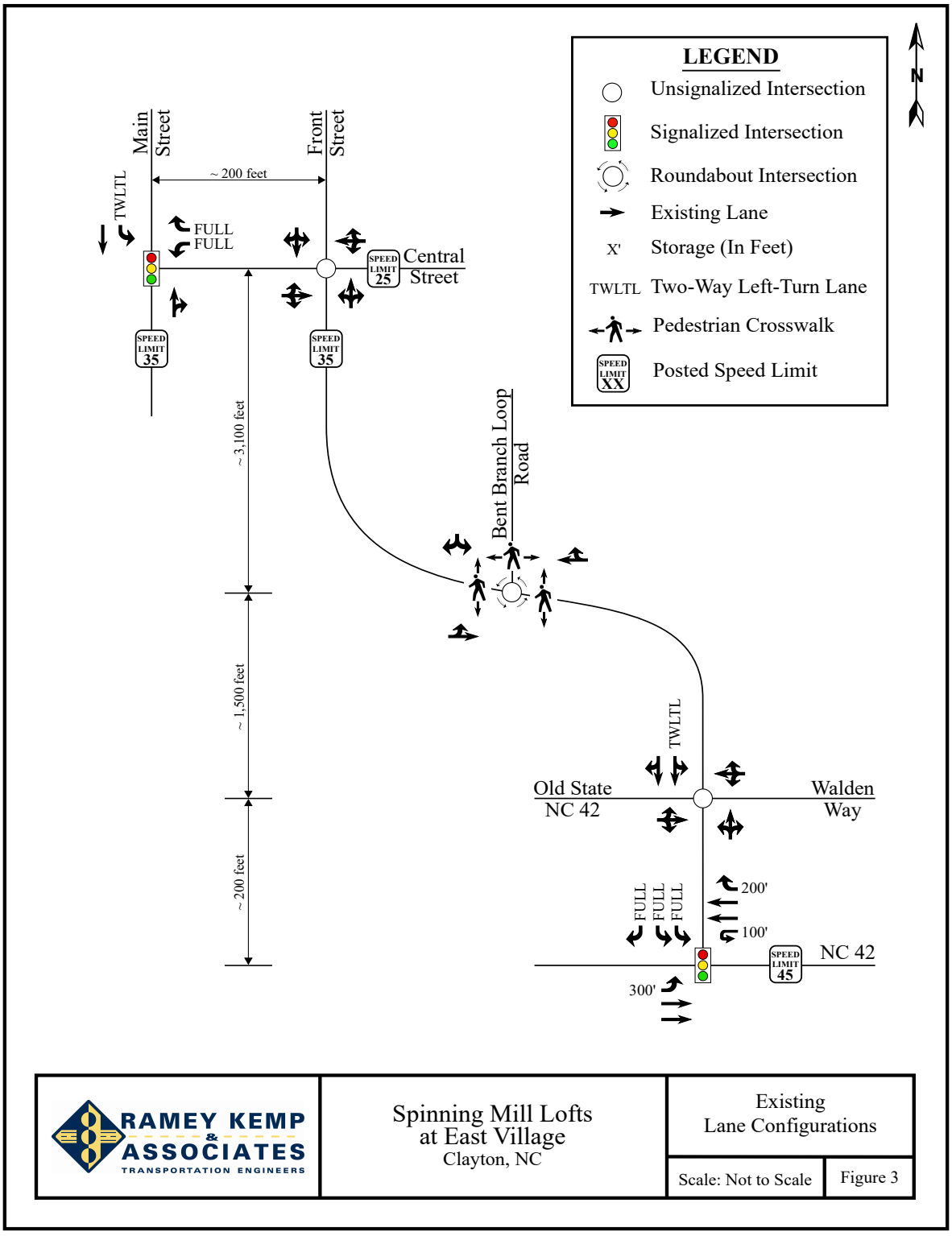
SHEET	SPINNING MILL LOFTS AT EAST VILLAGE	17033	04-02-18	MJG
C1.1	PHASE I PRELIMINARY SUBMITTAL	JOB NO.	DATE	DRAWN BY
	TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA	OVERALL PRELIMINARY SITE PLAN		
		SCALE: 1" = 80' HORZ		

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Existing
Lane Configurations

Scale: Not to Scale | Figure 3

2. EXISTING (2018) PEAK HOUR CONDITIONS

2.1. Existing (2018) Peak Hour Traffic

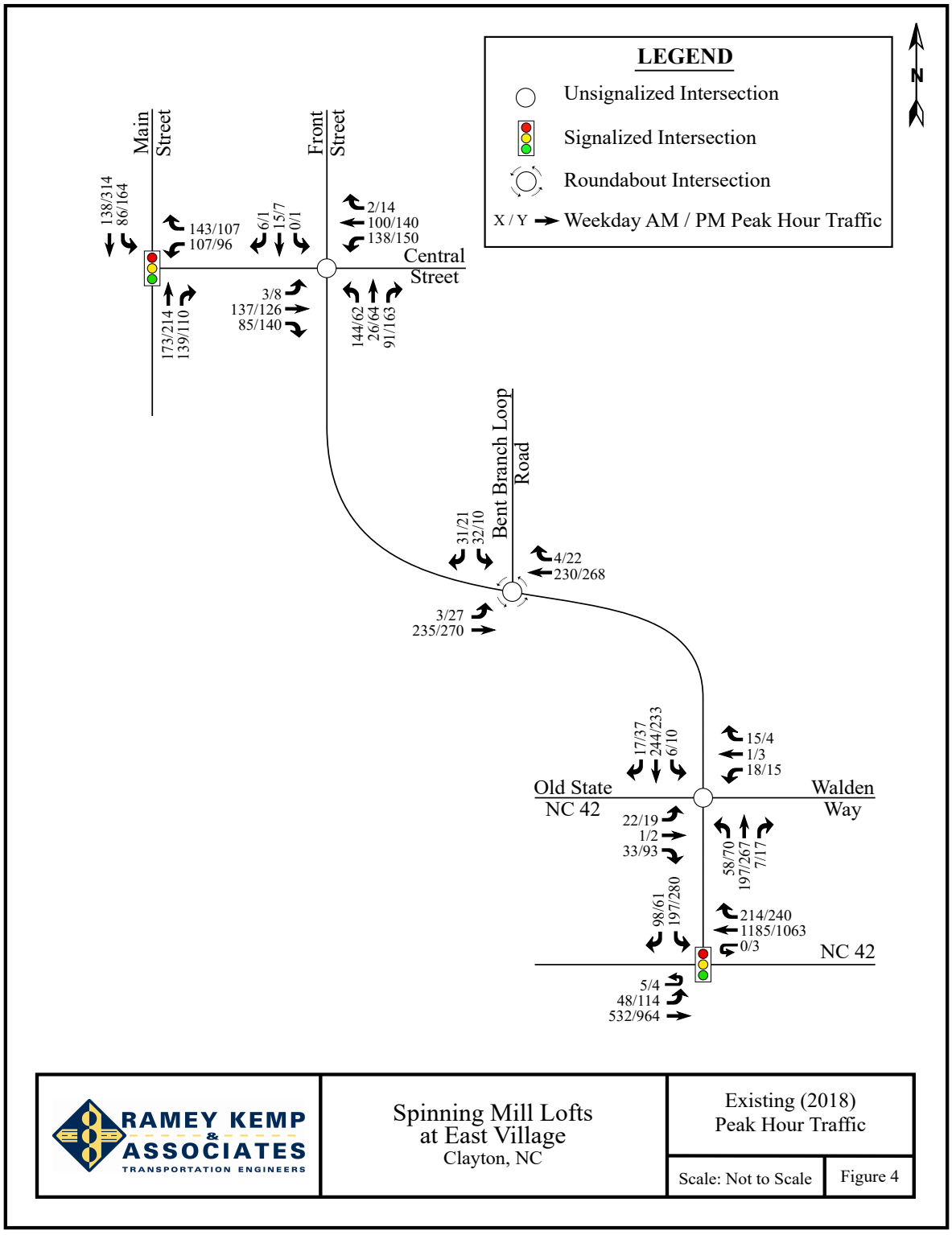
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in May of 2018 by RKA during a typical weekday AM (6:30 AM – 9:00 AM) and PM (4:00 PM – 7:00 PM) peak periods:

- Front Street and Central Street
- Front Street and Old State NC 42 / Walden Way
- Front Street and NC 42
- Central Street and Main Street
- Central Street and Bent Branch Loop Road

Traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for existing (2018) weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of Existing (2018) Peak Hour Traffic

The existing (2018) 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. The results of the analysis are presented in Section 7 of this report.



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Existing (2018)
Peak Hour Traffic

Scale: Not to Scale | Figure 4

3. BACKGROUND (2021) 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 (2021) weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for projected (2021) peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the Town, three adjacent developments were identified to be included in this study.

Arbors Phase 2 is anticipated to consist of 74 apartment units. The site is located north of Front Street with access at its intersection with Bent Branch Loop Road in Clayton, North Carolina.

East Village Walk consists of 300 single-family homes. The site is located north of Front Street with access at its intersection with Bent Branch Loop Road in Clayton, North Carolina.

The Hunt Property development is a mixed-use development that is anticipated to be built-out by 2019. The development is located southeast of the intersection of Glen Laurel Road and NC 42 in Clayton, North Carolina, and is expected to consist of 240 apartment units, 180,000 sq. ft. of commercial retail space, and a 117,000 sq. ft. self-storage facility.

As a result of the site driveways for the above listed adjacent developments, the trips associated with these developments do not balance between all study intersections for the

proposed Spinning Mill Lofts at East Village. Adjacent development trips are shown in Figure 6. Adjacent development information can be found in Appendix D.

3.3. Future Roadway Improvements

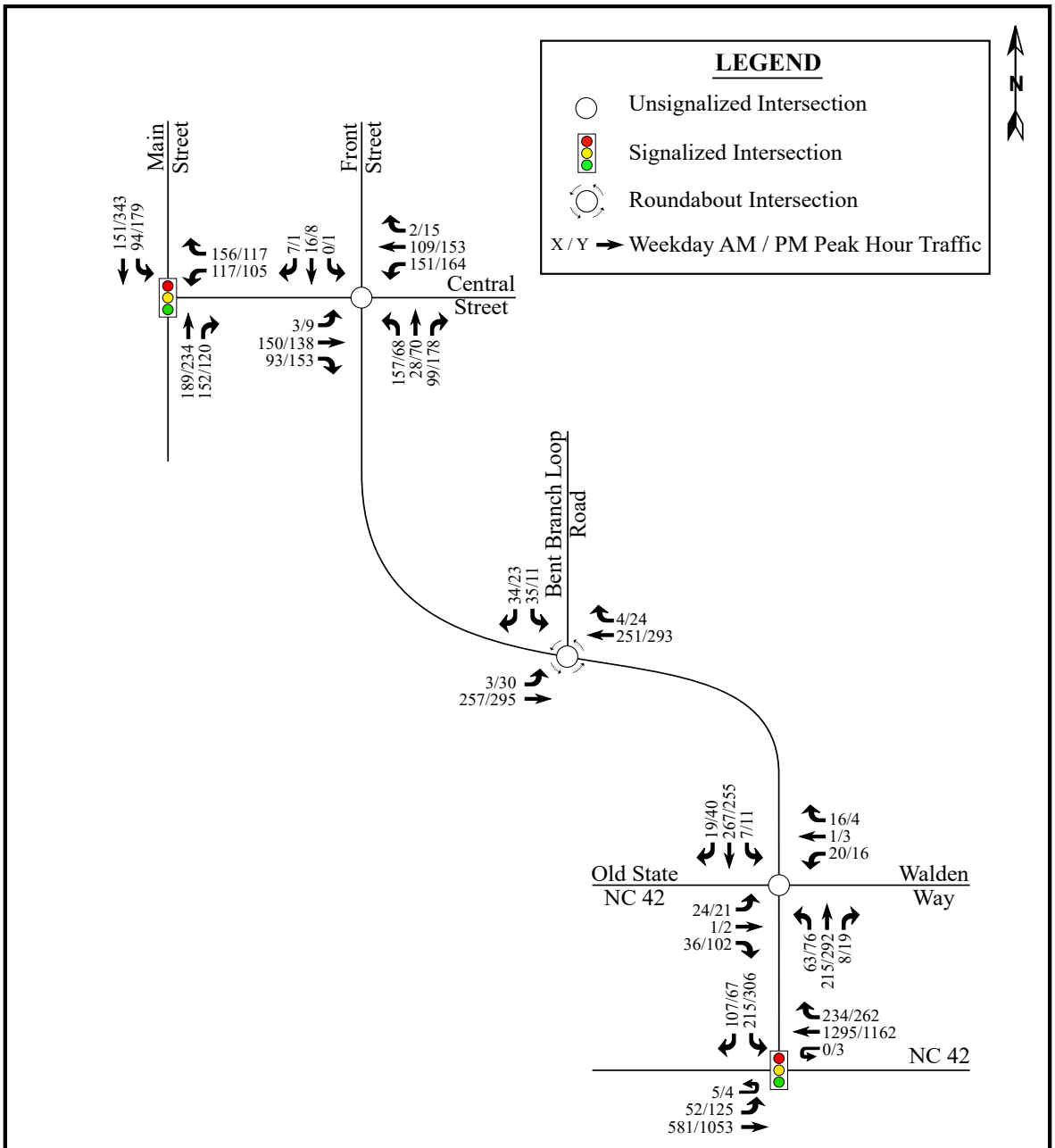
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

3.4. Background (2021) Peak Hour Traffic Volumes

The background (2021) traffic volumes were determined by projecting the existing (2018) peak hour traffic to the year 2021 and adding the adjacent development trips. Refer to Figure 7 for an illustration of the background (2021) peak hour traffic volumes at the study intersections.

3.5. Analysis of Background (2021) Peak Hour Traffic Conditions

The background (2021) 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.



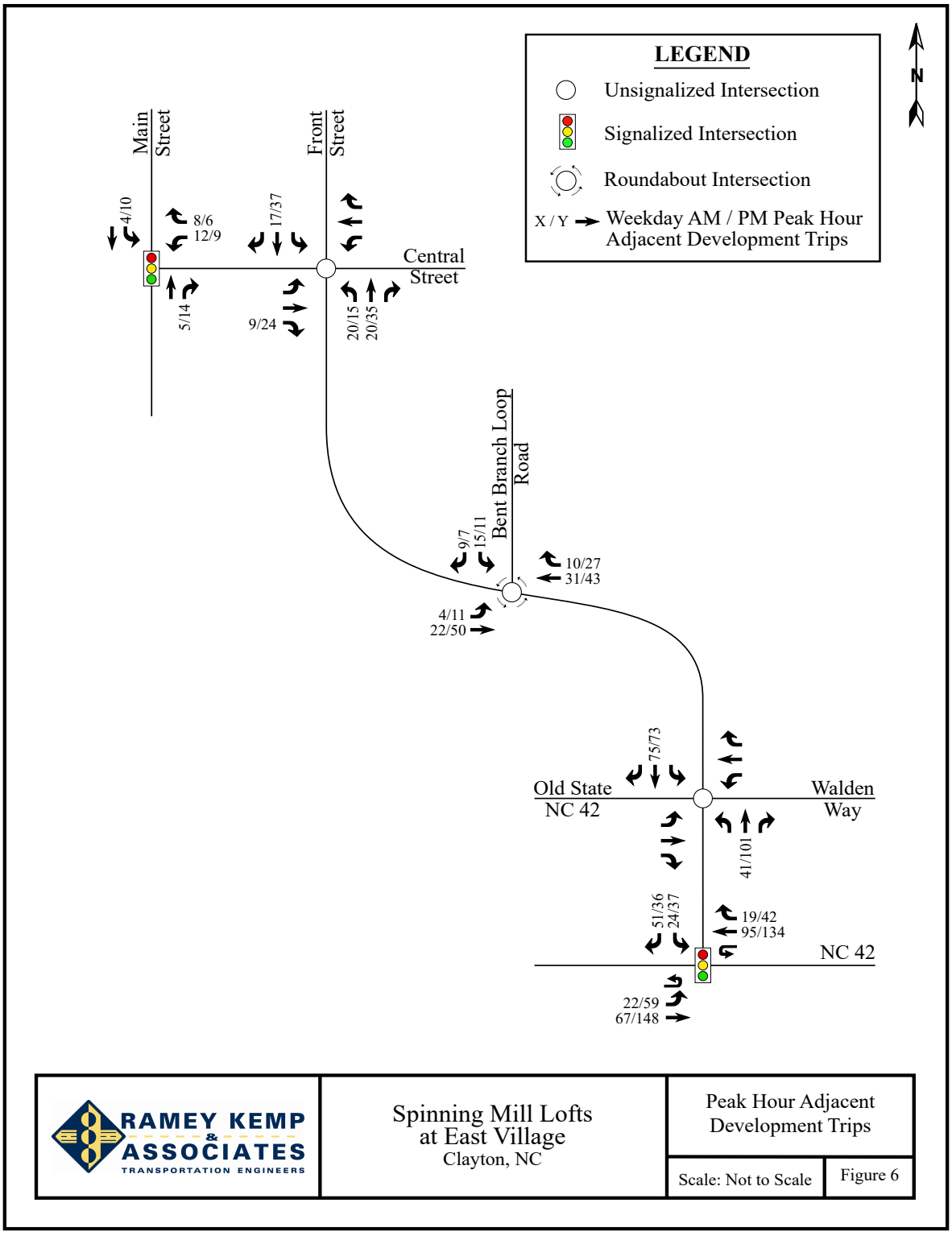
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Projected (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 5

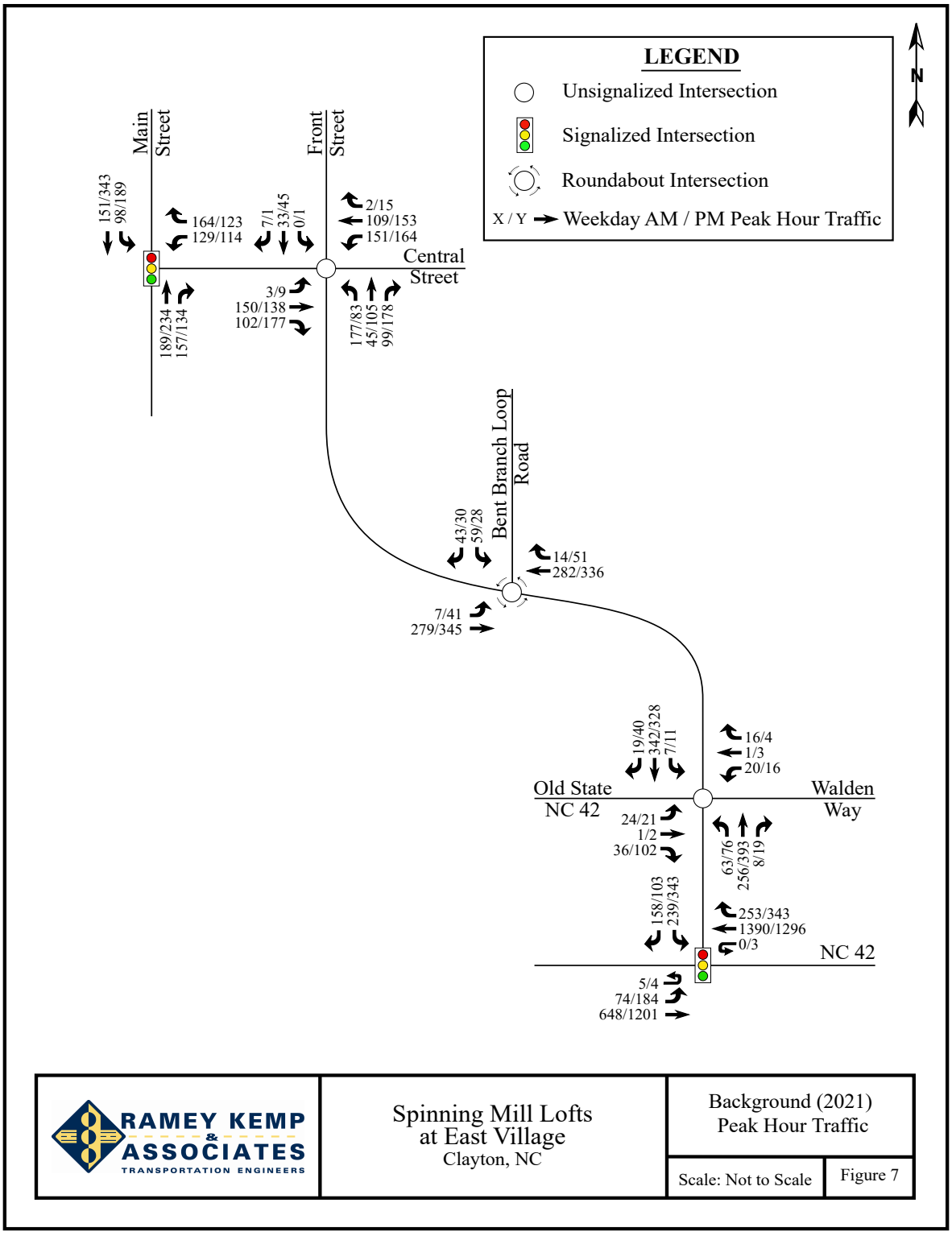


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Peak Hour Adjacent
Development Trips

Scale: Not to Scale | Figure 6



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Background (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 7

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of 255 low-rise apartment 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 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
Low-Rise Apartments (220)	255 dwellings	1,900	27	89	86	50

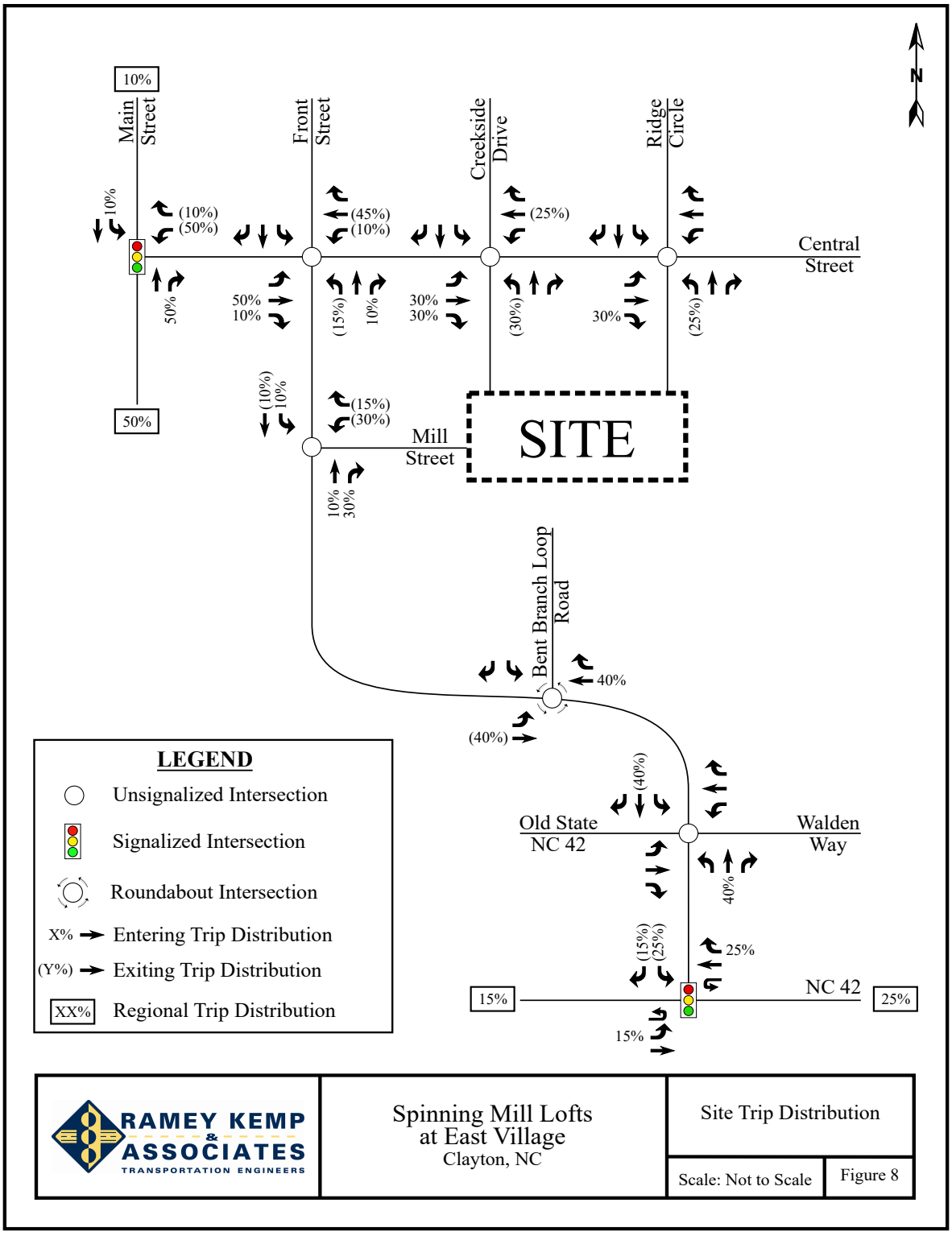
It is estimated that the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the 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 trips will be distributed as follows:

- 10% to/from the north via Main Street
- 25% to/from the east via NC 42
- 50% to/from the south via Main Street
- 15% to/from the west via NC 42

The site trip distribution is shown in Figure 8. Refer to Figure 9 for the site trip assignment.



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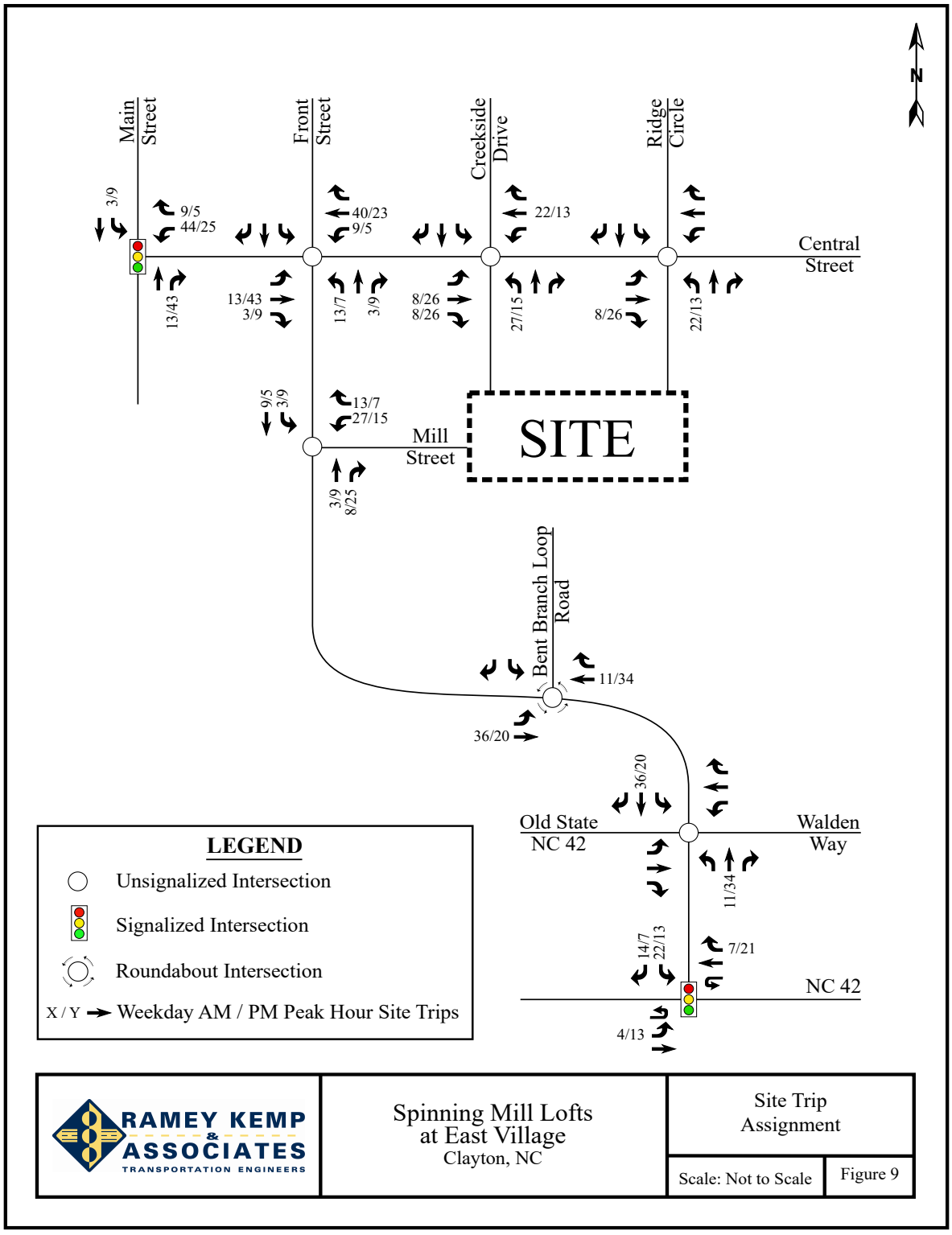
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Site Trip Distribution

Scale: Not to Scale

Figure 8


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State NC 42
Walden Way
NC 42
3/9
9/5
44/25
13/43
13/43
3/9
40/23
9/5
13/7
3/9
22/13
8/26
8/26
27/15
8/26
22/13
9/5
3/9
13/7
27/15
3/9
8/25
11/34
36/20
36/20
11/34
14/7
22/13
7/21
4/13
LEGEND
Unsignalized Intersection
Signalized Intersection
Roundabout Intersection
X / Y Weekday AM / PM Peak Hour Site Trips
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
Spinning Mill Lofts at East Village
Clayton, NC
Site Trip Assignment
Scale: Not to Scale
Figure 9

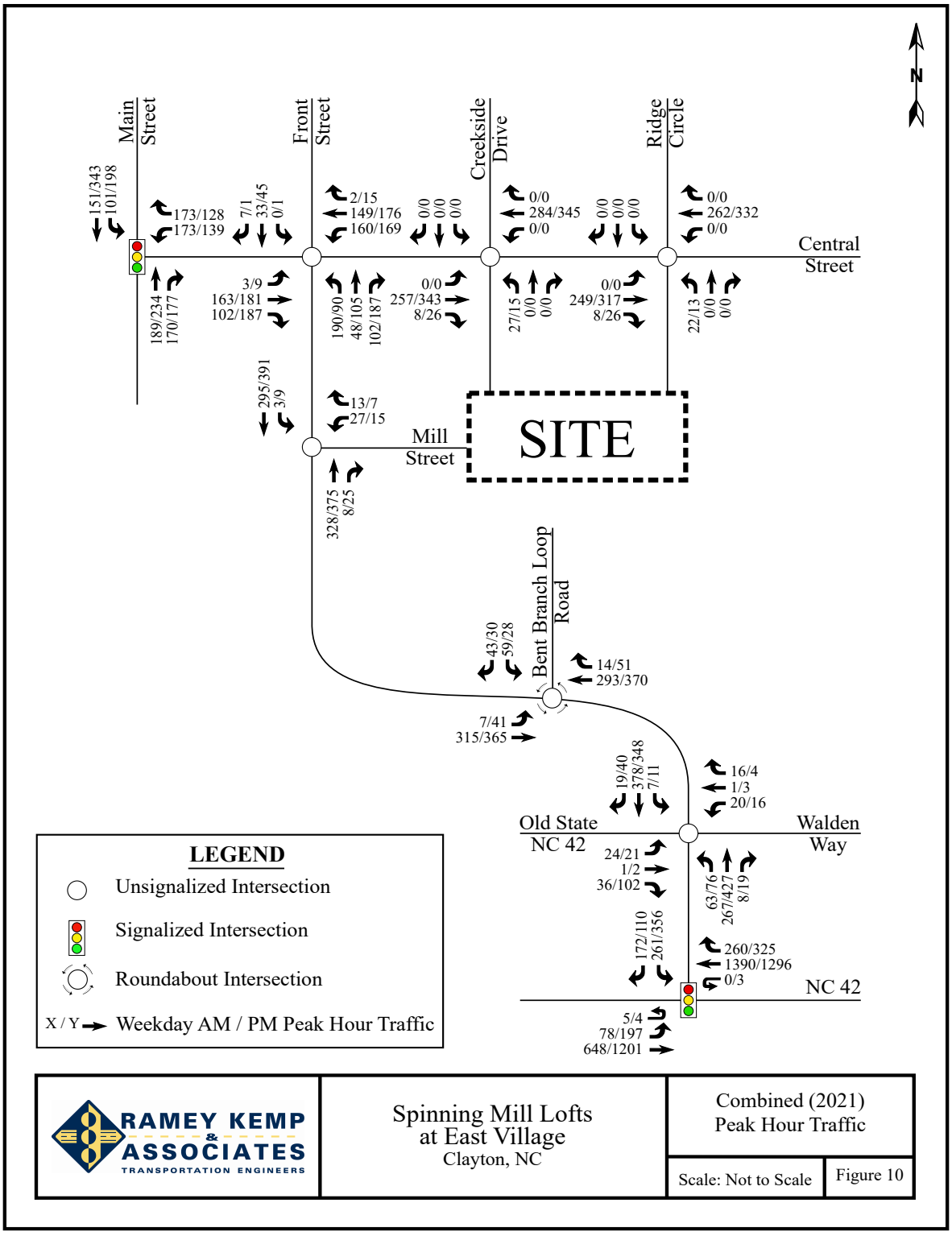
5. COMBINED (2021) TRAFFIC CONDITIONS

5.1. Combined (2021) Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the background (2021) traffic volumes to determine the combined (2021) traffic volumes. Refer to Figure 10 for an illustration of the combined (2021) peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of Combined (2021) Peak Hour Traffic

Study intersections were analyzed with the combined (2021) 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.



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Spinning Mill Lofts
at East Village
Clayton, NC

Combined (2021)
Peak Hour Traffic

Scale: Not to Scale

Figure 10

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *2010 Highway Capacity Manual* (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 9.2), 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. Front Street and Central Street

The existing unsignalized intersection of Front Street and Central Street was analyzed under existing (2018), background (2021), and combined (2021) 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 Front Street and Central 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 (2018) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] D[2] B[2]	N/A	A[1] A[1] D[2] C[2]	N/A
Background (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] F[2] C[2]	N/A	A[1] A[1] F[2] D[2]	N/A
Combined (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] F[2] C[2]	N/A	A[1] A[1] F[2] D[2]	N/A
Combined (2021) Conditions with Improvements*	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	C B C B	N/A	D C C B	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

*Due to limitations with the Synchro software, four-way stop control was reported in lieu of three-way stop control.

Capacity analysis of existing (2018) traffic conditions indicates all minor-street approaches and major-street left-turn movements at Front Street and Central Street are expected to operate at LOS D or better during both weekday AM and PM peak hours. Under background (2021) and combined (2021) traffic conditions, the northbound approach is expected to operate at LOS F during the weekday AM and PM peak hour. It should be noted that it is typical for the minor-street approach at an unsignalized intersection to operate with delay when the major-

street operates with a similar, high volume of traffic as the minor-street. It should also be noted that the proposed development contributes less than 10% of the total traffic at the intersection of Front Street and Central Street.

Alternate traffic control was considered at this intersection. Three-way stop control was considered at this intersection in combined (2021) traffic conditions with improvements. Capacity analysis of combined (2021) traffic conditions with improvements indicates that all approaches are expected to operate at LOS D or better during both weekday AM and PM peak hours. Due to limitations with the Synchro software, three-way stop control must be analyzed as four-way stop control; however, three-way stop control was analyzed with SimTraffic. Due to the proximity of the railroad, it is recommended that the eastbound movement remains free. A traffic signal was also considered at this intersection utilizing the methodology contained in the Manual on Uniform Traffic Control Devices (MUTCD). The intersection is not expected to warrant during either weekday peak hour under combined (2021) traffic conditions. Additionally, due to the high volume of residential development, which typically generates trips during two peak hours each day, it is anticipated that a 4- or 8-hour signal warrant would not be met either. Due to the proximity to other signalized intersections less than 200 feet away from the adjacent signalized intersection, this intersection is not a desirable intersection for signalization.

Modifying the westbound approach to provide stop control would be necessary in order to achieve significant improvements in operation and level of service; however, this improvement is not recommended by the Spinning Mill Lofts at East Village development because the proposed development is expected to contribute less than 10% of the total 2021 traffic to the intersection of Front Street and Central Street.

7.2. Central Street and Main Street

The existing signalized intersection of Central Street and Main Street was analyzed under existing (2018), background (2021), and combined (2021) 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 Central Street and Main 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 (2018) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	B B A	B (13)	B B A	B (11)
Background (2021) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	C B A	B (17)	C C A	B (15)
Combined (2021) Conditions	WB NB SB	1 LT, 1 RT 1 TH-RT 1 LT, 1 TH	C C A	B (18)	C C A	B (17)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Central Street and Main Street is expected to operate at an overall LOS B during both weekday AM and PM peak hours.

7.3. Front Street and NC 42

The existing signalized intersection of Front Street and NC 42 was analyzed under existing (2018), background (2021), and combined (2021) 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 Front Street 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 (2018) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A A E	B (14)	A B D	B (13)
Background (2021) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A B D	B (16)	A B D	B (17)
Combined (2021) Conditions	EB WB SB	1 LT, 2 TH 1 UT, 2 TH, 1 RT 2 LT, 1 RT	A B D	B (17)	A B D	B (17)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Front Street and NC 42 is expected to operate at an overall LOS B during both weekday AM and PM peak hours.

7.4. Front Street and Old State NC 42 / Walden Way

The existing signalized intersection of Front Street and Old State NC 42 / Walden Way was analyzed under existing (2018), background (2021), and combined (2021) traffic conditions with existing 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 Front Street and Old State NC 42 / Walden Way

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 (2018) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	B[2] B[2] A[1] A[1]	N/A	B[2] C[2] A[1] A[1]	N/A
Background (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	C[2] B[2] A[1] A[1]	N/A	C[2] C[2] A[1] A[1]	N/A
Combined (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH, 1 TH-RT	C[2] B[2] A[1] A[1]	N/A	C[2] C[2] A[1] A[1]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Front Street and Old State NC 42 / Walden Way are expected to operate at LOS C or better during both weekday AM and PM peak hours.

7.5. Front Street and Bent Branch Loop Road

The existing roundabout intersection of Front Street and Bent Branch Loop Road was analyzed under existing (2018), background (2021), and combined (2021) traffic conditions with existing 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 Front Street and Bent Branch Loop 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 (2018) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)
Background (2021) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)
Combined (2021) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A A A	A (4)	A A A	A (4)

Capacity analysis of existing (2018), background (2021), and combined (2021) traffic conditions indicates the intersection of Front Street and Bent Branch Loop Road is expected to operate at an overall LOS A during both weekday AM and PM peak hours.

7.6. Central Street and Creekside Drive (Site Drive 1)

The existing unsignalized intersection of Central Street and Creekside Drive (Site Drive 1) was analyzed under combined (2021) 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 Central Street and Creekside Drive (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 (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] B[2] B[2]	N/A	A[1] A[1] C[2] C[2]	N/A

3. Level of service for major-street left-turn movement.
4. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Central Street and Creekside Drive (Site Drive 1) are expected to operate at LOS C or better during the weekday AM and PM peak hours.

7.7. Central Street and East Ridge Circle (Site Drive 2)

The existing unsignalized intersection of Central Street and East Ridge Circle (Site Drive 2) was analyzed under combined (2021) 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 Central Street and East Ridge Circle (Site Drive 2)

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 (2021) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] B[2] B[2]	N/A	A[1] A[1] C[2] B[2]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Central Street and East Ridge Circle (Site Drive 2) are expected to operate at LOS C or better during the weekday AM and PM peak hours.

7.8. Front Street and Mill Street (Site Drive 3)

The existing unsignalized intersection of Front Street and Mill Street (Site Drive 3) was analyzed under combined (2021) 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 Front Street and Mill Street (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 (2021) Conditions	WB NB SB	1 LT-RT 1 TH, **1 RT** 1 LT-TH	B[2] -- A[1]	N/A	C[2] -- A[1]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of combined (2021) traffic conditions indicates the minor-street approach and major-street left-turn movement at the intersection of Front Street and Mill Street (Site Drive 3) is expected to operate at LOS C or better during the weekday AM and PM peak hours.

Left and right-turn lanes were considered at this intersection based on the methodology outlined in the *Policy on Street and Driveway Access to North Carolina Highways* (published by the NCDOT) was considered. Based on the findings from the turn lane warrant analysis, the intersection does not meet the criteria to warrant an exclusive left-turn lane; however, based on the 2018 AADT (~5,900 vpd) an exclusive left-turn lane is recommended to remove left turning vehicles from the through lane. It should be noted that although turning lanes were considered at this intersection, a full width left-turn lane may not fit within the existing right-of-way. The intersection was analyzed without a designated left-turn lane to determine the operations of the intersection if a designated left-turn lane cannot be constructed. The intersection is expected to operate at acceptable levels of service without a designated left-turn

lane. If right-of-way is available, a designated left-turn lane is recommended. The intersection is expected to warrant an exclusive right-turn lane with 50 feet of storage and appropriate taper.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Spinning Mill Lofts at East Village, located south of Central Street and east of Front Street in Clayton, North Carolina. The proposed development is expected to redevelop the existing Spinning Mill for residential use and be built out by 2021. Site access is proposed via the two existing full movement accesses on Central Street and the existing full movement access on Front Street.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2018) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

Trip Generation

It is estimated that the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the 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 intersection listed below. A summary of the study area intersection that are expected to need improvements are as follows:

Front Street and Central Street

The poor level-of-service observed on the northbound Front Street approach is due to it being an unsignalized approach at a two-lane mainline (Central Street) with heavy through volumes. Additionally, the northbound approach has similar traffic volumes as the mainline movements in both weekday AM and PM peak hours. Additional stop control of the westbound approach will be necessary in order to achieve significant improvements in operation and level of service. The traffic at this intersection does not meet the peak hour warrant for the weekday AM and PM peak hours from the *Manual on Uniform Traffic Control Devices* (MUTCD) and it is unlikely this intersection will satisfy the MUTCD 8-hour and 4-hour warrants. Improvement is not recommended by the Spinning Mill Lofts at East Village development since this development contributes less than 10% of the total traffic volumes to the intersection of Front Street and Central Street.

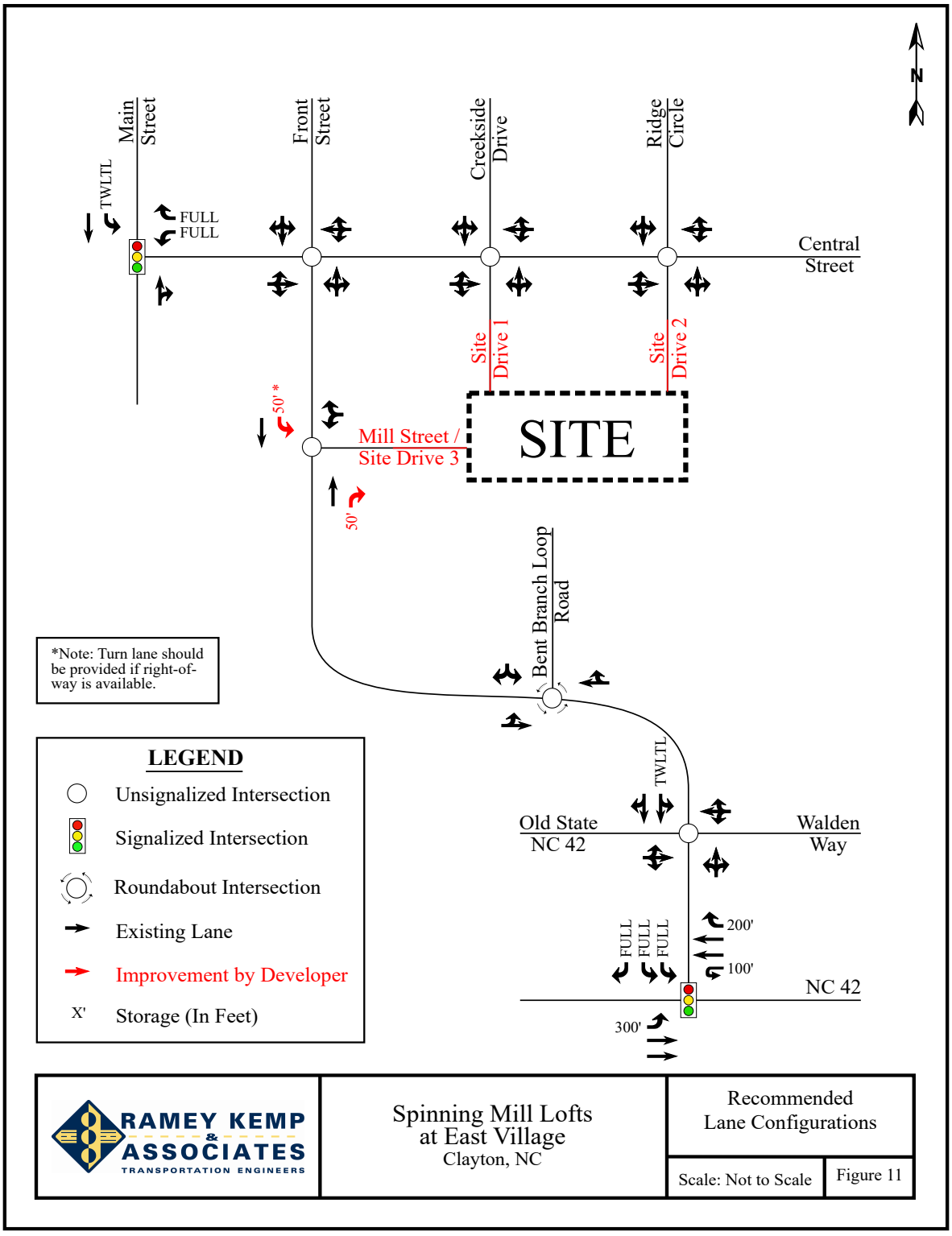
9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Recommended Improvements by Developer

Front Street and Mill Street (Site Drive 3)

- Provide an exclusive northbound right-turn lane on Front Street with 50 feet of storage and appropriate taper.
- If right-of-way is available, provide an exclusive southbound left-turn lane on Front Street with 50 feet of storage and appropriate taper.


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
TWLTL
FULL
FULL
Site Drive 1
Site Drive 2
50' *
Mill Street / Site Drive 3
SITE
50'
Bent Branch Loop Road
*Note: Turn lane should be provided if right-of-way is available.
LEGEND
Unsignalized Intersection
Signalized Intersection
Roundabout Intersection
Existing Lane
Improvement by Developer
X' Storage (In Feet)
TWLTL
Old State NC 42
Walden Way
FULL
FULL
FULL
200'
100'
NC 42
300'
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
Spinning Mill Lofts at East Village
Clayton, NC
Recommended Lane Configurations
Scale: Not to Scale
Figure 11

TECHNICAL APPENDIX

APPENDIX A

SCOPING INFORMATION

APPENDIX B

COUNT DATA

APPENDIX C

SIGNAL INFORMATION

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

CENTRAL STREET

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

MAIN STREET

APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

NC 42

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

OLD STATE NC 42 / WALDEN WAY

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

BENT BRANCH LOOP ROAD

APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

CREEKSIDE DRIVE

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

EAST RIDGE CIRCLE

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

MILL STREET

TECHNICAL APPENDIX

APPENDIX A

SCOPING INFORMATION

Mary Smith

From: Caroline Bojarski
Sent: Tuesday, May 22, 2018 9:49 AM
To: Mary Smith
Subject: FW: East Village (Spinning Mill) TIA Scoping Checklist, East Village Walk
Attachments: Trip Generation 8-20-15.pdf; Trip Generation Comparison - 9-4-2015 - submission.pdf

---

From: Jay McLeod <jwmcleod@townofclaytonnc.org>
Sent: Thursday, May 03, 2018 8:24 AM
To: Caroline Bojarski <cbojarski@rameykemp.com>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist, East Village Walk

Attached is the TIA info for East Village Walk, 300 homes just west of The Arbors apartments.
This is the last email. I hope this information helps you.

Thanks,
Jay McLeod
919-359-9335

From: Caroline Bojarski <cbojarski@rameykemp.com>
Sent: Wednesday, May 02, 2018 3:36 PM
To: Jay McLeod <jwmcleod@townofclaytonnc.org>
Cc: Jessica McClure <JMCClure@rameykemp.com>; Harrell, Jiles P <jpharrell@ncdot.gov>; Samantha Wullenwaber <swullenwaber@townofclaytonnc.org>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist

Jay / Samantha,

Thanks for the quick response. The new legislation calls out the timeline that NCDOT has to respond to specific items during the TIA scoping and submittal process: http://www.ncleg.net/Sessions/2017/Bills/House/PDF/H528v3.pdf

It's still relatively new, so we have been trying to determine the best way to scope projects in different municipalities. Some areas that didn't require in-person meetings for every project are requiring them now and vice versa.

Could you send us on the information regarding the adjacent developments that you mentioned? If there is anything on the 72-unit apartment that would be great, but I would imagine that traffic would be captured in a 3% growth rate. The 300 homes and the 244 apartments likely had a traffic study that we could pull the trips from to include.

We will continue to update the scoping checklist with the scoping information.

Thanks!

Caroline Bojarski, EI
Transportation Associate

Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Ph: 919-872-5115

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From: Jay McLeod <jwmcleod@townofclaytonnc.org>
Sent: Tuesday, May 01, 2018 3:55 PM
To: Caroline Bojarski <cbojarski@rameykemp.com>
Cc: Jessica McClure <JMCClure@rameykemp.com>; Harrell, Jiles P <jpharrell@ncdot.gov>; Samantha Wullenwaber <swullenwaber@townofclaytonnc.org>
Subject: RE: East Village (Spinning Mill) TIA Scoping Checklist

Hello,
What you have outlined seems sufficient scoping to begin your work. What you have provided is more than is usually presented and takes a well-rounded look at the site and potentially impacted intersections. I think it should be fine.
Please note that in the past we have used a 3% background population growth rate, but depending on what NCDOT thinks, that may not be applicable in this instance.
You might want to change the Project Description on the first page to match that shown in the rest of the document, which lists 255 apartments. The 255 figure is also reflected in the plans that have been submitted to the Town.
I must admit that I am not familiar with the legislation you reference regarding scoping timelines. Would you please let me know the referenced section of NC G.S. so that I can look it up?
The Town does have the TIA's for other local projects, including the 72-unit apartment addition at the Arbors and the 300 homes at East Village Walk. There are also 244 apartments going in on the corner of NC Hwy 42 W and Glen Laurel Road, but that might be out of the area of interest for your project.
Please note that I will no longer be working for the Town after May 10th, so please direct all future correspondence to Samantha Wullenwaber, Planning Director. She will probably also review this scoping document (attached) and will let you know if she has any comments.
Again, thanks for putting so much into this scoping document, and if you have any other questions, we're happy to help.

Thanks,
Jay McLeod, AICP
Senior Planner
TOWN OF CLAYTON
111 East Second Street | PO Box 879 | Clayton NC 27528
Direct (919) 359-9335 | Office (919) 553-5002
jwmcleod@townofclaytonnc.org

From: Caroline Bojarski [mailto:cbojarski@rameykemp.com]
Sent: Tuesday, May 01, 2018 2:09 PM
To: Harrell, Jiles P <jpharrell@ncdot.gov>; Jay McLeod <jwmcleod@townofclaytonnc.org>

Cc: Jessica McClure <JMCClure@rameykemp.com>
Subject: East Village TIA Scoping Checklist

Jiles / Jay,

Please see the attached scoping checklist and the preliminary site plan for the proposed East Village Apartments development in Clayton, NC. The development is expected to convert the existing Spinning Mill into apartments. We have filled out as much of the scoping checklist as we could with our assumptions.

Jay, please let us know if you will need a scoping meeting to finalize the scope. Per the legislation, we will need to finalize the scope within 10 business days, so if a meeting is required please provide your next availability as soon as possible.

Thanks!

Caroline Bojarski, EI
Transportation Associate

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Ph: 919-872-5115

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DRAFT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

A Traffic Impact Analysis (TIA) may be required for developments based on the site trip generation estimates, site context, or at the discretion of the NCDOT District Engineer. The Applicant or the TIA Consultant shall submit this form along with the site plan to the District Engineer to determine the TIA need and, if a TIA is required, initiate the TIA scoping process. Without an approved scope, the TIA is incomplete and will be rejected until the study is revised to conform to NCDOT's TIA requirements.

Project Name: East Village Apartments - Clayton **Previous Name:** If Applicable

Location: West of E Front St and South of Central St **County:** Johnston **Municipality:** Clayton

Project Description: Re-develop the existing Clayton Spinning Mill into 255 apartments

Project Contact:	Applicant	TIA Consultant
Company Name	Bass, Nixon, & Kennedy, Inc. (BNK)	Ramey Kemp & Associates, Inc. (RKA)
Contact Person	Marty Bizzell, PE, CPESC	Jessica McClure, PE
Phone Number	(919) 851-4422	(919) 872-5115
Email	Marty.Bizzell@bnkinc.com	jmmclure@rameykemp.com
Mailing Address	6310 Chapel Hill Road, Suite 250 Raleigh, NC 27607	5808 Faringdon Place, Suite 100 Raleigh, NC 27609

Site Plan Prepared By: Bnk **Site Plan Date:** 04/02/2018

See site plan/vicinity map requirements on page 2.

Parcel Size: 24.5 Acre(s) **Anticipated Build-Out Year:** Assume 2021

Weekday Site Trip Generation - Do NOT adjust for mode split, pass-by, internal capture, or diverted trips.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
220	Apartments	255	dwellings	1900	Adj. Street	27	89	116	86	50	136	ITE Equation
Total												

Refer to the current *NCDOT Congestion Management Capacity Analysis Guidelines* for acceptable trip calculation methods and data sources.

**Explain local or other data sources, if used:

☐ The estimated site trips meet NCDOT's TIA trip threshold of 3,000 daily trips.

☒ The estimated site trips meet the municipal TIA trip threshold of 100 trips / peak hour

☐ This project is located in a known STIP and/ or local CIP project #

☐ This project includes a rezoning request.

☐ The proposed site access is located within 1,000 feet of an interchange.

☐ The Applicant requests for a new or modified control-of-access break.

☐ The Applicant requests for a new or modified median break.

Applicant's Signature | Print Name | Date

DRAFT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

Site Plan/Vicinity Map Requirement for TIA Need Screening: While the site plan may not be finalized during the TIA scoping stage, the graphic representation of the proposed development shall provide adequate details on the development scope and context. More specifically, the site plan/map shall clearly show the location and type of each access point, spacing to adjacent and opposing driveways or intersections, internal street network, proposed buildings/parcels with their anticipated uses and sizes at full build-out and, if applicable, any nearby interstate, US, NC or Secondary Roads (SR).

Project Name: _____ **Project Reference Number:** _____

☒ **A TIA is Required by the Local Government.** In addition, the study area is expected to include NCDOT maintained transportation facilities.

☐ **A TIA is Required by NCDOT,** per the *Policy on Street and Driveway Access to North Carolina Highways*.

If either or both of the boxes above are checked, the Applicant/TIA Consultant is hereby requested to fill out as much as possible of the following TIA scoping checklist, and return it along with the supporting documents to NCDOT prior to the scoping meeting.

☐ **A TIA is NOT required**. This decision is based on the development information presented above. Changes in the development plan will require re-evaluation of the TIA need, and may necessitate a TIA. The Applicant should inform the District Engineer of any significant changes in a timely fashion to avoid delays or rejections of the driveway permit / encroachment agreement applications.

Additional Comments:

The TIA need decision is made by the NCDOT Division ____ District____ on _____.

_____ _____

NCDOT District Representative's Signature — Print Name

Email concurrence may be used in lieu of the signature.

DRAFT TIA Scoping Checklist

TIA Need Screening → TIA Scoping → TIA Submittal

Project Name: East Village Apartments - Clayton **TIA Scoping Date:** _____

☒ **TIA Need Screening Forms are Attached.** Project Reference #: _____ Decision Date: _____

☒ **Site Plan and Access**

☒ Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.
Refer to NCDOT's *Policy on Street and Driveway Access to North Carolina Highways* pages 14 and 15 for site plan requirements.

☒ Identify site access.

New Access	On Road	Access Type		Driveway Spacing		
	Road Name	Permitted Movements	Traffic Control	Distance (ft)	Direction	Nearest Intersection / Access
Access A	Front Street	Conventional Full-Mvmt	2-Way Stop		Please Select	
Access B						
Access C						
Access D						
Access E						
Access F						
Access G						
Access H						

Existing Access	Existing Intersection of		Access Modification	**Proposed Interconnectivity** (If Applicable)		
	Road A	Road B		Connector #	Road Connected	Adjacent Development
Access 1	Central Street	Creekside Drive	N/A	Connector 1		
Access 2	Central Street	E Ridge Circle	N/A	Connector 2		
Access 3	Front Street	Mill Street	N/A	Connector 3		
Access 4				Connector 4		

☐ Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).

☐ **Proposed K-12 School Site**

☐ NCDOT MSTA School Traffic Calculator for Select School Type shall be used.

☐ Peak Hour Factors (PHFs) shall be adjusted/weighted for new school trips (0.5 PHF by default).

☐ Internal school circulation analysis is required, and should be submitted in advance or concurrent with the TIA submittal.

☐ Clarify traffic operation plans (e.g. traffic circulation pattern, pedestrian access, drop-off/pick-up zone location and configuration, queue storage area and, if applicable, staggered start times).

☒ **Trip Generation**

The TIA Consultant shall prepare trip generation estimates following the current *NCDOT Congestion Management Capacity Analysis Guidelines*, and submit the calculation sheets and supporting information to the District Engineer for approval prior to capacity analysis.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
220	Apartments	255	dwellings	1900	Adj. Street	27	89	116	86	50	136	ITE Equation
Unadjusted Site Trips				1900		27	89	116	86	50	136	
Internal Capture Trips (Attach Calculation Sheets)												Please Select
Internal Capture % of Unadjusted Site Trips				%			%			%		
LUC	Proposed Land Use	Any Internal Trips?		Pass-By % of External Trips								
		Please Select		%			%			%		Please Select
				%			%			%		
				%			%			%		
				%			%			%		
				%			%			%		
Pass-By Trips (Attach Calculation Sheets)												
Adjacent Street Volumes												Please Select
Non-Pass-By Primary Trips												
Diverted Trips, if Applicable and Justifiable												Please Select

**Explain local or other data sources, if used:

☒ Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

ITE LUC	Existing Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
					Please Select							Please Select
Total Existing Site Trips												

☒ **Trip Distribution**

☐ Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).

☐ Trip distribution diagrams will be submitted separately, along with supporting information, to the District Engineer for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

If required by the District Engineer, the following additional diagrams shall also be submitted:

☐ Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)

☐ Inter-Development Trips (if 'internal" trips cross public streets)

☐ Pass-By Trips

☐ Diverted Trips

☐ Each Analysis Period

☐ **Mode Split**

☐ Provide Data Source and Justification

Mode / Period	Auto		
AM Peak	%	%	%
PM Peak	%	%	%
Daily	%	%	%
	%	%	%

☐ Identify proper infrastructure and accommodation for other modes of travel.

☒ **Analysis Peak Periods:**

☒ Weekday AM Peak _____

☒ Weekday PM Peak _____

☐ Weekday Midday Peak _____

☐ Weekday PM School Peak _____

☐ Weekend _____ Peak _____

☐ Other _____

☒ Study Area Intersections and Data Collection

The study area shall include the site access intersections (both new and existing) identified under "Site Plan and Access" on page 1, as well as the following external and, if applicable, internal intersections.

External Intersection	Intersection of		Traffic Control	Intersection Turning Movement Counts			Notes
	Road A	Road B		New / Existing	Date of Counts	Growth Adjustment	
#1	Front Street	Central Street	2-Way Stop	Require New Counts			
#2	Front Street	NC 42	Signal	Require New Counts			
#3	Old State NC 42	NC 42	Signal	Require New Counts			
#4	Central Street	Main Street	Signal	Require New Counts			
#5	Front Street	Bent Branch Loop	Yield	Require New Counts			
#6							
#7							
#8							
#9							
#10							
#11							
#12							

Internal Intersection	Intersection of		Access Type		Intersection Spacing		
	Road A	Road B	Traffic Control	Permitted Movements	Distance (ft)	Direction	Nearest Intersection
#101	Central Street	Creekside Drive	2-Way Stop	Conventional Full-Mvmt		Please Select	
#102	Central Street	East Ridge Circle	2-Way Stop	Conventional Full-Mvmt			
#103	Front Street	Mill Street	2-Way Stop	Conventional Full-Mvmt			
#104							
#105							

The following data will be collected:

☒ New traffic turning movement counts in ☒ 15-min intervals ☐ 5-min intervals (near schools)
Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.

☐ To account for the impact of existing and/or proposed school traffic, PHFs will be adjusted for:

intersections numbered: _____

and access points numbered: _____

☐ Traffic Forecast Data for TIP: _____

☒ Roadway/Intersection Configuration & Traffic Control

☒ Traffic Signal Phasing & Timing Data

☐ Crash Data: _____ Period: _____

☐ Other:

☒ **Future Year Conditions**

☒ Project Build-Out Year: Assume 2021

☒ Future Analysis Year(s): _____

☐ Identify below any funded/committed future transportation improvements, as well as any approved but incomplete developments near the site.

Funded STIP / Local CIP Project	Project Description	Year Complete

Nearby Approved Development	Location	Future Land Use (exclude any completed phases)	Committed Improvements

☐ Annual Growth Factor: _____%

Justification/Data Source: _____

☐ **Local Comprehensive Transportation Plan Compliance**

☐ Identify Applicable Local Transportation Planning Documents

☐ Identify Applicable Roadways inside the Study Area

Road Name	Classification	Speed Limit	Proposed Cross-Section	Proposed Right-of-Way	Compliance Requirements	Affect Study Intersection #

☒ **Study Method**

The traffic analysis shall follow the current *NCDOT Congestion Management Capacity Analysis Guidelines*, *Policy on Street and Driveway Access to North Carolina Highways*, and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

1. Existing Conditions
2. Future No-Build Conditions (existing + background growth + approved developments + committed or funded improvements)
3. Future Build Conditions (future no-build + site trips)
4. Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development's impacts) and, if applicable:

☐ 5. TIP Design Year Analysis _____

☐ 6. Alternative Access Scenario (without proposed control-of-access or median break / modification)

The following additional analysis/outputs should be provided as warranted:

- ☐ Signal Warrant Analysis for accesses/intersections _____
- ☐ Multi-Modal Level of Service Analysis
- ☐ School Loading Zone Traffic Simulation
- ☐ Phasing Analysis (scope separately as needed)
- ☐ Safety/Crash Analysis
- ☐ Control-of-Access Modification Justification
- ☐ Median Break / Modification Justification
- ☐ Other _____

☒ **Submittals**

In addition to the hardcopies required below, the TIA Consultant shall provide the District Engineer and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

☐ Div. Traffic Engr ☐ Regional Traffic Engr ☐ Congestion Management ☐ Other _____

Submittals	NCDOT		Local Government	
	Electronic	Hardcopy	Electronic	Hardcopy
Trip Generation & Distribution	Required		Please Select	
Draft TIA Report	Required			
Final Sealed TIA Report	Required			

☐ **Additional Comments (**municipal TIA requirements, approved variations from NCDOT guidelines)

Agreement by All Parties

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the District Engineer in writing. If approved by NCDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

This agreement shall become effective on the date approved by NCDOT, and shall expire____ months after the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

APPLICANT

Signature	Print Name	Date

TIA CONSULTANT

Signature	Print Name	Date

LOCAL GOVERNMENT REPRESENTATIVE (If Applicable)

Signature	Print Name	Date

Email concurrence may be used in lieu of the signature.

NCDOT DISTRICT REPRESENTATIVE

Reviewed and approved by the NCDOT Division ____District____ on _____.

Signature	Print Name

Email concurrence may be used in lieu of the signature.

DRAFT TIA Submittal Checklist

TIA Need Screening → TIA Scoping → TIA Submittal

Submittal: Please Select **Document Date:** _____

Project Name: _____ **Previous Name:** If Applicable _____

NCDOT Division: _____ **District:** _____ **County:** _____ **Municipality:** _____

TIA Consultant: _____ Submitted By: _____

Phone Number: _____ Email: _____

TIA Scoping Checklist Approval Date: _____ **Unadjusted Daily Site Trips:** _____

☒ The approved TIA Scoping Checklist is included in this submittal.

☒ LOS D or better is expected at all study intersections after proposed mitigations.

☒ The study report is sealed by a NC Professional Engineer with expertise in traffic engineering.

☒ This study has identified all known deficiencies with and without the proposed development.

☒ This study has identified mitigation measures to adequately accommodate the site trips.

Explain here if any of the boxes above are unchecked:

The undersigned affirms that, except for the deviations noted below, the TIA submittal conforms to the current *NCDOT Congestion Management Capacity Analysis Guidelines*, *Policy on Street and Driveway Access to North Carolina Highways*, and the TIA Scoping Checklist approved by the NCDOT District Office. The undersigned also acknowledges that the TIA will be rejected if the deviations and justifications are not properly documented and approved by NCDOT.

Deviations and Justifications (e.g., changes in site plan, development schedule, site trip and off-site trip estimates, study area, data collection, analysis period and method. Attached separate sheets if needed.)

TIA Consultant's Signature (Professional Engineer of TIA Record)	Print Name	Date

Effective Date: 10/01/2017 (Version 17-721)

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

May 23, 2018

Ms. Samantha Wullenwaber
Clayton Planning Department
111 E 2nd Street
Clayton, NC 27520
P: 919.553.5002
E: swullenwaber@townofclaytonnc.org

Reference: East Village Apartments
Clayton, North Carolina

Subject: Memorandum of Understanding for TIA Report

Dear Ms. Wullenwaber:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions to be included in the Traffic Impact Analysis (TIA) report for the proposed development located south of Central Street and east of Front Street in Clayton, North Carolina.

The East Village Apartments development is a residential development that is expected to re-develop the existing Clayton Spinning Mill. For the purpose of the TIA, the site is analyzed with 255 low-rise apartment units and is expected to be completed in 2021. Site access will be provided via the existing two full-movement driveways along Central Street and the existing full-movement driveway along Front Street. It should be noted that although the existing spinning mill is currently operational, it is expected that traffic to and from this mill is minimal. Therefore, to remain conservative, counts at these existing access drives were not collected and the volumes were considered negligible. A general site plan has been attached for your reference.

Study Area

The study area is proposed to consist of the following intersections:

- Front Street and Central Street (unsignalized)
- Front Street and NC 42 (signalized)
- Old State NC 42 and NC 42 (signalized)
- Central Street and Main Street (signalized)
- Front Street and Bent Branch Loop Road (roundabout)
- Central Street and Creekside Drive (unsignalized, site access)
- Central Street and East Ridge Circle (unsignalized, site access)
- Front Street and Mill Street (unsignalized, site access)

Existing Traffic Volumes

Peak hour turning movement counts were collected at the following existing study intersections by RKA in May of 2018 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hours:

- Front Street and Central Street
- Front Street and NC 42
- Old State NC 42 and NC 42
- Central Street and Main Street
- Front Street and Bent Branch Loop Road

It should be noted these counts were collected while the local schools were in session. An existing (2018) peak hour traffic volumes figure has been attached for your reference.

Trip Generation

Average weekday daily and peak hour trips for the proposed site were calculated utilizing methodology contained within the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. Per North Carolina Department of Transportation (NCDOT) Congestion Management guidelines, equations were used to generate trips for the development. No pass-by trips are associated with this type of development. Refer to Table 1 for a detailed breakdown of the trip generation.

TABLE 1
Trip Generation

Land Use (ITE Code)	Size	Weekday Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Low-Rise Apartments (220)	255 dwellings	1,900	27	89	86	50

It is estimated at full build-out the proposed development will generate approximately 1,900 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 116 trips (27 entering and 89 exiting) will occur during the AM peak hour and 136 (86 entering and 50 exiting) will occur during the PM peak hour.

Trip Distribution and Assignment

The proposed site trip distribution is based on existing traffic patterns, population centers, and engineering judgment. A summary of the overall distribution is below:

- 10% to/from the north via Main Street
- 25% to/from the east via NC 42
- 50% to/from the south via Main Street
- 15% to/from the west via NC 42

A site trip distribution figure has been attached for your reference.

Analysis Scenarios

All capacity analyses will be performed utilizing Synchro 9.2. All study intersections will be analyzed during the weekday AM and PM peak hours under the following proposed traffic scenarios:

- Existing (2017) Traffic Conditions
- Background (2021) Traffic Conditions
- Combined (2021) Traffic Conditions

Background Traffic Volumes

Background traffic volumes will be determined by projecting existing (2018) traffic volumes to each analysis year using a 3% annual growth rate. Historical data was considered when determining the proposed annual growth rate. It was determined, through coordination with the Town of Clayton that three adjacent developments are to be included in the study. Traffic from these developments will be distributed according to the approved TIA's, if available, or a trip generation / distribution will be calculated. These adjacent developments are listed below:

- Arbors Phase 2 (Trip Generation Letter provided)
- East Village Walk
- Hunt Property (TIA provided)

Refer to the attached adjacent development traffic figures for a summary of these trips.

Report

The TIA report will be prepared based on the North Carolina Department of Transportation requirements.

If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report as requested. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,
Ramey Kemp & Associates, Inc.

Joshua Reinke, P.E.
Transportation Manager

Attachments: Preliminary Site Plan
Existing (2017) Count Figure
Trip Distribution Figure

CC: Sam Lawhorn, NCDOT

4/2/2018 11:05:12 AM PLOT BY:mark.gatens R:*2017*17033 - East Village Spinning Mill Apartments*CIVIL*03 Preliminary*002 - 17033_c1.1.dgn

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PIN NUMBERS:	SITE DATA
SITE ADDRESS:	166918-30-4746, 166918-30-5328, 166806-48-6538,
EXISTING ZONING:	166918-30-8385, 166918-40-2748, 166918-30-2104
PROPOSED ZONING:	300 MILL STREET, CLAYTON, NC
OVERLAY DISTRICT:	B3-SUP, B-1, O-I, R-E
SITE AREA:	B-2 NEIGHBORHOOD BUSINESS
	WATERSHED PROTECTION
	166918-30-4746, 1.21 AC
	166918-30-5328, 4.75 AC
	166806-48-6538, 4.51 AC, PARTIAL TRACT
	166918-30-8385, 13.36 AC
	166918-40-2748, 0.674 AC, PARTIAL TRACT
TOTAL SITE ACERAGE:	24.50 AC
CORPORATE LIMITS:	YES
EXISTING USE:	VACANT, COMMERCIAL, SINGLE FAMILY RESIDENTIAL
EXISTING IMPERVIOUS:	134,943.7 SF/3.19 AC
PROPOSED USE:	RESIDENTIAL APARTMENTS
PROPOSED DENSITY:	10.41 UNITS PER ACRE
PROPOSED IMPERVIOUS:	360,620.5 SF/8.28 AC
PERVIOUS AREA:	622,036.80 SF/14.28 AC
BUILDING COVERAGE:	264,919.20 SF OR 23.70%
BUILDING HEIGHT:	50' MAX. HEIGHT
NUMBER OF STORIES:	2, 3, 3-4 SPLIT, 4-5 SPLIT
REQUIRED PARKING:	104 - 1 BR@1 = 104
	129 - 2 BR@2 = 256
	23 - 3 BR@2 = 46
TOTAL REQUIRED PARKING:	GUEST @ 1/4 = 63.75
PROPOSED PARKING:	469.75
REQUIRED ACCESSIBLE PARKING:	495
PROPOSED ACCESSIBLE PARKING:	9
PROPOSED GARAGES:	12
	38

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

SHEET C1.1

SPINNING MILL LOFTS AT EAST VILLAGE

PHASE I PRELIMINARY SUBMITTAL

TOWN OF CLAYTON JOHNSTON COUNTY NORTH CAROLINA

17033	04-02-18	MJG
JOB NO.	DATE	DRAWN BY

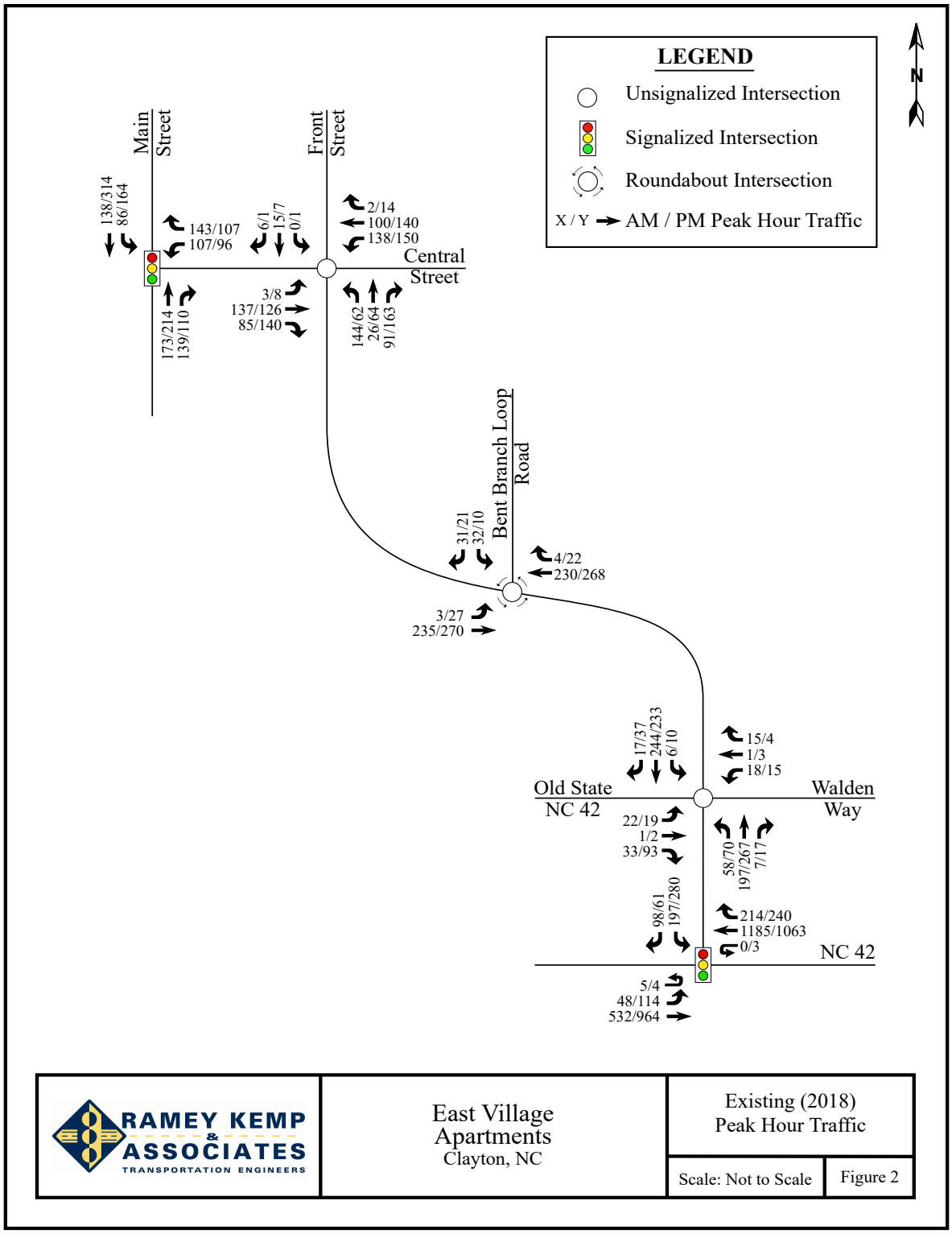
OVERALL PRELIMINARY SITE PLAN

SCALE: 1" = 80' HORZ

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

BNK

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

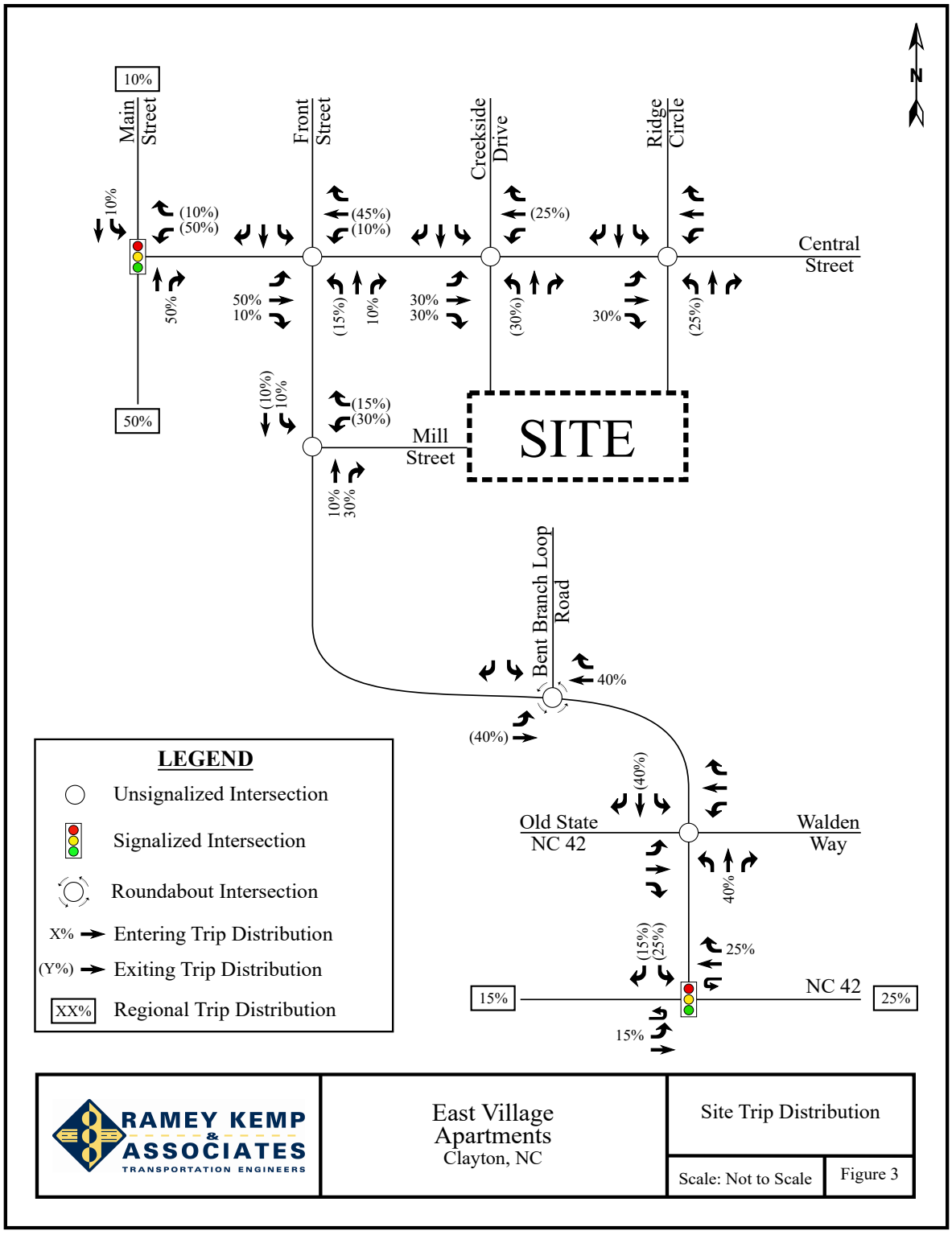


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

East Village Apartments
Clayton, NC

Existing (2018) Peak Hour Traffic

Scale: Not to Scale | Figure 2



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

East Village Apartments
Clayton, NC

Site Trip Distribution

Scale: Not to Scale

Figure 3

APPENDIX B

COUNT DATA

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 1

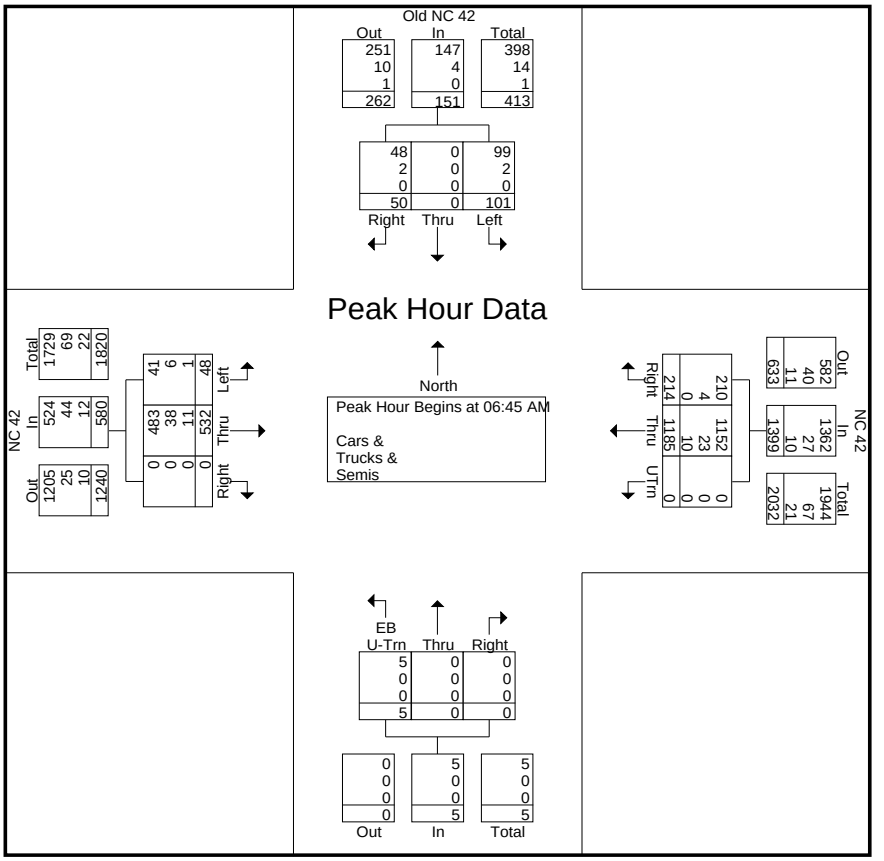
Groups Printed- Cars & - Trucks & - Semis

	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	14	0	15	29	34	317	0	351	0	0	2	2	0	92	6	98	480
06:45 AM	10	0	16	26	61	335	0	396	0	0	1	1	0	102	9	111	534
Total	24	0	31	55	95	652	0	747	0	0	3	3	0	194	15	209	1014
07:00 AM	6	0	26	32	56	314	0	370	0	0	2	2	0	138	9	147	551
07:15 AM	18	0	32	50	53	281	0	334	0	0	2	2	0	145	17	162	548
07:30 AM	16	0	27	43	44	255	0	299	0	0	0	0	0	147	13	160	502
07:45 AM	19	0	40	59	38	248	0	286	0	0	1	1	0	149	10	159	505
Total	59	0	125	184	191	1098	0	1289	0	0	5	5	0	579	49	628	2106
08:00 AM	15	0	25	40	40	245	1	286	0	0	2	2	0	149	16	165	493
08:15 AM	10	0	22	32	25	253	0	278	0	0	1	1	0	158	20	178	489
08:30 AM	8	0	34	42	59	293	1	353	0	0	5	5	0	153	9	162	562
08:45 AM	8	0	32	40	94	297	0	391	0	0	4	4	0	130	11	141	576
Total	41	0	113	154	218	1088	2	1308	0	0	12	12	0	590	56	646	2120
*** BREAK ***																	
04:00 PM	13	0	62	75	42	223	0	265	0	0	4	4	0	194	17	211	555
04:15 PM	7	0	67	74	44	218	0	262	0	0	2	2	0	227	31	258	596
04:30 PM	12	0	56	68	43	305	1	349	0	0	0	0	0	242	19	261	678
04:45 PM	15	0	64	79	50	274	0	324	0	0	0	0	0	256	17	273	676
Total	47	0	249	296	179	1020	1	1200	0	0	6	6	0	919	84	1003	2505
05:00 PM	9	0	82	91	36	259	1	296	0	0	1	1	0	189	24	213	601
05:15 PM	25	0	78	103	46	225	1	272	0	0	3	3	0	277	23	300	678
05:30 PM	4	0	75	79	43	286	0	329	0	0	5	5	0	218	20	238	651
05:45 PM	12	0	49	61	46	270	0	316	0	0	5	5	0	228	20	248	630
Total	50	0	284	334	171	1040	2	1213	0	0	14	14	0	912	87	999	2560
06:00 PM	7	0	58	65	42	183	0	225	0	0	3	3	0	190	15	205	498
06:15 PM	12	0	78	90	45	241	0	286	0	0	2	2	0	255	11	266	644
06:30 PM	8	0	66	74	33	225	0	258	0	0	0	0	0	225	20	245	577
06:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	255	13	268	270
Total	27	0	202	229	120	649	0	769	0	0	7	7	0	925	59	984	1989
Grand Total	248	0	1004	1252	974	5547	5	6526	0	0	47	47	0	4119	350	4469	12294
Apprch %	19.8	0	80.2		14.9	85	0.1		0	0	100		0	92.2	7.8		
Total %	2	0	8.2	10.2	7.9	45.1	0	53.1	0	0	0.4	0.4	0	33.5	2.8	36.4	
Cars &	234	0	985	1219	961	5392	5	6358	0	0	47	47	0	3956	324	4280	11904
% Cars &	94.4	0	98.1	97.4	98.7	97.2	100	97.4	0	0	100	100	0	96	92.6	95.8	96.8
Trucks &	13	0	18	31	13	115	0	128	0	0	0	0	0	123	24	147	306
% Trucks &	5.2	0	1.8	2.5	1.3	2.1	0	2	0	0	0	0	0	3	6.9	3.3	2.5
Semis	1	0	1	2	0	40	0	40	0	0	0	0	0	40	2	42	84
% Semis	0.4	0	0.1	0.2	0	0.7	0	0.6	0	0	0	0	0	1	0.6	0.9	0.7

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 2

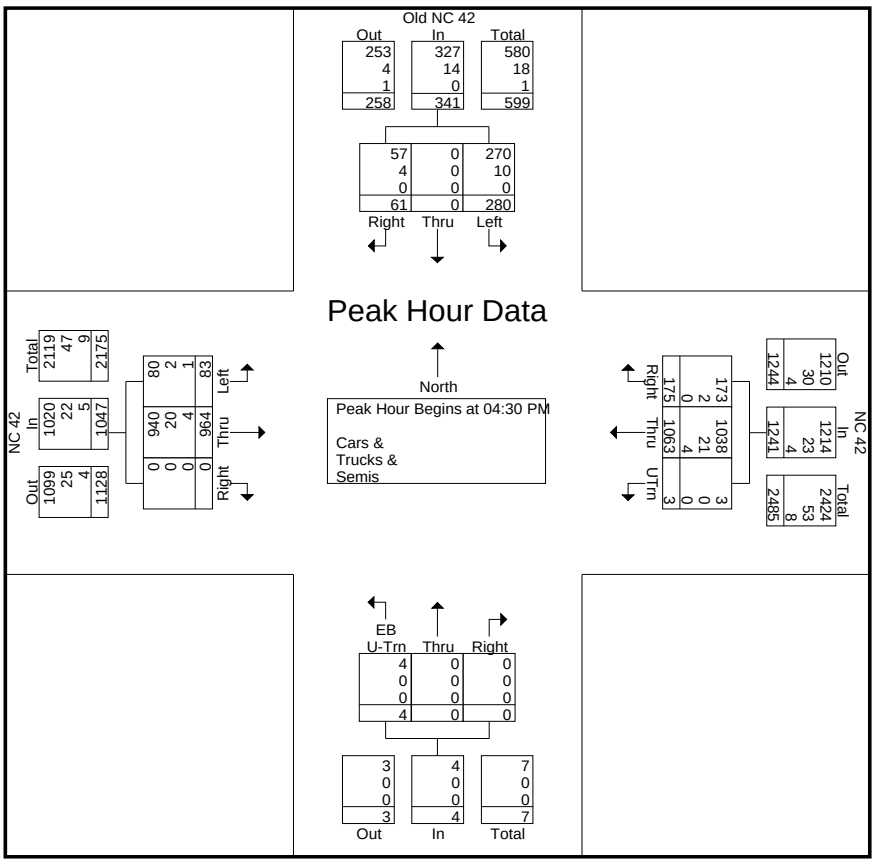
	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	10	0	16	26	61	335	0	396	0	0	1	1	0	102	9	111	534
07:00 AM	6	0	26	32	56	314	0	370	0	0	2	2	0	138	9	147	551
07:15 AM	18	0	32	50	53	281	0	334	0	0	2	2	0	145	17	162	548
07:30 AM	16	0	27	43	44	255	0	299	0	0	0	0	0	147	13	160	502
Total Volume	50	0	101	151	214	1185	0	1399	0	0	5	5	0	532	48	580	2135
% App. Total	33.1	0	66.9		15.3	84.7	0		0	0	100		0	91.7	8.3		
PHF	.694	.000	.789	.755	.877	.884	.000	.883	.000	.000	.625	.625	.000	.905	.706	.895	.969
Cars &	48	0	99	147	210	1152	0	1362	0	0	5	5	0	483	41	524	2038
% Cars &	96.0	0	98.0	97.4	98.1	97.2	0	97.4	0	0	100	100	0	90.8	85.4	90.3	95.5
Trucks &	2	0	2	4	4	23	0	27	0	0	0	0	0	38	6	44	75
% Trucks &	4.0	0	2.0	2.6	1.9	1.9	0	1.9	0	0	0	0	0	7.1	12.5	7.6	3.5
Semis	0	0	0	0	0	10	0	10	0	0	0	0	0	11	1	12	22
% Semis	0	0	0	0	0	0.8	0	0.7	0	0	0	0	0	2.1	2.1	2.1	1.0



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Old NC 42 and NC 42
Site Code : 00000003
Start Date : 5/9/2018
Page No : 3

	Old NC 42 From North				NC 42 From East				From South				NC 42 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	UTrn	App. Total	Right	Thru	EB U-Trn	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	0	56	68	43	305	1	349	0	0	0	0	0	242	19	261	678
04:45 PM	15	0	64	79	50	274	0	324	0	0	0	0	0	256	17	273	676
05:00 PM	9	0	82	91	36	259	1	296	0	0	1	1	0	189	24	213	601
05:15 PM	25	0	78	103	46	225	1	272	0	0	3	3	0	277	23	300	678
Total Volume	61	0	280	341	175	1063	3	1241	0	0	4	4	0	964	83	1047	2633
% App. Total	17.9	0	82.1		14.1	85.7	0.2		0	0	100		0	92.1	7.9		
PHF	.610	.000	.854	.828	.875	.871	.750	.889	.000	.000	.333	.333	.000	.870	.865	.873	.971
Cars &	57	0	270	327	173	1038	3	1214	0	0	4	4	0	940	80	1020	2565
% Cars &	93.4	0	96.4	95.9	98.9	97.6	100	97.8	0	0	100	100	0	97.5	96.4	97.4	97.4
Trucks &	4	0	10	14	2	21	0	23	0	0	0	0	0	20	2	22	59
% Trucks &	6.6	0	3.6	4.1	1.1	2.0	0	1.9	0	0	0	0	0	2.1	2.4	2.1	2.2
Semis	0	0	0	0	0	4	0	4	0	0	0	0	0	4	1	5	9
% Semis	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0	0.4	1.2	0.5	0.3



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 1

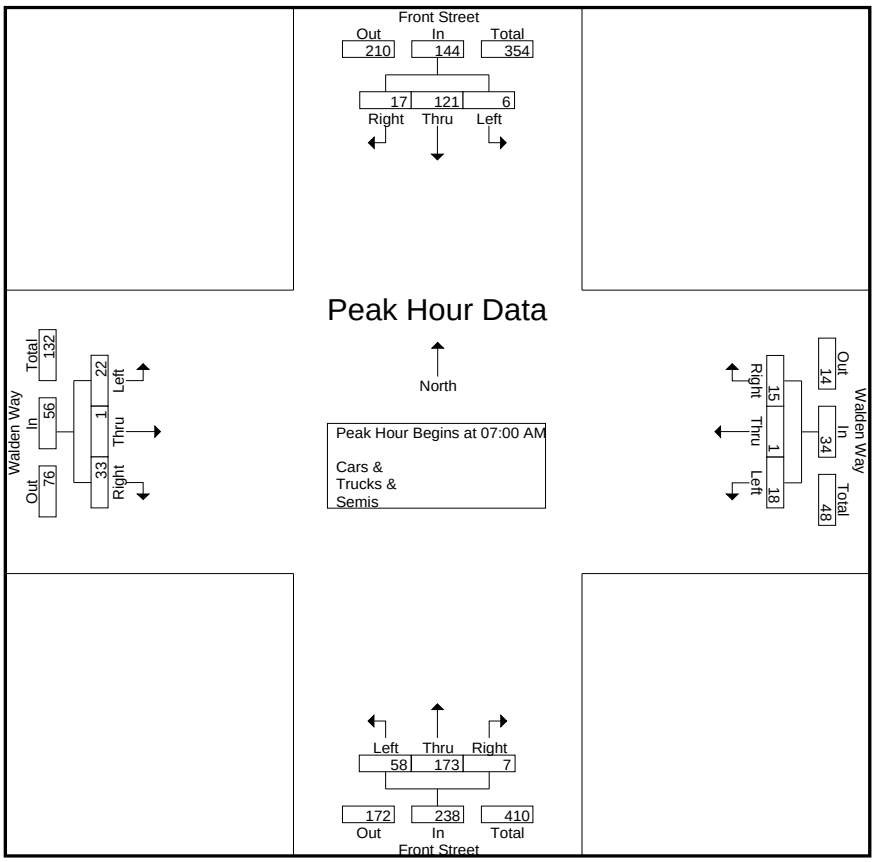
Groups Printed- Cars & - Trucks & - Semis

	Front Street From North				Walden Way From East				Front Street From South				Walden Way 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
06:30 AM	4	21	0	25	3	0	5	8	1	31	10	42	4	0	3	7	82
06:45 AM	5	20	0	25	4	1	4	9	1	54	15	70	4	0	4	8	112
Total	9	41	0	50	7	1	9	17	2	85	25	112	8	0	7	15	194
07:00 AM	6	25	0	31	5	0	0	5	2	52	12	66	5	1	7	13	115
07:15 AM	0	29	5	34	4	1	7	12	3	43	19	65	8	0	4	12	123
07:30 AM	5	32	1	38	5	0	3	8	1	46	11	58	6	0	6	12	116
07:45 AM	6	35	0	41	1	0	8	9	1	32	16	49	14	0	5	19	118
Total	17	121	6	144	15	1	18	34	7	173	58	238	33	1	22	56	472
08:00 AM	3	19	1	23	2	1	11	14	2	32	22	56	3	0	3	6	99
08:15 AM	4	20	0	24	1	0	8	9	0	23	12	35	6	0	3	9	77
08:30 AM	3	26	0	29	1	0	7	8	5	43	19	67	7	1	1	9	113
08:45 AM	9	28	0	37	3	1	6	10	2	85	16	103	14	0	6	20	170
Total	19	93	1	113	7	2	32	41	9	183	69	261	30	1	13	44	459
*** BREAK ***																	
04:00 PM	10	46	1	57	2	0	4	6	5	34	20	59	21	1	5	27	149
04:15 PM	5	50	2	57	2	0	3	5	6	42	21	69	22	0	5	27	158
04:30 PM	6	41	3	50	0	0	3	3	2	41	15	58	23	0	4	27	138
04:45 PM	14	53	3	70	4	1	4	9	4	47	16	67	24	0	4	28	174
Total	35	190	9	234	8	1	14	23	17	164	72	253	90	1	18	109	619
05:00 PM	7	52	3	62	0	0	0	0	6	27	17	50	24	0	5	29	141
05:15 PM	7	62	2	71	0	2	5	7	3	43	21	67	26	1	7	34	179
05:30 PM	9	53	2	64	0	0	6	6	4	44	16	64	19	1	3	23	157
05:45 PM	12	38	0	50	2	1	4	7	4	47	11	62	17	1	5	23	142
Total	35	205	7	247	2	3	15	20	17	161	65	243	86	3	20	109	619
06:00 PM	4	49	1	54	0	0	2	2	5	32	18	55	13	1	5	19	130
06:15 PM	5	67	0	72	2	0	3	5	3	38	13	54	18	1	11	30	161
06:30 PM	6	57	3	66	0	2	5	7	3	36	10	49	10	2	6	18	140
06:45 PM	4	31	3	38	2	0	7	9	3	25	13	41	18	0	4	22	110
Total	19	204	7	230	4	2	17	23	14	131	54	199	59	4	26	89	541
Grand Total	134	854	30	1018	43	10	105	158	66	897	343	1306	306	10	106	422	2904
Apprch %	13.2	83.9	2.9		27.2	6.3	66.5		5.1	68.7	26.3		72.5	2.4	25.1		
Total %	4.6	29.4	1	35.1	1.5	0.3	3.6	5.4	2.3	30.9	11.8	45	10.5	0.3	3.7	14.5	
Cars &	130	834	29	993	37	10	105	152	61	885	326	1272	293	10	103	406	2823
% Cars &	97	97.7	96.7	97.5	86	100	100	96.2	92.4	98.7	95	97.4	95.8	100	97.2	96.2	97.2
Trucks &	4	20	1	25	6	0	0	6	5	12	16	33	11	0	3	14	78
% Trucks &	3	2.3	3.3	2.5	14	0	0	3.8	7.6	1.3	4.7	2.5	3.6	0	2.8	3.3	2.7
Semis	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3
% Semis	0	0	0	0	0	0	0	0	0	0	0.3	0.1	0.7	0	0	0.5	0.1

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 2

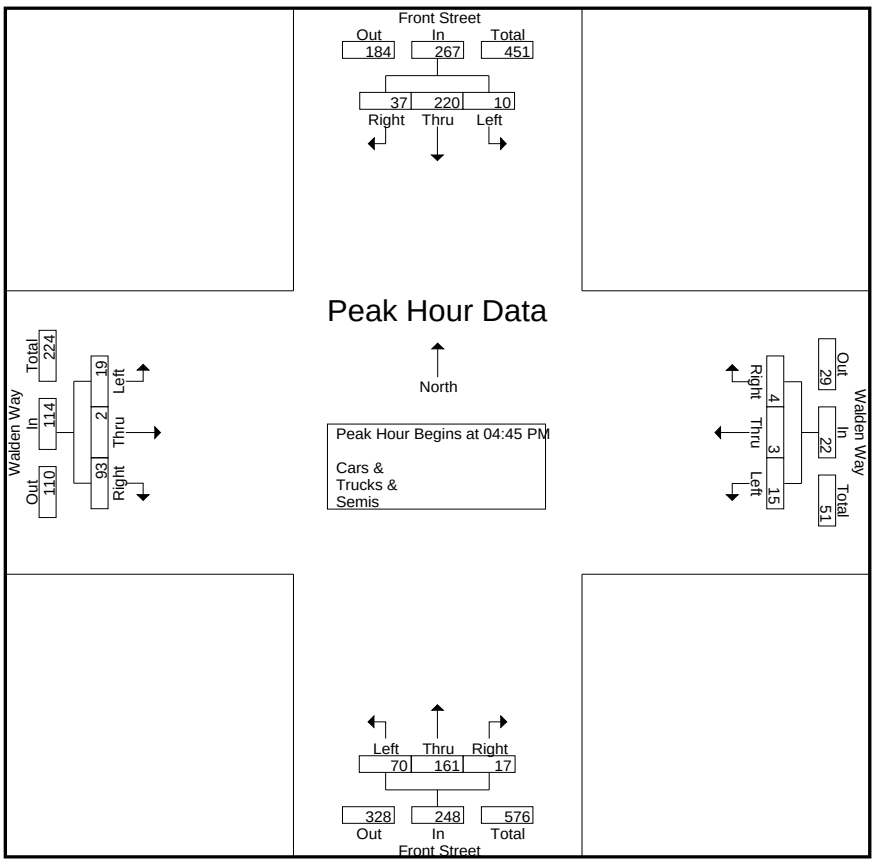
	Front Street From North				Walden Way From East				Front Street From South				Walden Way From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	25	0	31	5	0	0	5	2	52	12	66	5	1	7	13	115
07:15 AM	0	29	5	34	4	1	7	12	3	43	19	65	8	0	4	12	123
07:30 AM	5	32	1	38	5	0	3	8	1	46	11	58	6	0	6	12	116
07:45 AM	6	35	0	41	1	0	8	9	1	32	16	49	14	0	5	19	118
Total Volume	17	121	6	144	15	1	18	34	7	173	58	238	33	1	22	56	472
% App. Total	11.8	84	4.2		44.1	2.9	52.9		2.9	72.7	24.4		58.9	1.8	39.3		
PHF	.708	.864	.300	.878	.750	.250	.563	.708	.583	.832	.763	.902	.589	.250	.786	.737	.959



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Walden Way
Site Code : 00000002
Start Date : 5/9/2018
Page No : 3

	Front Street From North				Walden Way From East				Front Street From South				Walden Way 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	53	3	70	4	1	4	9	4	47	16	67	24	0	4	28	174
05:00 PM	7	52	3	62	0	0	0	0	6	27	17	50	24	0	5	29	141
05:15 PM	7	62	2	71	0	2	5	7	3	43	21	67	26	1	7	34	179
05:30 PM	9	53	2	64	0	0	6	6	4	44	16	64	19	1	3	23	157
Total Volume	37	220	10	267	4	3	15	22	17	161	70	248	93	2	19	114	651
% App. Total	13.9	82.4	3.7		18.2	13.6	68.2		6.9	64.9	28.2		81.6	1.8	16.7		
PHF	.661	.887	.833	.940	.250	.375	.625	.611	.708	.856	.833	.925	.894	.500	.679	.838	.909



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 1

Groups Printed- Cars & - Trucks & - Semis

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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
06:30 AM	9	0	13	22	1	36	0	37	0	0	0	0	0	13	0	13	72
06:45 AM	8	0	11	19	0	59	0	59	0	0	0	0	0	15	0	15	93
Total	17	0	24	41	1	95	0	96	0	0	0	0	0	28	0	28	165
07:00 AM	10	0	8	18	1	61	0	62	0	0	0	0	0	21	1	22	102
07:15 AM	6	0	7	13	1	45	0	46	0	0	0	0	0	23	2	25	84
07:30 AM	7	0	6	13	2	52	0	54	0	0	0	0	0	29	0	29	96
07:45 AM	4	0	7	11	0	37	0	37	0	0	0	0	0	33	1	34	82
Total	27	0	28	55	4	195	0	199	0	0	0	0	0	106	4	110	364
08:00 AM	2	0	7	9	3	32	0	35	0	0	0	0	0	20	0	20	64
08:15 AM	5	0	5	10	0	22	0	22	0	0	0	0	0	16	1	17	49
08:30 AM	6	0	5	11	1	42	0	43	0	0	0	0	0	28	0	28	82
08:45 AM	1	0	3	4	2	89	0	91	0	0	0	0	0	26	2	28	123
Total	14	0	20	34	6	185	0	191	0	0	0	0	0	90	3	93	318
*** BREAK ***																	
04:00 PM	5	0	4	9	4	36	0	40	0	0	0	0	0	50	1	51	100
04:15 PM	4	0	1	5	11	32	0	43	0	0	0	0	0	44	10	54	102
04:30 PM	6	0	1	7	9	36	0	45	0	0	0	0	0	48	4	52	104
04:45 PM	4	0	1	5	6	46	0	52	0	0	0	0	0	63	7	70	127
Total	19	0	7	26	30	150	0	180	0	0	0	0	0	205	22	227	433
05:00 PM	4	0	3	7	1	30	0	31	0	0	0	0	0	67	8	75	113
05:15 PM	8	0	3	11	7	41	0	48	0	0	0	0	0	56	4	60	119
05:30 PM	5	0	3	8	8	36	0	44	0	0	0	0	0	56	8	64	116
05:45 PM	1	0	3	4	4	45	0	49	0	0	0	0	0	41	4	45	98
Total	18	0	12	30	20	152	0	172	0	0	0	0	0	220	24	244	446
06:00 PM	7	0	4	11	9	31	0	40	1	0	0	1	0	48	6	54	106
06:15 PM	7	0	4	11	8	43	0	51	0	0	0	0	0	67	7	74	136
06:30 PM	4	0	3	7	11	26	0	37	0	0	0	0	0	60	6	66	110
06:45 PM	4	0	2	6	8	26	0	34	0	0	0	0	0	31	7	38	78
Total	22	0	13	35	36	126	0	162	1	0	0	1	0	206	26	232	430
Grand Total	117	0	104	221	97	903	0	1000	1	0	0	1	0	855	79	934	2156
Apprch %	52.9	0	47.1		9.7	90.3	0		100	0	0		0	91.5	8.5		
Total %	5.4	0	4.8	10.3	4.5	41.9	0	46.4	0	0	0	0	0	39.7	3.7	43.3	
Cars &	117	0	101	218	93	892	0	985	1	0	0	1	0	837	79	916	2120
% Cars &	100	0	97.1	98.6	95.9	98.8	0	98.5	100	0	0	100	0	97.9	100	98.1	98.3
Trucks &	0	0	3	3	4	10	0	14	0	0	0	0	0	17	0	17	34
% Trucks &	0	0	2.9	1.4	4.1	1.1	0	1.4	0	0	0	0	0	2	0	1.8	1.6
Semis	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% Semis	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1	0.1

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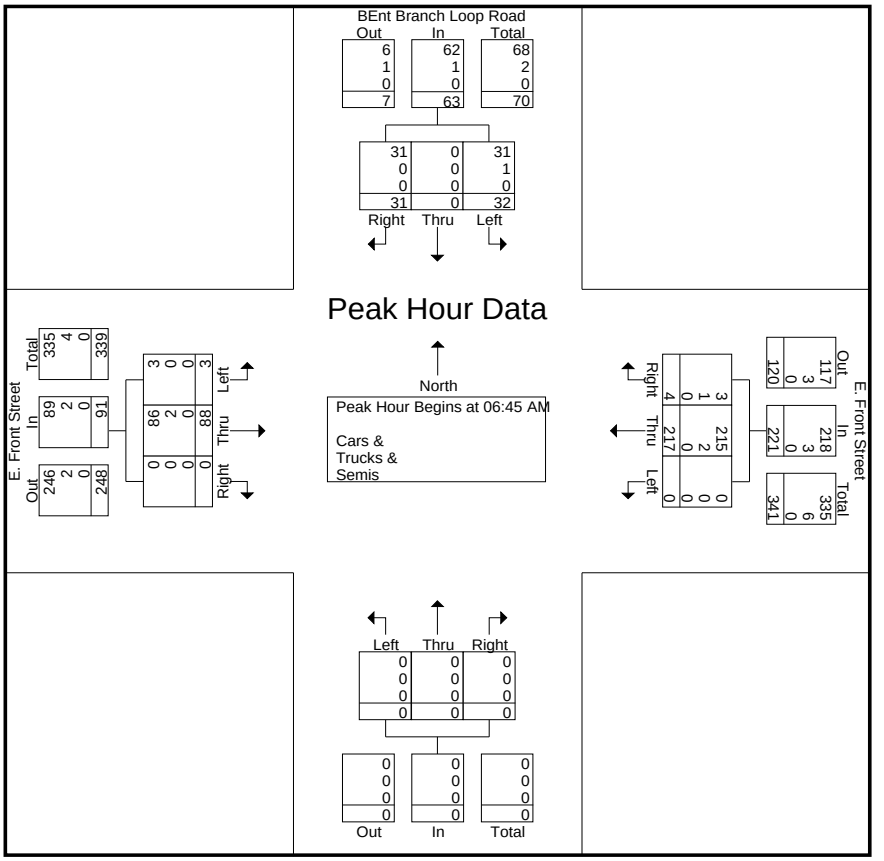
File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 2

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	8	0	11	19	0	59	0	59	0	0	0	0	0	15	0	15	93
07:00 AM	10	0	8	18	1	61	0	62	0	0	0	0	0	21	1	22	102
07:15 AM	6	0	7	13	1	45	0	46	0	0	0	0	0	23	2	25	84
07:30 AM	7	0	6	13	2	52	0	54	0	0	0	0	0	29	0	29	96
Total Volume	31	0	32	63	4	217	0	221	0	0	0	0	0	88	3	91	375
% App. Total	49.2	0	50.8		1.8	98.2	0		0	0	0		0	96.7	3.3		
PHF	.775	.000	.727	.829	.500	.889	.000	.891	.000	.000	.000	.000	.000	.759	.375	.784	.919
Cars &	31	0	31	62	3	215	0	218	0	0	0	0	0	86	3	89	369
% Cars &	100	0	96.9	98.4	75.0	99.1	0	98.6	0	0	0	0	0	97.7	100	97.8	98.4
Trucks &	0	0	1	1	1	2	0	3	0	0	0	0	0	2	0	2	6
% Trucks &	0	0	3.1	1.6	25.0	0.9	0	1.4	0	0	0	0	0	2.3	0	2.2	1.6
Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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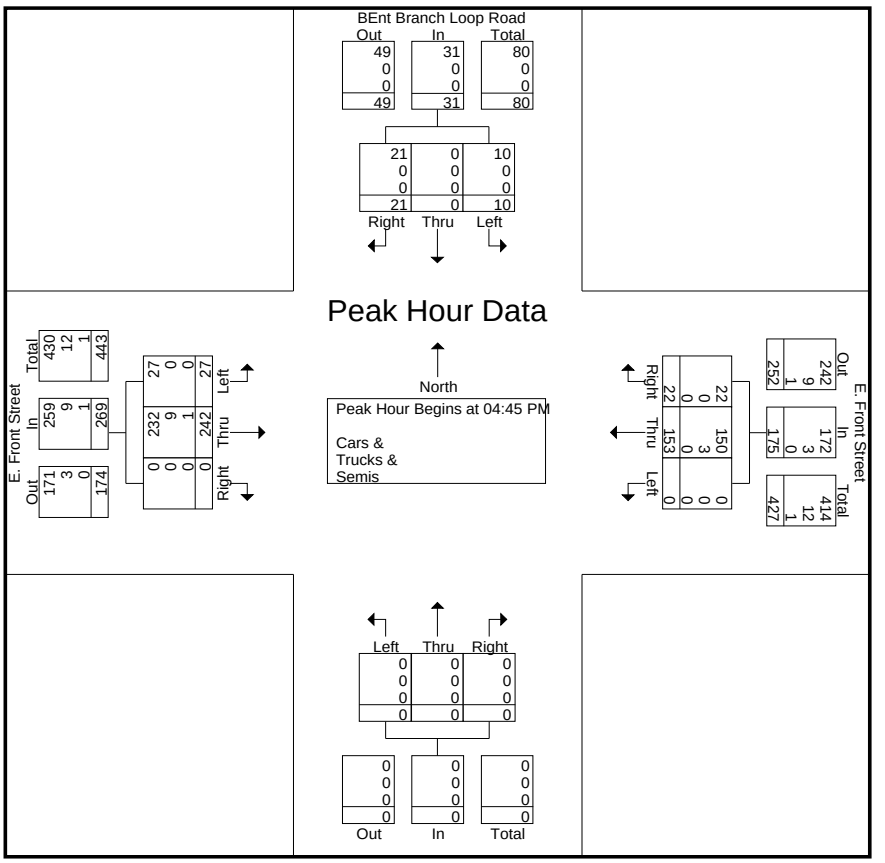
File Name : Front Street and Bent Branch Loop Road
Site Code : 00000005
Start Date : 5/9/2018
Page No : 3

	BEnt Branch Loop Road From North				E. Front Street From East				From South				E. Front 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	0	1	5	6	46	0	52	0	0	0	0	0	63	7	70	127
05:00 PM	4	0	3	7	1	30	0	31	0	0	0	0	0	67	8	75	113
05:15 PM	8	0	3	11	7	41	0	48	0	0	0	0	0	56	4	60	119
05:30 PM	5	0	3	8	8	36	0	44	0	0	0	0	0	56	8	64	116
Total Volume	21	0	10	31	22	153	0	175	0	0	0	0	0	242	27	269	475
% App. Total	67.7	0	32.3		12.6	87.4	0		0	0	0		0	90	10		
PHF	.656	.000	.833	.705	.688	.832	.000	.841	.000	.000	.000	.000	.000	.903	.844	.897	.935
Cars &	21	0	10	31	22	150	0	172	0	0	0	0	0	232	27	259	462
% Cars &	100	0	100	100	100	98.0	0	98.3	0	0	0	0	0	95.9	100	96.3	97.3
Trucks &	0	0	0	0	0	3	0	3	0	0	0	0	0	9	0	9	12
% Trucks &	0	0	0	0	0	2.0	0	1.7	0	0	0	0	0	3.7	0	3.3	2.5
Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0.4	0.2



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 1

Groups Printed- Cars & - Trucks & - Semis

	E. Main Street From North				Central Street From East				E. Main Street 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
06:30 AM	0	22	6	28	31	0	4	35	22	32	0	54	0	0	0	0	117
06:45 AM	0	16	7	23	40	0	16	56	16	42	0	58	0	0	0	0	137
Total	0	38	13	51	71	0	20	91	38	74	0	112	0	0	0	0	254
07:00 AM	0	31	18	49	43	0	13	56	21	48	0	69	0	0	0	0	174
07:15 AM	0	30	17	47	29	0	28	57	41	41	0	82	0	0	0	0	186
07:30 AM	0	38	32	70	36	0	27	63	54	44	0	98	0	0	0	0	231
07:45 AM	0	39	19	58	26	0	32	58	23	40	0	63	0	0	0	0	179
Total	0	138	86	224	134	0	100	234	139	173	0	312	0	0	0	0	770
08:00 AM	0	32	15	47	20	0	22	42	11	40	0	51	0	0	0	0	140
08:15 AM	0	28	16	44	24	0	14	38	7	40	0	47	0	0	0	0	129
08:30 AM	0	31	13	44	35	0	15	50	18	28	0	46	0	0	0	0	140
08:45 AM	0	31	19	50	49	0	14	63	11	48	0	59	0	0	0	0	172
Total	0	122	63	185	128	0	65	193	47	156	0	203	0	0	0	0	581
09:00 AM	0	1	0	1	0	0	3	3	1	2	0	3	0	0	0	0	7
*** BREAK ***																	
Total	0	1	0	1	0	0	3	3	1	2	0	3	0	0	0	0	7
*** BREAK ***																	
04:00 PM	0	56	41	97	31	0	46	77	36	45	0	81	0	0	0	0	255
04:15 PM	0	60	53	113	36	0	25	61	34	41	0	75	0	0	0	0	249
04:30 PM	0	55	41	96	27	0	19	46	12	57	0	69	0	0	0	0	211
04:45 PM	0	77	46	123	34	0	15	49	25	56	0	81	0	0	0	0	253
Total	0	248	181	429	128	0	105	233	107	199	0	306	0	0	0	0	968
05:00 PM	0	82	40	122	22	0	21	43	29	54	0	83	0	0	0	0	248
05:15 PM	0	74	32	106	26	0	29	55	33	59	0	92	0	0	0	0	253
05:30 PM	0	81	46	127	25	0	31	56	23	45	0	68	0	0	0	0	251
05:45 PM	0	73	32	105	30	0	19	49	27	43	0	70	0	0	0	0	224
Total	0	310	150	460	103	0	100	203	112	201	0	313	0	0	0	0	976
06:00 PM	0	61	34	95	14	0	20	34	25	45	0	70	0	0	0	0	199
06:15 PM	1	86	45	132	28	0	19	47	28	39	0	67	0	0	0	0	246
06:30 PM	0	71	49	120	18	0	18	36	27	32	0	59	0	0	0	0	215
06:45 PM	0	64	34	98	28	0	22	50	22	58	0	80	0	0	0	0	228
Total	1	282	162	445	88	0	79	167	102	174	0	276	0	0	0	0	888
Grand Total	1	1139	655	1795	652	0	472	1124	546	979	0	1525	0	0	0	0	4444
Apprch %	0.1	63.5	36.5		58	0	42		35.8	64.2	0		0	0	0		
Total %	0	25.6	14.7	40.4	14.7	0	10.6	25.3	12.3	22	0	34.3	0	0	0	0	
Cars &	1	1116	648	1765	646	0	463	1109	533	959	0	1492	0	0	0	0	4366
% Cars &	100	98	98.9	98.3	99.1	0	98.1	98.7	97.6	98	0	97.8	0	0	0	0	98.2
Trucks &	0	19	7	26	6	0	9	15	13	18	0	31	0	0	0	0	72
% Trucks &	0	1.7	1.1	1.4	0.9	0	1.9	1.3	2.4	1.8	0	2	0	0	0	0	1.6
Semis	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
% Semis	0	0.4	0	0.2	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1

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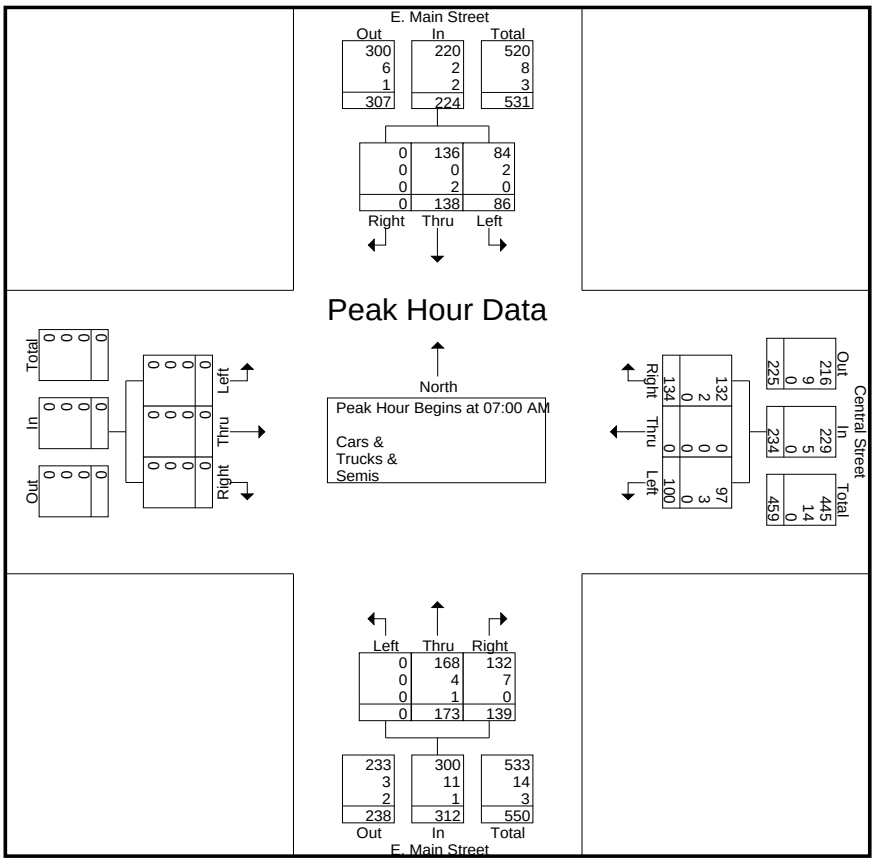
PH: 919 872-5115

File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 2

	E. Main Street From North				Central Street From East				E. Main Street 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	31	18	49	43	0	13	56	21	48	0	69	0	0	0	0	174
07:15 AM	0	30	17	47	29	0	28	57	41	41	0	82	0	0	0	0	186
07:30 AM	0	38	32	70	36	0	27	63	54	44	0	98	0	0	0	0	231
07:45 AM	0	39	19	58	26	0	32	58	23	40	0	63	0	0	0	0	179
Total Volume	0	138	86	224	134	0	100	234	139	173	0	312	0	0	0	0	770
% App. Total	0	61.6	38.4		57.3	0	42.7		44.6	55.4	0		0	0	0		
PHF	.000	.885	.672	.800	.779	.000	.781	.929	.644	.901	.000	.796	.000	.000	.000	.000	.833
Cars &	0	136	84	220	132	0	97	229	132	168	0	300	0	0	0	0	749
% Cars &	0	98.6	97.7	98.2	98.5	0	97.0	97.9	95.0	97.1	0	96.2	0	0	0	0	97.3
Trucks &	0	0	2	2	2	0	3	5	7	4	0	11	0	0	0	0	18
% Trucks &	0	0	2.3	0.9	1.5	0	3.0	2.1	5.0	2.3	0	3.5	0	0	0	0	2.3
Semis	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% Semis	0	1.4	0	0.9	0	0	0	0	0	0.6	0	0.3	0	0	0	0	0.4



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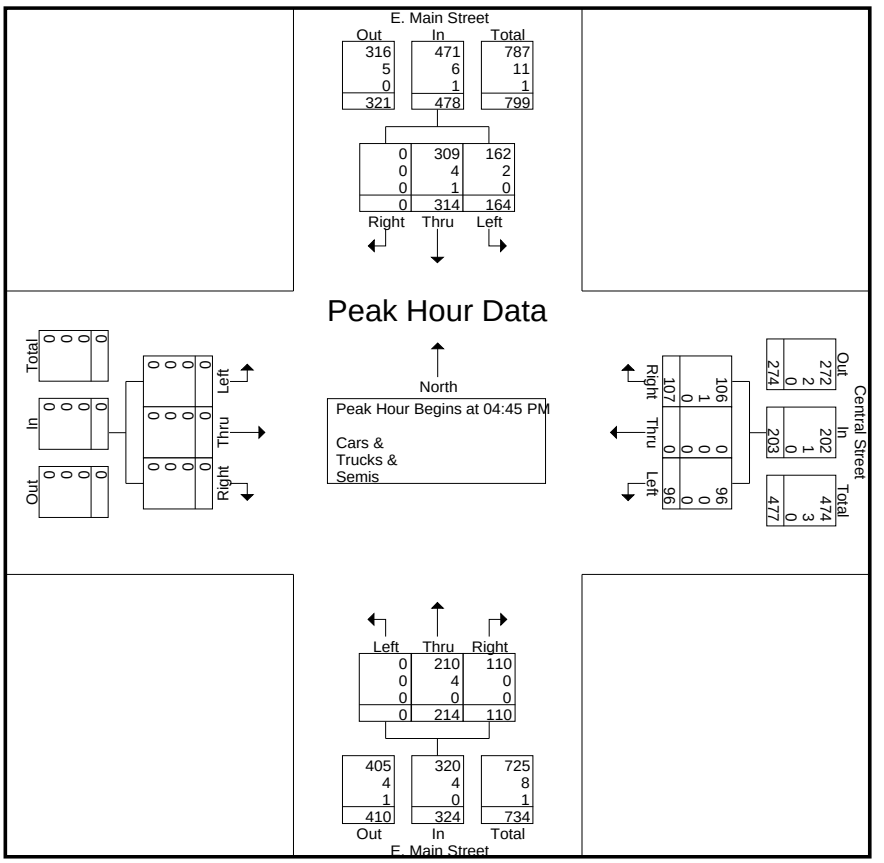
File Name : E. Main Street and Central Street
Site Code : 00000004
Start Date : 5/9/2018
Page No : 3

	E. Main Street From North				Central Street From East				E. Main Street 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	77	46	123	34	0	15	49	25	56	0	81	0	0	0	0	253
05:00 PM	0	82	40	122	22	0	21	43	29	54	0	83	0	0	0	0	248
05:15 PM	0	74	32	106	26	0	29	55	33	59	0	92	0	0	0	0	253
05:30 PM	0	81	46	127	25	0	31	56	23	45	0	68	0	0	0	0	251
Total Volume	0	314	164	478	107	0	96	203	110	214	0	324	0	0	0	0	1005
% App. Total	0	65.7	34.3		52.7	0	47.3		34	66	0		0	0	0		
PHF	.000	.957	.891	.941	.787	.000	.774	.906	.833	.907	.000	.880	.000	.000	.000	.000	.993
Cars &	0	309	162	471	106	0	96	202	110	210	0	320	0	0	0	0	993
% Cars &	0	98.4	98.8	98.5	99.1	0	100	99.5	100	98.1	0	98.8	0	0	0	0	98.8
Trucks &	0	4	2	6	1	0	0	1	0	4	0	4	0	0	0	0	11
% Trucks &	0	1.3	1.2	1.3	0.9	0	0	0.5	0	1.9	0	1.2	0	0	0	0	1.1
Semis	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Semis	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1



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File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 1

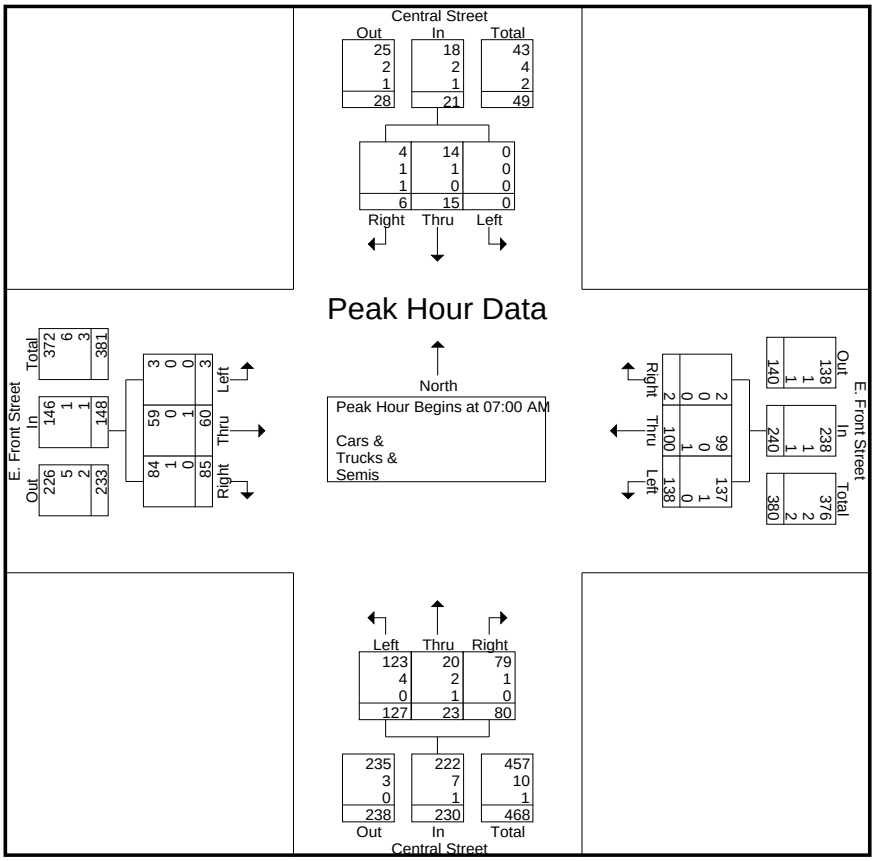
Groups Printed- Cars & - Trucks & - Semis

	Central Street From North				E. Front Street From East				Central Street From South				E. Front 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
06:30 AM	0	5	0	5	0	9	32	41	7	2	17	26	9	7	1	17	89
06:45 AM	0	4	0	4	0	29	40	69	6	4	13	23	11	9	1	21	117
Total	0	9	0	9	0	38	72	110	13	6	30	49	20	16	2	38	206
07:00 AM	3	4	0	7	2	25	48	75	18	4	20	42	8	10	0	18	142
07:15 AM	2	5	0	7	0	29	29	58	13	4	42	59	23	16	0	39	163
07:30 AM	0	4	0	4	0	32	33	65	30	8	51	89	25	11	1	37	195
07:45 AM	1	2	0	3	0	14	28	42	19	7	14	40	29	23	2	54	139
Total	6	15	0	21	2	100	138	240	80	23	127	230	85	60	3	148	639
08:00 AM	0	5	2	7	3	15	18	36	13	4	7	24	17	10	4	31	98
08:15 AM	0	2	0	2	0	10	22	32	16	3	9	28	12	9	1	22	84
08:30 AM	0	3	0	3	1	13	44	58	17	7	7	31	6	15	2	23	115
*** BREAK ***																	
Total	0	10	2	12	4	38	84	126	46	14	23	83	35	34	7	76	297
*** BREAK ***																	
04:00 PM	0	4	0	4	5	23	38	66	34	21	22	77	32	19	4	55	202
04:15 PM	0	2	1	3	5	31	40	76	43	22	19	84	17	21	0	38	201
04:30 PM	0	0	0	0	2	23	30	55	38	7	10	55	13	20	2	35	145
04:45 PM	1	1	0	2	2	21	42	65	48	14	11	73	8	32	2	42	182
Total	1	7	1	9	14	98	150	262	163	64	62	289	70	92	8	170	730
05:00 PM	0	4	0	4	1	18	22	41	41	9	18	68	17	30	2	49	162
05:15 PM	0	3	0	3	2	26	28	56	32	5	23	60	27	38	3	68	187
05:30 PM	1	3	0	4	1	18	34	53	43	7	21	71	27	18	1	46	174
05:45 PM	1	5	0	6	1	24	27	52	34	8	17	59	18	16	2	36	153
Total	2	15	0	17	5	86	111	202	150	29	79	258	89	102	8	199	676
06:00 PM	0	2	0	2	0	24	18	42	32	4	25	61	19	22	2	43	148
06:15 PM	0	2	0	2	1	28	28	57	47	10	17	74	12	27	3	42	175
06:30 PM	0	2	0	2	1	20	19	40	47	6	23	76	11	20	6	37	155
06:45 PM	1	2	0	3	1	14	28	43	29	6	17	52	12	15	1	28	126
Total	1	8	0	9	3	86	93	182	155	26	82	263	54	84	12	150	604
Grand Total	10	64	3	77	28	446	648	1122	607	162	403	1172	353	388	40	781	3152
Apprch %	13	83.1	3.9		2.5	39.8	57.8		51.8	13.8	34.4		45.2	49.7	5.1		
Total %	0.3	2	0.1	2.4	0.9	14.1	20.6	35.6	19.3	5.1	12.8	37.2	11.2	12.3	1.3	24.8	
Cars &	8	61	3	72	28	443	645	1116	605	159	396	1160	349	379	39	767	3115
% Cars &	80	95.3	100	93.5	100	99.3	99.5	99.5	99.7	98.1	98.3	99	98.9	97.7	97.5	98.2	98.8
Trucks &	1	3	0	4	0	2	3	5	2	2	5	9	3	6	1	10	28
% Trucks &	10	4.7	0	5.2	0	0.4	0.5	0.4	0.3	1.2	1.2	0.8	0.8	1.5	2.5	1.3	0.9
Semis	1	0	0	1	0	1	0	1	0	1	2	3	1	3	0	4	9
% Semis	10	0	0	1.3	0	0.2	0	0.1	0	0.6	0.5	0.3	0.3	0.8	0	0.5	0.3

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 2

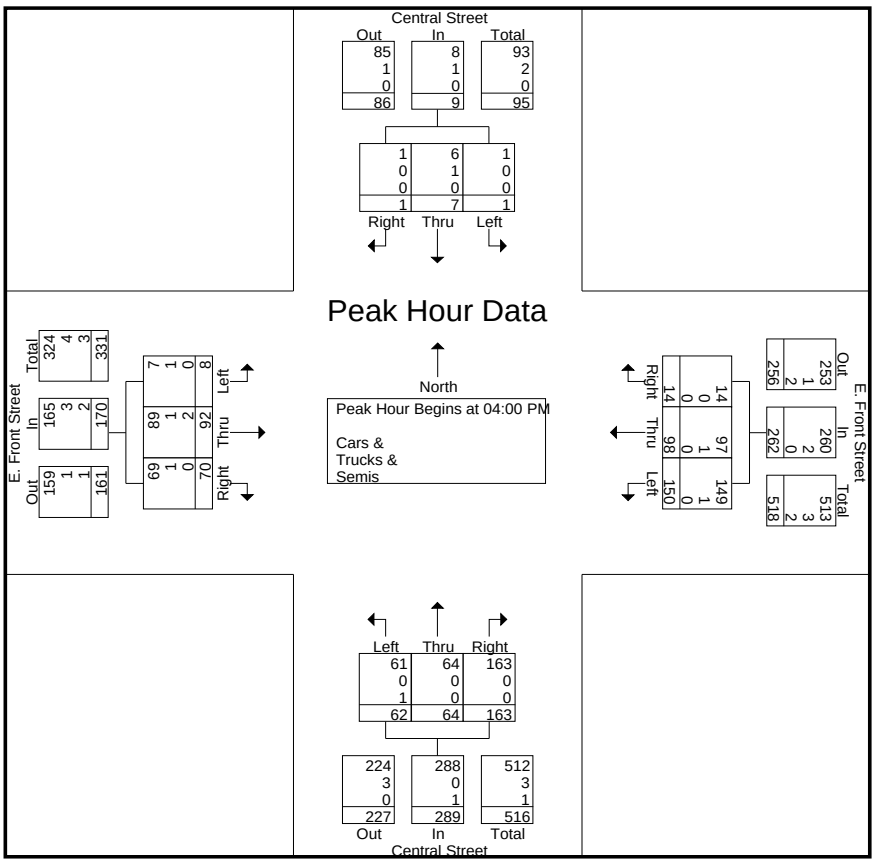
	Central Street From North				E. Front Street From East				Central Street From South				E. Front Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	4	0	7	2	25	48	75	18	4	20	42	8	10	0	18	142
07:15 AM	2	5	0	7	0	29	29	58	13	4	42	59	23	16	0	39	163
07:30 AM	0	4	0	4	0	32	33	65	30	8	51	89	25	11	1	37	195
07:45 AM	1	2	0	3	0	14	28	42	19	7	14	40	29	23	2	54	139
Total Volume	6	15	0	21	2	100	138	240	80	23	127	230	85	60	3	148	639
% App. Total	28.6	71.4	0		0.8	41.7	57.5		34.8	10	55.2		57.4	40.5	2		
PHF	.500	.750	.000	.750	.250	.781	.719	.800	.667	.719	.623	.646	.733	.652	.375	.685	.819
Cars &	4	14	0	18	2	99	137	238	79	20	123	222	84	59	3	146	624
% Cars &	66.7	93.3	0	85.7	100	99.0	99.3	99.2	98.8	87.0	96.9	96.5	98.8	98.3	100	98.6	97.7
Trucks &	1	1	0	2	0	0	1	1	1	2	4	7	1	0	0	1	11
% Trucks &	16.7	6.7	0	9.5	0	0	0.7	0.4	1.3	8.7	3.1	3.0	1.2	0	0	0.7	1.7
Semis	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	4
% Semis	16.7	0	0	4.8	0	1.0	0	0.4	0	4.3	0	0.4	0	1.7	0	0.7	0.6



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Central Street and Front Street
Site Code : 00000001
Start Date : 5/9/2018
Page No : 3

	Central Street From North				E. Front Street From East				Central Street From South				E. Front 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 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	4	0	4	5	23	38	66	34	21	22	77	32	19	4	55	202
04:15 PM	0	2	1	3	5	31	40	76	43	22	19	84	17	21	0	38	201
04:30 PM	0	0	0	0	2	23	30	55	38	7	10	55	13	20	2	35	145
04:45 PM	1	1	0	2	2	21	42	65	48	14	11	73	8	32	2	42	182
Total Volume	1	7	1	9	14	98	150	262	163	64	62	289	70	92	8	170	730
% App. Total	11.1	77.8	11.1		5.3	37.4	57.3		56.4	22.1	21.5		41.2	54.1	4.7		
PHF	.250	.438	.250	.563	.700	.790	.893	.862	.849	.727	.705	.860	.547	.719	.500	.773	.903
Cars &	1	6	1	8	14	97	149	260	163	64	61	288	69	89	7	165	721
% Cars &	100	85.7	100	88.9	100	99.0	99.3	99.2	100	100	98.4	99.7	98.6	96.7	87.5	97.1	98.8
Trucks &	0	1	0	1	0	1	1	2	0	0	0	0	1	1	1	3	6
% Trucks &	0	14.3	0	11.1	0	1.0	0.7	0.8	0	0	0	0	1.4	1.1	12.5	1.8	0.8
Semis	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	3
% Semis	0	0	0	0	0	0	0	0	0	0	1.6	0.3	0	2.2	0	1.2	0.4

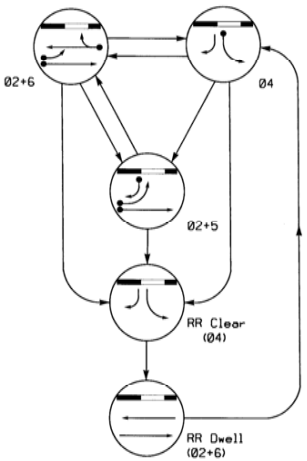


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

APPENDIX C

SIGNAL INFORMATION

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE					
	Ø2+5	Ø2+6	Ø4	CRR Entrance	CRR Exit	CRR Island
21	G	G	R	R	G	Y
22	G	G	R	R	G	Y
41	R	R	G	G	R	R
42	R	R	G	G	R	R
61, 62	R	G	R	R	G	Y
Sign B	OFF	OFF	OFF	ON	ON	*
Sign C	OFF	OFF	OFF	ON	ON	*

* See Note 5.

SIGNAL FACE I.D.

All Heads L.E.D.

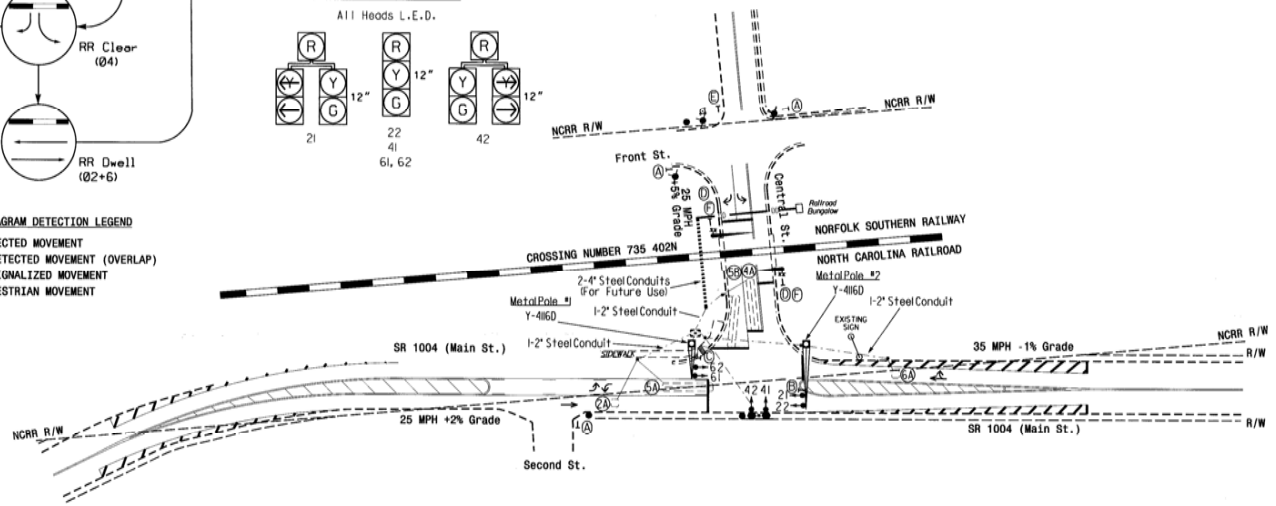
OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

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	6X6	70	3	-	2	Y	Y	-	—	—	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	—	3	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	—	15	-	-
					2	Y	Y	-	—	—	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	—	15	-	-
6A	6X6	70	3	-	6	Y	Y	-	—	—	-	-

3 Phase
Fully Actuated
With Railroad Preemption
(Isolated)

NOTES

1. Refer to "Roadway Standard Drawi NCDOT" dated July 2006 and "Standard Specifications for Roa and Structures" dated July 2006. work shall also be completed in accordance with North Carolina Railroad (NCRR) Specifications N and NCR 102.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 5 may be lagged.
4. Set all detector units to presen mode.
5. Ensure flashing operation does n alter operation of blankout sign
6. Program parent phases for Overla "P" for all phases used in norma operation.



LEGEND

PROPOSED		EXIST
	Traffic Signal Head	●
	Modified Signal Head	N/
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Pedestrian Signal Pedestal	●
	Metal Pole with Mastarm	□
	Signal Pole with Guy	●
	Signal Pole with Sidewalk Guy	●
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Steel Conduit	
N/A	4-in Underground Steel Conduit (2 Conduits)	
N/A	Right of Way	
	Directional Arrow	
N/A	Railroad Tracks	
N/A	Railroad Gate and Flasher	
Ⓐ	"STOP" Sign (R1-1)	Ⓐ
Ⓑ	"NO LEFT TURN - TRAIN" L.E.D. Blankout Sign	Ⓑ
Ⓒ	"NO RIGHT TURN - TRAIN" L.E.D. Blankout Sign	Ⓒ
Ⓓ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓓ
Ⓔ	"DO NOT BLOCK INTERSECTION" Sign (R10-7)	Ⓔ
Ⓕ	"STOP HERE WHEN FLASHING" Sign (R8-10)	Ⓕ

OASIS 2070L TIMING CHART

FEATURE	PHASE			
	2	4	5	6
Min Green 1 *	10	7	7	10
Extension 1 *	3.0	2.0	2.0	3.0
Max Green 1 *	45	25	15	45
Yellow Clearance	3.9	3.0	3.0	3.7
Red Clearance	1.1	2.1	1.8	1.3
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
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.

2070 RAIL PREEMPTION

Interval 1 - Track Clearance Green	20
Interval 1 - Track Clearance Yellow	3.0
Interval 1 - Track Clearance Red	2.1
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
Delay Time	0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	3.9
Red Clear Before Pre	1.1
Dwell Min Time	10
Ped Clear Through Yellow	N
Omit Overlaps	P

* Time defaults to time used for phase during normal operation.

Plan of Record

PREPARED BY: L. D. Young DATE: December 2010
REVIEWED BY: P. L. Alexander DATE: December 2010
SIGNATURE: DATE: 1/3/11
COMMENTS
Removed backplates.
This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from its original state.

PLAN OF RECORD

Prepared in the Offices of:
750 N.Greenfield Pkwy,Garner,NC 27529

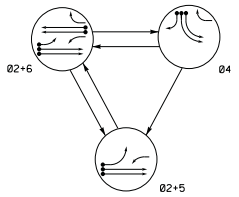
SR 1004 (Main Street)
at
Central Street

Division 4 Johnston County Clayton
PLAN DATE: March 2006 REVIEWED BY:
PREPARED BY: Sterling REVIEWED BY:
REVISIONS INIT. DATE

SCALE 0 50
1"=50'

PROJECT REFERENCE NO.	SHEET NO.
	Sig. 1.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

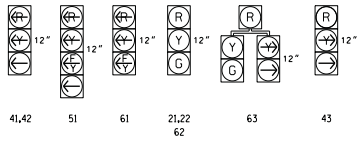
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	PHASE Ø4	PHASE Ø2+6
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.



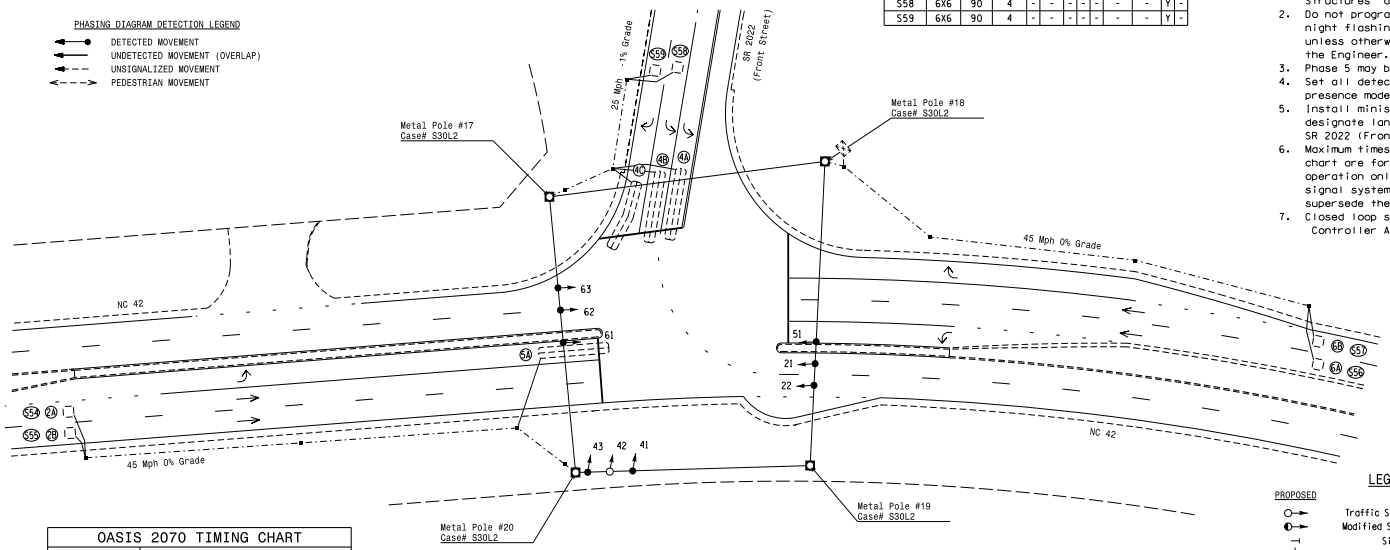
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FAIL TIME RESET	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	
N/A	2-in Underground Conduit	
	Right of Way	
→	Directional Arrow	→

Signal Upgrade

Prepared in the Offices of:
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.S. Peedin, Jr REVIEWED BY:

SCALE 0 30 1"=30'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29904 JASON P. GALLOWAY
4/10/2015

SIG. INVENTORY NO. 04-1234

10-APR-2015 15:19
S:\NTS&DSH\TS Signals\Signal Design Section\Eastern Region\div-04\04-1234\04-1234_sig_dsn_2015mmdd.dgn
User Name:

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION

Traffic Impact Analysis

For

Hunt Property

Located in

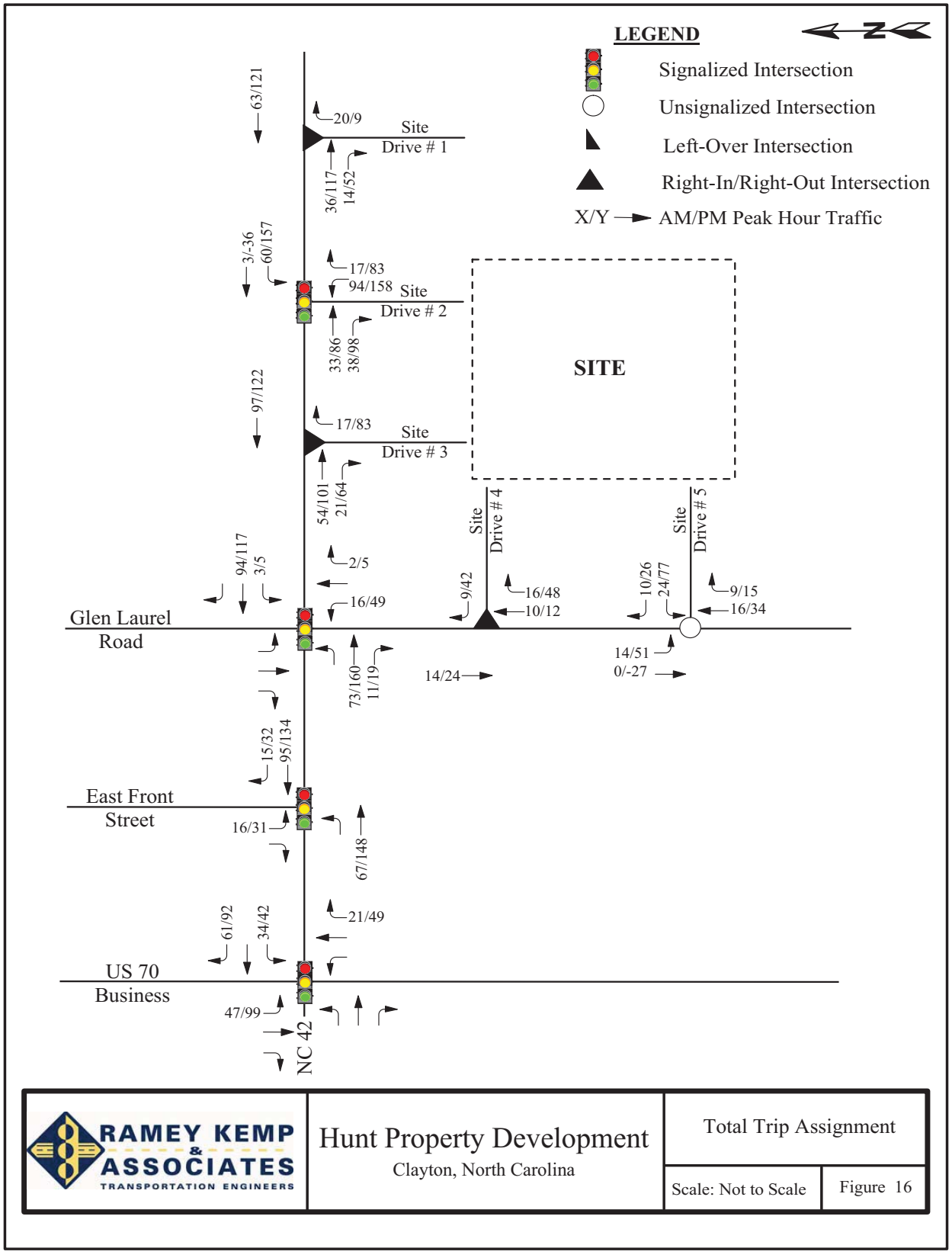
Clayton, North Carolina

Prepared For:
C. Brantley Tillman
Commercial Properties, Inc.
1004 Wake Forest Road
Raleigh, NC 27604

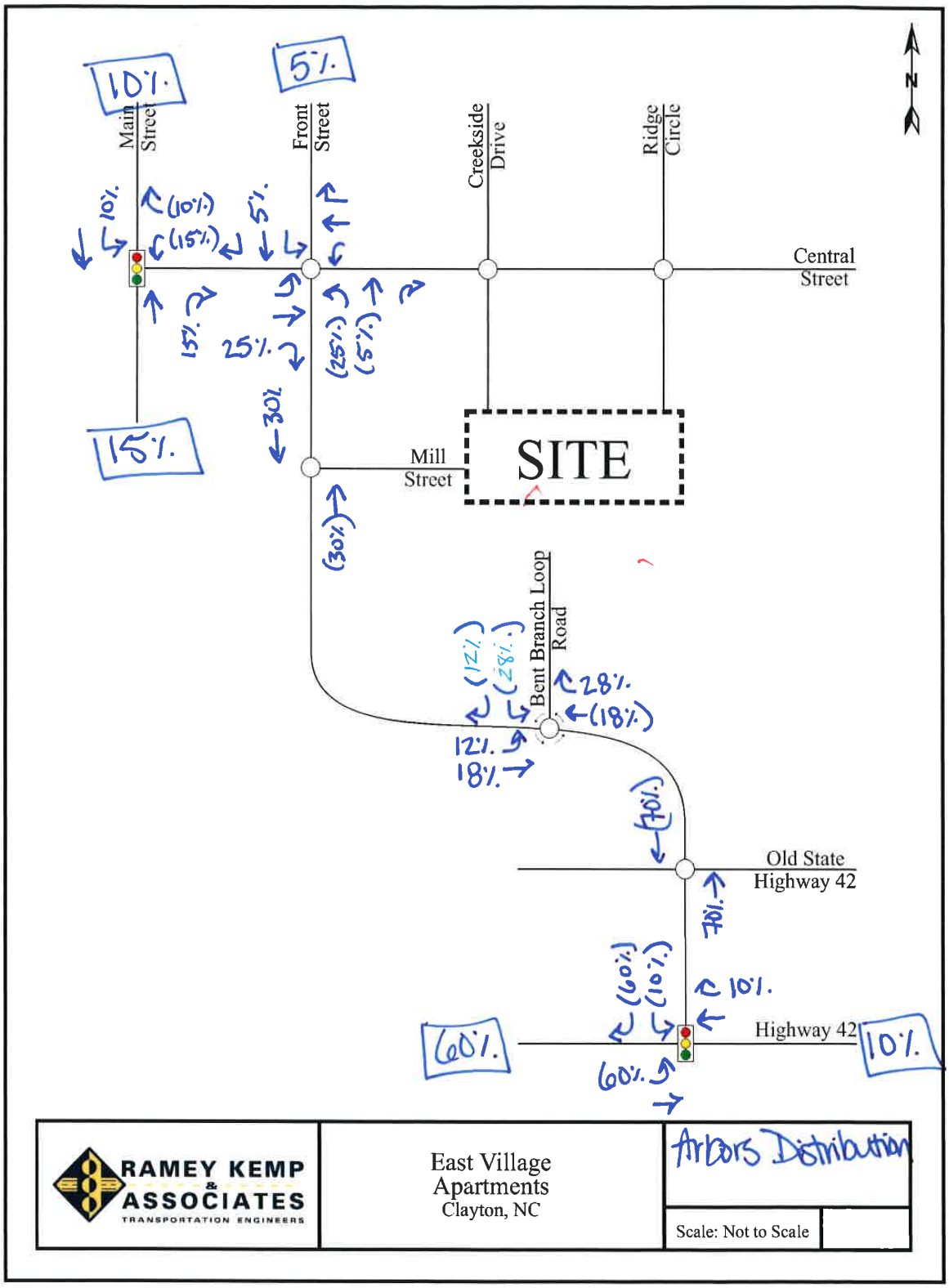
Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
NC Corporate License # C-0910

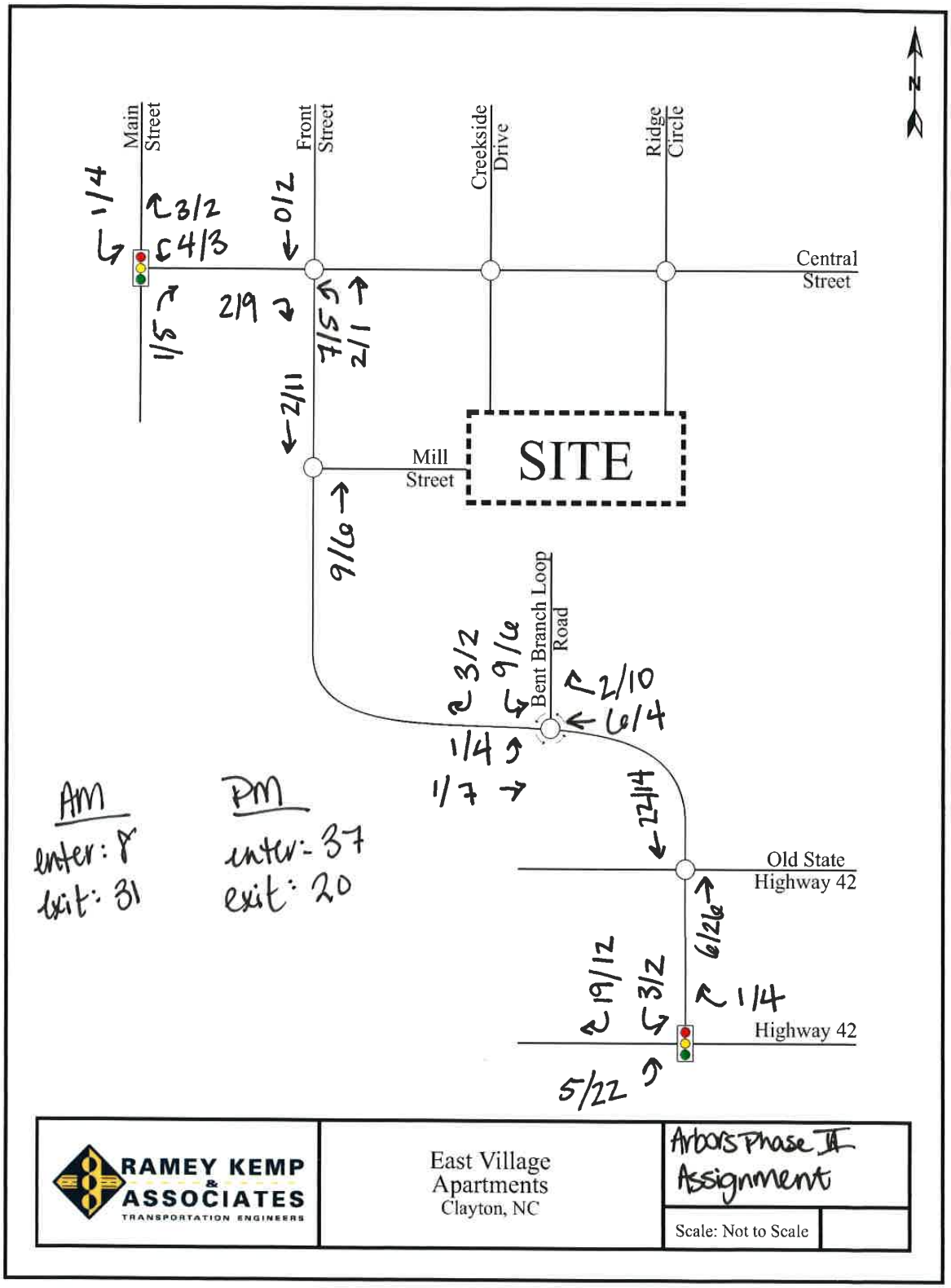
November 2015

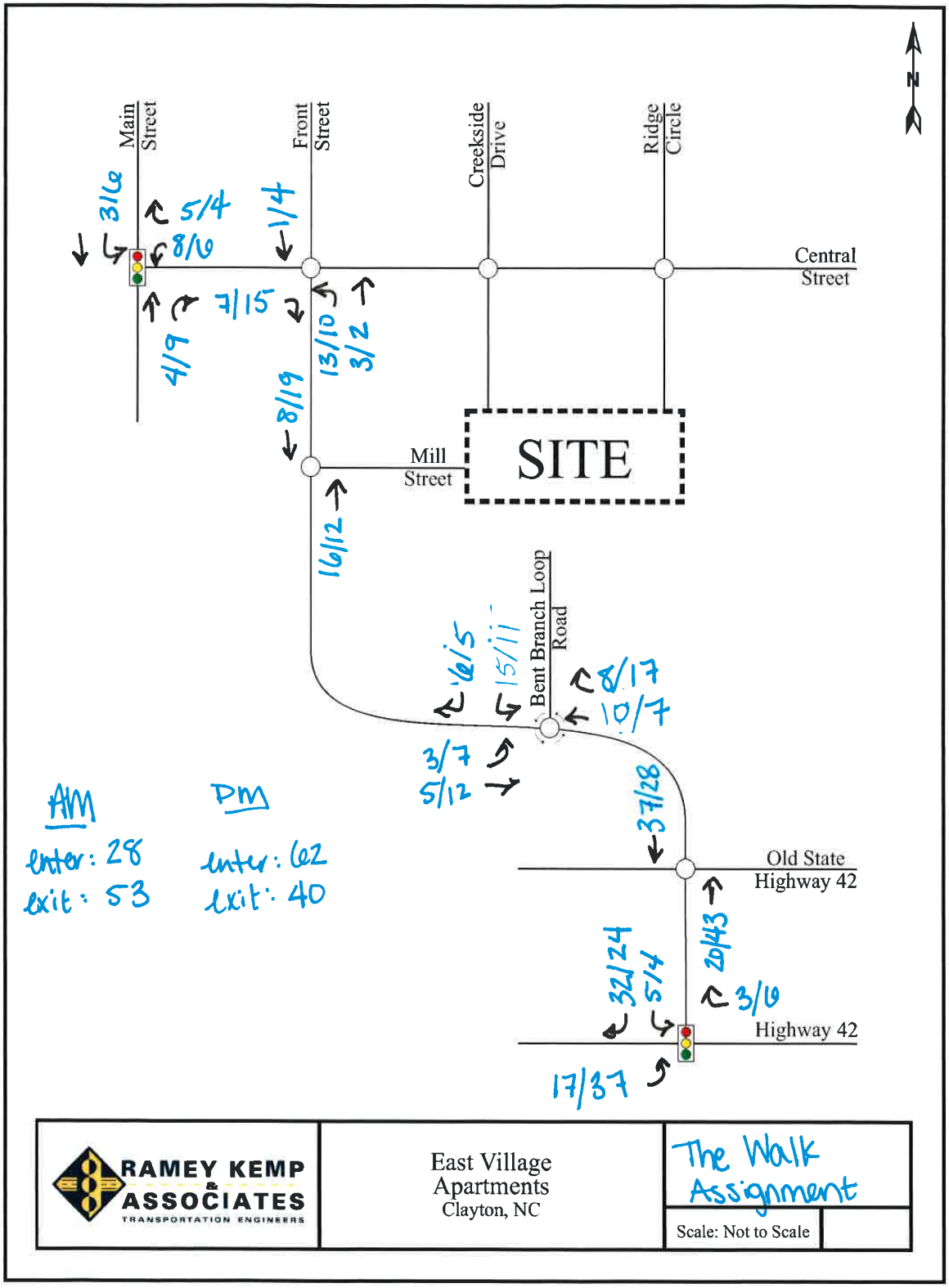
RKA Project #15074



RAMEY KEMP & ASSOCIATES TRANSPORTATION ENGINEERS	Hunt Property Development Clayton, North Carolina	Total Trip Assignment	
		Scale: Not to Scale	Figure 16


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
10'.
5'.
15'.
60'.
10'.
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
Arbors Distribution
Scale: Not to Scale


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
1/4
3/2
4/3
0/2
2/9
1/5
7/5
2/1
2/11
9/6
3/2
9/6
2/10
6/4
1/4
1/7
2/14
6/26
1/4
19/12
3/2
5/22
AM
enter: 8
exit: 31
PM
enter: 37
exit: 20
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
Arbors Phase II
Assignment
Scale: Not to Scale


N
Main Street
Front Street
Creekside Drive
Ridge Circle
Central Street
Mill Street
SITE
Bent Branch Loop Road
Old State Highway 42
Highway 42
3/6
5/4
8/6
1/4
4/9
7/15
13/10
3/2
8/19
16/12
6/5
15/11
8/17
10/7
3/7
5/12
37/28
20/43
3/6
32/24
5/4
17/37
AM
enter: 28
exit: 53
PM
enter: 62
exit: 40
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
East Village Apartments
Clayton, NC
The Walk Assignment
Scale: Not to Scale

RAMEY KEMP & ASSOCIATES TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

September 4, 2015

Hubert G. Tolson, III
UHF Development Group, LLC
227 East Front Street
New Bern, NC 28560
P: 252-670-9370
E: hubie@uhfdevelopmentgroup.com

Subject: **Trip Generation Study for Arbors Phase 2**
Clayton, North Carolina

Dear Mr. Tolson:

This letter provides an updated trip generation for the East Village development located on the north side of Front Street west of NC 42 in Clayton. The trip generation update is being requested by the Town since the Arbors – Phase 2 proposes to expand the number of residential units at the property that was previously considered for commercial use.

A Traffic Impact Analysis (TIA) report was prepared for the overall development in January 2012 by Ramey Kemp & Associates, Inc. (RKA). The original TIA report included a mix of residential, office, and retail uses for the development. Single-family homes were assumed to be traditional and not age-restricted. Assumptions were made for commercial uses since exact land uses were not known when the TIA was completed. Refer to Table 1 for the total trips generated for the overall development as shown in the TIA report. Relevant pages from the TIA report are attached for reference.

Table 1
TIA Approved Trip Generation

Land Use	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
		Enter	Exit	Enter	Exit
Total Trips	6,237	179	229	304	308

* See attached trip generation table from TIA report

It is our understanding that the project is currently approved for two scenarios of residential development. Option 1 would allow 151 single-family homes + 57 townhomes + 192 apartments. Option 2 would allow 151 single-family homes + 37 additional single-family homes + 192 apartments. This study assumes the residential portion of the development will include a total of 300 residential units in addition to 264 apartments. The apartments would be increased by 72 units from 192 to 264 units. To be conservative, all 300 residential units are assumed to be detached instead of a mixture of single-family and townhomes. In addition, it is our understanding that the non-apartment residential units would be age-restricted to seniors. Commercial land uses are not known at this time.

Trips were generated for the updated land uses within the development using the ITE *Trip Generation Manual*, 9th Edition. Assumptions for the commercial land uses are the same as in the original TIA. Refer to Table 2 for the trip generation associated with the overall development.

Table 2
Future Overall Development Trip Generation – Updated Option

Land Use (ITE Code)	Density	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Senior Adult Housing – Detached (251) (ITE equation used)	300 units	1,257	28	53	62	40
Apartments (approved + 72 units) (210) (ITE equation used)	264 units (192 + 72)	1,723	27	106	106	57
Specialty Retail (826) (ITE equation used)	38,000 s.f.	1,663	0	0	50	63
General Office Building (710) (ITE equation used)	48,000 s.f.	752	93	13	22	110
High Turnover Sit Down Restaurant (932) (ITE rates used)	6,000 s.f.	763	36	29	35	24
Total – Option 1		**6,160**	**184**	**201**	**274**	**294**

Table 3 provides a comparison of the updated trip generation results for the development with the previously approved trip generation from the original TIA report.

Table 3
Trip Generation Comparison

Use Scenario	Average Daily Traffic (vpd)	AM Peak Hour Trips (vph)			PM Peak Hour Trips (vph)		
		Enter	Exit	Total	Enter	Exit	Total
Approved TIA	6,237	179	229	**408**	304	308	**612**
Updated Option	6,160	184	201	**385**	274	294	**568**

Conclusions

The updated land uses for the overall development are expected to generate fewer trips than the trip generation that was approved in the TIA report. The updated land uses include additional residential units and also assumes the single-family homes and townhomes are age-restricted. It should be noted that specific uses for the commercial portion of the development are unknown. The actual trips added to the roadway network will likely be less than shown in the tables above since the trip generation calculations do not consider reductions for internal capture trips between residential and commercial uses.

Please let us know if you have any questions regarding this information.

Sincerely,

NORTH CAROLINA PROFESSIONAL SEAL 026926 ENGINEER RYNAL G. STEPHENSON

9-4-15

Rynal Stephenson, P.E.
Regional Manager
RAMEY KEMP & ASSOCIATES, INC
NC Corporate License # C-0910

Attachment: TIA Report Pages

RAMEY KEMP ASSOCIATES

5. TRIP GENERATION

At full build out, the East Village development is expected to consist of approximately 141 single-family homes, 192 apartments, 48 townhomes, and commercial development along E. Front Street Extension. The commercial property located along E. Front Street Extension is currently zoned for neighborhood business uses. Based on discussions with the Town Planning staff, intense commercial development such as big-box retail space or grocery stores would not be allowed in this zoning. Based on uses allowed in this zoning, this study assumes the commercial property would be developed with 48,000 s.f. of office space, 38,000 s.f. of specialty retail space, and a 6,000 s.f. sit-down restaurant. The land use type and size of the commercial property uses were estimated for the purposes of this study. Refer to Appendix C for more information on the assumptions for the commercial property.

Average weekday daily, AM peak hour and PM peak hour trips for the proposed development were calculated utilizing methodology contained within the ITE *Trip Generation Manual*, 8th Edition. Refer to Table 2 for a summary of the trip generation results.

Table 2
East Village Site Trip Generation Table

Land Use	ITE Code	Size	24 Hour Volumes	AM Peak Hour Trips		PM Peak Hour Trips	
				Enter	Exit	Enter	Exit
Single-Family Detached Housing	210	141 Units	1,426	27	81	90	53
Apartments	220	192 Units	1,287	20	78	80	43
Townhomes	230	48 Units	340	5	24	22	11
Specialty Retail	814	38,000 sf	1,663	0	0	50	63
High Turnover Sit Down Restaurant	932	6,000 sf	763	36	33	39	27
General Office	710	48,000 sf	758	92	13	23	110
Total Trips			**6,237**	**179**	**229**	**304**	**308**

Parcel #	Approx. Size (Acres)
5	4.4
6	3.6
7	2.8
8	1.5
9	1.3
10	1.5
11	1.9
	17 AC TOTAL

17 AC
- 1.9 (not usable)
- 2.8 (restaurant)
12.3 AC (retail + office)

Assume 6 AC Office @ 8,000 SF/AC = 48,000 sf
6.3 AC retail @ 6,000 SF/AC = 38,000 sf

HagerSmith
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Architecture
Landscape Architecture
Planning
Interior Design

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CONSULTANTS

CONSULTANTS NAMES

SEALS

PROJECT

ARBORS AT EAST VILLAGE

CLIENT

CLAYTON MULTIFAMILY INVESTMENTS, LLC

DRAWING TITLE

EAST VILLAGE PLAN

REVISIONS		
NUMBER	DESCRIPTION	DATE

DRAWN BY JET
CHECKED BY JET
DATE ISSUED 8/19/10

L-100
1 OF

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

CENTRAL STREET

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	137	85	138	100	2	144	26	91	0	15	6
Future Vol, veh/h	3	137	85	138	100	2	144	26	91	0	15	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	152	94	153	111	2	160	29	101	0	17	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	247	0	0	637	626	199	690	672	112
Stage 1	-	-	-	-	-	-	206	206	-	419	419	-
Stage 2	-	-	-	-	-	-	431	420	-	271	253	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1319	-	-	390	401	842	359	377	941
Stage 1	-	-	-	-	-	-	796	731	-	612	590	-
Stage 2	-	-	-	-	-	-	603	589	-	735	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1319	-	-	337	351	842	268	330	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	351	-	268	330	-
Stage 1	-	-	-	-	-	-	794	730	-	611	517	-
Stage 2	-	-	-	-	-	-	508	516	-	620	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.7	29.3	14.4
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	428	1476	-	-	1319	-	-	405
HCM Lane V/C Ratio	0.678	0.002	-	-	0.116	-	-	0.058
HCM Control Delay (s)	29.3	7.4	0	-	8.1	0	-	14.4
HCM Lane LOS	D	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	4.9	0	-	-	0.4	-	-	0.2

Intersection												
Int Delay, s/veh	11.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	126	140	150	140	14	62	64	163	1	7	1
Future Vol, veh/h	8	126	140	150	140	14	62	64	163	1	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	140	156	167	156	16	69	71	181	1	8	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	171	0	0	296	0	0	737	740	218	859	810	163
Stage 1	-	-	-	-	-	-	236	236	-	497	497	-
Stage 2	-	-	-	-	-	-	501	504	-	362	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1406	-	-	1265	-	-	334	345	822	277	314	882
Stage 1	-	-	-	-	-	-	767	710	-	555	545	-
Stage 2	-	-	-	-	-	-	552	541	-	657	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1406	-	-	1265	-	-	288	292	822	156	266	882
Mov Cap-2 Maneuver	-	-	-	-	-	-	288	292	-	156	266	-
Stage 1	-	-	-	-	-	-	761	704	-	551	465	-
Stage 2	-	-	-	-	-	-	463	462	-	457	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.1	29.4	19.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	457	1406	-	-	1265	-	-	266
HCM Lane V/C Ratio	0.703	0.006	-	-	0.132	-	-	0.038
HCM Control Delay (s)	29.4	7.6	0	-	8.3	0	-	19.1
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.4	0	-	-	0.5	-	-	0.1

Intersection												
Int Delay, s/veh	33.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	150	102	151	109	2	177	48	99	4	33	7
Future Vol, veh/h	3	150	102	151	109	2	177	48	99	4	33	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	167	113	168	121	2	197	53	110	4	37	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	123	0	0	280	0	0	710	689	223	770	745	122
Stage 1	-	-	-	-	-	-	230	230	-	458	458	-
Stage 2	-	-	-	-	-	-	480	459	-	312	287	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1464	-	-	1283	-	-	348	369	817	318	342	929
Stage 1	-	-	-	-	-	-	773	714	-	583	567	-
Stage 2	-	-	-	-	-	-	567	566	-	699	674	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1464	-	-	1283	-	-	279	316	817	214	293	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	279	316	-	214	293	-
Stage 1	-	-	-	-	-	-	771	713	-	582	487	-
Stage 2	-	-	-	-	-	-	447	486	-	559	673	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.7	84.6	18.4
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	1464	-	-	1283	-	-	317
HCM Lane V/C Ratio	1.008	0.002	-	-	0.131	-	-	0.154
HCM Control Delay (s)	84.6	7.5	0	-	8.2	0	-	18.4
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	11.8	0	-	-	0.5	-	-	0.5

Intersection												
Int Delay, s/veh	47.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	138	177	164	153	15	83	105	178	1	45	1
Future Vol, veh/h	9	138	177	164	153	15	83	105	178	1	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	153	197	182	170	17	92	117	198	1	50	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	187	0	0	350	0	0	840	823	252	972	913	178
Stage 1	-	-	-	-	-	-	272	272	-	543	543	-
Stage 2	-	-	-	-	-	-	568	551	-	429	370	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1387	-	-	1209	-	-	285	309	787	232	273	865
Stage 1	-	-	-	-	-	-	734	685	-	524	520	-
Stage 2	-	-	-	-	-	-	508	515	-	604	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1209	-	-	205	255	787	98	225	865
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	255	-	98	225	-
Stage 1	-	-	-	-	-	-	727	679	-	519	433	-
Stage 2	-	-	-	-	-	-	373	428	-	371	614	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.2	132.3	26.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	351	1387	-	-	1209	-	-	222
HCM Lane V/C Ratio	1.159	0.007	-	-	0.151	-	-	0.235
HCM Control Delay (s)	132.3	7.6	0	-	8.5	0	-	26.1
HCM Lane LOS	F	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	16.3	0	-	-	0.5	-	-	0.9

Intersection												
Int Delay, s/veh	57.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	163	105	160	149	2	190	48	102	4	33	7
Future Vol, veh/h	3	163	105	160	149	2	190	48	102	4	33	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	181	117	178	166	2	211	53	113	4	37	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	298	0	0	790	769	239	851	826	167
Stage 1	-	-	-	-	-	-	246	246	-	522	522	-
Stage 2	-	-	-	-	-	-	544	523	-	329	304	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1263	-	-	308	332	800	280	307	877
Stage 1	-	-	-	-	-	-	758	703	-	538	531	-
Stage 2	-	-	-	-	-	-	523	530	-	684	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1410	-	-	1263	-	-	240	280	800	181	259	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	280	-	181	259	-
Stage 1	-	-	-	-	-	-	756	701	-	536	449	-
Stage 2	-	-	-	-	-	-	402	448	-	541	661	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	4.3	156.4	20.6
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	1410	-	-	1263	-	-	279
HCM Lane V/C Ratio	1.211	0.002	-	-	0.141	-	-	0.175
HCM Control Delay (s)	156.4	7.6	0	-	8.3	0	-	20.6
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	16.7	0	-	-	0.5	-	-	0.6

Intersection												
Int Delay, s/veh	78											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	181	186	169	176	15	90	105	187	1	45	1
Future Vol, veh/h	9	181	186	169	176	15	90	105	187	1	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	201	207	188	196	17	100	117	208	1	50	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	212	0	0	408	0	0	929	912	304	1066	1007	204
Stage 1	-	-	-	-	-	-	324	324	-	579	579	-
Stage 2	-	-	-	-	-	-	605	588	-	487	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1358	-	-	1151	-	-	248	274	736	200	241	837
Stage 1	-	-	-	-	-	-	688	650	-	501	501	-
Stage 2	-	-	-	-	-	-	485	496	-	562	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1358	-	-	1151	-	-	170	221	736	72	194	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	221	-	72	194	-
Stage 1	-	-	-	-	-	-	681	644	-	496	408	-
Stage 2	-	-	-	-	-	-	346	404	-	327	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	4.1	230	31
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	1358	-	-	1151	-	-	190
HCM Lane V/C Ratio	1.396	0.007	-	-	0.163	-	-	0.275
HCM Control Delay (s)	230	7.7	0	-	8.7	0	-	31
HCM Lane LOS	F	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	22.2	0	-	-	0.6	-	-	1.1

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

MAIN STREET

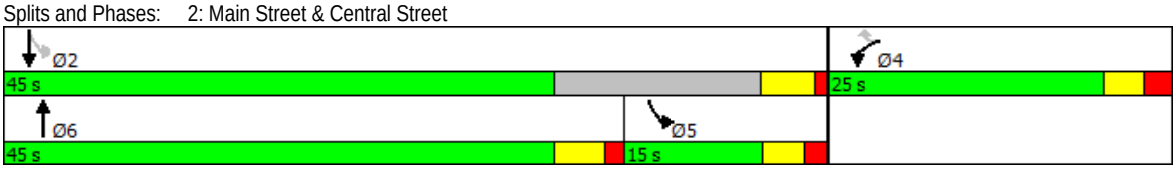
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	107	143	173	139	86	138
Future Volume (vph)	107	143	173	139	86	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.940			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1751	0	1770	1863
Flt Permitted	0.950				0.524	
Satd. Flow (perm)	1770	1583	1751	0	976	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	159	192	154	96	153
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	159	346	0	96	153
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.8	9.8	19.2		25.8	25.2
Actuated g/C Ratio	0.24	0.24	0.47		0.63	0.61
v/c Ratio	0.28	0.42	0.42		0.13	0.13
Control Delay	17.3	19.6	14.3		5.5	5.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	17.3	19.6	14.3		5.5	5.6
LOS	B	B	B		A	A
Approach Delay	18.6		14.3			5.6
Approach LOS	B		B			A

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 41
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 13.2 — Intersection LOS: B
Intersection Capacity Utilization 41.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



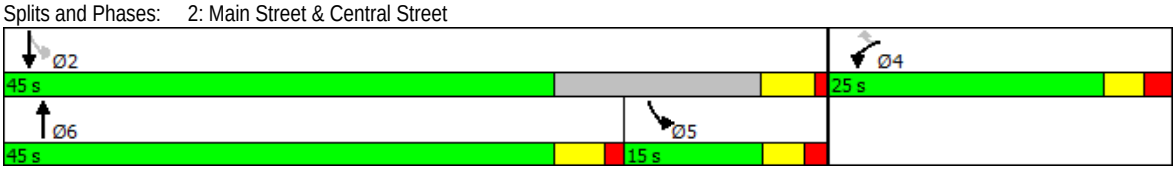
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	96	107	214	110	164	314
Future Volume (vph)	96	107	214	110	164	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.954			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1777	0	1770	1863
Flt Permitted	0.950				0.505	
Satd. Flow (perm)	1770	1583	1777	0	941	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	119	238	122	182	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	119	360	0	182	349
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	8.8	8.8	18.4		25.6	27.2
Actuated g/C Ratio	0.21	0.21	0.45		0.62	0.66
v/c Ratio	0.28	0.35	0.45		0.25	0.28
Control Delay	18.4	19.7	15.0		6.3	5.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	18.4	19.7	15.0		6.3	5.5
LOS	B	B	B		A	A
Approach Delay	19.1		15.0			5.8
Approach LOS	B		B			A
Queue Length 50th (ft)	22	25	74		17	35
Queue Length 95th (ft)	63	70	157		44	84
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	921	823	1624		853	1863
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.12	0.14	0.22		0.21	0.19

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 41.1
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 11.4 — Intersection LOS: B
Intersection Capacity Utilization 45.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



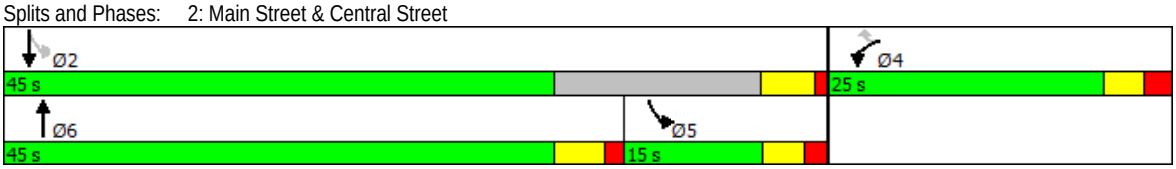
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	129	164	189	157	98	151
Future Volume (vph)	129	164	189	157	98	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.939			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1749	0	1770	1863
Flt Permitted	0.950				0.448	
Satd. Flow (perm)	1770	1583	1749	0	835	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		25			25
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		35.5			29.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	143	182	210	174	109	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	182	384	0	109	168
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	10.6	10.6	15.5		26.5	24.3
Actuated g/C Ratio	0.23	0.23	0.34		0.58	0.53
v/c Ratio	0.35	0.50	0.65		0.17	0.17
Control Delay	19.6	22.6	19.8		6.6	5.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	19.6	22.6	19.8		6.6	5.9
LOS	B	C	B		A	A
Approach Delay	21.3		19.8			6.2
Approach LOS	C		B			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	32	43	88		11	18
Queue Length 95th (ft)	86	109	185		34	49
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	830	742	1494		767	1824
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.17	0.25	0.26		0.14	0.09

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 45.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 45.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



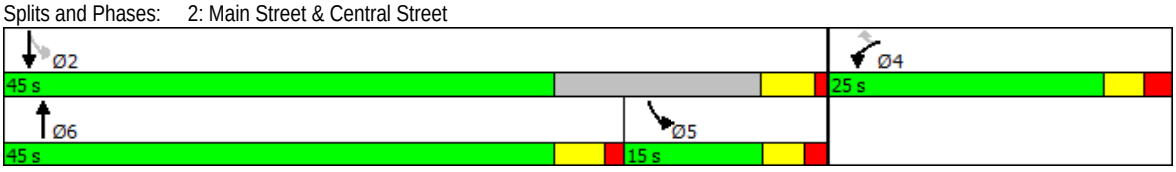
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	114	123	234	134	189	343
Future Volume (vph)	114	123	234	134	189	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.951			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1771	0	1770	1863
Flt Permitted	0.950				0.411	
Satd. Flow (perm)	1770	1583	1771	0	766	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		35			35
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		25.3			20.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	137	260	149	210	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	127	137	409	0	210	381
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.2	9.2	15.3		27.8	27.8
Actuated g/C Ratio	0.19	0.19	0.32		0.59	0.59
v/c Ratio	0.37	0.45	0.71		0.35	0.35
Control Delay	21.5	23.5	22.0		8.0	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	21.5	23.5	22.0		8.0	6.2
LOS	C	C	C		A	A
Approach Delay	22.5		22.0			6.9
Approach LOS	C		C			A
Queue Length 50th (ft)	29	32	90		21	42
Queue Length 95th (ft)	82	89	200		54	98
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	768	687	1528		715	1823
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.17	0.20	0.27		0.29	0.21

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 47.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



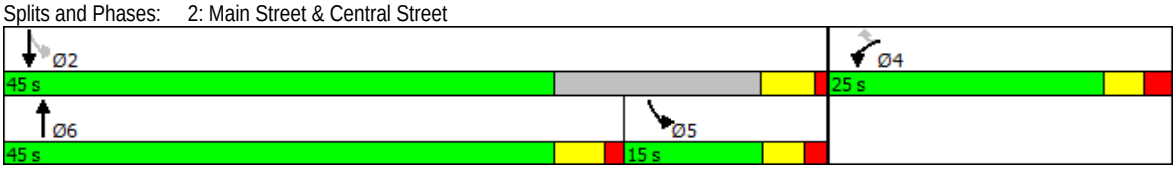
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	173	173	189	170	101	151
Future Volume (vph)	173	173	189	170	101	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.936			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1744	0	1770	1863
Flt Permitted	0.950				0.432	
Satd. Flow (perm)	1770	1583	1744	0	805	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	35		45			45
Link Distance (ft)	195		1300			1066
Travel Time (s)	3.8		19.7			16.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	192	192	210	189	112	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	192	399	0	112	168
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	11.2	11.2	16.5		27.7	25.3
Actuated g/C Ratio	0.24	0.24	0.35		0.58	0.53
v/c Ratio	0.46	0.52	0.66		0.18	0.17
Control Delay	22.0	23.7	20.2		6.9	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	22.0	23.7	20.2		6.9	6.0
LOS	C	C	C		A	A
Approach Delay	22.8		20.2			6.3
Approach LOS	C		C			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Queue Length 50th (ft)	47	48	95		12	19
Queue Length 95th (ft)	116	120	201		36	51
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	813	727	1437		750	1806
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.24	0.26	0.28		0.15	0.09

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 47.4
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.5 — Intersection LOS: B
Intersection Capacity Utilization 48.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



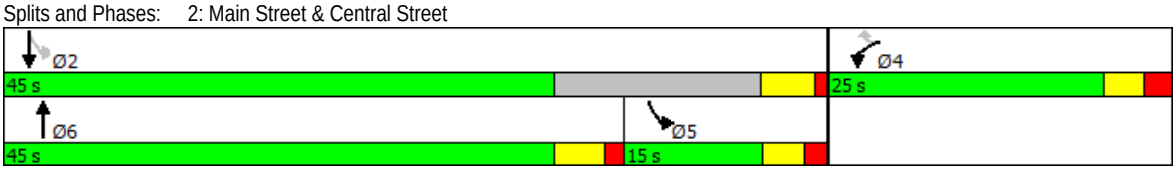
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	139	128	234	177	198	343
Future Volume (vph)	139	128	234	177	198	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.942			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1755	0	1770	1863
Flt Permitted	0.950				0.360	
Satd. Flow (perm)	1770	1583	1755	0	671	1863
Right Turn on Red		No		No		
Satd. Flow (RTOR)						
Link Speed (mph)	25		35			35
Link Distance (ft)	195		1300			1066
Travel Time (s)	5.3		25.3			20.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	154	142	260	197	220	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	142	457	0	220	381
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1		1	1
Detector Template						
Leading Detector (ft)	40	40	76		40	76
Trailing Detector (ft)	0	0	70		0	70
Detector 1 Position(ft)	0	0	70		0	70
Detector 1 Size(ft)	40	40	6		40	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	3.0	15.0	0.0		15.0	0.0
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0		7.0	10.0
Minimum Split (s)	12.1	12.1	15.0		11.8	15.0
Total Split (s)	25.0	25.0	45.0		15.0	45.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Split (%)	29.4%	29.4%	52.9%		17.6%	52.9%
Maximum Green (s)	19.9	19.9	40.0		10.2	40.0
Yellow Time (s)	3.0	3.0	3.7		3.0	3.9
All-Red Time (s)	2.1	2.1	1.3		1.8	1.1
Lost Time Adjust (s)	-0.1	-0.1	0.0		0.2	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0	2.0	3.0		2.0	3.0
Recall Mode	None	None	Min		None	Min
Act Effct Green (s)	9.7	9.7	17.0		30.1	30.1
Actuated g/C Ratio	0.19	0.19	0.34		0.60	0.60
v/c Ratio	0.45	0.47	0.77		0.38	0.34
Control Delay	24.5	25.5	24.4		9.1	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	24.5	25.5	24.4		9.1	6.1
LOS	C	C	C		A	A
Approach Delay	25.0		24.4			7.2
Approach LOS	C		C			A
Queue Length 50th (ft)	38	35	107		23	43
Queue Length 95th (ft)	104	99	237		58	102
Internal Link Dist (ft)	115		1220			986
Turn Bay Length (ft)					100	
Base Capacity (vph)	732	655	1443		664	1797
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.21	0.22	0.32		0.33	0.21

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 50.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 16.9 — Intersection LOS: B
Intersection Capacity Utilization 54.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Main Street & Central Street



APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

NC 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	48	532	0	1185	214	197	98
Future Volume (vph)	5	48	532	0	1185	214	197	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.160					0.950	
Satd. Flow (perm)	0	298	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	53	591	0	1317	238	219	109
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	59	591	0	1317	238	219	109
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
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)		20.0	90.0	90.0	90.0	20.0	20.0	20.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)		15.4%	69.2%	69.2%	69.2%	15.4%	15.4%	15.4%
Maximum Green (s)		13.6	83.5	83.5	83.5	13.8	13.8	13.8
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		Lead			Lag			
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)		2.0	3.0	3.0	3.0	2.0	2.0	2.0
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)		105.2	105.2		94.4	115.3	14.8	14.8
Actuated g/C Ratio		0.81	0.81		0.73	0.89	0.11	0.11
v/c Ratio		0.18	0.21		0.51	0.17	0.56	0.61
Control Delay		4.1	3.3		9.6	1.7	59.5	68.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		4.1	3.3		9.6	1.7	59.5	68.3
LOS		A	A		A	A	E	E
Approach Delay			3.3		8.4		62.4	
Approach LOS			A		A		E	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 40 (31%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	114	964	3	1063	240	280	61
Future Volume (vph)	4	114	964	3	1063	240	280	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.166		0.245			0.950	
Satd. Flow (perm)	0	309	3539	456	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	127	1071	3	1181	267	311	68
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	131	1071	3	1181	267	311	68
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		75.2	75.2	75.2	61.4	81.2	14.8	14.8
Actuated g/C Ratio		0.75	0.75	0.75	0.61	0.81	0.15	0.15
v/c Ratio		0.36	0.40	0.01	0.54	0.21	0.61	0.29
Control Delay		6.6	5.2	4.0	12.9	2.6	44.9	40.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		6.6	5.2	4.0	12.9	2.6	44.9	40.1
LOS		A	A	A	B	A	D	D
Approach Delay			5.4		11.0		44.0	
Approach LOS			A		B		D	
Queue Length 50th (ft)		18	104	0	207	28	97	39
Queue Length 95th (ft)		41	165	3	313	50	134	76
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		422	2677	344	2172	1327	599	276
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		0.31	0.40	0.01	0.54	0.20	0.52	0.25

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.9 Intersection LOS: B
Intersection Capacity Utilization 57.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	74	648	0	1390	253	239	158
Future Volume (vph)	5	74	648	0	1390	253	239	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.090					0.950	
Satd. Flow (perm)	0	168	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			30		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			30.2		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	82	720	0	1544	281	266	176
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	88	720	0	1544	281	266	176
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	80.0	80.0	62.0	20.0	20.0	20.0
Total Split (%)	18.0%	18.0%	80.0%	80.0%	62.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	11.6	73.5	73.5	55.5	13.8	13.8	13.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		74.4	74.4		63.7	85.3	15.6	15.6
Actuated g/C Ratio		0.74	0.74		0.64	0.85	0.16	0.16
v/c Ratio		0.34	0.27		0.69	0.21	0.50	0.71
Control Delay		7.4	4.6		15.0	2.3	41.7	56.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		7.4	4.6		15.0	2.3	41.7	56.7

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS		A	A		B	A	D	E
Approach Delay			4.9		13.0		47.7	
Approach LOS			A		B		D	
Queue Length 50th (ft)		14	70		346	29	79	106
Queue Length 95th (ft)		24	83		409	47	121	#207
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300				200		
Base Capacity (vph)		333	2684		2254	1347	564	260
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		0.26	0.27		0.69	0.21	0.47	0.68

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 66.5% 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: 3: NC 42 & Old State Hwy 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	184	1201	3	1296	304	343	103
Future Volume (vph)	4	184	1201	3	1296	304	343	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.094		0.173			0.950	
Satd. Flow (perm)	0	175	3539	322	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	204	1334	3	1440	338	381	114
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	208	1334	3	1440	338	381	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		74.0	74.0	74.0	57.7	78.7	16.0	16.0
Actuated g/C Ratio		0.74	0.74	0.74	0.58	0.79	0.16	0.16
v/c Ratio		0.67	0.51	0.01	0.71	0.27	0.69	0.45
Control Delay		24.6	6.5	4.0	18.3	3.7	46.6	43.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.6	6.5	4.0	18.3	3.7	46.6	43.6
LOS		C	A	A	B	A	D	D
Approach Delay			8.9		15.5		45.9	
Approach LOS			A		B		D	
Queue Length 50th (ft)		50	161	0	331	47	119	66
Queue Length 95th (ft)		127	205	3	432	78	168	120
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		342	2633	239	2068	1267	598	276
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		0.61	0.51	0.01	0.70	0.27	0.64	0.41

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 68.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: NC 42 & Front Street

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	5	78	648	0	1390	260	261	172
Future Volume (vph)	5	78	648	0	1390	260	261	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1863	3539	1583	3433	1583
Flt Permitted		0.086					0.950	
Satd. Flow (perm)	0	160	3539	1863	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	87	720	0	1544	289	290	191
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	93	720	0	1544	289	290	191
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	80.0	80.0	62.0	20.0	20.0	20.0
Total Split (%)	18.0%	18.0%	80.0%	80.0%	62.0%	20.0%	20.0%	20.0%
Maximum Green (s)	11.6	11.6	73.5	73.5	55.5	13.8	13.8	13.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		73.6	73.6		62.6	84.9	16.4	16.4
Actuated g/C Ratio		0.74	0.74		0.63	0.85	0.16	0.16
v/c Ratio		0.36	0.28		0.70	0.22	0.52	0.74
Control Delay		8.4	4.8		15.8	2.4	41.6	57.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0
Total Delay		8.4	4.8		15.8	2.4	41.6	57.9

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
LOS		A	A		B	A	D	E
Approach Delay			5.2		13.7		48.1	
Approach LOS			A		B		D	
Queue Length 50th (ft)		15	75		361	31	85	114
Queue Length 95th (ft)		29	82		426	54	132	#234
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300				200		
Base Capacity (vph)		327	2674		2216	1337	580	267
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		0.28	0.27		0.70	0.22	0.50	0.72

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 67.4% 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: 3: NC 42 & Old State Hwy 42

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	4	197	1201	3	1296	325	356	110
Future Volume (vph)	4	197	1201	3	1296	325	356	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		300		100		200	0	0
Storage Lanes		1		1		1	2	1
Taper Length (ft)		100		100			100	
Lane Util. Factor	0.95	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)	0	1770	3539	1770	3539	1583	3433	1583
Flt Permitted		0.092		0.172			0.950	
Satd. Flow (perm)	0	171	3539	320	3539	1583	3433	1583
Right Turn on Red						No		No
Satd. Flow (RTOR)								
Link Speed (mph)			45		45		35	
Link Distance (ft)			1327		1539		289	
Travel Time (s)			20.1		23.3		5.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	219	1334	3	1440	361	396	122
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	223	1334	3	1440	361	396	122
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	R NA	Left	Right	Left	Right
Median Width(ft)			12		12		24	
Link Offset(ft)			0		0		0	
Crosswalk Width(ft)			16		16		16	
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9		9	15	9
Number of Detectors	1	1	1	0	1	0	1	1
Detector Template	Left							
Leading Detector (ft)	20	35	306	0	306	0	35	35
Trailing Detector (ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Position(ft)	0	-5	300	0	300	0	-5	-5
Detector 1 Size(ft)	20	40	6	20	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	15.0	0.0	0.0	0.0	0.0	3.0	15.0
Turn Type	custom	pm+pt	NA	D.Pm	NA	pm+ov	Prot	Perm
Protected Phases		5	2		6	4	4	
Permitted Phases	5	2		2		6		4
Detector Phase	5	5	2	2	6	4	4	4
Switch Phase								
Minimum Initial (s)	7.0	7.0	12.0	12.0	12.0	7.0	7.0	7.0
Minimum Split (s)	13.4	13.4	18.5	18.5	18.5	13.2	13.2	13.2
Total Split (s)	18.0	18.0	78.0	78.0	60.0	22.0	22.0	22.0

Lane Group	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Total Split (%)	18.0%	18.0%	78.0%	78.0%	60.0%	22.0%	22.0%	22.0%
Maximum Green (s)	11.6	11.6	71.5	71.5	53.5	15.8	15.8	15.8
Yellow Time (s)	3.0	3.0	4.5	4.5	4.5	3.0	3.0	3.0
All-Red Time (s)	3.4	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	Lead	Lead			Lag			
Lead-Lag Optimize?	Yes	Yes			Yes			
Vehicle Extension (s)	2.0	2.0	6.0	6.0	6.0	2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	45.0	45.0	45.0	0.0	0.0	0.0
Recall Mode	None	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)		73.7	73.7	73.7	57.0	78.4	16.3	16.3
Actuated g/C Ratio		0.74	0.74	0.74	0.57	0.78	0.16	0.16
v/c Ratio		0.72	0.51	0.01	0.71	0.29	0.71	0.47
Control Delay		28.7	6.6	4.0	18.8	3.9	46.8	44.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		28.7	6.6	4.0	18.8	3.9	46.8	44.0
LOS		C	A	A	B	A	D	D
Approach Delay			9.8		15.8		46.1	
Approach LOS			A		B		D	
Queue Length 50th (ft)		62	164	0	345	55	123	71
Queue Length 95th (ft)		#143	205	3	432	85	173	128
Internal Link Dist (ft)			1247		1459		209	
Turn Bay Length (ft)		300		100		200		
Base Capacity (vph)		336	2625	237	2044	1259	602	277
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		0.66	0.51	0.01	0.70	0.29	0.66	0.44

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 2:EBWB and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 69.6% 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: 3: NC 42 & Front Street

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

OLD STATE NC 42 / WALDEN WAY

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	1	33	18	1	15	58	197	7	6	244	17
Future Vol, veh/h	22	1	33	18	1	15	58	197	7	6	244	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1	37	20	1	17	64	219	8	7	271	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	655	650	145	501	655	223	290	0	0	227	0	0
Stage 1	294	294	-	352	352	-	-	-	-	-	-	-
Stage 2	361	356	-	149	303	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	365	387	877	467	385	816	1270	-	-	1340	-	-
Stage 1	691	669	-	664	631	-	-	-	-	-	-	-
Stage 2	657	628	-	839	663	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	339	362	877	425	360	816	1270	-	-	1340	-	-
Mov Cap-2 Maneuver	339	362	-	425	360	-	-	-	-	-	-	-
Stage 1	651	665	-	625	594	-	-	-	-	-	-	-
Stage 2	605	592	-	798	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	12.2	1.8	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1270	-	-	532	535	1340	-	-
HCM Lane V/C Ratio	0.051	-	-	0.117	0.071	0.005	-	-
HCM Control Delay (s)	8	0	-	12.7	12.2	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0.2	0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	2	93	15	3	4	70	267	17	10	233	37
Future Vol, veh/h	19	2	93	15	3	4	70	267	17	10	233	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	2	103	17	3	4	78	297	19	11	259	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	768	773	150	615	784	306	300	0	0	316	0	0
Stage 1	302	302	-	462	462	-	-	-	-	-	-	-
Stage 2	466	471	-	153	322	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	305	329	870	389	324	733	1260	-	-	1243	-	-
Stage 1	683	664	-	579	564	-	-	-	-	-	-	-
Stage 2	576	559	-	835	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	281	301	870	319	296	733	1260	-	-	1243	-	-
Mov Cap-2 Maneuver	281	301	-	319	296	-	-	-	-	-	-	-
Stage 1	632	657	-	536	522	-	-	-	-	-	-	-
Stage 2	526	517	-	725	643	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	16	1.6	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1260	-	-	629	351	1243	-	-
HCM Lane V/C Ratio	0.062	-	-	0.201	0.07	0.009	-	-
HCM Control Delay (s)	8	0	-	12.2	16	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.2	0	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1	36	20	1	16	63	256	8	7	342	19
Future Vol, veh/h	24	1	36	20	1	16	63	256	8	7	342	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	40	22	1	18	70	284	9	8	380	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	844	839	201	635	846	289	401	0	0	293	0	0
Stage 1	406	406	-	429	429	-	-	-	-	-	-	-
Stage 2	438	433	-	206	417	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	269	301	807	377	298	749	1156	-	-	1267	-	-
Stage 1	593	597	-	603	583	-	-	-	-	-	-	-
Stage 2	597	581	-	777	590	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	246	277	807	336	274	749	1156	-	-	1267	-	-
Mov Cap-2 Maneuver	246	277	-	336	274	-	-	-	-	-	-	-
Stage 1	550	592	-	560	541	-	-	-	-	-	-	-
Stage 2	540	539	-	731	585	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.3	14.1	1.6	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1156	-	-	418	438	1267	-	-
HCM Lane V/C Ratio	0.061	-	-	0.162	0.094	0.006	-	-
HCM Control Delay (s)	8.3	0	-	15.3	14.1	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	2	102	16	3	4	76	393	19	11	328	40
Future Vol, veh/h	21	2	102	16	3	4	76	393	19	11	328	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	113	18	3	4	84	437	21	12	364	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1031	1038	204	824	1049	447	409	0	0	458	0	0
Stage 1	411	411	-	616	616	-	-	-	-	-	-	-
Stage 2	620	627	-	208	433	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	199	230	803	278	227	611	1148	-	-	1101	-	-
Stage 1	589	594	-	477	481	-	-	-	-	-	-	-
Stage 2	475	475	-	775	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	205	803	217	202	611	1148	-	-	1101	-	-
Mov Cap-2 Maneuver	179	205	-	217	202	-	-	-	-	-	-	-
Stage 1	531	586	-	430	434	-	-	-	-	-	-	-
Stage 2	422	428	-	654	573	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	21.6	1.3	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1148	-	-	492	242	1101	-	-
HCM Lane V/C Ratio	0.074	-	-	0.282	0.106	0.011	-	-
HCM Control Delay (s)	8.4	0	-	15.2	21.6	8.3	0.1	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2	0.4	0	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1	36	20	1	16	63	267	8	7	378	19
Future Vol, veh/h	24	1	36	20	1	16	63	267	8	7	378	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	40	22	1	18	70	297	9	8	420	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	897	892	221	667	898	301	441	0	0	306	0	0
Stage 1	446	446	-	441	441	-	-	-	-	-	-	-
Stage 2	451	446	-	226	457	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	247	281	783	358	278	738	1117	-	-	1253	-	-
Stage 1	562	573	-	594	576	-	-	-	-	-	-	-
Stage 2	587	573	-	757	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	225	258	783	317	255	738	1117	-	-	1253	-	-
Mov Cap-2 Maneuver	225	258	-	317	255	-	-	-	-	-	-	-
Stage 1	519	568	-	549	532	-	-	-	-	-	-	-
Stage 2	528	529	-	711	562	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	14.6	1.6	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1117	-	-	390	417	1253	-	-
HCM Lane V/C Ratio	0.063	-	-	0.174	0.099	0.006	-	-
HCM Control Delay (s)	8.4	0	-	16.2	14.6	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.3	0	-	-

Intersection												
Int Delay, s/veh	3.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	2	102	16	3	4	76	427	19	11	348	40
Future Vol, veh/h	21	2	102	16	3	4	76	427	19	11	348	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	2	113	18	3	4	84	474	21	12	387	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1091	1097	216	873	1110	485	431	0	0	496	0	0
Stage 1	433	433	-	654	654	-	-	-	-	-	-	-
Stage 2	658	664	-	219	456	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	180	212	789	257	209	581	1127	-	-	1066	-	-
Stage 1	572	581	-	455	462	-	-	-	-	-	-	-
Stage 2	452	457	-	764	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	187	789	199	185	581	1127	-	-	1066	-	-
Mov Cap-2 Maneuver	160	187	-	199	185	-	-	-	-	-	-	-
Stage 1	513	572	-	408	414	-	-	-	-	-	-	-
Stage 2	399	410	-	642	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	23.3	1.2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1127	-	-	461	222	1066	-	-
HCM Lane V/C Ratio	0.075	-	-	0.301	0.115	0.011	-	-
HCM Control Delay (s)	8.5	0	-	16.1	23.3	8.4	0.1	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	0.4	0	-	-

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

BENT BRANCH LOOP ROAD

MOVEMENT SUMMARY

Site: 101 [Existing (2018) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	256	2.0	0.168	3.6	LOS A	1.0	7.0	0.14	0.34	57.5
6	R2	4	2.0	0.168	9.3	LOS A	1.0	7.0	0.14	0.34	57.9
Approach		260	2.0	0.168	3.7	LOS A	1.0	7.0	0.14	0.34	57.5
North: Bent Branch Loop Road											
7	L2	34	2.0	0.055	4.4	LOS A	0.3	1.9	0.37	0.57	53.2
9	R2	33	2.0	0.055	10.2	LOS B	0.3	1.9	0.37	0.57	55.0
Approach		66	2.0	0.055	7.3	LOS A	0.3	1.9	0.37	0.57	54.1
West: Front Street											
10	L2	3	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	56.4
11	T1	247	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	58.2
Approach		251	2.0	0.146	3.4	LOS A	0.8	5.5	0.04	0.34	58.2
All Vehicles		577	2.0	0.168	4.0	LOS A	1.0	7.0	0.12	0.37	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Existing (2018) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	298	2.0	0.201	3.5	LOS A	1.2	8.8	0.12	0.36	57.4
6	R2	24	2.0	0.201	9.2	LOS A	1.2	8.8	0.12	0.36	57.7
Approach		322	2.0	0.201	4.0	LOS A	1.2	8.8	0.12	0.36	57.4
North: Bent Branch Loop Road											
7	L2	11	2.0	0.028	4.6	LOS A	0.1	1.0	0.40	0.58	52.3
9	R2	22	2.0	0.028	10.3	LOS B	0.1	1.0	0.40	0.58	54.1
Approach		33	2.0	0.028	8.5	LOS A	0.1	1.0	0.40	0.58	53.5
West: Front Street											
10	L2	28	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	56.0
11	T1	284	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	57.8
Approach		313	2.0	0.196	3.5	LOS A	1.1	7.7	0.11	0.34	57.6
All Vehicles		667	2.0	0.201	4.0	LOS A	1.2	8.8	0.13	0.36	57.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Background (2021) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	313	2.0	0.216	3.6	LOS A	1.3	9.5	0.19	0.36	57.2
6	R2	16	2.0	0.216	9.4	LOS A	1.3	9.5	0.19	0.36	57.5
Approach		329	2.0	0.216	3.9	LOS A	1.3	9.5	0.19	0.36	57.2
North: Bent Branch Loop Road											
7	L2	62	2.0	0.092	4.7	LOS A	0.5	3.3	0.42	0.58	53.3
9	R2	45	2.0	0.092	10.4	LOS B	0.5	3.3	0.42	0.58	55.2
Approach		107	2.0	0.092	7.1	LOS A	0.5	3.3	0.42	0.58	54.1
West: Front Street											
10	L2	7	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	56.2
11	T1	294	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	57.9
Approach		301	2.0	0.184	3.5	LOS A	1.0	7.3	0.09	0.34	57.9
All Vehicles		737	2.0	0.216	4.2	LOS A	1.3	9.5	0.18	0.38	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Background (2021) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	373	2.0	0.272	3.6	LOS A	1.8	13.0	0.16	0.39	56.9
6	R2	57	2.0	0.272	9.3	LOS A	1.8	13.0	0.16	0.39	57.3
Approach		430	2.0	0.272	4.3	LOS A	1.8	13.0	0.16	0.39	57.0
North: Bent Branch Loop Road											
7	L2	29	2.0	0.055	5.0	LOS A	0.3	2.0	0.47	0.60	52.8
9	R2	32	2.0	0.055	10.7	LOS B	0.3	2.0	0.47	0.60	54.6
Approach		61	2.0	0.055	7.9	LOS A	0.3	2.0	0.47	0.60	53.7
West: Front Street											
10	L2	43	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	55.6
11	T1	363	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	57.3
Approach		406	2.0	0.269	3.7	LOS A	1.6	11.5	0.20	0.36	57.1
All Vehicles		897	2.0	0.272	4.3	LOS A	1.8	13.0	0.20	0.39	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Combined (2021) AM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	326	2.0	0.224	3.6	LOS A	1.4	10.1	0.19	0.36	57.2
6	R2	16	2.0	0.224	9.4	LOS A	1.4	10.1	0.19	0.36	57.5
Approach		341	2.0	0.224	3.9	LOS A	1.4	10.1	0.19	0.36	57.2
North: Bent Branch Loop Road											
7	L2	62	2.0	0.094	4.9	LOS A	0.5	3.4	0.45	0.60	53.2
9	R2	45	2.0	0.094	10.6	LOS B	0.5	3.4	0.45	0.60	55.1
Approach		107	2.0	0.094	7.3	LOS A	0.5	3.4	0.45	0.60	54.0
West: Front Street											
10	L2	7	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	56.2
11	T1	332	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	57.9
Approach		339	2.0	0.206	3.5	LOS A	1.2	8.4	0.09	0.33	57.9
All Vehicles		787	2.0	0.224	4.2	LOS A	1.4	10.1	0.18	0.38	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [Combined (2021) PM]

Front Street and Bent Branch Loop Road
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Front Street											
5	T1	411	2.0	0.294	3.6	LOS A	2.0	14.6	0.17	0.38	57.0
6	R2	57	2.0	0.294	9.3	LOS A	2.0	14.6	0.17	0.38	57.3
Approach		468	2.0	0.294	4.3	LOS A	2.0	14.6	0.17	0.38	57.0
North: Bent Branch Loop Road											
7	L2	29	2.0	0.056	5.1	LOS A	0.3	2.1	0.48	0.61	52.7
9	R2	32	2.0	0.056	10.8	LOS B	0.3	2.1	0.48	0.61	54.6
Approach		61	2.0	0.056	8.1	LOS A	0.3	2.1	0.48	0.61	53.7
West: Front Street											
10	L2	43	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	55.5
11	T1	384	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	57.3
Approach		427	2.0	0.282	3.7	LOS A	1.7	12.3	0.21	0.36	57.1
All Vehicles		956	2.0	0.294	4.3	LOS A	2.0	14.6	0.20	0.39	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

CREEKSIDE DRIVE

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	257	8	4	284	4	27	4	4	4	4	4
Future Vol, veh/h	4	257	8	4	284	4	27	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	286	9	4	316	4	30	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	320	0	0	294	0	0	630	628	290	630	630	318
Stage 1	-	-	-	-	-	-	299	299	-	327	327	-
Stage 2	-	-	-	-	-	-	331	329	-	303	303	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1240	-	-	1268	-	-	394	400	749	394	399	723
Stage 1	-	-	-	-	-	-	710	666	-	686	648	-
Stage 2	-	-	-	-	-	-	682	646	-	706	664	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1240	-	-	1268	-	-	386	397	749	386	396	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	397	-	386	396	-
Stage 1	-	-	-	-	-	-	707	663	-	683	645	-
Stage 2	-	-	-	-	-	-	670	643	-	694	661	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	14.7	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	410	1240	-	-	1268	-	-	462
HCM Lane V/C Ratio	0.095	0.004	-	-	0.004	-	-	0.029
HCM Control Delay (s)	14.7	7.9	0	-	7.8	0	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	343	26	4	345	4	15	4	4	4	4	4
Future Vol, veh/h	4	343	26	4	345	4	15	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	381	29	4	383	4	17	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	410	0	0	803	801	396	803	813	386
Stage 1	-	-	-	-	-	-	404	404	-	394	394	-
Stage 2	-	-	-	-	-	-	399	397	-	409	419	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1170	-	-	1149	-	-	302	318	653	302	313	662
Stage 1	-	-	-	-	-	-	623	599	-	631	605	-
Stage 2	-	-	-	-	-	-	627	603	-	619	590	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	1149	-	-	295	315	653	295	311	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	315	-	295	311	-
Stage 1	-	-	-	-	-	-	621	597	-	628	603	-
Stage 2	-	-	-	-	-	-	616	601	-	608	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	16.8	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	1170	-	-	1149	-	-	370
HCM Lane V/C Ratio	0.077	0.004	-	-	0.004	-	-	0.036
HCM Control Delay (s)	16.8	8.1	0	-	8.1	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

CENTRAL STREET

&

EAST RIDGE CIRCLE

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	249	8	4	262	4	22	4	4	4	4	4
Future Vol, veh/h	4	249	8	4	262	4	22	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	277	9	4	291	4	24	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	296	0	0	286	0	0	597	594	281	596	596	293
Stage 1	-	-	-	-	-	-	290	290	-	302	302	-
Stage 2	-	-	-	-	-	-	307	304	-	294	294	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1265	-	-	1276	-	-	415	418	758	415	417	746
Stage 1	-	-	-	-	-	-	718	672	-	707	664	-
Stage 2	-	-	-	-	-	-	703	663	-	714	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1265	-	-	1276	-	-	407	415	758	407	414	746
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	415	-	407	414	-
Stage 1	-	-	-	-	-	-	715	669	-	704	661	-
Stage 2	-	-	-	-	-	-	691	660	-	702	667	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	14	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	435	1265	-	-	1276	-	-	483
HCM Lane V/C Ratio	0.077	0.004	-	-	0.003	-	-	0.028
HCM Control Delay (s)	14	7.9	0	-	7.8	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	317	26	4	332	4	13	4	4	4	4	4
Future Vol, veh/h	4	317	26	4	332	4	13	4	4	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	352	29	4	369	4	14	4	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	373	0	0	381	0	0	760	758	367	760	770	371
Stage 1	-	-	-	-	-	-	376	376	-	380	380	-
Stage 2	-	-	-	-	-	-	384	382	-	380	390	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1185	-	-	1177	-	-	323	336	678	323	331	675
Stage 1	-	-	-	-	-	-	645	616	-	642	614	-
Stage 2	-	-	-	-	-	-	639	613	-	642	608	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1177	-	-	316	333	678	316	328	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	316	333	-	316	328	-
Stage 1	-	-	-	-	-	-	642	614	-	639	612	-
Stage 2	-	-	-	-	-	-	628	611	-	631	606	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.8	14.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1185	-	-	1177	-	-	390
HCM Lane V/C Ratio	0.066	0.004	-	-	0.004	-	-	0.034
HCM Control Delay (s)	15.8	8	0	-	8.1	0	-	14.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

FRONT STREET

&

MILL STREET

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	13	328	8	3	295
Future Vol, veh/h	27	13	328	8	3	295
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	30	14	364	9	3	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	698	364	0	0	364	0
Stage 1	364	-	-	-	-	-
Stage 2	334	-	-	-	-	-
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	407	681	-	-	1195	-
Stage 1	703	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	406	681	-	-	1195	-
Mov Cap-2 Maneuver	406	-	-	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	467	1195	-
HCM Lane V/C Ratio	-	-	0.095	0.003	-
HCM Control Delay (s)	-	-	13.5	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	7	375	25	9	391
Future Vol, veh/h	15	7	375	25	9	391
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	17	8	417	28	10	434

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	871	417	0	0	417	0
Stage 1	417	-	-	-	-	-
Stage 2	454	-	-	-	-	-
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	322	636	-	-	1142	-
Stage 1	665	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	318	636	-	-	1142	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	378	1142	-
HCM Lane V/C Ratio	-	-	0.065	0.009	-
HCM Control Delay (s)	-	-	15.2	8.2	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

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

SUBDIVISION: MAJOR SUBDIVISION (Preliminary Subdivision Plat)

Pursuant to Article 7, §155.706 of the Unified Development Code (UDC), an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town of Clayton to approve a subdivision of land. Please complete all fields in this application and submit to the Planning Department with all required materials.

Application Fees: **Major Preliminary Subdivision Plat Fee: $400.00 + $5.00 per lot**
Advertisement Fee: $100.00
Modifications to Approved Plans Fee:
Major Modification: $400.00 + $5.00 per lot modified
Minor Modification: $200.00 + $5.00 per lot modified

See §155.706(F) of the UDC for a definition of Major vs. Minor Subdivisions.
See §155.706(I) for Preliminary Plat approval (major subdivision) process/approval information.
See§155.203(F), (G), and (H) for information on Conventional vs. Open Space Subdivisions.
See §155.706(N) for information on minor and major modifications.
See UDC Article 6 for Subdivision Standards.

SITE INFORMATION

☐ New Major Subdivision
Conventional: _____ *Open Space:* _____

☐ New Subdivision Master Plan

☒ Modification to Approved Preliminary Plat
Major: x *Minor:* _____

Name of Project: Ashcroft Phases 6 & 7 **Acreage of Property:** 18.55 ACS

Tag #: 05H02200B / 0502015A **NC PIN:** 166900-76-7638 / 166900-75-4535

Location: Off Atwood Drive in Ashcroft Subdivision

Number of Lots (existing): 139 **(Proposed)** 56 **Min Lot Size:** 6.00 SF

Zoning District: PD-R **Electric Provider:** Town of Clayton

Wastewater: ☐ Septic ☒ Sewer (check one)

Water: ☐ Well ☒ Public/Private Water (check one)

Recreation/Open Space Requirement: ☐ Fee in lieu ☒ Land Dedication – Acreage: 5.43 ACS

FOR OFFICE USE ONLY

Date Received: RECEIVED JUL 02 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: $ 850 File Number: 2018-120-SD

PROPERTY OWNER INFORMATION

Name: Ashcroft Partners, LLC

Mailing Address: 114 W. Main St, Clayton, NC 27520

Phone Number: 919-422-6815 **Fax:** N/A

Email Address: reid@one27homes.com

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

Mailing Address: 314 E. Main St, Clayton, NC

Phone Number: 919-763-7278 **Fax:** N/A

Contact Person: Donnie Adams

Email Address: donnie@adamsandhodge.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany the application:

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application meeting was held with Town Staff. Date: 05/16/18	✓				
2. Completed Application	✓				
3. Review Fee and Advertisement Fee	✓				
4. Findings of Fact, signed *Not required for minor modifications. Form is included in this packet.*	✓				
5. Owner's Consent Form *Required if applicant is not the property owner. Included in this packet*	✓				
6. Preliminary Plat Subdivision Requirements Checklist form, completed and signed *Checklist is included in this packet*	✓				
7. Plat sheet(s) meeting requirements of the Requirements Checklist	✓				
8. If subdivision waivers are requested, applicant must attach a separate typed document requesting the waivers. The document must specifically list the waivers requested, including Code references, and must address the 4 considerations outlined in §155.706(I)(7).		✓			
9. Adjacent Property Owners List	✓				
10. Road Name Application *Included in this packet*	✓				
11. Wastewater allocation request OR verification of wastewater allocation *Letter format, to the attention of the Town Manager.*	✓				

12. A signed and sealed Traffic Impact Analysis *(required for projects which generate at least 100 vehicle trips at peak hour. See §155.708 of the UDC)*			
13. Neighborhood Meeting Notice Letter* (1 copy) *See sample letter and meeting requirement, included in this packet.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*	✓		
14. Neighborhood Meeting summary form* *Included in this packet – NOT submitted with application.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*			Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.
15. Stamped, addressed, empty envelopes with no return address, using the adjacent property owner list. **Not required for minor modifications* *This for a public notice of the public hearing mailed by the Town – thus, neighbors will receive both a neighborhood meeting letter from the applicant, and a notice of the hearing from the Town.*	✓		

EXPLANATION OF PROJECT

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

This project includes minor modifications to the current Ashcroft PDR as well as the addition of the approximately 18.55 acres. The minor modification and additional property will be developed to generate 56 new single family lots resulting in a total of 195 lots in Ashcroft. This addition will be developed in a manor comparable and consistent with the current phases of Ashcroft.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Planning Board of the Town of Clayton to approve the subject 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.

Adams & Hodge Engineering
Print Name

Signature of Applicant

6/29/2018
Date

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) That the subdivision meets all required specifications of the town Subdivision Regulations and conforms to the town Unified Development Code.

The subdivision meets all applicable regulations and conforms to the UDO.

(2) That 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 subdivision design is such that it will be beneficial to orderly development on adjacent tracts.

(3) 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.

The subdivision is designed to provide proper traffic flow within the neighborhood and provides a continuation of the existing street system as well as two stub roads for possible future development.

(4) That the subdivision will not adversely affect the general plans for the orderly growth and development of the town and is consistent with the planning policies adopted by the Town Council.

This subdivision is consistent with the orderly growth and development pattern of the town.

Project Name: Ashcroft Phases 6 & 7

Adams & Hodge Engineering
Print Name

Signature of Applicant

6/29/2018
Date

ADAMS & HODGE
ENGINEERING, PC

August 3, 2018

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: **Wednesday, August 15, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **114 W. Main Street**
Clayton, NC 27520

Type of Application: **Major Subdivision Plan**

Project/proposal property address: **Off of Atwood Drive in Ashcroft Subdivision.**

Description of project/proposal: **The proposed project is a residential subdivision which will be serviced by public water and sewer.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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*.

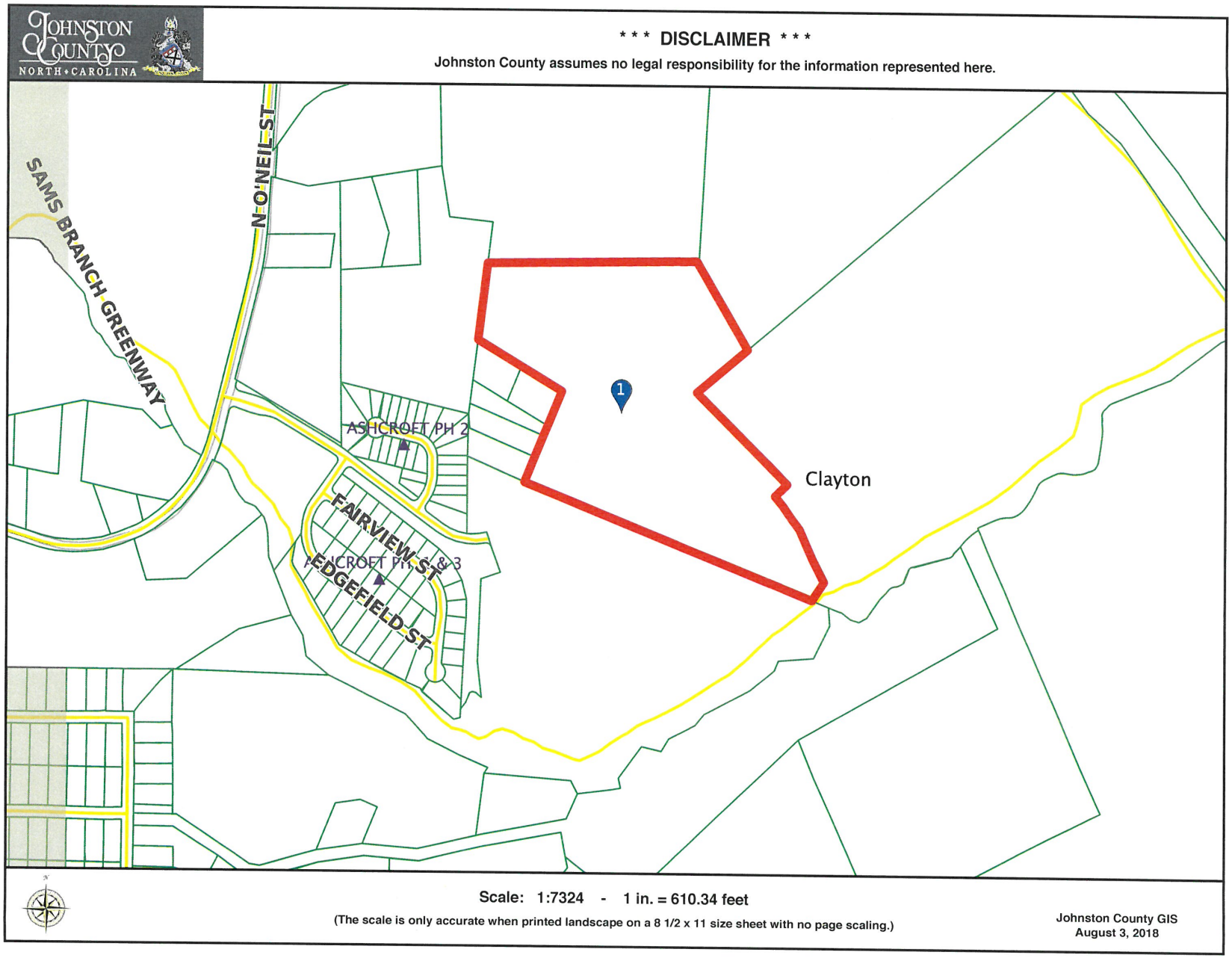
You may also contact the Planning Department at 919-553-5002.

Sincerely,

Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25459 ENGINEER DONALD C. ADAMS, JR.

Cc: Town of Clayton Planning Dept.


JOHNSTON COUNTY
NORTH • CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
SAMS BRANCH GREENWAY
N O'NEIL ST
ASHCROFT PH 2
FAIRVIEW ST
EDGEFIELD ST
1
Clayton
Scale: 1:7324 - 1 in. = 610.34 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, 2018

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Ashcroft Phases 6 & 7

Application: Major Subdivision

Location/Date: 114 West Main St. Clayton - August 15, 2018 7:00 pm

	NAME	ADDRESS
1	Donnie Adams	314 E. Main St. Clayton
2	Holland Adams	" "
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Ashcroft Phases 6 & 7 - Major Subdivision Application

Date of Mailing: Friday Aug. 3rd

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:

Printed Name: Holland Adams Signature: (Holland Adams)

Date of Meeting: August 15, 2018 Time of Meeting: 7:00 pm

Location of Meeting: 914 W. Main St. Conference Room (Clayton, N.C)

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.*

Donnie Adams (Adams & Hodge Engineering, PC) had all materials ready to present for the Ashcroft Phases 6 & 7 Major Subdivision, however after waiting until 7:20pm noone showed up.

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

ADJACENT PROPERTY OWNERS LIST

Project Name: THe Village at Parkview Phases 9-16

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
	See attached	

JOHNSTON COUNTY
NORTH CAROLINA

*** DISCLAIMER ***

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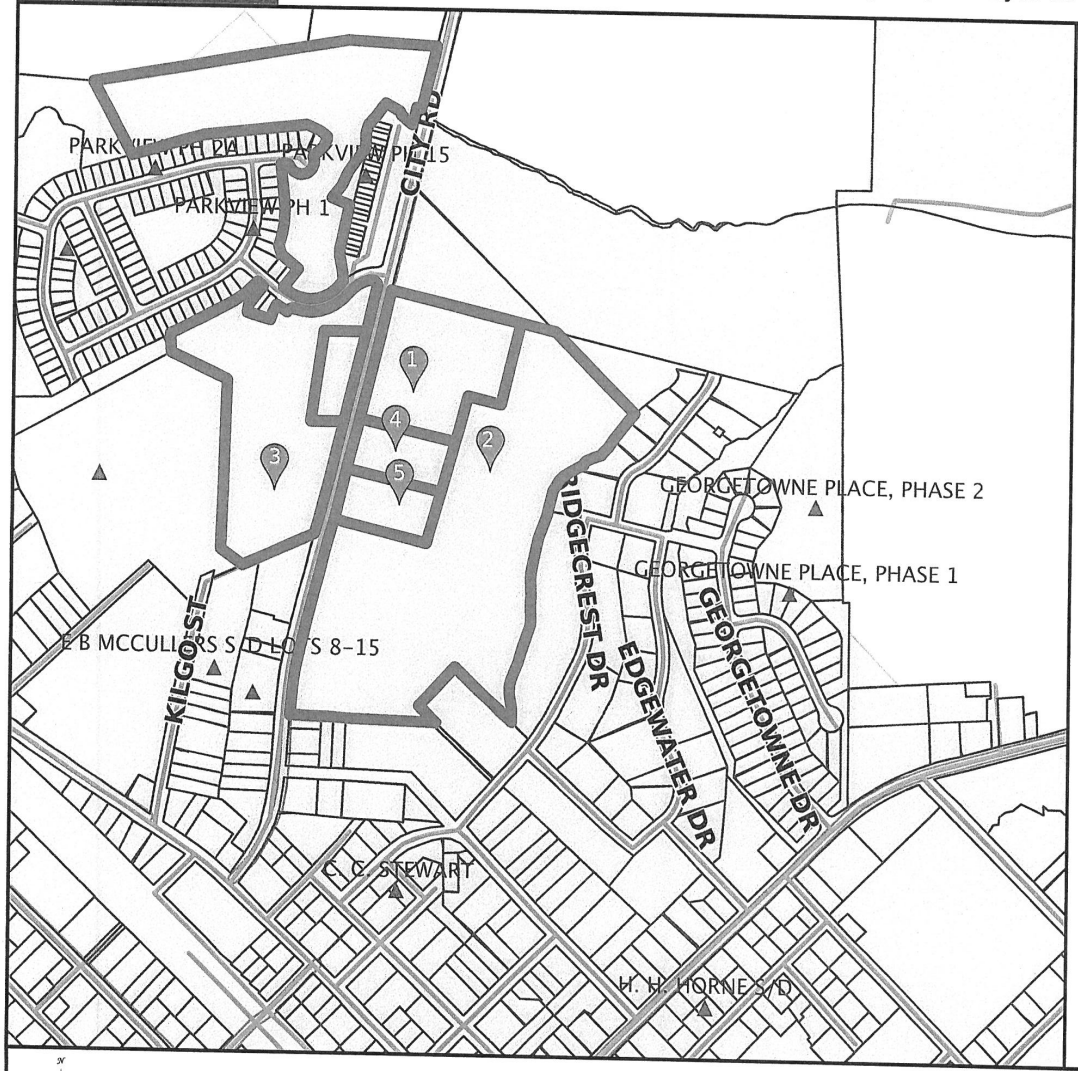


Result 1

id:	05H02020
Tag:	05H02020
NCPin:	166909-06-4838
Mapsheet No:	166909
Owner Name 1:	SAM'S BRANCH, LLC
Owner Name 2:	
Mail Address 1:	114 W MAIN ST STE 102
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27520-2397
Site Address 1:	
Site Address 2:	
Book:	05111
Page:	0199
Market Value:	66680
Assessed Acreage:	7
Calc. Acreage:	6.98
Sales Price:	3000
Sale Date:	2018-03-06

Scale: 1:7876 - 1 in. = 656.32 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 31, 2018

JOHNSTON COUNTY NORTH CAROLINA

*** DISCLAIMER ***

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

Result 2

id: 05029021
Tag: 05029021
NCPin: 166909-06-6358
Mapsheet No: 166909
Owner Name 1: GORDON, HARVEY B
Owner Name 2: GORDON, MILDRED S
Mail Address 1: 133 PLANTATION CIR S
Mail Address 2:
Mail Address 3: PONTE VEDRA BEACH, FL 32082-0000
Site Address 1:
Site Address 2:
Book:
Page:
Market Value: 119210
Assessed Acreage: 22.43
Calc. Acreage: 22.429
Sales Price: 0
Sale Date:

Result 3

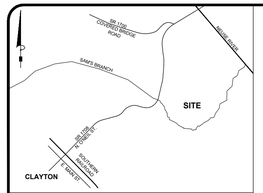
id: 05030069
Tag: 05030069
NCPin: 165908-97-7935
Mapsheet No: 165908
Owner Name 1: CITY ROAD LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2321
Site Address 1:
Site Address 2:
Book: 04557
Page: 0814
Market Value: 112350
Assessed Acreage: 22.35
Calc. Acreage: 22.4
Sales Price: 425000
Sale Date: 2015-02-13

Result 4

id: 05H02199C
Tag: 05H02199C
NCPin: 166909-06-1495
Mapsheet No: 166909
Owner Name 1: SAM'S BRANCH, LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2397
Site Address 1: 352 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 05130
Page: 0112
Market Value: 94030
Assessed Acreage: 1.85
Calc. Acreage: 1.848
Sales Price: 152500
Sale Date: 2018-04-10

Result 5

id: 05H02198
Tag: 05H02198
NCPin: 166909-06-1265
Mapsheet No: 166909
Owner Name 1: DELILA R B THOMPSON LIVING TRUST
Owner Name 2:
Mail Address 1: 8013 OLD STAGE ROAD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27603-0000
Site Address 1: 300 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 03003
Page: 0637
Market Value: 90710
Assessed Acreage: 1.99
Calc. Acreage: 1.855
Sales Price: 0
Sale Date: 2005-10-26



VICINITY MAP (NOT TO SCALE)

DEVELOPMENT NAME: ASHCROFT SUBDIVISION

PARCEL PIN: 166900-75-1610

ADDITIONAL LAND: OWNER GATTIS W. LEE
PO BOX 72
CLAYTON, NC 27520

PARCEL PIN: 166900-76-7638

PREVIOUS AREA CONTAINED WITHIN SUBDIVISION: 69.61 AC
ADDITIONAL ACREAGE WITH THIS SUBMITTAL: 5.03+13.52 = 18.55AC
TOTAL 88.16 AC

TOTAL FLOOD AREA: 10.12 AC.
THIS SUBMITTAL: 0.36 AC
TOTAL 10.48 AC

NET USABLE LAND: 88.16 AC - 10.48 AC = 77.68 AC

MAX DENSITY IN WATERSHED PROTECTION AREA: 2 UNITS/AC UNLESS HIGH DENSITY OPTION EXERCISED
DENSITY PROPOSED: 2.1 UNITS/ACRE USING HIGH DENSITY OPTION
TOTAL NUMBER OF UNITS PROPOSED: 156

PHASES 1 & 3 (45 SINGLE FAMILY LOTS)
MAX IMPERVIOUS AREA PER LOT = 5,500 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

PHASE 2 (28 TOWNHOMES LOTS)
MAX IMPERVIOUS AREA PER LOT = 3,500 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

PHASES 4 & 5 (66 SINGLE FAMILY LOTS)
MAX IMPERVIOUS AREA PER LOT = 5,000 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

PHASE 6 & 7 (56 SINGLE FAMILY LOTS)
MAX IMPERVIOUS AREA PER LOT = 5,000 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

TOTAL: 167 SINGLE-FAMILY RESIDENTIAL (PHASES 1 & 3-7)
MINIMUM LOT AREA: 6,000 SF
MIN. LOT WIDTH: 42'
MIN. STREET YARD: 20'
MIN. SIDE YARD (INT): 6'
MIN. SIDE YARD (STREET): 10'
MIN. REAR YARD: 15'
MAX. BUILDING HEIGHT: 35'

TOTAL: 28 TOWNHOMES (PHASE 2)
MIN. LOT AREA: 4,800 SF
MIN. LOT WIDTH: 40'
MIN. SIDE YARD (INT): 0' AND 6'
MIN. SIDE YARD (STREET): 10'
MIN. SIDE YARD (TOTAL): N/A
MIN. REAR YARD: 15'
MIN. BLDG. SEPARATION: 12'
MAX. BUILDING HEIGHT: 35'

CURRENT AREA IN SIDEWALKS: 1.81 AC.
THIS SUBMITTAL: .53 AC
TOTAL **2.34 AC**

CURRENT AREA IN PAVEMENT: 5.83 AC.
THIS SUBMITTAL: 1.53 AC.
TOTAL: **7.36 AC.**

LINEAR FEET OF STREETS: 8,209 L.F.
THIS SUBMITTAL: 2,300 L.F.
TOTAL: **10,509 L.F.**

TYPE OF WATER SYSTEM PROPOSED: TOWN OF CLAYTON
TYPE OF SANITARY SEWER SYSTEM PROPOSED: TOWN OF CLAYTON
ELECTRICAL SERVICE PROVIDED BY TOWN OF CLAYTON

ZONING DISTRICT: PD-R
WATERSHED PROTECTION AREA: YES, ENTIRE SITE
PROPOSED ZONING: PD-R

INSIDE CITY LIMITS? CURRENT PORTION - YES / ADDITIONAL PROPERTY - NO

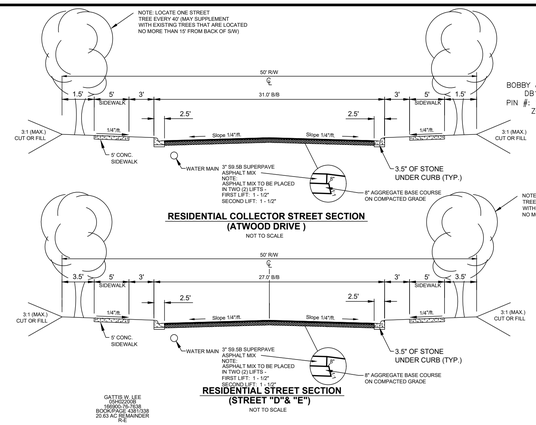
IMPERVIOUS SURFACE AREA SUMMARY

1.	PREVIOUS AREA CONTAINED WITHIN SUBDIVISION:	= 69.61 AC. OR 3,032,212 S.F.
	ADDITIONAL ACREAGE WITH THIS SUBMITTAL:	= 18.55 AC. OR 808,038 S.F.
	TOTAL AREA WITHIN SUBDIVISION:	= 88.16 AC. OR 3,840,250 S.F.
2.	PREVIOUS MAXIMUM ALLOWABLE IMPERVIOUS SURFACE AREA (36%):	= 1,091,596 S.F.
	ADDITIONAL IMPERVIOUS AREA WITH THIS SUBMITTAL:	= 290,894 S.F.
	TOTAL MAXIMUM ALLOWABLE IMPERVIOUS AREA:	= 1,382,490 S.F.
3.	PREVIOUS IMPERVIOUS SURFACE CONTAINED WITHIN ASPHALT & C & G:	= 253,674 S.F.
	ADDITIONAL IMPERVIOUS AREA WITHIN ASPHALT & C&G WITH THIS SUBMITTAL:	= 66,460 S.F.
	TOTAL IMPERVIOUS SURFACE AREA WITHIN ASPHALT & C&G:	= 320,134 S.F.
4.	PREVIOUS IMPERVIOUS SURFACE CONTAINED WITHIN CONCRETE SIDEWALK:	= 79,100 S.F.
	ADDITIONAL IMPERVIOUS AREA WITHIN CONCRETE SIDEWALK WITH THIS SUBMITTAL:	= 23,000 S.F.
	TOTAL IMPERVIOUS SURFACE AREA WITHIN CONTAINED CONCRETE SIDEWALK:	= 102,100 S.F.
5.	SINGLE FAMILY (PHASES 1 & 3) - 5,500 S.F. PER LOT X 45 LOTS	= 247,500 S.F.
6.	TOWNHOMES (PHASE 2) - 3,500 S.F. PER LOT X 28 LOTS	= 98,000 S.F.
7.	SINGLE FAMILY (PHASES 4-5) - 5,000 S.F. PER LOT X 66 LOTS	= 330,000 S.F.
8.	SINGLE FAMILY (PHASES 6&7) - 5,000 S.F. PER LOT X 56 LOTS	= 280,000 S.F.
	TOTAL LOT IMPERVIOUS	= 955,500 S.F.
9.	TOTAL PROPOSED IMPERVIOUS SURFACE AREA:	= 1,377,734 S.F.

BUT NO MORE THAN 75% OF ANY LOT

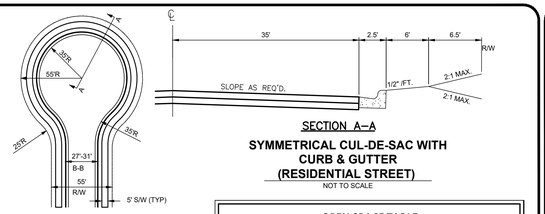
10. PROPOSED IMPERVIOUS AREA 1,377,734 S.F. < MAX. ALLOWED IMPERVIOUS AREA 1,382,490 S.F. (OKAY)

NOTE: CONSTRUCTION DRAWINGS ARE TO BE SUBMITTED TO THE TOWN OF CLAYTON ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL.



BOBBY & NANCY HARDEE
DB1879 P00051
PIN #: 166900-55-8439
ZONED: R-E

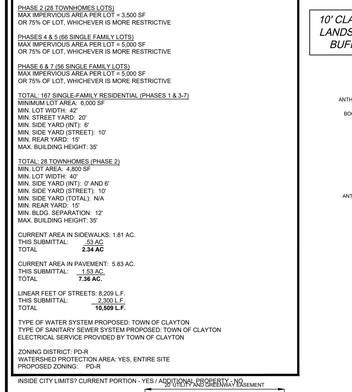
GATTIS W. LEE
0944020588
166900-76-7638
BOOK/PAGE 4387/338
20.62 AC REMAINDER
R-E

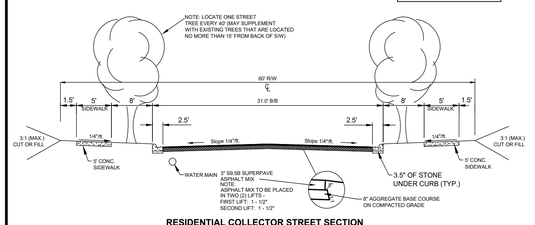


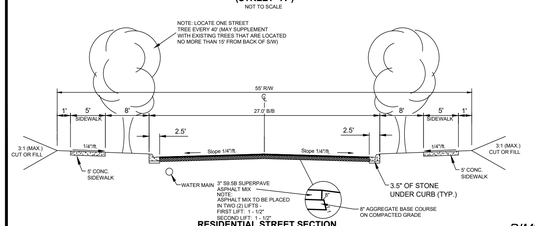
SECTION A–A
SYMMETRICAL CUL-DE-SAC WITH CURB & GUTTER (RESIDENTIAL STREET)
NOT TO SCALE

OPEN SPACE TABLE	
	ACRES
NET USEABLE LAND	77.68
REQUIRED OPEN SPACE (12.5%)	9.71
OPEN SPACE PROVIDED	20.7
IMPROVED RECREATION / OPEN SPACE (REQ'D 25% OF TOTAL OPEN SPACE)	5.18
IMPROVED RECREATION AREA PROVIDED (PARK ONLY - DOES NOT INCLUDE GREENWAY TRAIL)	5.43

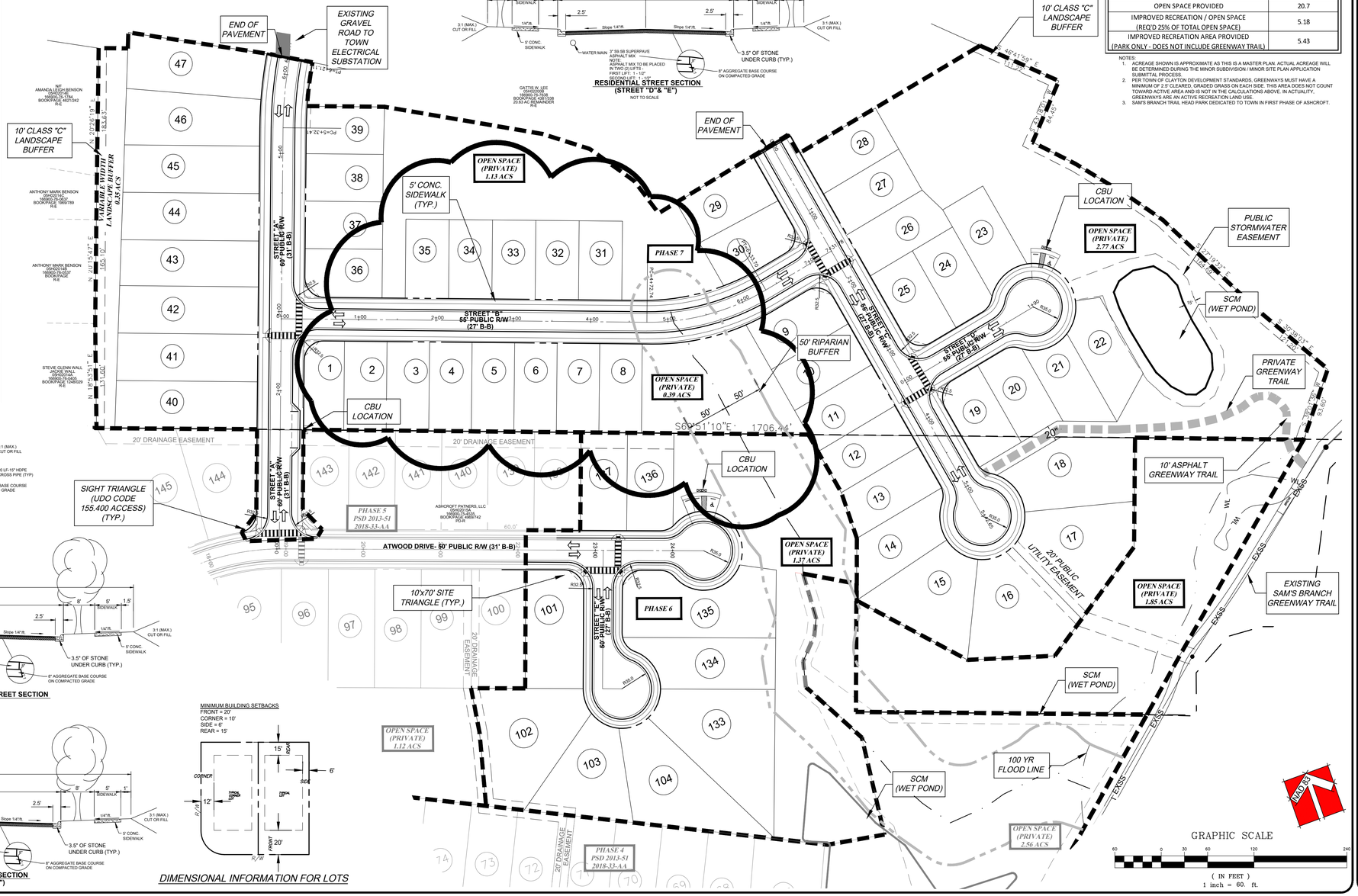
NOTES:
1. ACREAGE SHOWN IS APPROXIMATE AS THIS IS A MASTER PLAN. ACTUAL ACREAGE WILL BE DETERMINED DURING THE MINOR SUBDIVISION / MINOR SITE PLAN APPLICATION SUBMITTAL PROCESS.
2. PER TOWN OF CLAYTON DEVELOPMENT STANDARDS, GREENWAYS MUST HAVE A MINIMUM OF 2.5' CLEARED, GRADED GRASS ON EACH SIDE. THIS AREA DOES NOT COUNT TOWARD ACTIVE AREA AND IS NOT IN THE CALCULATIONS ABOVE. IN ACTUALITY, GREENWAYS ARE AN ACTIVE RECREATION LAND USE.
3. SAM'S BRANCH TRAIL, HEAD PARK DEDICATED TO TOWN IN FIRST PHASE OF ASHCROFT.







DIMENSIONAL INFORMATION FOR LOTS



ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dhodge@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/26/18 TOC COMMENTS
2) 09/25/18 TOC COMMENTS

ASHCROFT SUBDIVISION PHASES 6 & 7
TOWN OF CLAYTON, JOHNSTON COUNTY, NC

PRELIMINARY SITE PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	06/29/2018
JOB NO.	AH–
SHEET	SP2

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

Planning Board
September 24, 2018

STAFF REPORT

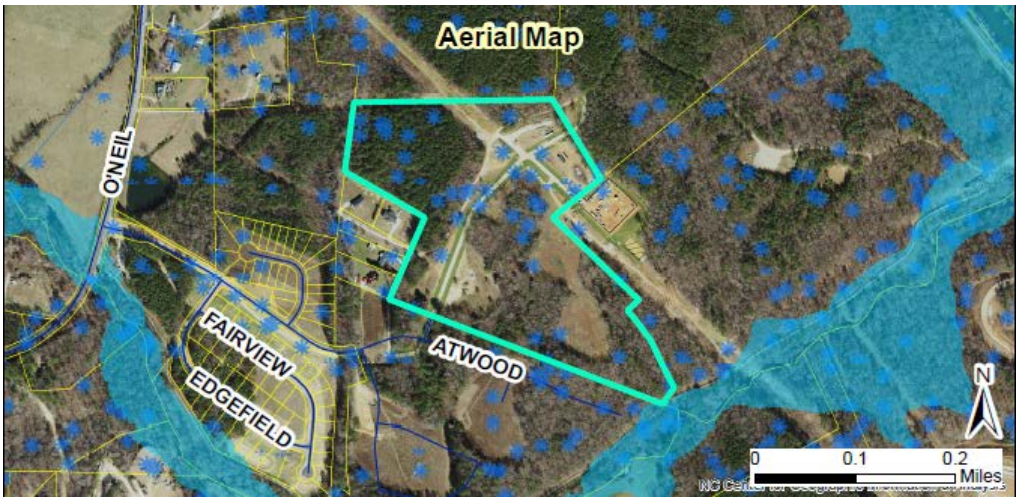
Application Number: 2018-120-SD
Project Name: Ashcroft Ph. 6 & 7 Major Modification (Preliminary Plat)

NC PIN / Tag #: 166900-76-7638 / 05H02200B, 166900-75-4535 / 05H02015A
Town Limits/ETJ: Town Limits
Applicant: Adams & Hodge Engineering
Owner: Lee Heirs, Gattis/Ashcroft Partners, LLC
Location: North of Atwood Drive; overall subdivision is located off N O'Neil Street

Public Noticing:

- Sign posted prior to September 14, 2018
- Letters mailed October 2, 2018
- Newspaper published October 5, 2018 and October 12, 2018

REQUEST: The applicant is requesting a major modification to the previously approved preliminary plat for Ashcroft Subdivision to add 18.55 acres of land, and 56 new single-family lots. Overall, if approved, the total lot count would increase to 195 units in Ashcroft Subdivision. A rezoning application is running concurrently with this project to rezone the property from Residential-Estate (R-E) to Planned Development Residential (PD-R).

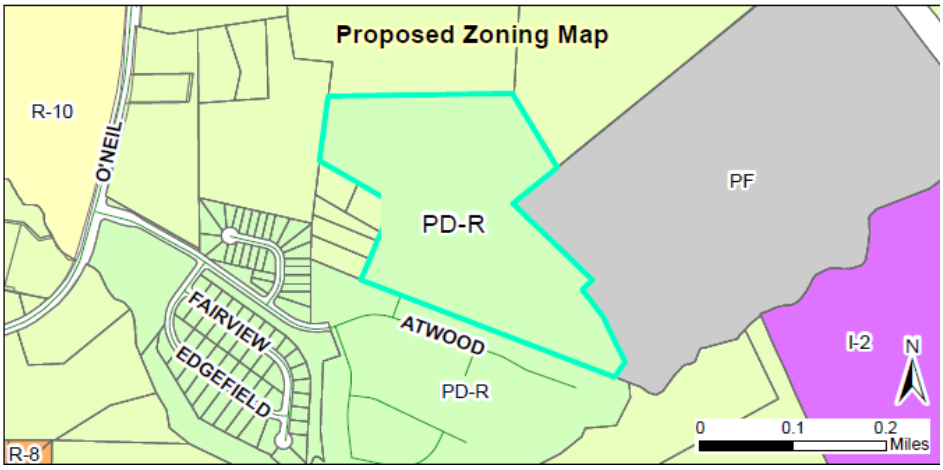


SITE DATA:

Acreage: 18.55 additional acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-Estate (R-E)	Vacant
South	Planned Development-Residential (PD-R)	Single-family Residential (Ashcroft)
East	Public Facilities	Town of Clayton Electrical Substation
West	Residential-Estate (R-E)	Single-family Residential



DEVELOPMENT DATA:

Proposed Uses:	56 residential lots
Buildings:	56 single-family residences
Density/Intensity:	2.1 units/acre
Impervious Surface:	5,000 SF or 75% per lot, whichever is greater
Required Parking:	2 spaces per unit
Proposed Parking:	2 spaces per unit
Access/Streets:	The majority of the additional lots will be accessed through the remainder of Ashcroft Subdivision, off Atwood Drive. Some lots will be located at the end of Atwood Drive, within two cul-de-sacs.

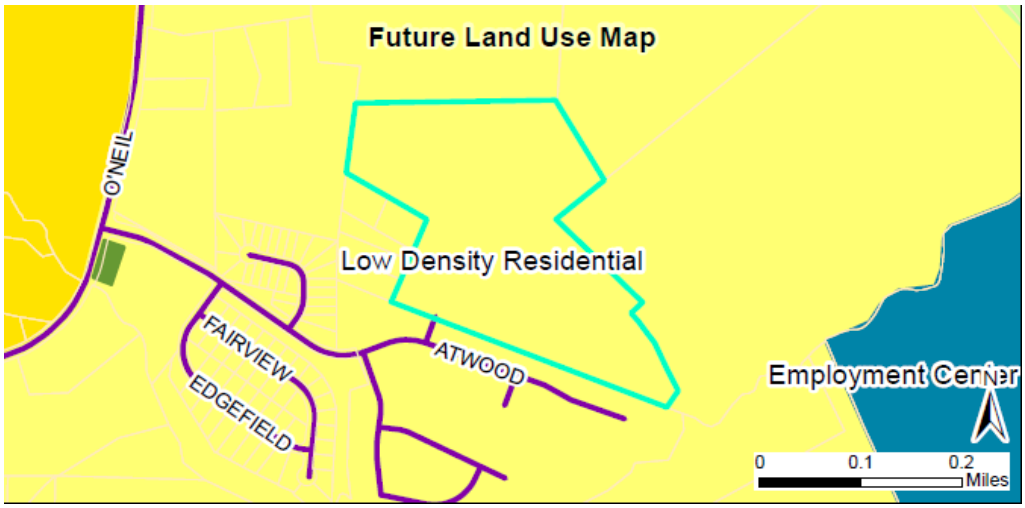
STAFF ANALYSIS:

Overview
The applicant is requesting a major modification to a previously approved preliminary plat for Ashcroft Subdivision (PSD 2013-51), to add 18.55 acres of land and create 56 additional single-family residential lots. The subdivision was originally approved for Phases 1-5 in 2013. These proposed units will make up Phases 6 and 7 of the overall development. Since the applicant is proposing additional lots and adding land to the previously approved preliminary plat, a major modification is required to be reviewed and approved by Town Council. The property is currently zoned Residential-Estate (R-E), but a rezoning application is running concurrently with this modification requesting a rezoning to Planned-Development Residential (PD-R). Most of these additional units (47) will be accessed via a connection to Atwood Drive. The remaining units will be accessed via two cul-de-sacs at the end of Atwood Drive.

Consistency with Adopted Plans

- **Comprehensive Plan 2040**
  The Future Land Use Map designates this land as "Low Density Residential". This typically includes single-family residential uses, with up to 3 dwelling units per acre. While the proposed density is not entirely consistent with the Future Land Use Map designation, it is consistent with the existing development pattern in this vicinity and across North O'Neil Street.

- **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 and is compatible with the surrounding land uses, which consists primarily of single-family residential.

Landscaping and Buffering
The development will include a Class "C" landscape buffer along the western property line. Street trees will also be provided as required within the Unified Development Code.

Access/Streets
The new units will be located off Atwood Drive, which is a previously approved street from the original Ashcroft Subdivision. Overall, Ashcroft subdivision is located off N O'Neil Street with internal connectivity throughout the development. Two stub-outs to the north will be provided within the additional Phases; one of these will connect to an existing gravel road, utilized by the Town to access an electrical substation on the adjacent property. The second will provide connectivity for future adjacent development.

Traffic
Based upon the peak hour trip generation, a full traffic study was not required. The applicant has provided a traffic letter (included as an attachment to this staff report) which has been reviewed by staff and NCDOT.

Multi-Modal Access
Interior sidewalks are located throughout the development. The new phases included within this application will connect internally to the remainder of the development.

Garbage / Recycling
The development will utilize roll-outs in Phases 6 & 7 to serve the single-family residential units.

CONSIDERATIONS:

- This plan is subject to final approval by Town Council.
- This approval is subject to approval of 2018-119-PDD to rezone the property to PD-R.

FINDINGS:
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.

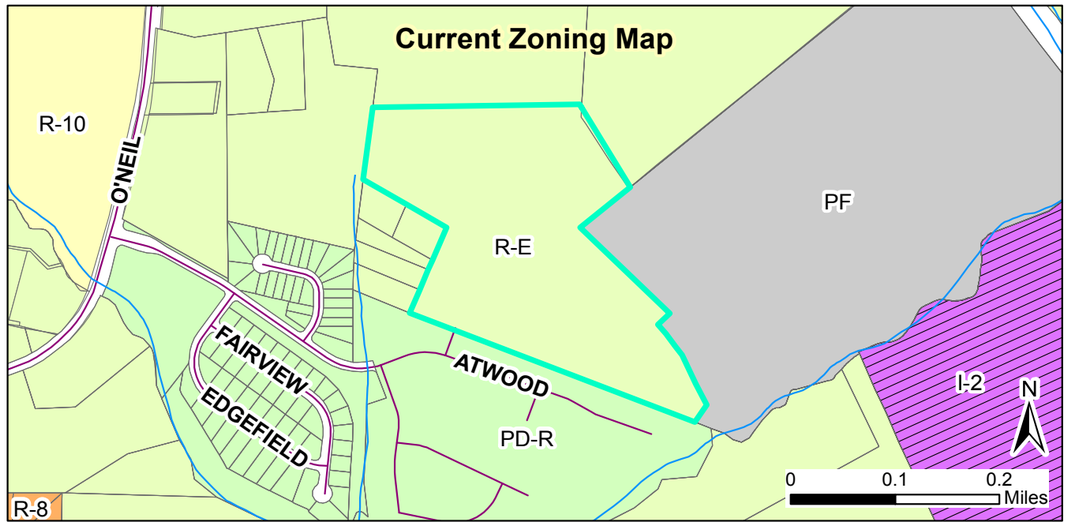
RECOMMENDED CONDITIONS OF APPROVAL:

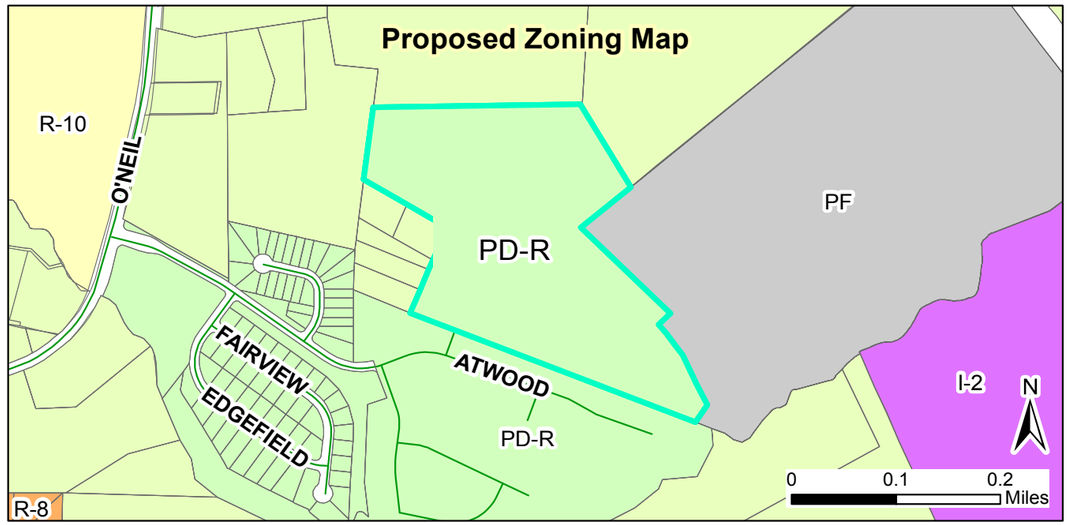
1. The previous conditions of approval for PSD 2013-51 (Ashcroft Preliminary Plat Ph. 1-5) shall be struck and replaced with the conditions contained herein.
2. Following Council approvals, three copies of the approved Master Plan/Preliminary Subdivision Plan meeting the requirements of the Conditions of Approval shall be submitted to Planning Department.
3. The development of the site is limited to the design and uses approved by the Town Council. Modifications may require additional approvals to be consistent with the UDC, or as necessary to meet Conditions of Approval.
4. A utility acreage and nutrient offset fees, and recreation and open space fees are due prior to plat recordation. Capacity fees shall be due prior to the issuance of each building permit.
5. Approved street names and addresses shall be applied to the plat prior to recording.

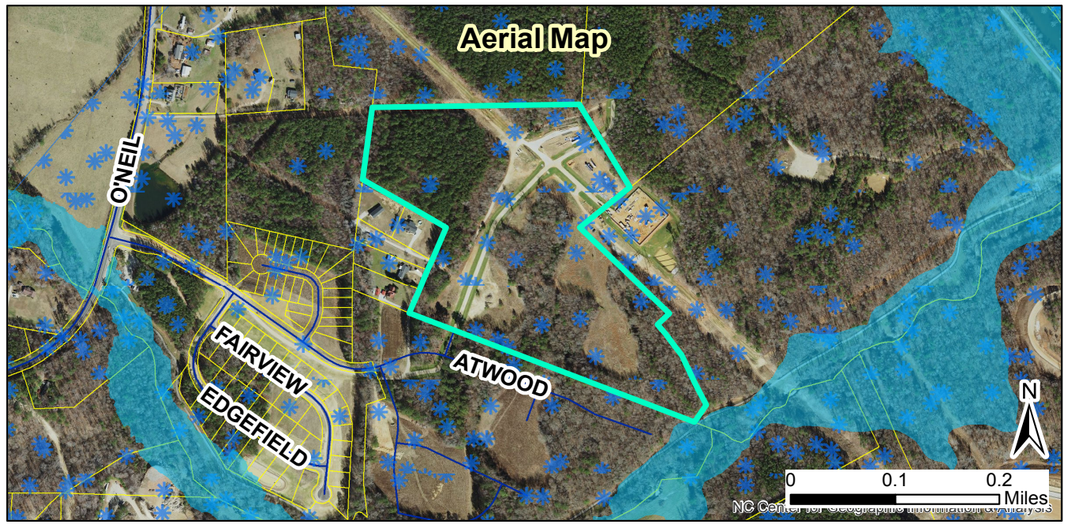
6. All recorded maps shall prominently identify riparian buffers and note that the lots are subject to the regulations of the Watershed Protection Overlay District of the Town of Clayton.
7. The street connection to N. O'Neil Street (SR 1708) shall be approved by NCDOT prior to recording final plats.
8. Prior to plat recordation, a Development Agreement shall be executed between the developer and the Town of Clayton to formalize the timeframes and process associated with necessary roadway improvements and the dedication of land for a public park.
9. The lots at the eastern end of the project shall not be recorded until NCDOT completes a preliminary alignment analysis for the Clayton Parkway.
10. Homeowners Association documents which provide for maintenance and management of all common facilities must be recorded prior to any plat recordation.
11. Existing 100 year flood zone encroachment issues shall be resolved before any non-drainage related improvements occur in the impacted area.

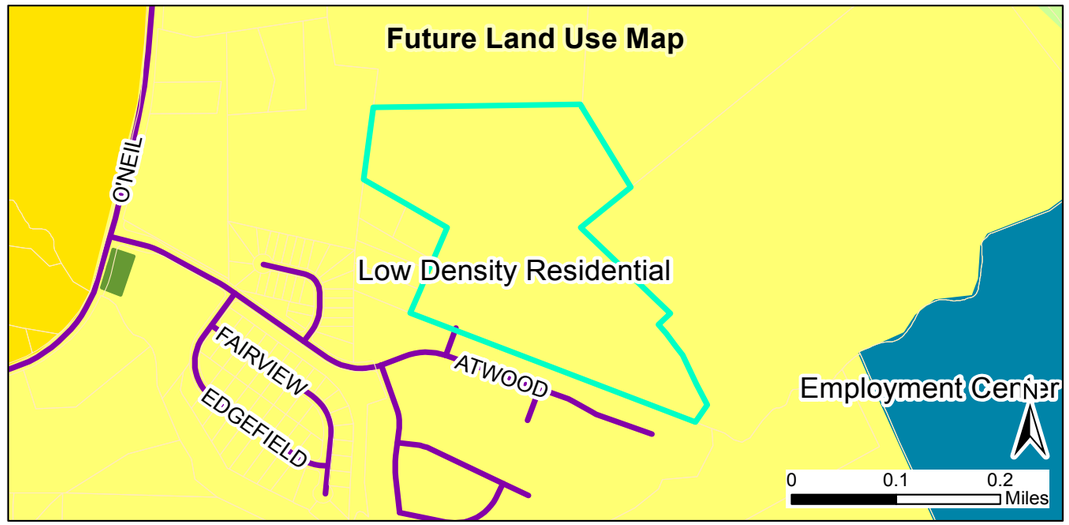
ATTACHMENTS:

1.) Staff Report Maps
2.) Application
3.) Neighborhood Meeting Materials
4.) Site Plan
5.) Traffic Letter
6.) Stormwater Statement









2018-120-SD Ashcroft Phase 6 & 7 Major Modification
Request: An addition of approximately 18.55 acres to be developed with 56 new single family lots.

Applicant: Adams & Hodge Engineering, PC
Property Owners: Lee Heirs Gattis/Ashcroft Partners, LLC
Parcel ID: 166900-76-7638/166900-75-4535
Tag #: 05H02200B/05H02015A

Staff Report Map

Legend
- Site
- 100-yr Flood Zone
- Thoroughfare Overlay
- Watershed Protection Overlay

09/17/2018
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\2018\2018-120-SD Ashcroft Phases 6 & 7 Modification\Map\Map 2018-120-SD Ashcroft Phase 6 & 7 Modification.mxd

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone: 919-872-5115
www.rameykemp.com

August 2, 2018

Haley Hogg
Planning and Development Department
Town of Clayton
111 East Second Street | PO Box 879 | Clayton, NC 27528
hhogg@townofclaytonnc.org

Subject: **Trip Generation Letter**
Ashcroft 6-7
Clayton, North Carolina

Dear Ms. Hogg:

This letter provides an estimate of the trip generation for the proposed residential development located along N. O'Neil Street in Clayton, North Carolina. Trip generation information is also provided for the existing phases 1-5 of the Ashcroft development (111 single-family homes and 28 townhomes). The proposed phases 6-7 of the development is anticipated to consist of an additional 56 single-family homes located within the existing Ashcroft development with access provided along N. O'Neil Street.

According to the ordinance, the Town of Clayton (Town) requires a traffic study if a proposed development is expected to generate 100 or more vehicular trips during the weekday AM or PM peak hours. It should be noted that the Ashcroft development conducted a TIA in September 2009 for 104 single family homes and 46 townhomes. Refer to the attachments for the original approved TIA for the Ashcroft development.

Trip Generation

Average weekday AM and PM peak hour trips for the proposed and existing developments 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 based on the LUC 210 (Single-Family Detached Housing) and LUC 220 (Multifamily Housing (Low-Rise)) rates.

Table 1: Site Trip Generation Based on LUC 210 and LUC 220

Land Use (ITE Code)	Intensity	Daily Trips (veh.)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single-Family Detached Housing (210) – Phases 1-5	111 units	1,150	21	63	71	41
Multifamily (Low-Rise) (220) – Phases 1-5	28 units	170	3	11	12	7
Total Site Trips (Phases 1-5)		**1,320**	**24**	**74**	**83**	**48**
Single-Family Detached Housing (210) – Phases 6-7	56 units	610	11	34	37	21

As shown in Table 1, based on the ITE *Trip Generation Manual*, 10th Edition, it is estimated that the existing site generates 1,320 total daily trips; with 98 total trips (24 entering and 74 exiting) during the weekday AM peak hour and 131 total trips (83 entering and 48 exiting) are estimated to occur during the weekday PM peak hour. The proposed phases of the Ashcroft development are expected to generate 610 daily trips; with 45 trips (11 entering and 34 exiting) during the weekday AM peak hour and 58 trips (37 entering and 21 exiting) expected to occur during the PM peak hour.

Findings and Summary

The calculations provided in this letter are estimations of the trip generation potential for the site based on ITE *Trip Generation Manual*, 10th Edition data. Based on the trip generation results, it is expected that the proposed phases of the Ashcroft residential development will have minimal impact on the surrounding roadway network and is expected to be below the traffic study threshold, as identified in the Town's ordinance.

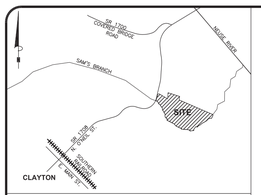
If you should have any questions, please feel free to contact me at (919) 872-5115.

Sincerely,
RAMEY KEMP & ASSOCIATES, INC.

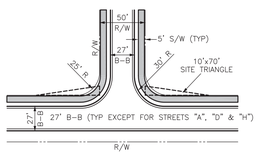
Joshua Reinke, P.E.
Transportation Manager
NC Corporate License # C-0910

cc: Donnie Adams (Adams & Hodge Engineering, PC)

Attachments: Proposed Site Plan

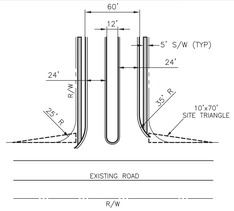


VICINITY MAP (NOT TO SCALE)



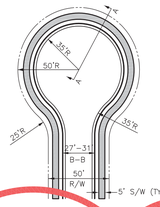
INTERNAL INTERSECTION DETAIL

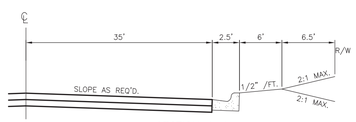
NOT TO SCALE



ROAD CONNECTION AT N. O'NEIL ST.

NOT TO SCALE





SECTION A–A

SYMMETRICAL CUL-DE-SAC WITH CURB & GUTTER (RESIDENTIAL STREET)

NOT TO SCALE

N/F JOHN WESLEY MASSEY DB1060 PG0172 PIN #: 166900-67-5095 ZONED: R-E

N/F ANTHONY MARK BENSON PIN #: 166900-76-0536 ZONED: R-E

N/F STEVIE & JACKIE WALL DB1248 PG0029 PIN #: 166900-76-0405 ZONED: R-E

N/F GATTIS LEE DB1381 PG0338 PIN #: 166900-76-9720 ZONED: R-E

N/F TRACY & DEANNA JONES DB4246 PG0268 PIN #: 166900-57-9030 ZONED: R-E

N/F JOSEPH T HARDEE DB1307 PG0552 PIN #: 166900-74-3548 ZONED: R-E

N/F BOBBY & NANCY HARDEE DB1879 PG0051 PIN #: 166900-55-8439 ZONED: R-E

N/F BOBBY HINTON HARDEE DB1307 PG0563 PIN #: 166915-65-1061 ZONED: R-E

N/F BOBBY HINTON HARDEE DB1307 PG0566 PIN #: 166915-74-0667 ZONED: R-E

REVISED PHASES 4 & 5

AREA REMOVED FROM SUBDIVISION 5.03 ACS

PHASE 1 CONSTRUCTION ENTRANCE

PHASE 1 LOTS 1-45

PHASE 2 LOTS 105-132

PHASE 4

PHASE 5

PHASE 4 CBU LOCATION

N. O'NEIL STREET (SR1700) - 60' PUBLIC R/W

HIGHMEADOW LANE - 50' PUBLIC R/W

ATWOOD DRIVE - 50' PUBLIC R/W (31' B-B)

STREET "C" - 50' PUBLIC R/W

STREET "B" - 50' PUBLIC R/W

STREET "H" - 50' PUBLIC R/W

STREET "E" - 50' PUBLIC R/W

STREET "F" - 50' PUBLIC R/W

STREET "G" - 50' PUBLIC R/W

OPEN SPACE 0.39 ACS

OPEN SPACE 0.98 ACS

OPEN SPACE 2.79 ACS

OPEN SPACE 5.22 ACS

OPEN SPACE 2.56 ACS

20' GREENWAY & UTILITY EASEMENT

20' GREENWAY AND UTILITY EASEMENT

WETLANDS

EXISTING 12" WATER MAIN

EXISTING 30' UTILITY EASEMENT

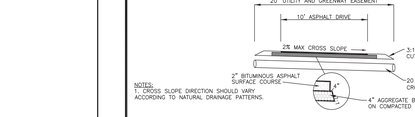
100-yr FLOOD (RESOURCE CONSERVATION AREA)

SX. 18" RCP

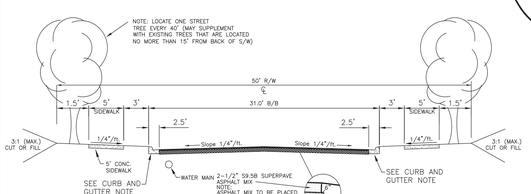
20' DRAINAGE EASEMENT

SAM'S BRANCH

50' RIPARIAN BUFFER (NOTE: 50' MEASURED FROM TOP OF BANK)

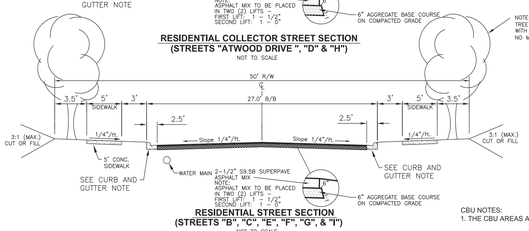


GREENWAY AND UTILITY EASEMENT ACCESS (NTS)



RESIDENTIAL COLLECTOR STREET SECTION (STREETS "ATWOOD DRIVE ", "D" & "H")

NOT TO SCALE



RESIDENTIAL STREET SECTION (STREETS "B", "C", "E", "F", "G", & "I")

NOT TO SCALE

CBU NOTES:
1. THE CBU AREAS ARE TO MEET NC BUILDING CODE FOR ADA ACCESSIBILITY.

2. ALL PLANTS AND INSTALLATION FOR THE CBU AREAS, SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY

IMPERVIOUS SURFACE AREA SUMMARY

1.	TOTAL AREA CONTAINED WITHIN SUBDIVISION	= 69.607 AC. OR 3,032,081 S.F.
2.	MAXIMUM ALLOWABLE IMPERVIOUS SURFACE AREA (36%)	= 1,091,549 S.F.
3.	IMPERVIOUS SURFACE CONTAINED WITHIN ASPHALT AND C & G	= 253,674 S.F.
4.	IMPERVIOUS SURFACE CONTAINED WITHIN CONCRETE SIDEWALK	= 79,100 S.F.
	TOTAL INFRASTRUCTURE	= 332,774 S.F.
5.	SINGLE FAMILY (PHASES 1–3) – 5,500 S.F. PER LOT X 45 LOTS	= 247,500 S.F.
6.	TOWNHOMES (PHASE 2) – 3,500 S.F. PER LOT X 28 LOTS	= 98,000 S.F.
7.	SINGLE FAMILY (PHASES 4–5) – 5,000 S.F. PER LOT X 75 LOTS	= 375,000 S.F.
	TOTAL LOT IMPERVIOUS	= 720,500 S.F.
8.	TOTAL PROPOSED IMPERVIOUS SURFACE AREA	= 1,053,274
9.	1,053,274 S.F. < 1,091,549 S.F. (OKAY)	

BUT NO MORE THAN 75% OF ANY LOT

NOTE: CONSTRUCTION DRAWINGS ARE TO BE SUBMITTED TO THE TOWN OF CLAYTON PUBLIC WORKS ENGINEERING DIVISION FOR REVIEW AND APPROVAL.

NOTE: N.C.D.O.T. DRIVEWAY PERMIT APPROVAL IS REQUIRED FOR ROADWAY CONNECTION TO NORTH O'NEIL STREET.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25469 DONALD C. ADAMS, JR

REVISED 8:18 am, Apr 13, 2018

NOTE:
PHASES 1-3 WERE DESIGNED BY DALTON ENGINEERING & ASSOCIATES.

SUMMARY INFORMATION

DEVELOPMENT NAME: ASHCROFT SUBDIVISION

PARCEL PIN: 166900-75-1610

TOTAL AREA CONTAINED WITHIN TRACT: 74.637 AC
AREA REMOVED FROM SUBDIVISION = 5.03 AC
ACS TOTAL AREA IN SUBDIVISION = 69.607 ACS
TOTAL FLOOD AREA: 10.12 AC.
NET USEABLE LAND: 59.487 AC.
TOTAL AREA IN OPEN SPACE REQUIRED: 7.436 AC.
(12.5% OF NET USEABLE LAND 59.487 AC.)
TOTAL AREA IN OPEN SPACE PROVIDED: 11.94 AC.
TOTAL AREA IN RECREATION PARK: 5.43 AC.
TOTAL AREA IN RECREATION/OPEN SPACE: 17.37 AC.

TOTAL AREA OF IMPROVED RECREATION/OPEN SPACE REQUIRED: 1.859 AC.
(25% OF TOTAL RECREATION/OPEN SPACE)

TOTAL AREA OF PARK OUTSIDE GREENWAY EASEMENT: 3.79 AC.
TOTAL AREA IN GREENWAY EASEMENT: 12.04 AC.
RESOURCE CONSERVATION AREAS: 10.12 AC.

MAX DENSITY IN WATERSHED PROTECTION AREA: 2 UNITS/ACRE
DENSITY PROPOSED: 2 UNITS/ACRE
TOTAL NUMBER OF UNITS PROPOSED: 140

PHASES 1 & 3 (SINGLE FAMILY)
MAX IMPERVIOUS AREA PER LOT = 5,500 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

PHASE 2 (TOWNHOMES)
MAX IMPERVIOUS AREA PER LOT = 3,500 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

PHASES 4 & 5 (SINGLE FAMILY)
MAX IMPERVIOUS AREA PER LOT = 5,000 SF
OR 75% OF LOT, WHICHEVER IS MORE RESTRICTIVE

TOTAL: 112 SINGLE-FAMILY RESIDENTIAL (PHASES 1 & 3-5)
MINIMUM LOT AREA: 6,000 SF
MIN. LOT WIDTH: 42'
MIN. STREET YARD: 20'
MIN. SIDE YARD (INT): 6'
MIN. SIDE YARD (STREET): 10'
MIN. SIDE YARD (TOTAL): 12'
MIN. REAR YARD: 15'
MAX. BUILDING HEIGHT: 35'

TOTAL: 28 TOWNHOMES (PHASE 2)
MIN. LOT AREA: 4,800 SF
MIN. LOT WIDTH: 40'
MIN. SIDE YARD (INT): 0' AND 6'
MIN. SIDE YARD (STREET): 10'
MIN. SIDE YARD (TOTAL): N/A
MIN. REAR YARD: 15'
MIN. BLDG. SEPARATION: 12'
MAX. BUILDING HEIGHT: 35'

AREA IN SIDEWALKS: 1.81 AC.
AREA IN PAVEMENT: 5.83 AC.
LINEAR FEET OF STREETS: 8,209 L.F.

TYPE OF WATER SYSTEM PROPOSED: TOWN OF CLAYTON
TYPE OF SANITARY SEWER SYSTEM PROPOSED: TOWN OF CLAYTON
ELECTRICAL SERVICE PROVIDED BY TOWN OF CLAYTON

ZONING DISTRICT: PD-R
WATERSHED PROTECTION AREA: YES
PROPOSED ZONING: PD-R

INSIDE CITY LIMITS? YES

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

314 East Main Street
Clayton, NC 27520
dmiller@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:

ADAMS & HODGE ENGINEERING, PC

ASHCROFT SUBDIVISION

TOWN OF CLAYTON, JOHNSTON COUNTY, NC

MASTER PLAN

DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	02/12/2018
JOB NO.	AH-
SHEET	SP01

EXISTING GRAVEL ROAD

STREET "A" 60' PUBLIC R/W (33' B-B)

STREET "B" 55' PUBLIC R/W (27' B-B)

STREET "C" 55' PUBLIC R/W (27' B-B)

STREET "D" 55' PUBLIC R/W (27' B-B)

STREET "E" 50' PUBLIC R/W (27' B-B)

ATWOOD DRIVE- 50' PUBLIC R/W (31' B-B)

FAIRVIEW STREET 50' PUBLIC R/W (27' B-B)

EDGEFIELD STREET- 50' PUBLIC R/W (27' B-B)

50' PUBLIC R/W (27' B-B)

O'NEAL STREET

PHASE 2

PHASE 7

PHASE 6

PHASE 5
PSD 2013-51
2018-33-AA

PHASE 1&3
PSD 2013-51

PHASE 4
PSD 2013-51
2018-33-AA

20' DRAINAGE EASEMENT

30' DRAINAGE EASEMENT

S69°51'10"E 1706.44'

S76°57'52"E 653.55'

S60°51'48"E 616.52'

EXSS

PRELIMINARY

NOT RELEASED FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 034809 ENGINEER DONALD C. ADAMS, JR.

REVISED
3:43 pm, Jun 01, 2018

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dominic@adamshodge.com
919-243-1332
FIRM # C-4187

revisions:
1)

ASHCROFT SUBDIVISION
PHASES 6 & 7
TOWN OF CLAYTON, JOHNSTON COUNTY, NC

PHASES 6 & 7
PHASING PLAN w/
OVERALL MASTER PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	06/01/2018
JOB NO.	AH-
SHEET	SP3

WATER SYSTEM PROJECT SUMMARY:

1. THERE ARE 56 SINGLE FAMILY LOTS SERVED BY THIS WATER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF WATER MAIN EXTENSIONS ARE AS FOLLOWS:
   ±2404 LF OF 6" PVC MAIN

SEWER SYSTEM PROJECT SUMMARY:

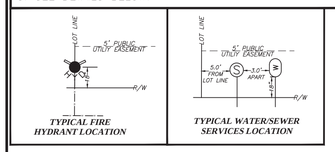
1. THERE ARE 56 SINGLE FAMILY LOTS SERVED BY THIS GRAVITY SEWER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF SEWER MAIN EXTENSIONS ARE AS FOLLOWS:
   ±2502 LF OF 8" PVC MAIN

STREET SUMMARY:

1. THE TOTAL LINEAR OF STREETS:
   ±2,300 LF THIS SUBMITTAL

WATER AND SEWER SERVICES MUST BE:

1. INSTALLED 3' APART
2. INSTALLED ±5' FROM LOW SIDE OF LOT CORNER, PER STREET GRADE.
3. WATER AND SEWER SERVICES SHOULD BE INSTALLED 18" FROM R/W, INSIDE THE LOT.
4. SEWER SERVICE MUST BE INSTALLED CLOSEST TO LOT CORNER
5. SEE DETAILS BELOW.



TYPICAL FIRE HYDRANT LOCATION

TYPICAL WATER/SEWER SERVICES LOCATION

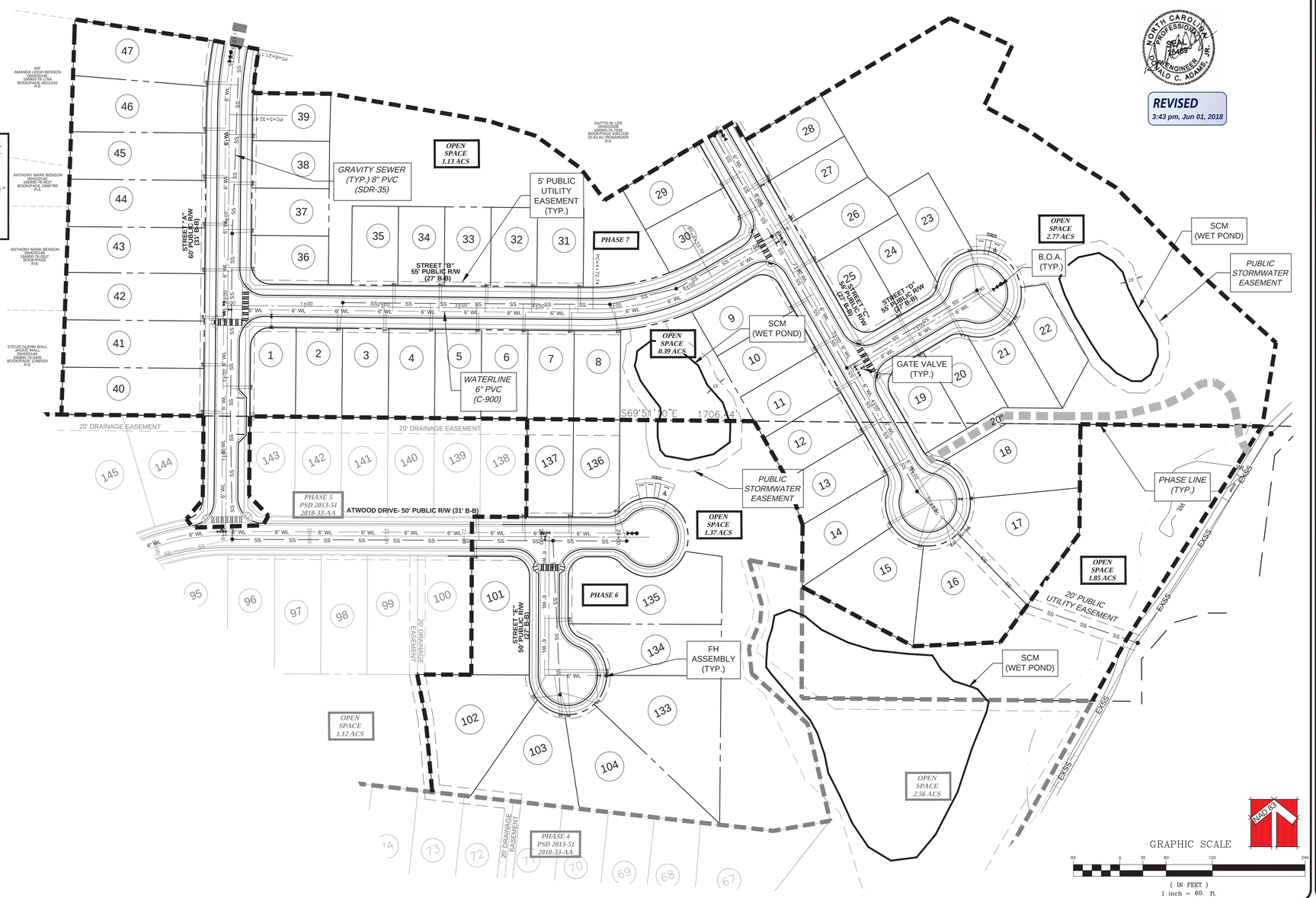
LEGEND

PROPOSED

- W/L — 6"WL
- BLOWOFF
- HYDRANT
- VALVE
- METER
- SEWERLINE — S — S —
- MANHOLE
- CLEANOUT
- STORM DRAINAGE
- CATCH BASIN
- DROP INLET/YARD INLET

NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

NOTES:
1. ALL PUBLIC WATER AND SEWER UTILITY MATERIALS AND METHODS OF INSTALLATION TO BE IN ACCORDANCE WITH TOWN OF CLAYTON STANDARDS AND SPECIFICATIONS AND MEET APPLICABLE NC PLUMBING CODES.
2. CONTRACTOR SHALL CALL NC CALL ONE AT 1-800-632-4949 TO VERIFY LOCATION OF EXISTING SERVICES BEFORE BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED TO THEIR ORIGINAL CONDITIONS. THIS INCLUDES ANY EXISTING UTILITY DAMAGE AND REPAIR OF ANY PAVEMENT, WALKWAYS, OR STRUCTURAL ITEMS. INCLUDING BUT NOT LIMITED TO: WATER, SEWER, ELECTRIC, GAS, IRRIGATION, CATV, FIBER OPTIC, TELEPHONE, LANDSCAPING, PAVEMENT, SIDEWALKS AND CURB & GUTTER.
4. INTERNAL SIDEWALKS TO BE INSTALLED BY BUILDER



PRELIMINARY

NOT RELEASED FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 16409 ENGINEER DONALD C. ADAMS, JR.

REVISED
3:43 pm, Jun 01, 2018

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60. ft.

NAD 83

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dominic@adamshodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1)

ASHCROFT SUBDIVISION PHASES 6 & 7

TOWN OF CLAYTON, JOHNSTON COUNTY, NC

PRELIMINARY UTILITY PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	05/09/2018
JOB NO.	AH-
SHEET	SP4

Ashcroft Residential Development

Clayton, NC

TRAFFIC IMPACT ANALYSIS

Prepared for

Nathan Evans
Johnston Land Group, LLC
P.O. Box 189
Clayton, NC 27528

Prepared by

MARTIN ALEXIOU BRYSON

4000 WESTCHASE BOULEVARD, SUITE 530, RALEIGH, NC 27607

September 10, 2009

5.0 FINDINGS AND CONCLUSIONS

It is concluded that the Ashcroft subdivision development will not have a significant negative impact on the surrounding roadway network; thus no on-site or off-site improvements are recommended beyond the driveway configurations shown in the site plan.

As indicated in Section 3, the eastbound approach of Covered Bridge Road at O'Neil Street is projected to fall to a LOS F during the P.M. peak hour due to background growth. Operations at this intersection will worsen slightly with the addition of site traffic, remaining at a failing LOS. Because this intersection is projected to fail without the addition of site traffic, it is reasonable to conclude that any improvements to this intersection should not be the responsibility of the Ashcroft subdivision, due to the minimal addition of site related traffic through this intersection. Simple widening options, including exclusive turn lanes, will not significantly benefit the operations at this location. Based on the most recent crash data from NCDOT, this location has sustained nine crashes in the last three years. Most of these crashes involved left-turning vehicles, and the severity of the crashes ranged from property damage only to minor injuries.

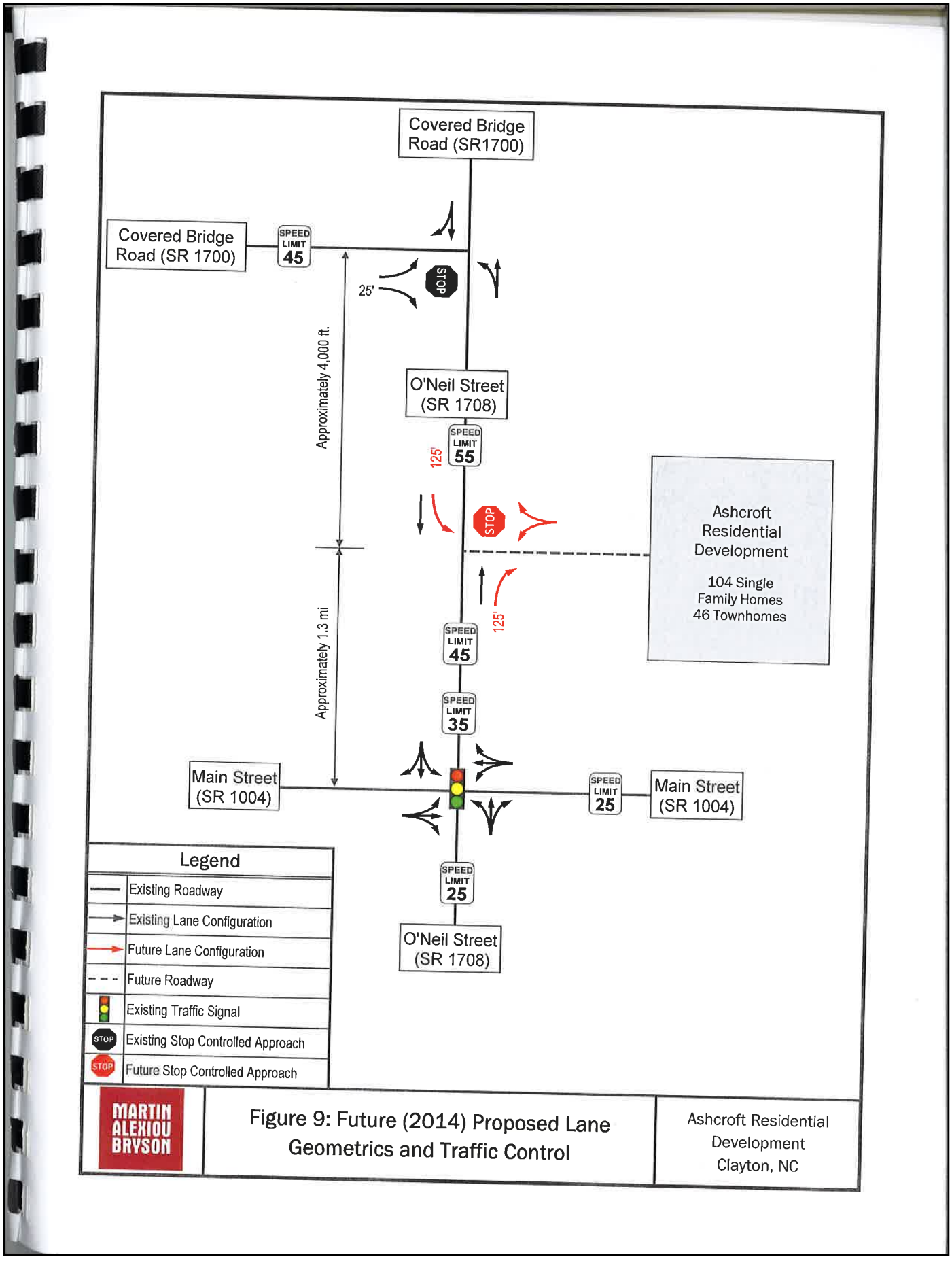
As additional development takes place in this area, it should be considered to address operations at this location. Signalization or possible realignment, shifting the stop control to the northbound O'Neil Street approach, could be future solutions for this location to improve traffic operations as well as to improve the overall safety of the intersection.

The recommended future geometrics are shown in Figure 9. Table 7 summarizes the level of service results across all analyzed scenarios.

Table 7 LOS Results Summary

Intersection	Existing (2009)		No-Build (2014)		Build (2014)	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
O'Neil Street and Main Street	**B (18.3 sec)**	**C (20.4 sec)**	**C (21.3 sec)**	**D (35.3 sec)**	**C (23.7 sec)**	**D (49.4 sec)**
Eastbound	C	C	C	D	D	E
Westbound	C	B	C	B	C	B
Northbound	A	B	A	B	A	B
Southbound	B	B	B	D	B	E
O'Neil Street and Covered Bridge Road	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound	C	D	C	F	D	F
O'Neil Street and Site Access	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound	N/A	N/A	N/A	N/A	C	C

LEGEND: **X (XX sec)** = Overall LOS (Overall delay in seconds) for signalized intersections
X = Approach LOS for unsignalized intersections


Covered Bridge Road (SR1700)
Covered Bridge Road (SR 1700)
SPEED LIMIT 45
STOP
25'
Approximately 4,000 ft.
O'Neil Street (SR 1708)
SPEED LIMIT 55
125'
STOP
Ashcroft Residential Development
104 Single Family Homes
46 Townhomes
125'
SPEED LIMIT 45
Approximately 1.3 mi
SPEED LIMIT 35
Main Street (SR 1004)
SPEED LIMIT 25
Main Street (SR 1004)
SPEED LIMIT 25
O'Neil Street (SR 1708)
Legend
Existing Roadway
Existing Lane Configuration
Future Lane Configuration
Future Roadway
Existing Traffic Signal
Existing Stop Controlled Approach
Future Stop Controlled Approach
MARTIN ALEXIOU BRYSON
Figure 9: Future (2014) Proposed Lane Geometrics and Traffic Control
Ashcroft Residential Development
Clayton, NC

4.0 BUILD ANALYSIS

4.1 Trip Generation

The site trips were generated for the proposed development based on rates found in the *ITE Trip Generation Manual, 8th Edition,* for the given Land Use Code. The proposed development is to be a residential subdivision, consisting of 104 single family homes (ITE LUC 210) and 46 multi-family dwellings/townhomes (ITE LUC 230). As a result, the Ashcroft subdivision is projected to generate 1,405 trips per typical weekday, including 111 A.M. peak hour trips (26 entering, 85 exiting) and 141 P.M. peak hour trips (90 entering, 51 exiting). Table 5 summarizes the trip generation for the proposed development during typical A.M. and P.M. weekday peak hours.

Table 5 Trip Generation Rates (Vehicle Trips)

ITE Land Use Code	USE	Units	ITE MANUAL RATES*						
			ADT	A.M. Enter	A.M. Exit	A.M. Total	P.M. Enter	P.M. Exit	P.M. Total
210	Single Family Detached Housing	104 units	1,078	21	62	83	69	40	109
230	Residential Townhomes	46 units	327	5	23	28	21	11	32
		Totals	***1,405***	***26***	***85***	***111***	***90***	***51***	***141***

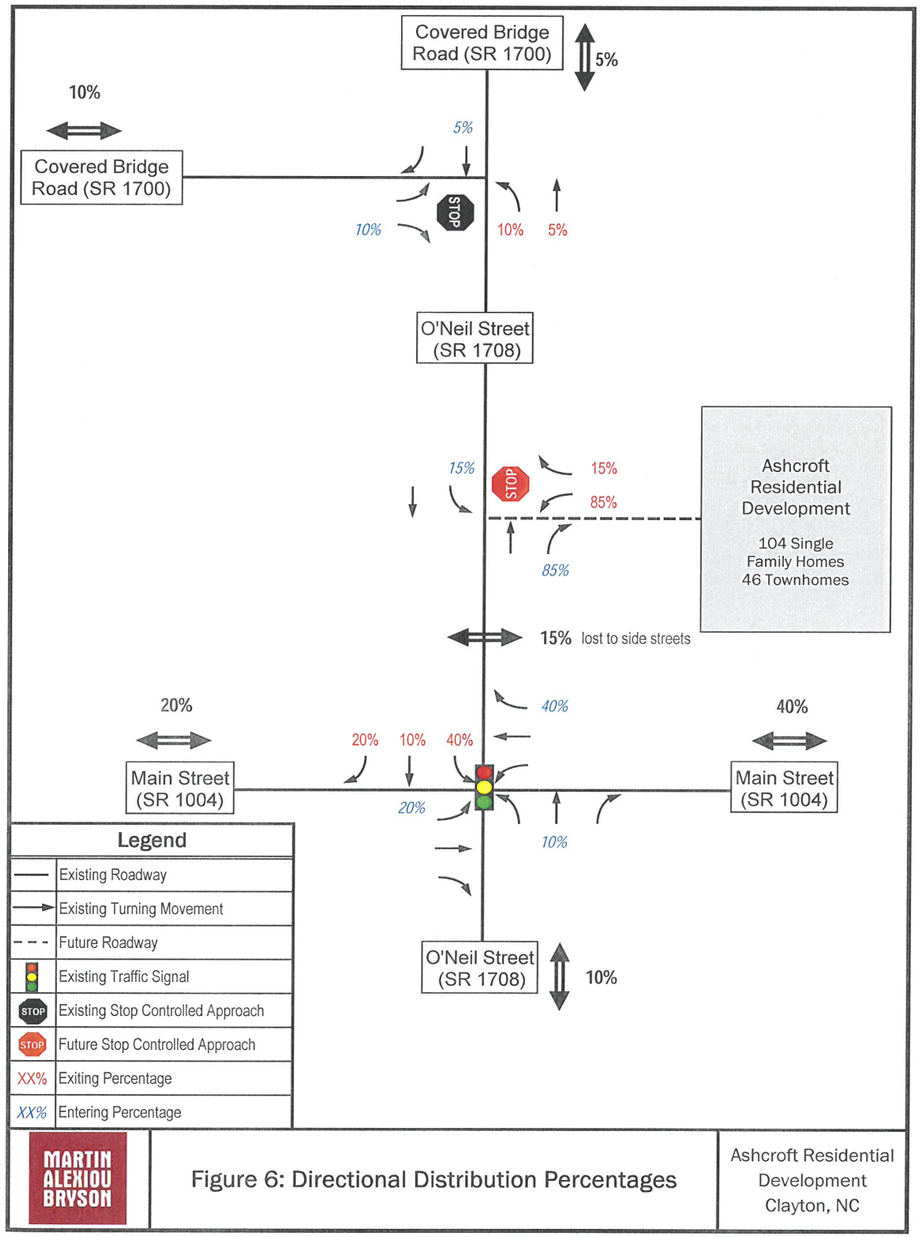
**ITE Trip Generation Manual, 8th Edition*

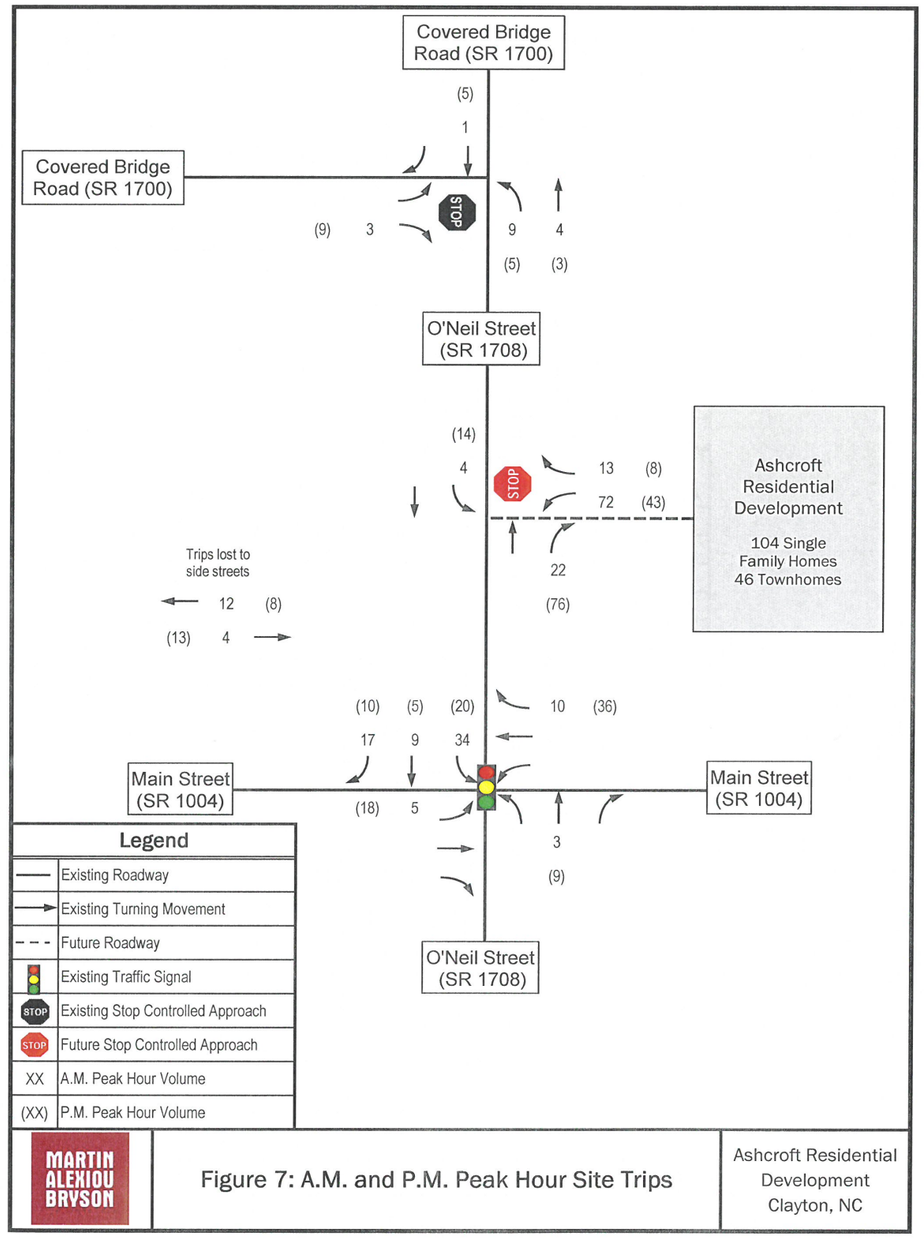
4.2 Trip Distribution and Assignment

The site trips from the proposed development were distributed based upon the existing traffic volumes. The trips were distributed for the proposed development as follows:

- 20% along Main Street to/from the west
- 10% along O'Neil Street to/from the south
- 40% along Main Street to/from the east
- 5% along O'Neil Street/Covered Bridge Road to/from the north
- 10% along Covered Bridge Road to/from the west

The remaining 15% is assumed to be lost to or gained from side streets along O'Neil Street between the site driveway and Main Street. There are multiple possibilities for routes to US 70 or other local destinations via unsignalized intersections north of Main Street. This percentage accounts for those vehicles that may chose to turn off of O'Neil Street prior to Main Street. The directional distribution percentages and site trip assignments for the Ashcroft subdivision are included in Figure 6 and Figure 7, respectively.


Covered Bridge Road (SR 1700)
5%
10%
Covered Bridge Road (SR 1700)
5%
10%
STOP
10%
5%
O'Neil Street (SR 1708)
15%
STOP
15%
85%
85%
Ashcroft Residential Development
104 Single Family Homes
46 Townhomes
15% lost to side streets
20%
40%
40%
20%
10%
40%
Main Street (SR 1004)
Main Street (SR 1004)
20%
10%
O'Neil Street (SR 1708)
10%
Legend
Existing Roadway
Existing Turning Movement
Future Roadway
Existing Traffic Signal
Existing Stop Controlled Approach
Future Stop Controlled Approach
XX% Exiting Percentage
XX% Entering Percentage
MARTIN ALEXIOU BRYSON
Figure 6: Directional Distribution Percentages
Ashcroft Residential Development
Clayton, NC


Covered Bridge Road (SR 1700)
(5)
1
Covered Bridge Road (SR 1700)
STOP
(9) 3
9 4
(5) (3)
O'Neil Street (SR 1708)
(14)
4
STOP
13 (8)
72 (43)
Ashcroft Residential Development
104 Single Family Homes
46 Townhomes
Trips lost to side streets
12 (8)
(13) 4
22
(76)
(10) (5) (20)
17 9 34
10 (36)
Main Street (SR 1004)
(18) 5
Main Street (SR 1004)
3
(9)
O'Neil Street (SR 1708)
Legend
Existing Roadway
Existing Turning Movement
Future Roadway
Existing Traffic Signal
Existing Stop Controlled Approach
Future Stop Controlled Approach
XX A.M. Peak Hour Volume
(XX) P.M. Peak Hour Volume
MARTIN ALEXIOU BRYSON
Figure 7: A.M. and P.M. Peak Hour Site Trips
Ashcroft Residential Development
Clayton, NC

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

Pursuant to Article 7, Section 155.704 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town Council to amend the Official Zoning Map.

Application Fees: **Standard Rezoning Fee: $500.00**
Rezoning to Planned Development District Fee: $1,000.00 + $5.00 acre
Advertisement Fee: $100.00
All fees are due when the application is submitted.

Note on Planned Developments: Requests to rezone to a Planned Development District must be accompanied by a Master Plan submittal. Master Plans are approved as Preliminary Subdivision Plats – please submit a concurrent Preliminary Subdivision Plat application and Master Plan.

SITE INFORMATION

Name of Project: Ashcroft Phase 6 & 7 **Acreage of Property:** 18.55 ACS

County Tag Number: 05H02200B/05H02015A **NC PIN:** 166900-76-7638/166900-75-4535

Address/Location: Atwood Drive, Clayton

Existing Zoning District: RE/PD-R

Proposed Zoning District: PDR

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

Mailing Address: 314 E.Main Street Clayton, NC 27520

Phone Number: 919-763-7278 **Fax:** N/A

Contact Person: Donnie Adams

Email Address: donnie@adamsandhodge.com

FOR OFFICE USE ONLY

Date Received: RECEIVED JUL 02 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: $1295 File Number: 2018-119-PDD

PROPERTY OWNER INFORMATION

Name: Gattis Lee Heirs/Ashcroft Partners, LLC

Mailing Address: 114 W.Main Street Clayton NC 27520

Phone Number: 919-422-6815 **Fax:** N/A

Email Address: reid@one27homes.com

EXPLANATION OF PROJECT

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

The rezoning request is for additional property to be added to the Ashcroft PD-R

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany a Rezoning application.

To be completed by the applicant:			For staff use only:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: 5-16-2018	•				
2. Review Fee ($500 for standard rezoning OR $1,000 + $5.00/acre for Planned Developments) and Advertisement Fee ($100)	•				
3. Completed application	•				
4. Owner's Consent Form *Required if applicant is not property owner.*	•				
5. A signed and sealed boundary survey (not more than a year old unless otherwise approved by the Planning Department).					
6. *If property to be rezoned is a portion of a parcel:* - Property legal description typed (10 pt. font or greater, and also submitted electronically in MS Word format.) - Plat showing property to be rezoned, matching legal description.					
7. Adjacent property owners list	•				
8. Neighborhood meeting notice letter (1 copy) *See sample letter and meeting requirements included in this packet*					
9. Neighborhood meeting summary form (1 copy) *Included in this packet*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.				
10. Stamped, addressed, empty envelopes with no return address, using the adjacent property owner list (1 set) *This for a public notice of the public hearing mailed by the Town – thus, neighbors will receive both a neighborhood meeting letter from the applicant, and a notice of the hearing from the Town.*	•				

APPROVAL CRITERIA

All applications for a Rezoning must address the following findings:

1. Consistency with the adopted plans of the Town.

   The proposed plan will be consistent with adopted plans of the town and will provide a mixture of residential units.

2. Suitability of the subject property for uses permitted by the current vs. the proposed district.

   A portion of the property is currently located in the town limits and is undeveloped. The remaining portion is in the Town's ETJ and will need to be annexed. Rezoning this property will allow for orderly development as well as an extension of Ashcroft.

3. Whether the proposed change tends to improve the balance of uses, or meets specific demand in the Town.

   The proposed zoning change will allow flexibility in development to facilitate better overall use of the property.

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.

   This property is adjacent to an existing planned development and adjacent to current Town Limits. As such the town has anticipated the proposed density.

5. It has been determined that the legal purposes for which zoning exists are not violated.

   The legal purposes for zoning have not been violated.

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.

   The rezoning should have a positive effect instead of a negative.

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.

   This change will benefit the general public.

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.

Adams & Hodge Engineering		6/1/2018
Print Name	*Signature of Applicant*	*Date*

ADAMS & HODGE
ENGINEERING, PC

August 3, 2018

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: **Wednesday, August 15, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **114 W. Main Street**
Clayton, NC 27520

Type of Application: **Major Subdivision Plan**

Project/proposal property address: **Off of Atwood Drive in Ashcroft Subdivision.**

Description of project/proposal: **The proposed project is a residential subdivision which will be serviced by public water and sewer.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

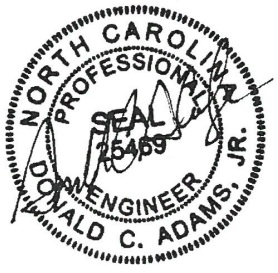
1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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*.

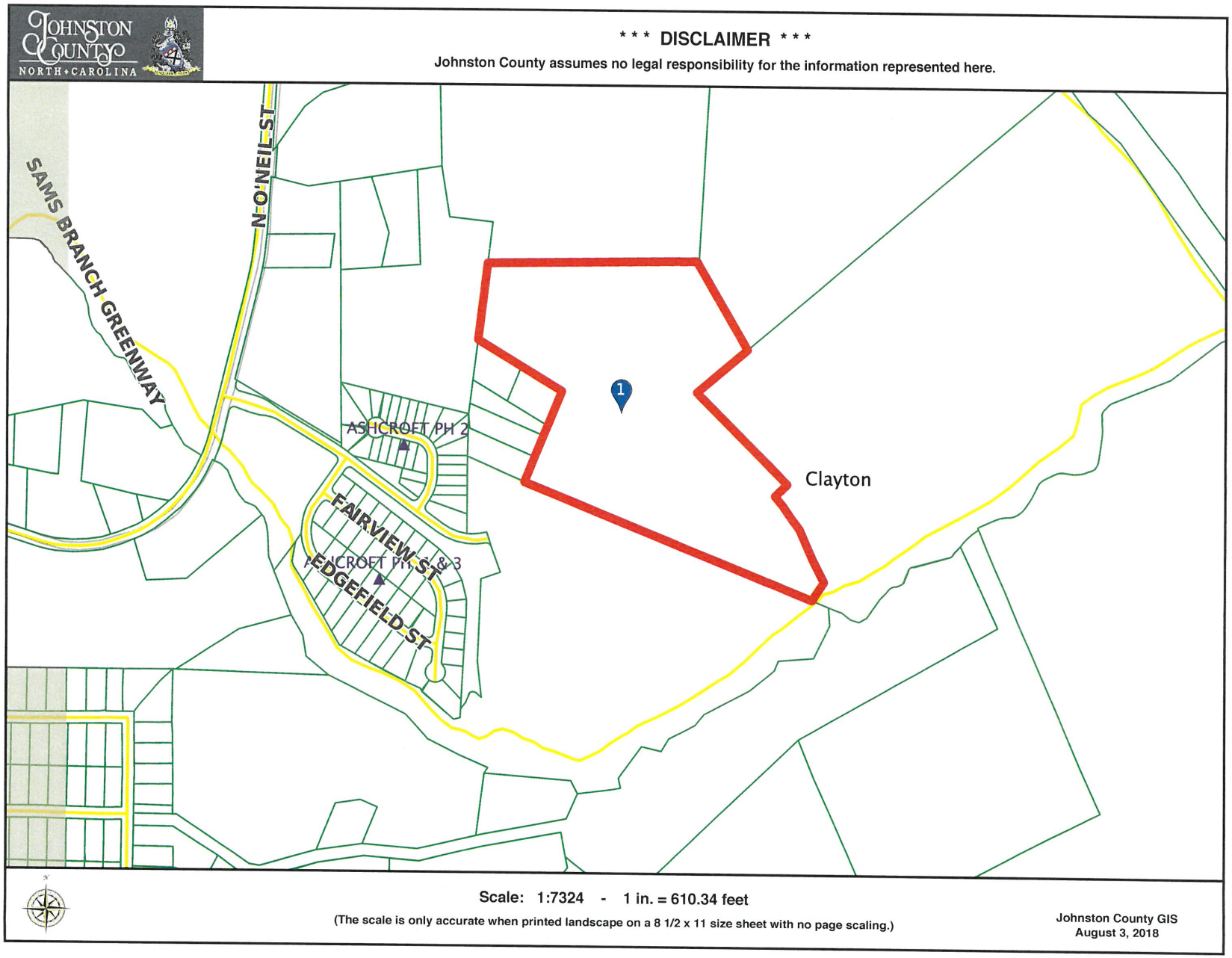
You may also contact the Planning Department at 919-553-5002.

Sincerely,



Donald C. Adams, Jr., PE

Cc: Town of Clayton Planning Dept.


JOHNSTON COUNTY
NORTH • CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
SAMS BRANCH GREENWAY
N O'NEIL ST
ASHCROFT PH 2
FAIRVIEW ST
EDGEFIELD ST
1
Clayton
Scale: 1:7324 - 1 in. = 610.34 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, 2018

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Ashcroft Phases 6 & 7

Application: Major Subdivision

Location/Date: 114 West Main St. Clayton - August 15, 2018 7:00 pm

	NAME	ADDRESS
1	Donnie Adams	314 E. Main St. Clayton
2	Holland Adams	" "
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Ashcroft Phases 6 & 7 - Major Subdivision Application

Date of Mailing: Friday Aug. 3rd

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:

Printed Name: Holland Adams Signature: (Holland Adams)

Date of Meeting: August 15, 2018 Time of Meeting: 7:00 pm

Location of Meeting: 914 W. Main St. Conference Room (Clayton, N.C)

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.*

Donnie Adams (Adams & Hodge Engineering, PC) had all materials ready to present for the Ashcroft Phases 6 & 7 Major Subdivision, however after waiting until 7:20pm noone showed up.

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

ADJACENT PROPERTY OWNERS LIST

Project Name: THe Village at Parkview Phases 9-16

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

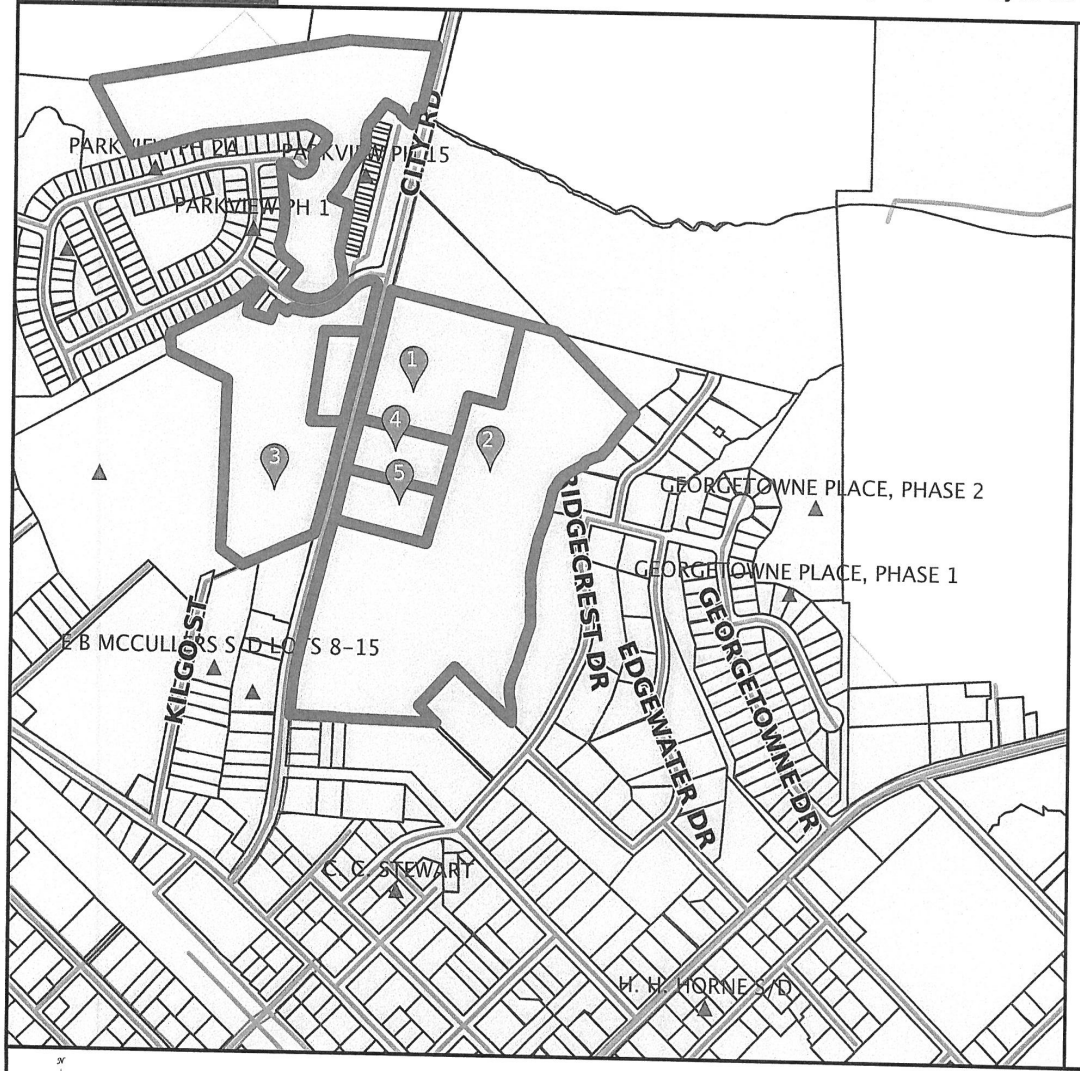
It is the responsibility of the applicant to correctly identify the current owner, based upon records in the Johnston County GIS Office, for all property owners of land within the required public notice radius.

PARCEL NUMBER	NAME	ADDRESS
	See attached	

JOHNSTON COUNTY
NORTH CAROLINA

*** DISCLAIMER ***

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



Result 1

id:	05H02020
Tag:	05H02020
NCPin:	166909-06-4838
Mapsheet No:	166909
Owner Name 1:	SAM'S BRANCH, LLC
Owner Name 2:	
Mail Address 1:	114 W MAIN ST STE 102
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27520-2397
Site Address 1:	
Site Address 2:	
Book:	05111
Page:	0199
Market Value:	66680
Assessed Acreage:	7
Calc. Acreage:	6.98
Sales Price:	3000
Sale Date:	2018-03-06

Scale: 1:7876 - 1 in. = 656.32 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 31, 2018

JOHNSTON COUNTY NORTH CAROLINA

*** DISCLAIMER ***

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

Result 2

id: 05029021
Tag: 05029021
NCPin: 166909-06-6358
Mapsheet No: 166909
Owner Name 1: GORDON, HARVEY B
Owner Name 2: GORDON, MILDRED S
Mail Address 1: 133 PLANTATION CIR S
Mail Address 2:
Mail Address 3: PONTE VEDRA BEACH, FL 32082-0000
Site Address 1:
Site Address 2:
Book:
Page:
Market Value: 119210
Assessed Acreage: 22.43
Calc. Acreage: 22.429
Sales Price: 0
Sale Date:

Result 3

id: 05030069
Tag: 05030069
NCPin: 165908-97-7935
Mapsheet No: 165908
Owner Name 1: CITY ROAD LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2321
Site Address 1:
Site Address 2:
Book: 04557
Page: 0814
Market Value: 112350
Assessed Acreage: 22.35
Calc. Acreage: 22.4
Sales Price: 425000
Sale Date: 2015-02-13

Result 4

id: 05H02199C
Tag: 05H02199C
NCPin: 166909-06-1495
Mapsheet No: 166909
Owner Name 1: SAM'S BRANCH, LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2397
Site Address 1: 352 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 05130
Page: 0112
Market Value: 94030
Assessed Acreage: 1.85
Calc. Acreage: 1.848
Sales Price: 152500
Sale Date: 2018-04-10

Result 5

id: 05H02198
Tag: 05H02198
NCPin: 166909-06-1265
Mapsheet No: 166909
Owner Name 1: DELILA R B THOMPSON LIVING TRUST
Owner Name 2:
Mail Address 1: 8013 OLD STAGE ROAD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27603-0000
Site Address 1: 300 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 03003
Page: 0637
Market Value: 90710
Assessed Acreage: 1.99
Calc. Acreage: 1.855
Sales Price: 0
Sale Date: 2005-10-26

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

September 24, 2018

STAFF REPORT

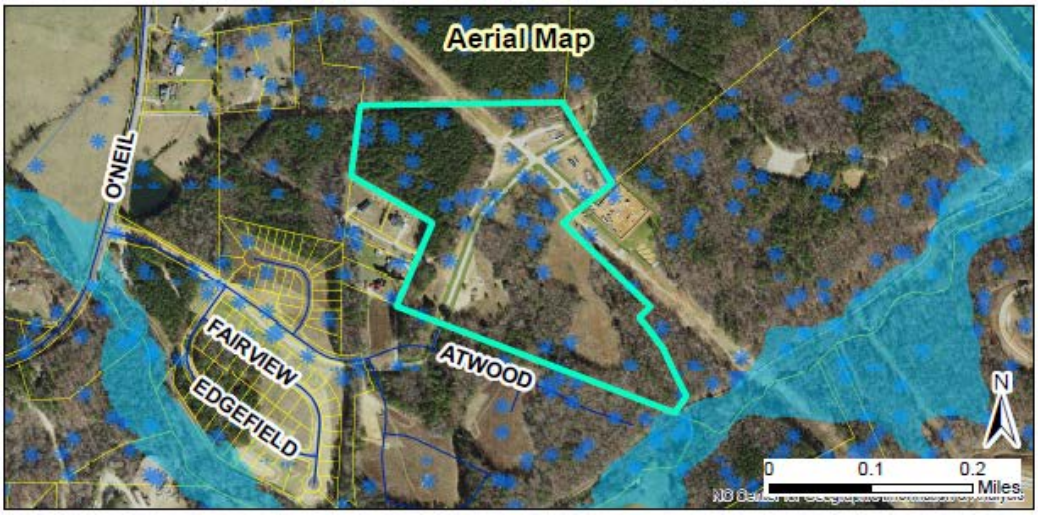
Application Number: 2018-119-PDD
Project Name: Ashcroft Phase 6 & 7, Rezoning

NC PIN / Tag #:	166900-76-7638, 166900-75-4535 / 05H02200B/05H02015A
Town Limits/ETJ:	ETJ
Overlay:	Watershed Protection Overlay
Applicant:	Adams & Hodge Engineering, PC
Owner:	Lee Heirs Gattis/Ashcroft Partners, LLC
Location:	18.55 acres located off of Atwood Drive, north of Fairview Street, east of O'Neil Street, and south of Covered Bridge Road.

Public Noticing:

- Neighborhood meeting held on August 15, 2018
- Sign posted September 14 , 2018
- Letters mailed October 2, 2018
- Newspaper ad posted October 5, 2018 and October 12, 2018

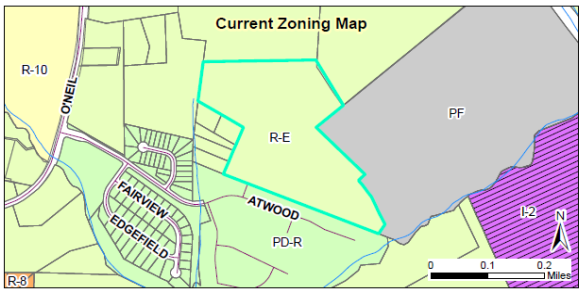
REQUEST: Rezone 18.55 acres of additional property to be rezoned from Residential-Estate (R-E) to Planned Development Residential (PD-R), to be added to the Ashcroft Subdivision.

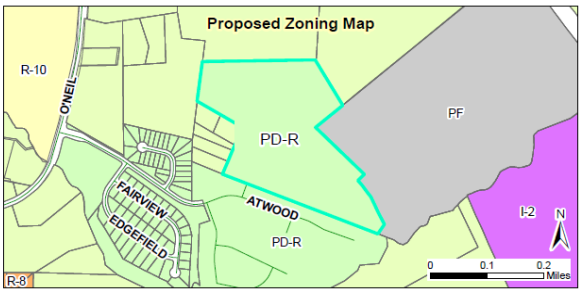


SITE DATA:
Acreage: 18.55 acres
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-Estate	Vacant, Single family residential
South	Residential-Estate, Industrial-Heavy	Vacant, Single family residential, Industrial
East	Public Facilities, Industrial-Heavy, Residential Estate	Electrical Substation, Industrial, Single family residential
West	Residential-Estate, Single Family Residential-10, Single Family Residential-8	Vacant, Single family residential





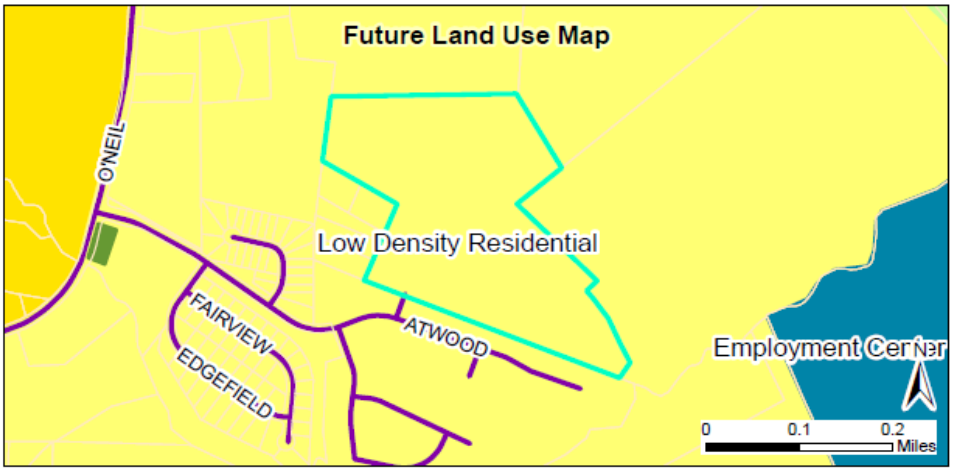
STAFF ANALYSIS AND COMMENTARY:

Overview
The applicant is requesting to rezone 18.55 acres of land from Residential-Estate to Planned Development-Residential (PD-R).

This application is running concurrently with a major subdivision modification, acting as a preliminary site plan for additional development (2018-120-SD, Ashcroft Phase 6 & 7 Modification). The preliminary site plan designates the uses, dimensional standards, and other associated design elements, including unique road design cross sections, that are part of the planned community. If this Planned Development rezoning and the associated preliminary site plan are approved, then individual phases of the development would be allowed to proceed to platting and construction through staff-level review, as each phase is developed.

Compatibility with surrounding land uses
The proposed zoning is consistent with the surrounding land uses, which are primarily single-family residential.

Consistency with the Comprehensive Plan 2040
The Comprehensive Plan 2040 designates this property as “low density residential” in the future land use map, with employment center located to the east and medium density residential to the west. The requested rezoning is generally consistent with these designations, as it does allow for the development of residential.



CONSIDERATIONS:

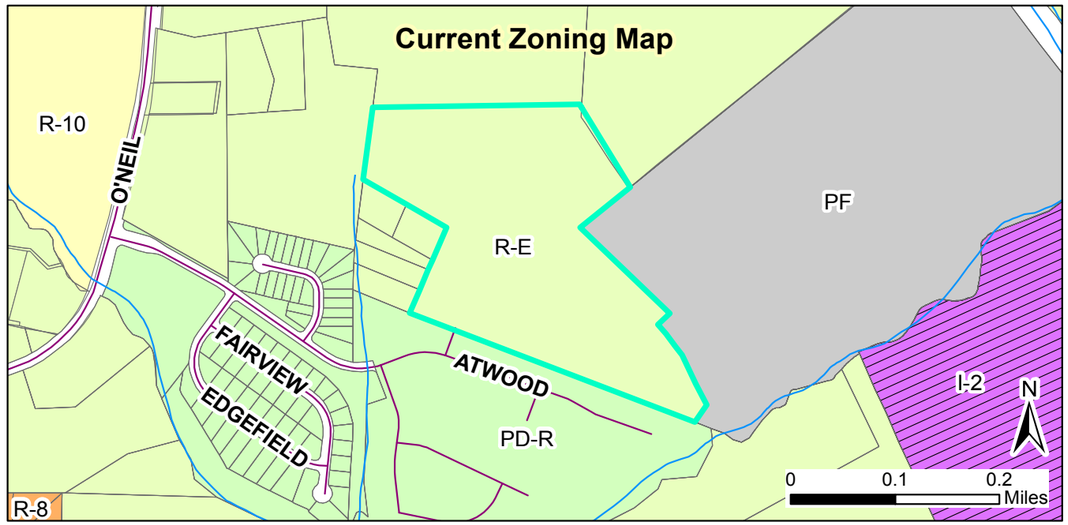
- Rezonings are decided by the Town Council. The Planning Board shall make a recommendation to the Town Council.
- When adopting or rejecting the rezoning, the Town Council shall approve a statement describing whether its action is consistent with adopted plans and/or policies of the Town and explaining why the Council considers the action taken to be reasonable and in the public interest.
- This rezoning is running concurrently with a major preliminary plat request (2018-120-SD, Ashcroft Phases 6 & 7 Modification, acting as a preliminary plan for the planned development).
- Dimensional standards and other criteria for a planned development are set within the preliminary plan.

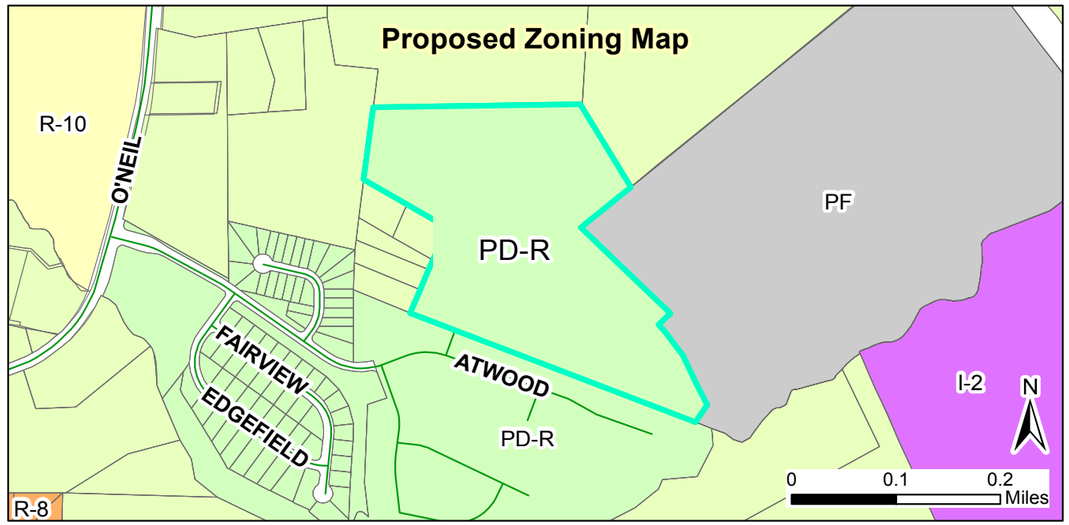
APPROVAL CRITERIA:

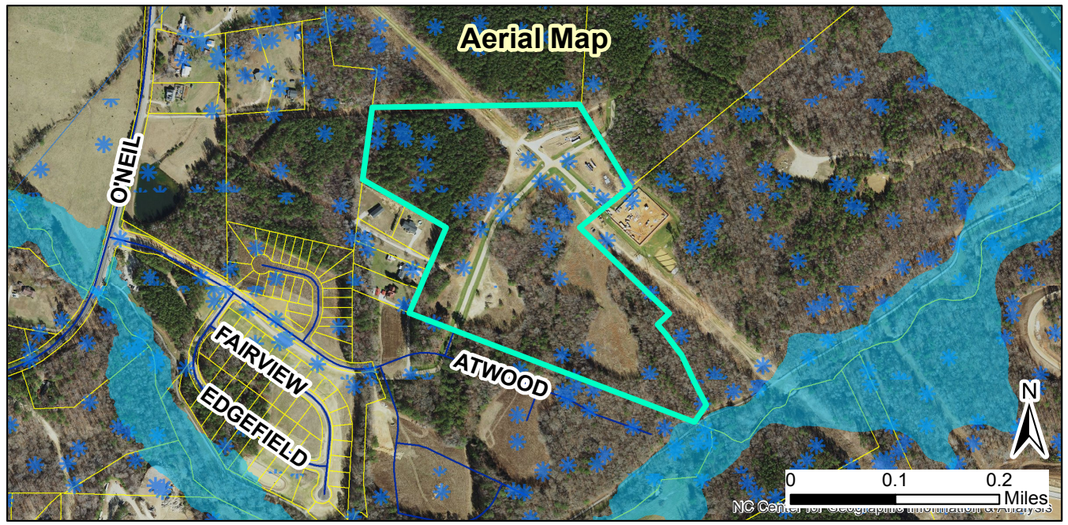
The applicant has addressed the Rezoning Approval Criteria and Master Plan Approval Criteria outlined in §155.704 and .705. The applicant's responses are incorporated in the application, as an attachment to the Staff Report.

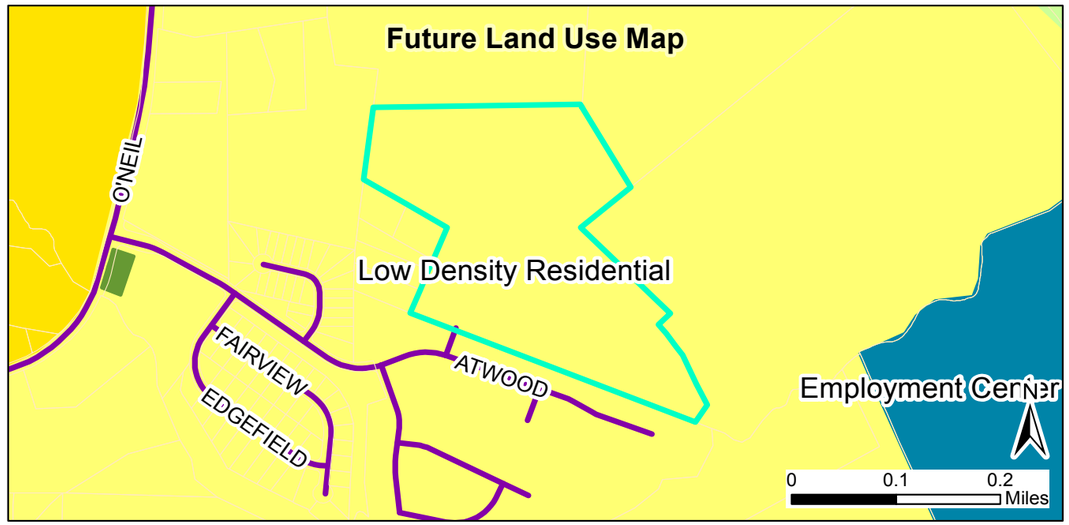
ATTACHMENTS:

1) Application
2) Staff Report Map
3) Neighborhood Meeting Materials
4) Associated Preliminary Plan (2018-120-SD)









Request:
2018-119-PDD, Ashcroft Phase 6 & 7, rezoning

Applicant: Adams & Hodge Engineering, PC
Property Owners: Lee Heirs Gattis/Ashcroft Partners, LLC
Parcel ID: 166900-76-7638/166900-75-4535
Tag #: 05H02200B/05H02015A

Staff Report Map

09/17/2018
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Legend
- Site
- 100-yr Flood Zone
- Thoroughfare Overlay
- Watershed Protection Overlay

Document Path: O:\PLANNING\REZONING\Planned Developments\2018\2018-119-PDD Ashcroft Phase 6 & 7\Mapping\Map 2018-119-PD Ashcroft Phase 6 & 7 rezoning.mxd

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

SPECIAL USE APPLICATION

Pursuant to Article 7, Section 155.711 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town Council to allow a Special Use. Special Uses are uses that may be appropriate in a particular district, but have the potential to create incompatibilities with adjacent uses.

Application Fee: $400.00.
Advertisement Fee: $100.00.
All fees are due when the application is submitted.

Please note that Section 155.702(B) of the Unified Development Code requires a Neighborhood Meeting for all Special Use Permit applications.

APPLICATION TYPE

☐ **New Special Use Permit**

☒ **Major Modification to an approved SUP**
Permit Modified: _____

SITE INFORMATION

Name of Project: The Village at Parkview Phases 9-16 **Acreage of Property:** 3.85 ACS

Parcel ID Number: NCPIN 166909-06-1495 / 166909-06-1265 **Tax ID:** TAG 05H02199C / 05H02198

Deed Book: 5130 / 3003 **Deed Page(s):** 112 / 637

Address/Location: 352 City Road, Clayton, NC 27520

Existing Use: Single Family Residential **Proposed Use:** Townhomes (R-10 SUP)

Is project within a Planned Development? ☒ No ☐ Yes

Planned Development District (if applicable): N/A

Is project within an Overlay District: ☒ No ☐ Yes

Overlay District (if applicable): N/A

OFFICE USE ONLY

RECEIVED
JUL 02 2018
TOWN OF CLAYTON
PLANNING DEPARTMENT

Date Received: _____ Amount Paid: $ 600 Permit Number: 2018-12-SUP

PROPERTY OWNER INFORMATION

Name: Sam's Branch, LLC / Delila R B Thompson Living Trust

Mailing Address: 114 W. Main Street, Clayton NC 27520 / 8013 Old Stage Rd.,Raleigh, NC 27603

Phone Number: 919-422-6815 **Fax:** N/A

Email Address: reid@one27homes.com

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

Mailing Address: 314 E. Main Street Clayton, NC 27520

Phone Number: 919-763-7278 **Fax:** N/A

Contact Person: Donnie Adams

Email Address: donnie@adamsandhodge.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany a Conditional Use Permit (CUP) application.

To be completed by the applicant:			To be completed by staff:		
	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: _____	☑	☐			
2. Review Fee ($400) and Application Fee ($100)	☑	☐			
3. Completed application (9 copies)	☑	☐			
4. Owner's Consent Form (9 copies)	☑	☐			
5. Adjacent property owners list (9 copies)	☑	☐			
6. Wastewater allocation request OR verification of wastewater allocation (9 copies)	☑	☐			
7. Signed and sealed traffic impact analysis (2 copies)	☐	☐	In Progress		
8. If applicant is concurrently applying for site plan approval, a copy of the proposed site plan.	☑	☐			
9. Neighborhood meeting notice letter (9 copies) *See sample letter and meeting requirements included in this packet*	May be provided at time of submittal if meeting date is known – otherwise must be submitted by email or mail on date the letter is mailed out.				
10. Set of stamped, addressed envelopes using the adjacent property owners list	May be provided at time of submittal OR no later than 25 days prior to the Town Council meeting.				
11. Neighborhood meeting summary form (9 copies) *Form is included in this packet*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.				

Note: More information may be requested by the Planning Department depending on the project

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.

   The subdivision is designed to provide proper traffic flow within the neighborhood and provides appropriate points of connection to the existing street system for safe ingress and egress.

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.

   This subdivision has been designed with sound land use planning practices and conforms to the Town U.D.O. and applicable regulations.

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 proposed use is consistent with approved use for adjacent tract. It will be a maintenance free neighborhood and should have a positive impact on the general area.

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.

   This subdivision is consistent with the orderly growth and development pattern of the Town.

EXPLANATION OF PROJECT

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

This project is a 39 townhome units extension of the adjacent approved subdivision/special use (2017-171-SD).

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.

Adams & Hooge Engineering		6/1/2018
Print Name	*Signature of Applicant*	*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

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 Village at Parkview Ph 9-16 **Address or PIN #:** 300 City Road, Clayton 05H02198

AGENT/APPLICANT INFORMATION:

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

314 E. 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*):

Rezoning
Major Subdivision
Final Plats
Construction Plans

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: Delilah B Thompson
Carol Boyette, Trustee Living Trust
(Name - type, print clearly)

8011 Old Stage Rd
(Address)

Carol J. Boyette, Trustee
(Owner's Signature)

Raleigh NC 27603
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Marguerite Sawicki, a Notary Public for the above State and County, this the 17 day of May, 2018.

SEAL

MARGUERITE SAWICKI NOTARY PUBLIC LEE COUNTY, NC

Marguerite Sawicki
Notary Public

My Commission Expires: 11-1-2022

October 2013

May 17 18,04:31p Clyde and Carol Boyette 919-772-8432 p.1

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

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Project Name: The Village at Parkview JPN 9-16 **Address or PIN #:** 166909-06-1495

AGENT/APPLICANT INFORMATION:

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

314 E. 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)*:

REZONING — FINAL PLATS
MAJOR SUBDIVISION — CONSTRUCTION PLANS

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:

SAMS BRANCH LLC
(Name - type, print clearly)

114 W. Main St
(Address)

(Owner's Signature)

CLAYTON, NC 27520
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Johnston

Sworn and subscribed before me Polly A. Mudd, a Notary Public for the above State and County, this the 5th day of May, 2018.

POLLY A. MUDD NOTARY PUBLIC JOHNSTON CO., NC

SEAL

Polly A Mudd
Notary Public

My Commission Expires: June 18, 2020

January 2018

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Major Subdivision - The Village at Parkview 9-16

Date of Mailing: August 3, 2018

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:

Printed Name: Holland Adams Signature: Holland Adams

Date of Meeting: August 16, 2018 Time of Meeting: 7:00 pm

Location of Meeting: 114 W. Main St. Clayton NC 27520

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.*

Donnie Adams had all materials ready for presentation for The Village at Parkview 9-16 at 7:00 pm, however after waiting until 7:20pm, noone shawed up.

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

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: The Village at Parkview 9-16

Application: Major Subdivision

Location/Date: 114 W. Main St. Clayton, NC 7:00pm

	NAME	ADDRESS
1	Donnie Adams	314 E. Main St. Clayton, NC 27520
2	Holland Adams	" "
3		
4		
5		
6		
7		
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9		
10		
11		
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13		
14		
15		
16		
17		
18		
19		
20		

ADAMS & HODGE
ENGINEERING, PC

August 3, 2018

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: **Thursday, August 16, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **114 W. Main Street**
Clayton, NC 27520

Type of Application: **Major Subdivision Plan**

Project/proposal property address: **352 City Rd, Clayton, NC 27520 (East side of City Road.)**

Description of project/proposal: **The proposed project is a residential subdivision which will be serviced by public water and sewer.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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*.

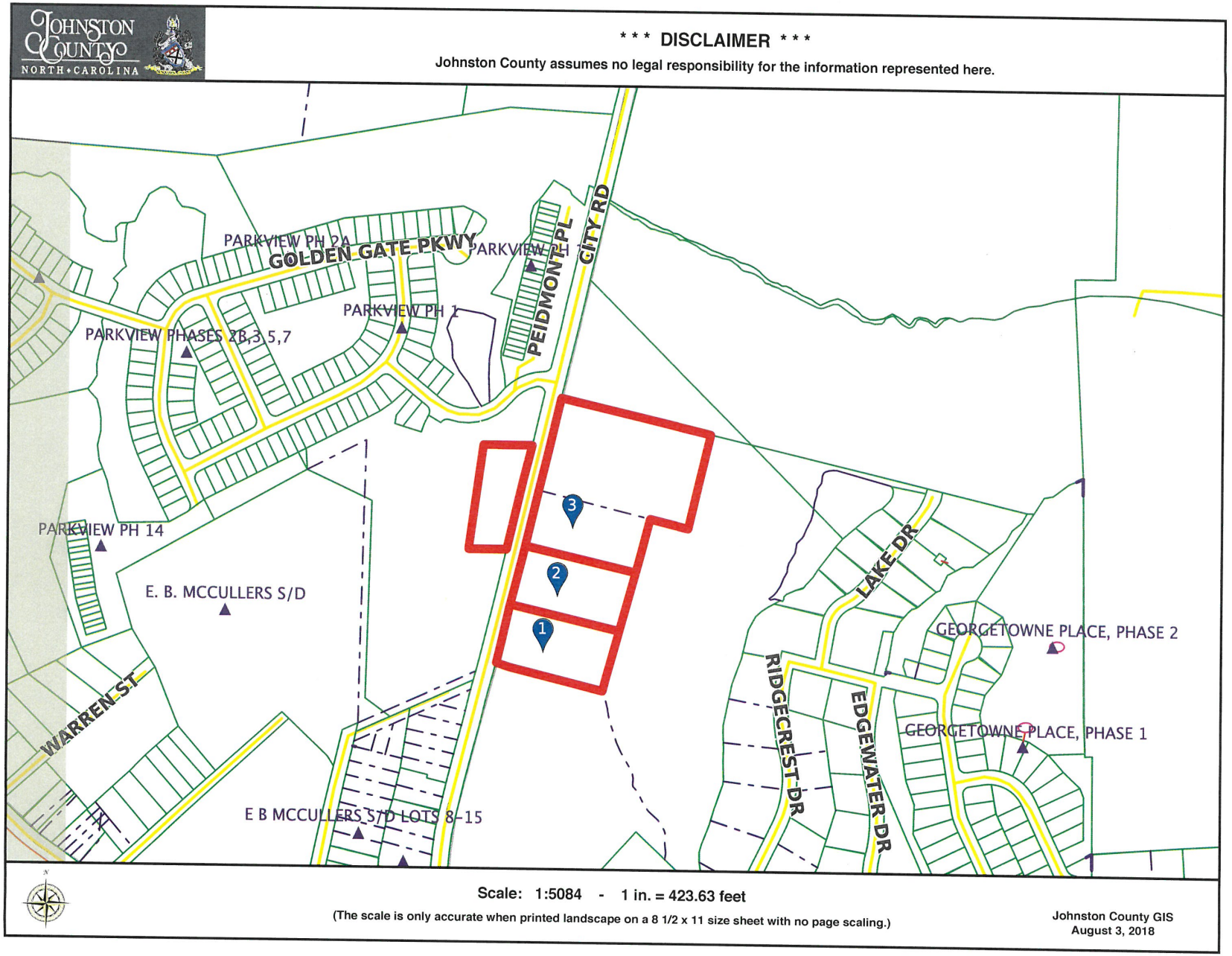
You may also contact the Planning Department at 919-553-5002.

Sincerely,

Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25499 ENGINEER DONALD C. ADAMS, JR.

Cc: Town of Clayton Planning Dept.


JOHNSTON COUNTY
NORTH CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
PARKVIEW PH 2A
GOLDEN GATE PKWY
PARKVIEW PH
PEIDMONT PL
CITY RD
PARKVIEW PH 1
PARKVIEW PHASES 2B,3 5,7
PARKVIEW PH 14
E. B. MCCULLERS S/D
LAKE DR
GEORGETOWNE PLACE, PHASE 2
RIDGECREST DR
EDGEWATER DR
GEORGETOWNE PLACE, PHASE 1
WARREN ST
E B MCCULLERS S/D LOTS 8-15
1
2
3
Scale: 1:5084 - 1 in. = 423.63 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, 2018

ADJACENT PROPERTY OWNERS LIST

Project Name: THe Village at Parkview Phases 9-16

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
	See attached	

JOHNSTON COUNTY
NORTH CAROLINA

*** DISCLAIMER ***

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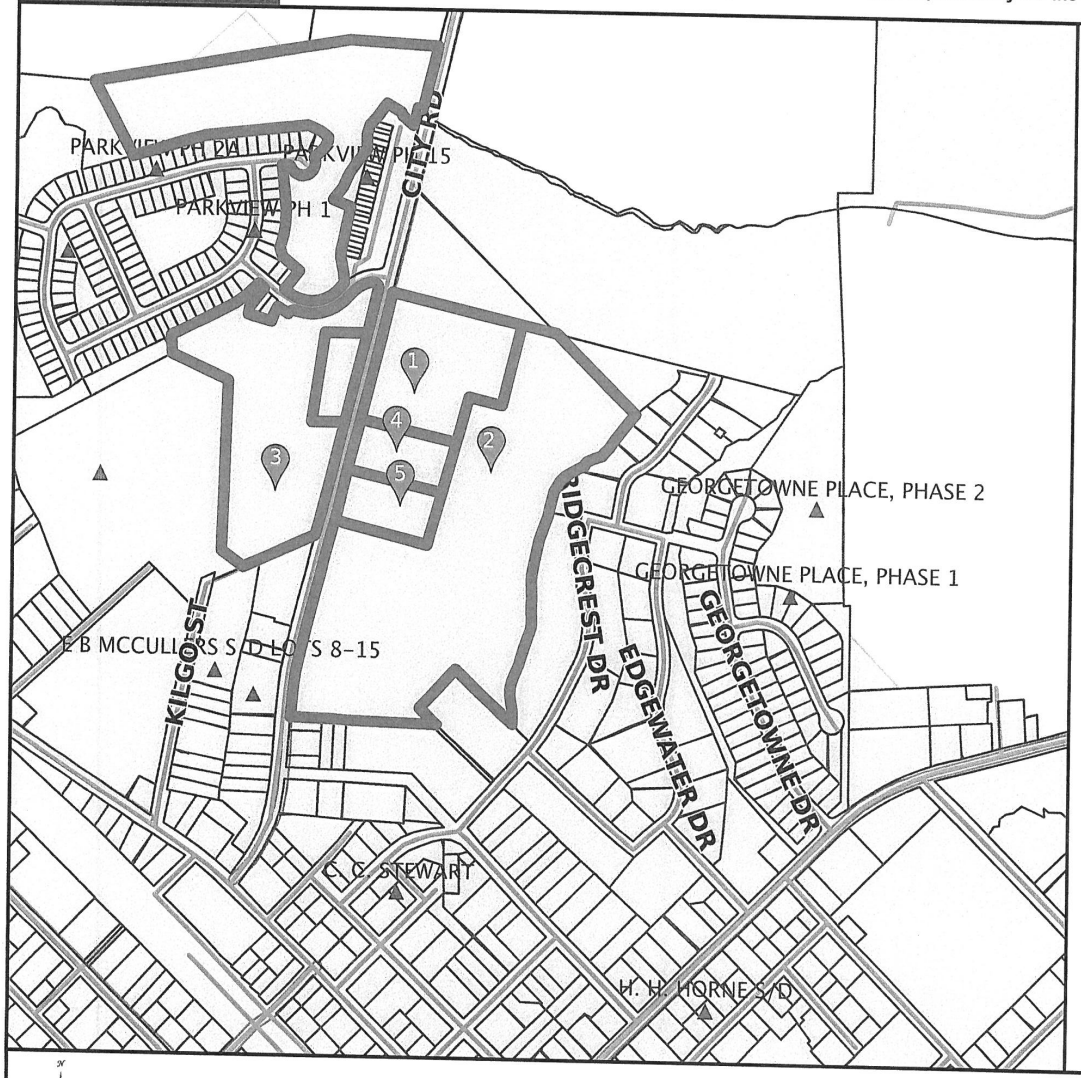


Result 1

id:	05H02020
Tag:	05H02020
NCPin:	166909-06-4838
Mapsheet No:	166909
Owner Name 1:	SAM'S BRANCH, LLC
Owner Name 2:	
Mail Address 1:	114 W MAIN ST STE 102
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27520-2397
Site Address 1:	
Site Address 2:	
Book:	05111
Page:	0199
Market Value:	66680
Assessed Acreage:	7
Calc. Acreage:	6.98
Sales Price:	3000
Sale Date:	2018-03-06

Scale: 1:7876 - 1 in. = 656.32 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 31, 2018

JOHNSTON COUNTY NORTH CAROLINA

*** DISCLAIMER ***

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

Result 2

id: 05029021
Tag: 05029021
NCPin: 166909-06-6358
Mapsheet No: 166909
Owner Name 1: GORDON, HARVEY B
Owner Name 2: GORDON, MILDRED S
Mail Address 1: 133 PLANTATION CIR S
Mail Address 2:
Mail Address 3: PONTE VEDRA BEACH, FL 32082-0000
Site Address 1:
Site Address 2:
Book:
Page:
Market Value: 119210
Assessed Acreage: 22.43
Calc. Acreage: 22.429
Sales Price: 0
Sale Date:

Result 3

id: 05030069
Tag: 05030069
NCPin: 165908-97-7935
Mapsheet No: 165908
Owner Name 1: CITY ROAD LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2321
Site Address 1:
Site Address 2:
Book: 04557
Page: 0814
Market Value: 112350
Assessed Acreage: 22.35
Calc. Acreage: 22.4
Sales Price: 425000
Sale Date: 2015-02-13

Result 4

id: 05H02199C
Tag: 05H02199C
NCPin: 166909-06-1495
Mapsheet No: 166909
Owner Name 1: SAM'S BRANCH, LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2397
Site Address 1: 352 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 05130
Page: 0112
Market Value: 94030
Assessed Acreage: 1.85
Calc. Acreage: 1.848
Sales Price: 152500
Sale Date: 2018-04-10

Result 5

id: 05H02198
Tag: 05H02198
NCPin: 166909-06-1265
Mapsheet No: 166909
Owner Name 1: DELILA R B THOMPSON LIVING TRUST
Owner Name 2:
Mail Address 1: 8013 OLD STAGE ROAD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27603-0000
Site Address 1: 300 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 03003
Page: 0637
Market Value: 90710
Assessed Acreage: 1.99
Calc. Acreage: 1.855
Sales Price: 0
Sale Date: 2005-10-26

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-121-SUP
Project Name: Villages at Parkview Special Use Permit- Major Modification

NC PIN / Tag #:	166909-06-4838 / 05H02020, 166909-06-1495 / 05H02199C, 166909-06-1265 / 05H02198
Town Limits/ETJ:	Town Limits
Applicant:	Adams & Hodge Engineering
Owner:	Sam's Branch LLC, Delila R B Thompson Living Trust
Location:	Off City Road, south of Legend Park and east of Parkview Subdivision

Public Noticing:

- Neighborhood meeting held on August 16, 2018
- Sign posted prior to August 17, 2018
- Letters mailed October 2, 2018
- Newspaper published October 5, 2018 and October 12, 2018

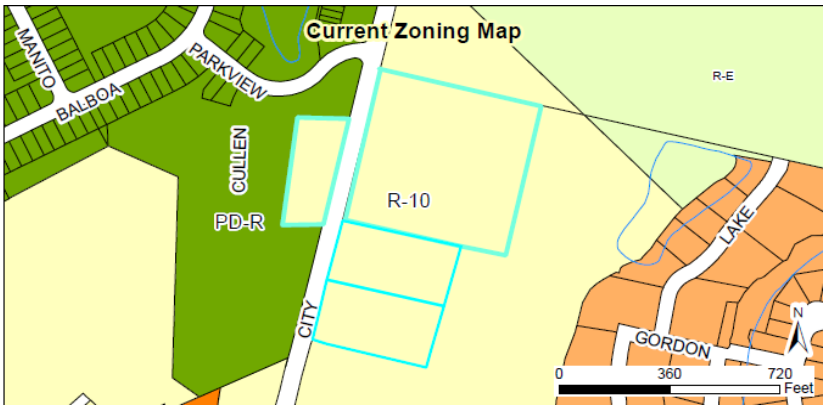
REQUEST: The applicant is requesting a major modification to a previously approved Special Use Permit (2017-172-SUP) to allow the use of townhomes on the subject properties, which are zoned R-10. A major modification to the previously approved preliminary plat (2018-122-SD) is running concurrently with this request.

SITE DATA:

Acreage: 3.85 additional acres (7 acres were included in the original development)
Existing Use: Vacant/single-family residential

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-10	Legend Park
South	Residential-10	Single-Family Residential
East	Residential-10	Vacant
West	Planned Development-Residential (PD-R)	Single-Family Residential (Parkview)



DEVELOPMENT DATA:

Proposed Uses: Townhomes (35 additional units, 68 previously approved= 103 total units)

Buildings: 8 new buildings, with each unit on its own lot; 16 total buildings including previously approved

Density/Intensity: 9.49 units/acre (10 units/acre maximum permitted by UDC)

Impervious Surface: maximum 65% per lot

Required Parking: 232 spaces (2 spaces per unit + 1 space per 4 units for guest parking)

Proposed Parking: 248 spaces

Access/Streets: The portion included in the original development application had one access point off Street "A", which is shared with Legend Park. The new phases included within this application will be access through the originally approved portion to the north, and will have a right-in/right-out off City Road.

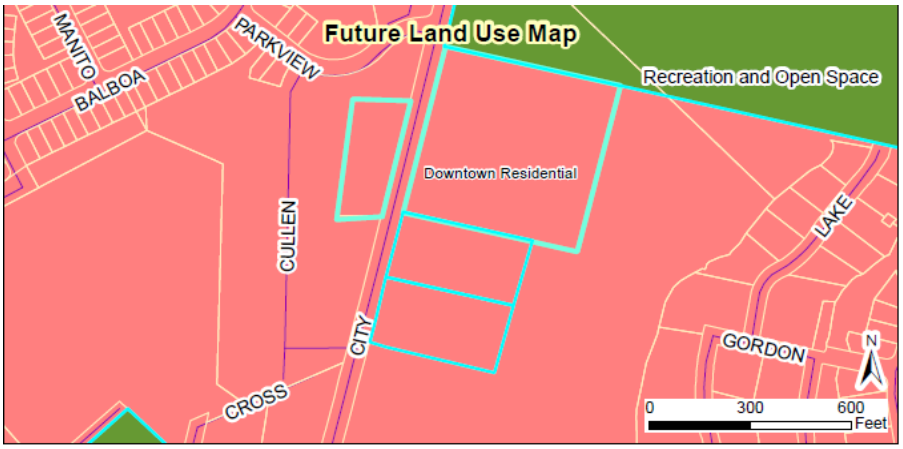
STAFF ANALYSIS:

Overview
The applicant is requesting a major modification to a previously approved Special Use Permit to allow townhomes on the subject properties, which are zoned Residential-10 (R-10). The original Special Use Permit was approved in 2018 for 68 townhome units on 7 acres of land. The applicant has since acquired additional land to the south, and is now requesting to modify the original Special Use Permit to include 3.85 additional acres and 35 additional townhome units. A major modification to the associated preliminary plat is running concurrently with this request (2018-122-SD). This development was formerly known as "Goodson Tract" when it was approved in February 2018.

Associated Site Plan
Pursuant to §155.711(D)(1), concurrent with a request for a special use permit, an applicant shall submit a site plan for review and approval. This site plan is processed as any other site plan (in this case as a Preliminary Plat application: 2018-122-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 2018-122-SD.

Consistency with Adopted Plans

- **Comprehensive Plan 2040**
  The future land use map designates this property as "Downtown Residential". This request is consistent with this designation, which calls for higher-density developments of up to 12 units/acre.



- **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 and is compatible with the surrounding land uses, which consist of single-family residential including some higher densities to the west.

CONSIDERATIONS:

- This plan is subject to final approval by Town Council.

FINDINGS:

The applicant has addressed the Special Use Major Subdivision Approval Criteria outlined in UDC Section 155.711. The applicant's Findings of Fact are incorporated into the record as an attachment to the Staff Report.

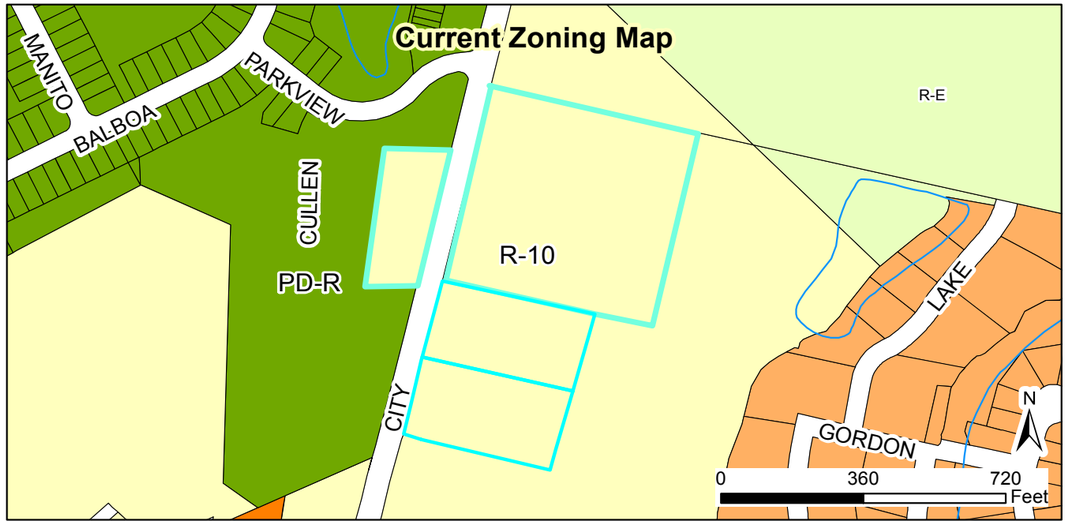
CONDITIONS:

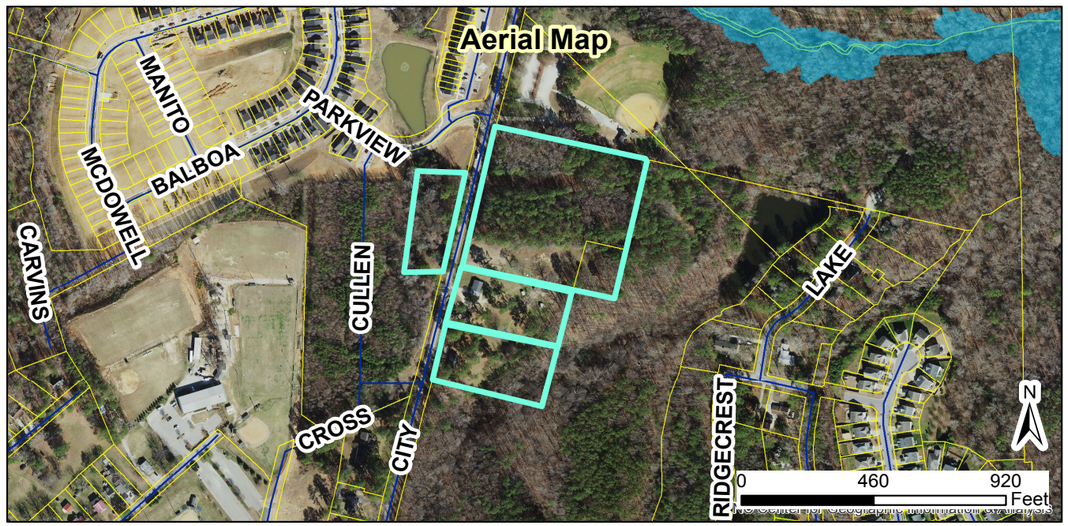
If approved, staff recommends the following conditions be applied to the approval of the Special Use Permit:

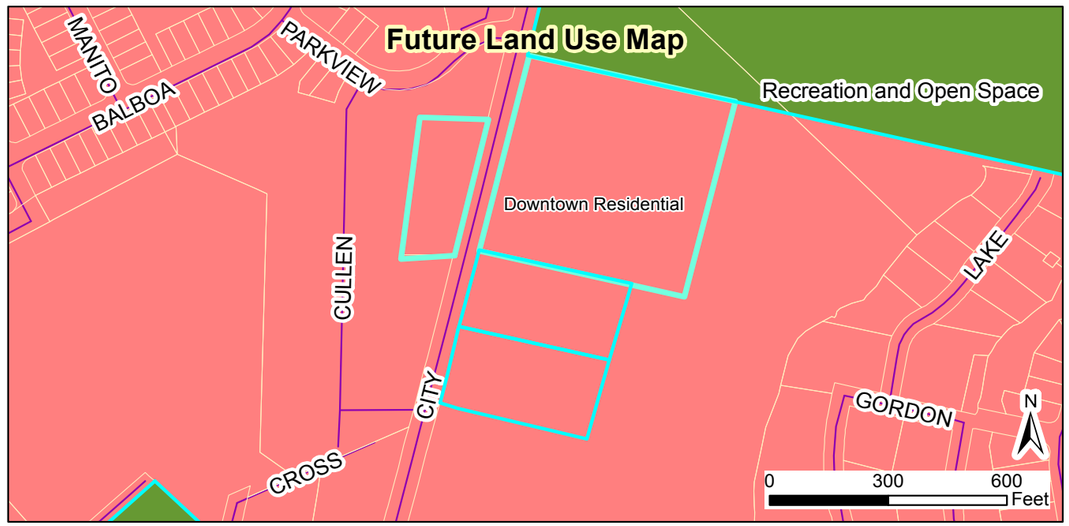
1. The previous conditions of approval for 2017-172-SUP (Goodson Tract Townhomes) shall be struck and replaced with the conditions contained herein.
2. These Conditions of Approval, and any others associated with the Preliminary Plat (2018-122-SD) shall be recorded upon the final plan set, which will be delivered to the Planning Department for review and final approval.
3. This Special Use Permit shall be valid only for the 10.85 acres of land, outlined in the application and the associated preliminary plat (2018-122-SD). Any addition of land or units shall be subject to the modification criteria as outlined in UDC Section 155.711.

ATTACHMENTS:

1.) Staff Report Maps
2.) Application
3.) Neighborhood Meeting Materials
4.) Associated Site Plan







2018-121-SUP The Villages at Parkview Special Use Permit (major modification)
2018-122-SD The Villages at Parkview Preliminary Plat (major modification)
Requests: Modify original SUP and SD to add land and units

Applicant: Adams & Hodge Engineering, LLC
Property Owners: Sam's Branch LLC, Delila R B Thompson Living Trust
Parcel ID: 166909-06-4838, 166909-06-1495, 166909-06-1265
Tag #: 05H02020, 05H02199C, 05H02198

Staff Report Map

08/20/18
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
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2018\2018-122-SD The Village at Parkview Ph. 9-16\Maps\Staff Report Maps 2018-122-SD and 2018-121-SUP.mxd

MAJOR MODIFICATION SUBDIVISION PLAN

(MAJOR MODIFICATION TO 2017-171-SD)

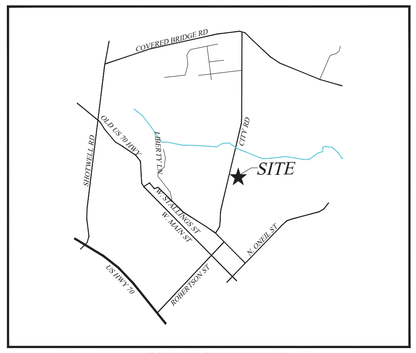
Received by Town of Clayton
8/20/2018

THE VILLAGE at PARKVIEW

PHASES 9-16

IN

TOWN OF CLAYTON



SITE VICINITY MAP

NOT TO SCALE

DEVELOPER/APPLICANT:

SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

SHEET INDEX

SHEET TITLE	SHEET No.
SEALED BOUNDARY	BM1
MASTER PLAN	MP1
EXISTING CONDITIONS	SP01
SITE PLAN	SP02
PHASE PLAN	SP03
UTILITY PLAN	SP04
GRADING PLAN	SP05
LANDSCAPE PLAN	SP06
REGULATORY STANDARDS	SP07 & SP08

PRELIMINARY

REVISED
4:11 pm, Aug 16, 2018

ADAMS & HODGE ENGINEERING, PC
339 ATHLETIC CLUB BLVD
CLAYTON, NC 27527
919-243-1332 donnie@adamsandhodge.com
FIRM # C-4187

The Village at Parkview
Phases 9-16
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

JULY 2, 2018
JULY 26, 2018 - TRC COMMENTS
**AUGUST 16, 2018 - TRC COMMENTS*

MAJOR MODIFICATION TO 2017-171-SD / 2018-122-SD

DEED NORTH
BB 5001 PG 1

I, JOHN H. CHANDLER, PLS L-4389, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM INFORMATION SHOWN IN DEED BOOKS REFERENCED ON MAP AND MAP BOOKS REFERENCED ON MAP; THAT ANY LINES NOT ACTUALLY SURVEYED APPEAR AS BROKEN LINES AND WERE PLOTTED FROM INFORMATION AS NOTED ON THE PLAT; THAT THE RATIO OF PRECISION AS CALCULATED IS BETTER THAN 1:10,000; THAT THE AREA IS COMPUTED BY COORDINATE METHOD; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS THE 25th DAY OF July A.D.,2018.

JOHN H. CHANDLER L-4389
PROFESSIONAL LAND SURVEYOR

THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

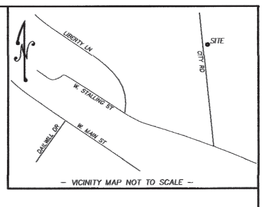
JOHN H. CHANDLER L-4389
PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4389 LAND SURVEYOR JOHN H. CHANDLER

NORTH CAROLINA PROFESSIONAL SEAL L-4389 LAND SURVEYOR JOHN H. CHANDLER

– LEGEND –

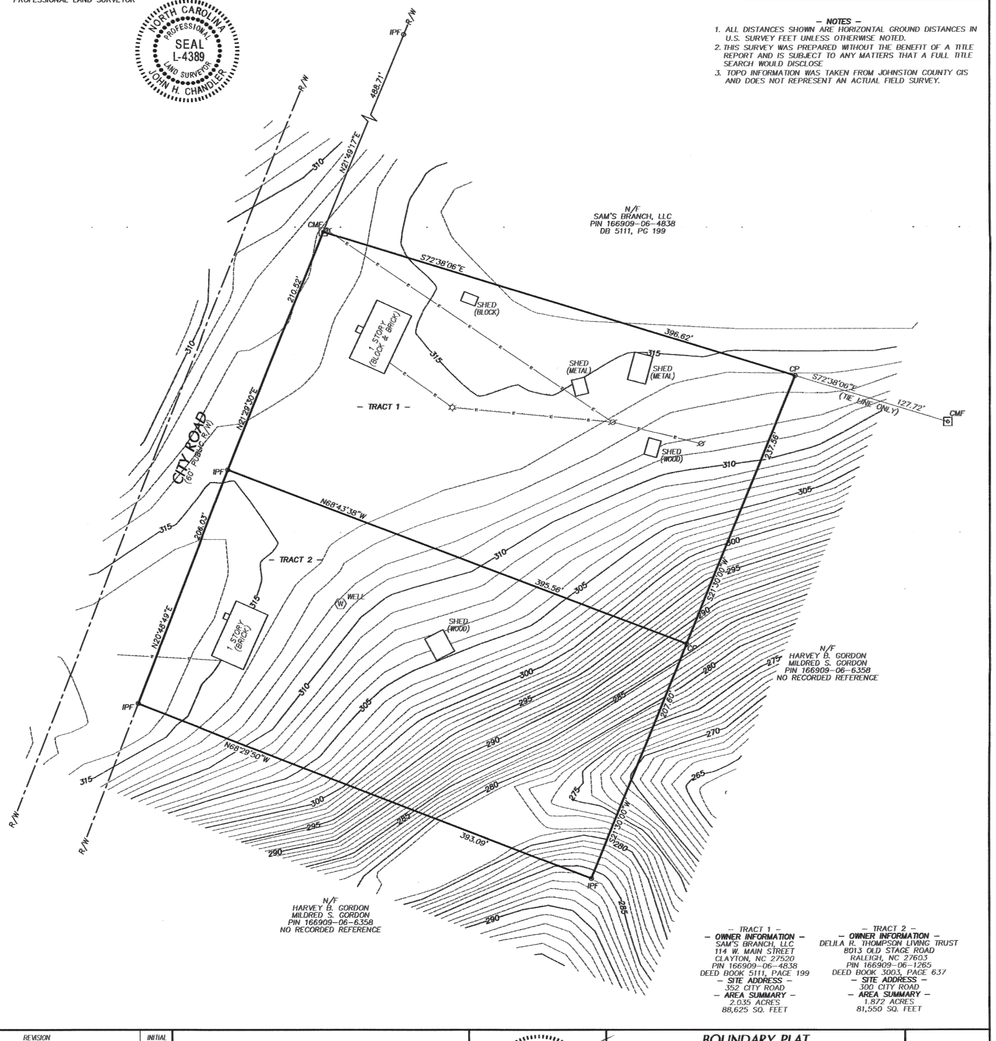
IPF	IRON PIPE FOUND
CMF	CONCRETE MONUMENT FOUND
IRF	IRON ROD FOUND
CP	CALCULATED POINT
R/W	RIGHT-OF-WAY



– VICINITY MAP NOT TO SCALE –

– NOTES –

1. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
2. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY MATTERS THAT A FULL TITLE SEARCH WOULD DISCLOSE.
3. TOPO INFORMATION WAS TAKEN FROM JOHNSTON COUNTY GIS AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



– TRACT 1 –
– OWNER INFORMATION –
SAM'S BRANCH, LLC
114 W. MAIN STREET
CLAYTON, NC 27520
PIN 166909-06-4838
DEED BOOK 5111, PAGE 199
– SITE ADDRESS –
352 CITY ROAD
– AREA SUMMARY –
2.035 ACRES
88,625 SQ. FEET

– TRACT 2 –
– OWNER INFORMATION –
DELILA R. THOMPSON LIVING TRUST
8013 OLD STAGE ROAD
RALEIGH, NC 27603
PIN 166909-06-1265
DEED BOOK 5003, PAGE 637
– SITE ADDRESS –
300 CITY ROAD
– AREA SUMMARY –
1.872 ACRES
81,550 SQ. FEET

DATE	REVISION	INITIAL

SCALE: 1" =50'
0 25 50 100 150

chandler land surveying
83 Adams Point Drive, Garner, North Carolina, 27529
Phone: 919-291-9163

NORTH CAROLINA PROFESSIONAL SEAL L-4389 LAND SURVEYOR JOHN H. CHANDLER
DATE: 7-25-18

BOUNDARY PLAT
OF
SAM'S BRANCH, LLC & THOMPSON PROPERTIES
FOR
THE VILLAGE AT PARKVIEW

SCALE: 1" = 50' DATE: JUNE 26, 2018
CLAYTON TOWNSHIP JOHNSTON COUNTY NORTH CAROLINA

PROJECT # 201828
SURVEYED BY JHC
DRAWN BY DBR
DRAWING NAME 201828-RECOM
SHEET NUMBER 1 OF 1

SHEET BM1	JOB NO. AH-	DATE 07/02/2018	VERTICAL SCALE N/A	HORIZONTAL SCALE SEE GRAPHIC SCALE	DESIGN DCA/AJS
					DRAWN AJS
					CHECKED DCA

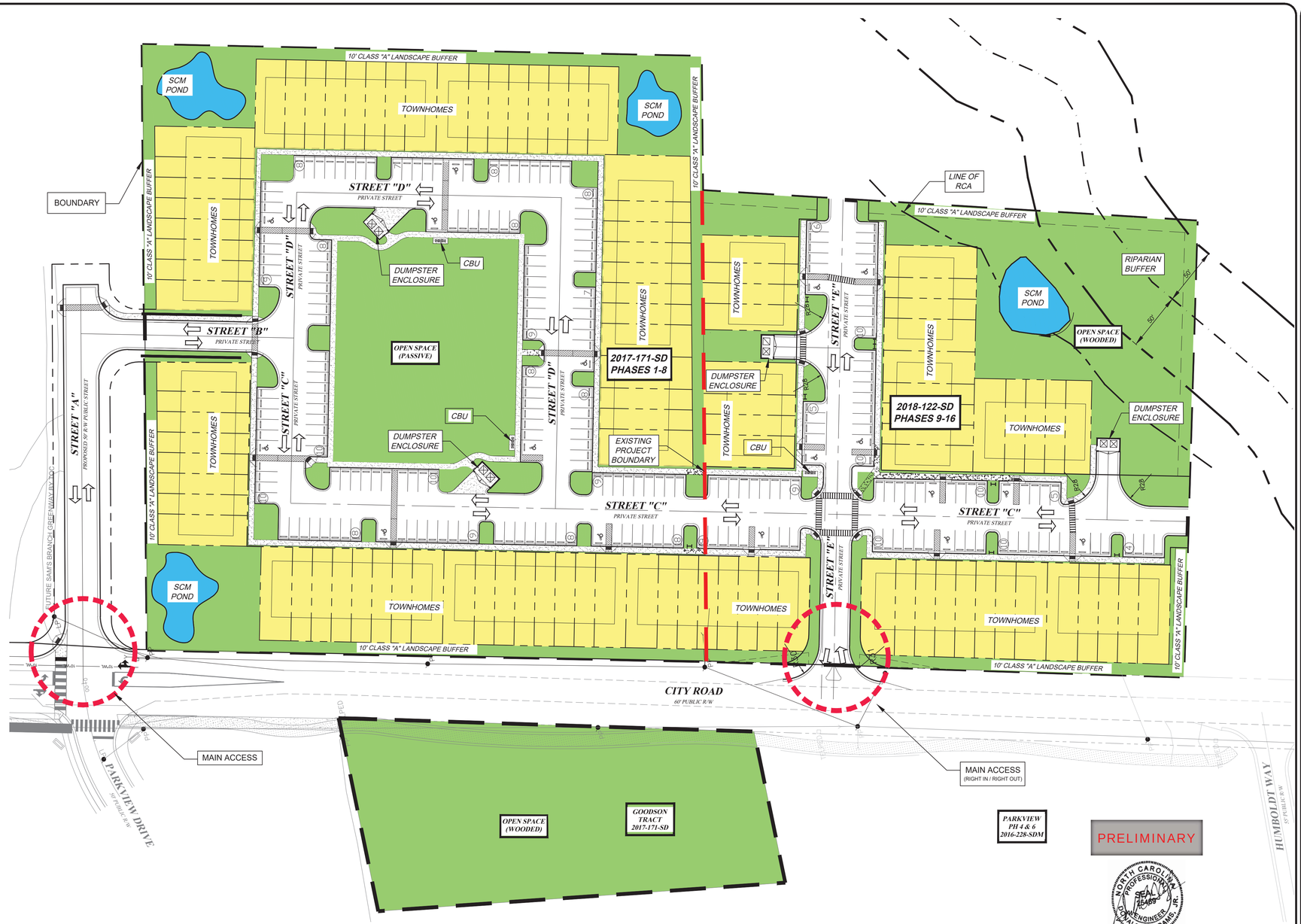
SEALED BOUNDARY SURVEY

The Villag @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

A&H ADAMS & HODGE ENGINEERING, PC

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/26/18 TRC COMMENTS



THE VILLAGE AT PARKVIEW DEVELOPMENT CHART									
PHASE	AREA OF PHASE	% OF OVERALL SITE	# OF LOTS	RIGHTS-OF-WAY	RESOURCE CONSERVATION AREAS	OPEN SPACE	IMPERVIOUS AREA	PERVIOUS AREA	STATUS OF PHASE
1-8	7.00 AC	65%	64	2.15 AC	0 AC	2.99 AC	3.04 AC (43%)	3.96 AC (57%)	APPROVED
9-16	3.85 AC	35%	39	1.06 AC	2.47 AC	1.14 AC	1.52 AC (39%)	2.33 AC (61%)	SUBMITTED FOR APPROVAL
Totals	10.85 AC	100.00%	103	3.21 AC	2.47 AC	4.13 AC	4.57 AC (42%)	6.29 AC (58%)	

REVISIONS:
1) 07/26/18 TRC COMMENTS
2) 08/16/18 TRC COMMENTS

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

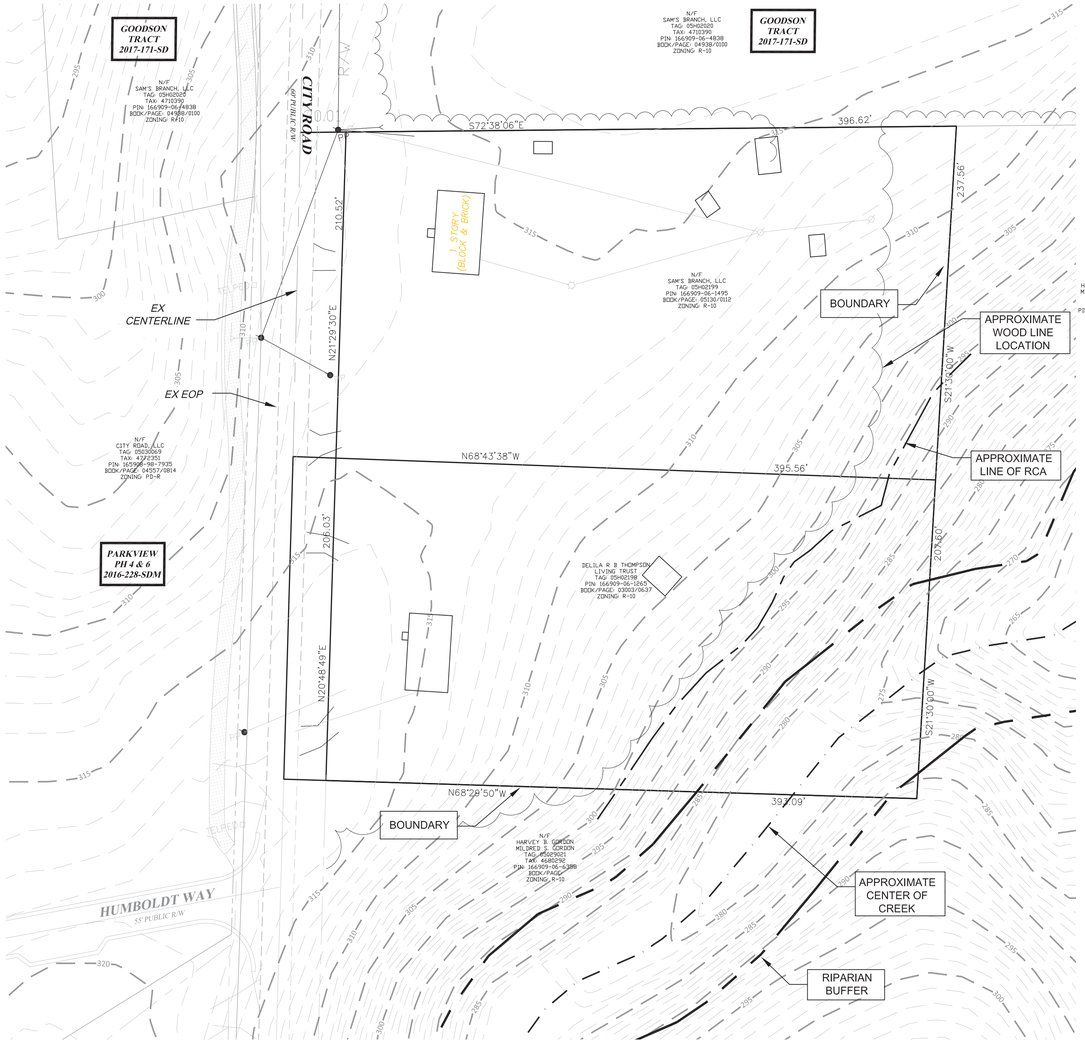
ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview

TOWN OF CLAYTON, NC 27520

MASTER PLAN

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: MP1



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15489 DONALD C. ADAMS, JR.

REVISED
3:43 pm, Aug 16, 2018

NOTE:
TOPO INFORMATION WAS TAKEN FROM JOHNSTON COUNTY GIS AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

NAD 83

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

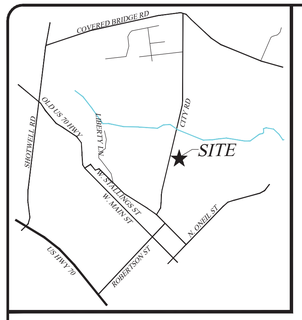
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamsandhodge.com
919-243-1333
FIRM # C-4187

REVISIONS:
1) 06/15/18 TRC COMMENTS
2) 08/16/18 TRC COMMENTS

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

EXISTING CONDITIONS

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP01



VICINITY MAP
(NO SCALE)

NOTE:
THIS SUBDIVISION TO BE ADDED TO THE PREVIOUSLY APPROVED 2017-171-SD GOODSON TRACT PRELIMINARY PLAT.

DEVELOPER/APPLICANT:

SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

THE VILLAGE AT PARKVIEW DEVELOPMENT CHART

PHASE	AREA OF PHASE	% OF OVERALL SITE	# OF LOTS	RIGHTS-OF-WAY	RESOURCE CONSERVATION AREAS	OPEN SPACE	IMPERVIOUS AREA	PERVIOUS AREA	STATUS OF PHASE
1-8	7.00 AC	65%	64	2.15 AC	0 AC	2.99 AC	3.04 AC (43%)	3.96 AC (57%)	APPROVED
9-16	3.85 AC	35%	39	1.06 AC	2.47 AC	1.14 AC	1.52 AC (39%)	2.33 AC (61%)	SUBMITTED FOR APPROVAL
Totals	10.85 AC	100.00%	103	3.21 AC	2.47 AC	4.13 AC	4.57 AC (42%)	6.29 AC (58%)	

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

REVISED
4:08 pm, Aug 16, 2018

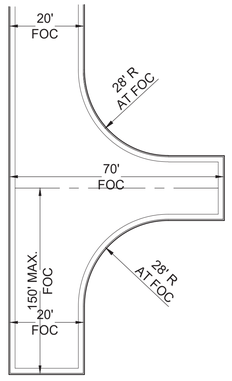
THE VILLAGE AT PARKVIEW PH 9-16 SITE DATA CHART

PARCEL OWNER	SAM'S BRANCH, LLC	DELILA R B THOMPSON LIVING TRUST
PARCEL OWNER ADDRESS	114 W. MAIN ST, SUITE 102 CLAYTON, NC 27520	8013 OLD STAGE RD RALEIGH, NC 27603
PARCEL IDENTIFICATION	166909-06-1495	166909-06-1265
PROPERTY SIZE (SF)	2.00 ACS / 87,120 SF	1.85 ACS / 80,586 SF
PROPERTY SIZE (SF) TOTAL	3.85 ACS / 167,706 SF	
PROPERTY LOCATION	TOWN OF CLAYTON/CLAYTON TOWNSHIP	
EXISTING/PROPOSED ZONING	R-10/R-10	
EXISTING USE	SINGLE FAMILY - RESIDENTIAL	
PROPOSED USE	SINGLE FAMILY TOWNHOME UNITS	
PROPOSED INTENSITY (GROSS FLOOR AREA IN SF)	40,053SF/ 0.92ACS (1027SF/UNIT)	
PROPOSED NUMBER OF LOTS	39 LOTS	
PROPOSED DENSITY	PHASE 9-16 - 39 UNITS/3.85 ACS = 10.13 UNITS/AC (OVERALL TOTAL SITE 103 UNITS/ 10.85 ACS = 9.49 UNITS/AC)	
PROPOSED IMPERVIOUS AREA (% OF TOTAL SITE)	50%	
PROPOSED IMPERVIOUS AREA PER LOT	65%	
TOTAL RESOURCE CONSERVATION AREA	107,593 SF / 2.47 AC	
PRPOPOSED BUILDING HEIGHT (NUMBER OF STORIES & FEET)	2 STORIES/ 29'-8"	
ELECTRIC PROVIDER	TOWN OF CLAYTON	
WATER PROVIDER	TOWN OF CLAYTON	
SEWER PROVIDER	TOWN OF CLAYTON	

*NO FLOOD PLAIN EXISTS AS PER FEMA FIRM PANEL 3720165900J & 3720166900J DATE 12/02/2015.
*REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.
*PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.

THE VILLAGE AT PARKVIEW SUBDIVISION STANDARDS

ZONING	UNIT TYPE	LOT STANDARDS					Density (dwelling units/ acre)	MINIMUM SETBACKS (FT.)					BUILDING STANDARDS	
		Min. Site Area (acres)	Min. Lot Area (sq.ft.)	Min. Lot Width (LF)	Max. Lot Coverage (%)	Max. Impervious Surface (%)		Front	Side Interior	Side Street	Rear	Building Separation	Max. Height (ft.)	Min. Dwelling Unit Size (sq.ft.)
R-10	TOWNHOUSE (2 UNITS)	-	1,250	17.5'	55	65	10	12	0	5	10	20	35	N/A

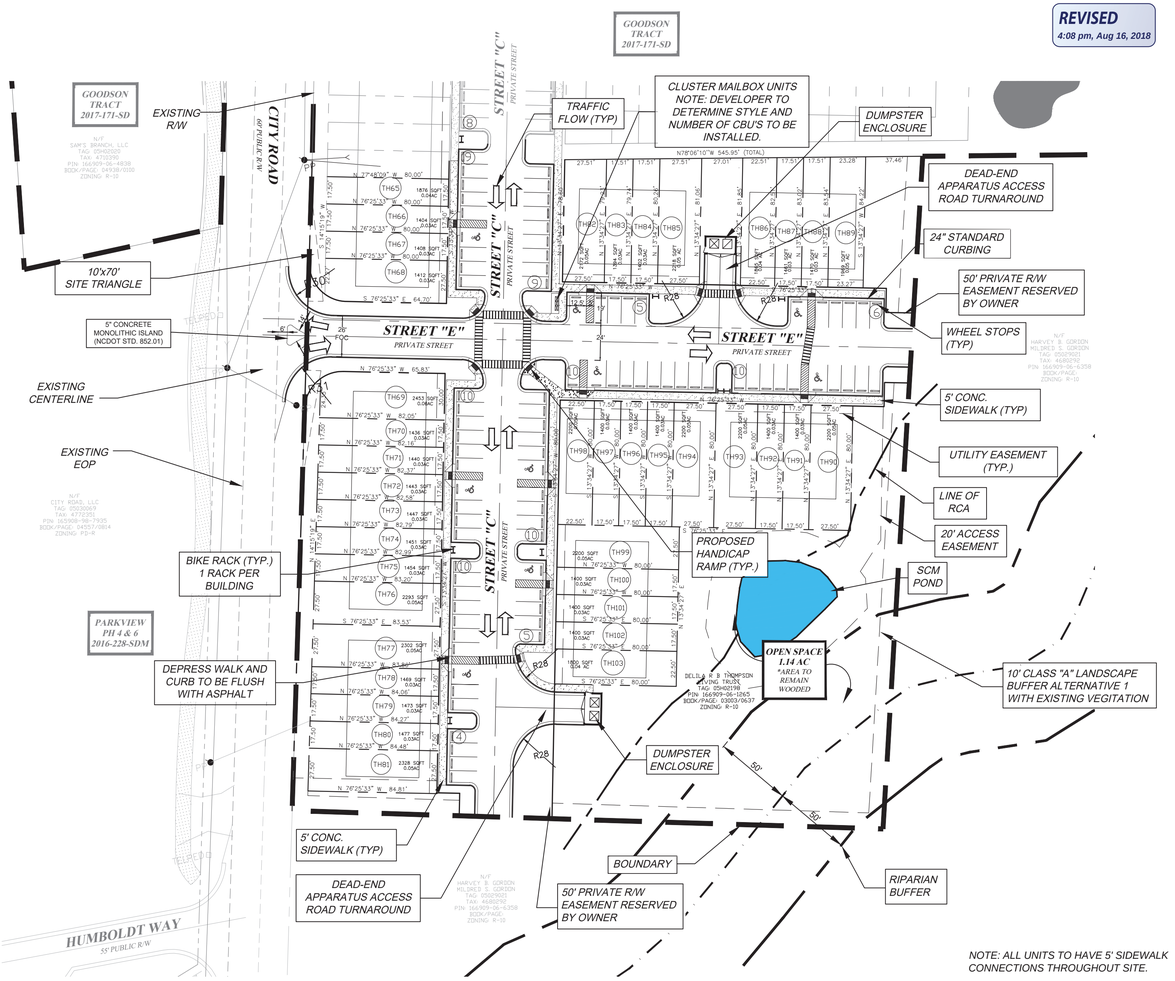


DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
ACCEPTABLE ALTERNATIVE TP 120' HAMMERHEAD

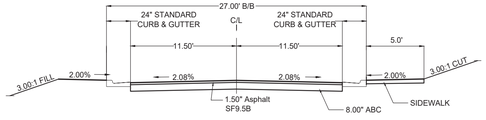
PARKING CALCULATIONS

	NUMBER OF UNITS	PARKING SPACE REQUIREMENTS	TOTAL NUMBER OF SPACES
PHASES 1-8 (2 BDRM UNITS)	64	2 SPACES/ 2 BDRM UNIT	128
GUEST PARKING PHASES 1-8		1 SPACE/4 UNITS	16
REQUIRED ADA PARKING SPACES PHASES 1-8		1 SPACE/25 SPACES	6
TOTAL REQUIRED SPACES (INCLUDING ADA)			144
TOTAL PROPOSED SPACES PHASES 1-8			160
REQUIRED BICYCLE PARKING PHASES 1-8	8 BLDGS	1 RACK PER BLDG	8 BIKE RACKS
PHASES 9-16 (2 BDRM UNITS)	39	2 SPACES/ 2 BDRM UNIT	78
GREENWAYS***			
GUEST PARKING PHASES 9-16		1 SPACE/4 UNITS	10
REQUIRED ADA PARKING SPACES PHASES 9-16		1 SPACE/25 SPACES	4
TOTAL REQUIRED SPACES (INCLUDING ADA)			88
TOTAL PROPOSED SPACES PHASES 9-16			88
REQUIRED BICYCLE PARKING PHASES 9-16	8 BLDGS	1 RACK PER BLDG	8 BIKE RACKS
ALL PHASES TOTAL REQUIRED SPACES			**232**
ALL PHASES TOTAL PROPOSED SPACES			248
ALL PHASES REQUIRED BICYCLE PARKING	16 BLDGS	1 RACK PER BLDG	16 BIKE RACKS

* NOTE: PARKING CALCULATIONS ARE BASED ON SECTION 155.401, TABLE 4-2 OF THE TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE



NOTE: ALL UNITS TO HAVE 5' SIDEWALK CONNECTIONS THROUGHOUT SITE.



TYPICAL PRIVATE STREET
(STREET "C" & "E")
45' RIGHT-OF-WAY W/ SIDEWALK
NO SCALE

NOTE:
ROADS TO BE DESIGNED FOR FIRE TRUCK LOADING.

NAD 83

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

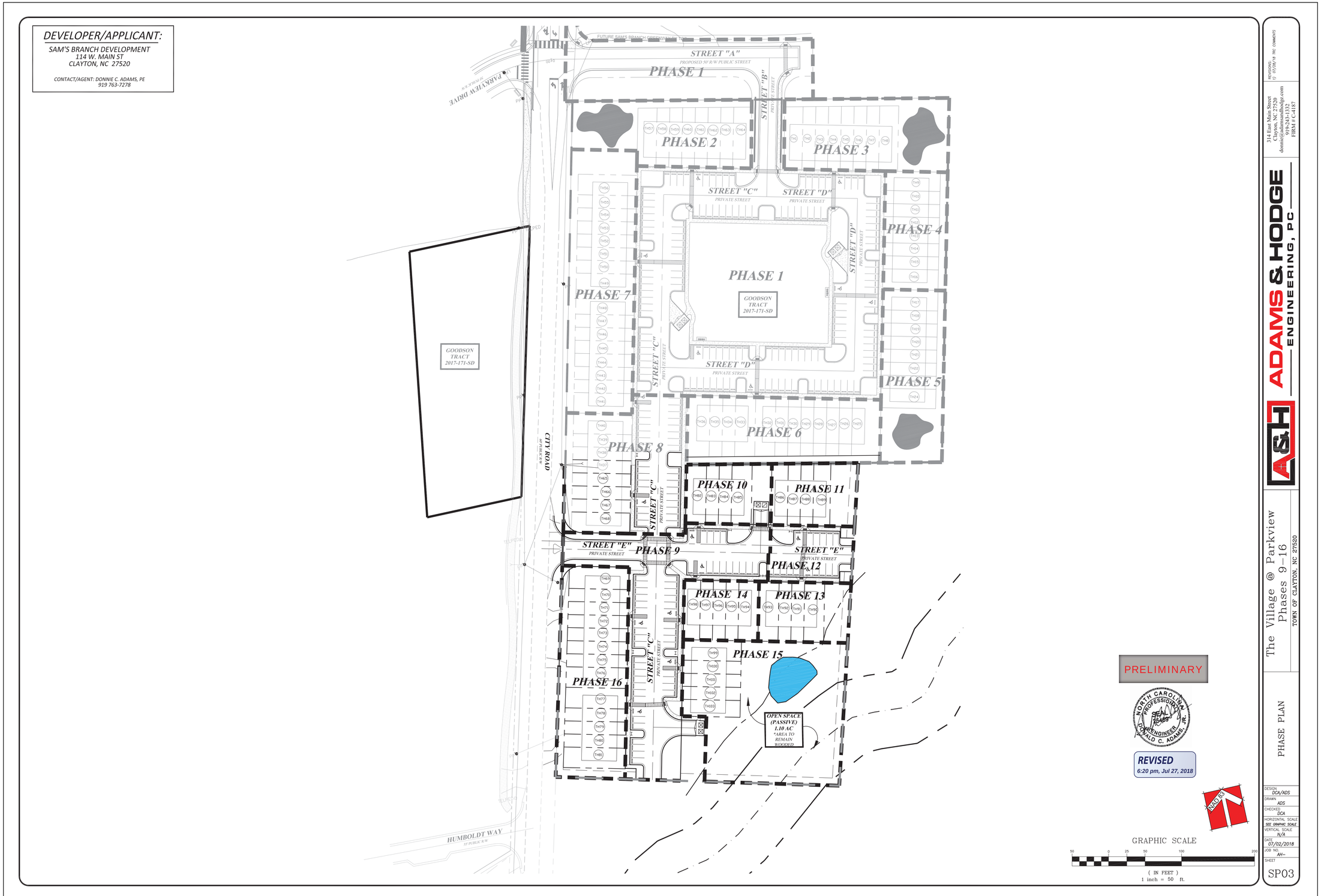
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/16/18 INC COMMENTS
2) 08/16/18 INC COMMENTS

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

PRELIMINARY SITE PLAN

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP02


DEVELOPER/APPLICANT:
SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520
CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278
STREET "A"
PROPOSED 50' R/W PUBLIC STREET
PHASE 1
PHASE 2
PHASE 3
PHASE 4
PHASE 5
PHASE 6
PHASE 7
PHASE 8
PHASE 9
PHASE 10
PHASE 11
PHASE 12
PHASE 13
PHASE 14
PHASE 15
PHASE 16
STREET "B"
STREET "C"
STREET "D"
STREET "E"
PRIVATE STREET
GOODSON TRACT 2017-171-SD
CITY ROAD
HUMBOLDT WAY
PARKVIEW DRIVE
OPEN SPACE (PASSIVE) 1.10 AC *AREA TO REMAIN WOODED
PRELIMINARY
REVISED
6:20 pm, Jul 27, 2018
NAD 83
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
REVISIONS:
1) 07/26/18 TRC COMMENTS
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187
ADAMS & HODGE
ENGINEERING, PC
The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520
PHASE PLAN
DESIGN DCA/ADS
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 07/02/2018
JOB NO. AH-
SHEET SP03

WATER SYSTEM PROJECT SUMMARY:

1. THERE ARE 39 SINGLE FAMILY TOWNHOME LOTS SERVED BY THIS WATER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF WATER MAIN EXTENSIONS ARE AS FOLLOWS:
   ±668 LF OF 6" PVC MAIN

SEWER SYSTEM PROJECT SUMMARY:

1. THERE ARE 39 SINGLE FAMILY TOWNHOME LOTS SERVED BY THIS GRAVITY SEWER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF SEWER MAIN EXTENSIONS ARE AS FOLLOWS:
   ± 665 LF OF 8" PVC MAIN

STREET SUMMARY:

1. THE TOTAL LINEAR OF PRIVATE STREETS:
   ±935 LF

LEGEND

PROPOSED

- FIRE HOSE
- WATERLINE — 6"WL —
- BLOWOFF
- HYDRANT
- VALVE
- REDUCER
- METER
- SEWERLINE — SS —
- MANHOLE
- CLEANOUT
- STORM DRAINAGE
- CATCH BASIN
- DROP INLET/YARD INLET

NOTE:

1. SEE SHEET SP05 FOR STORM WATER MANAGEMENT.
2. FIRE HYDRANTS ARE SPACED LESS THAN 500' APART. FIRE HOSE LAY WILL NOT EXCEED 500' MAX.
3. EXISTING WELLS AND SEPTIC TANKS TO BE ABANDONED IN A MANNER THAT IS CONSISTENT WITH APPLICABLE REGULATIONS.

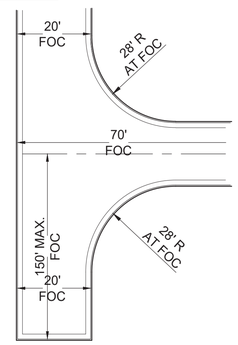
NOTES:

1. ALL PUBLIC WATER AND SEWER UTILITY MATERIALS AND METHODS OF INSTALLATION TO BE IN ACCORDANCE WITH TOWN OF CLAYTON STANDARDS AND SPECIFICATIONS AND MEET APPLICABLE NC PLUMBING CODES.
2. CONTRACTOR SHALL CALL NC CALL ONE AT 1-800-632-4949 TO VERIFY LOCATION OF EXISTING SERVICES BEFORE BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED TO THEIR ORIGINAL CONDITIONS. THIS INCLUDES ANY EXISTING UTILITY DAMAGE AND REPAIR OF ANY PAVEMENT, WALKWAYS, OR STRUCTURAL ITEMS. INCLUDING BUT NOT LIMITED TO: WATER, SEWER, ELECTRIC, GAS, IRRIGATION, CATV, FIBER OPTIC, TELEPHONE, LANDSCAPING, PAVEMENT, SIDEWALKS AND CURB & GUTTER.
4. INTERNAL SIDEWALKS TO BE INSTALLED BY BUILDER
5. ALL ACCESS TO OUTFALL WATER AND SEWER EASEMENTS SHALL HAVE A MAXIMUM SLOPE OF 4:1(H:V) AND A MAXIMUM CROSS SLOPE OF 4%.
6. OWNERSHIP AND MAINTENANCE FOR PERMANENT STORM WATER FACILITIES TO BE IN ACCORDANCE WITH JOHNSTON COUNTY AND TOWN OF CLAYTON REQUIREMENTS +
7. ALL 5' DIAMETER MANHOLES SHOWN IN PLANS SHALL REQUIRE AN EXTENDED BASE SECTION.
8. ALL 4" SANITARY SEWER SERVICES EQUAL TO OR GREATER THAN 12' DEEP SHALL BE 4" 401 LINED DIP.
9. ALL CONCRETE THROUGH LIMITS OF KIOSK AREA SHALL BE A MINIMUM OF 6" THICK.
10. EXISTING WELLS AND SEPTIC TANKS TO BE ABANDONED PER JOHNSTON COUNTY HEALTH DEPARTMENT.

THE TOWN OF CLAYTON AND/OR JOHNSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

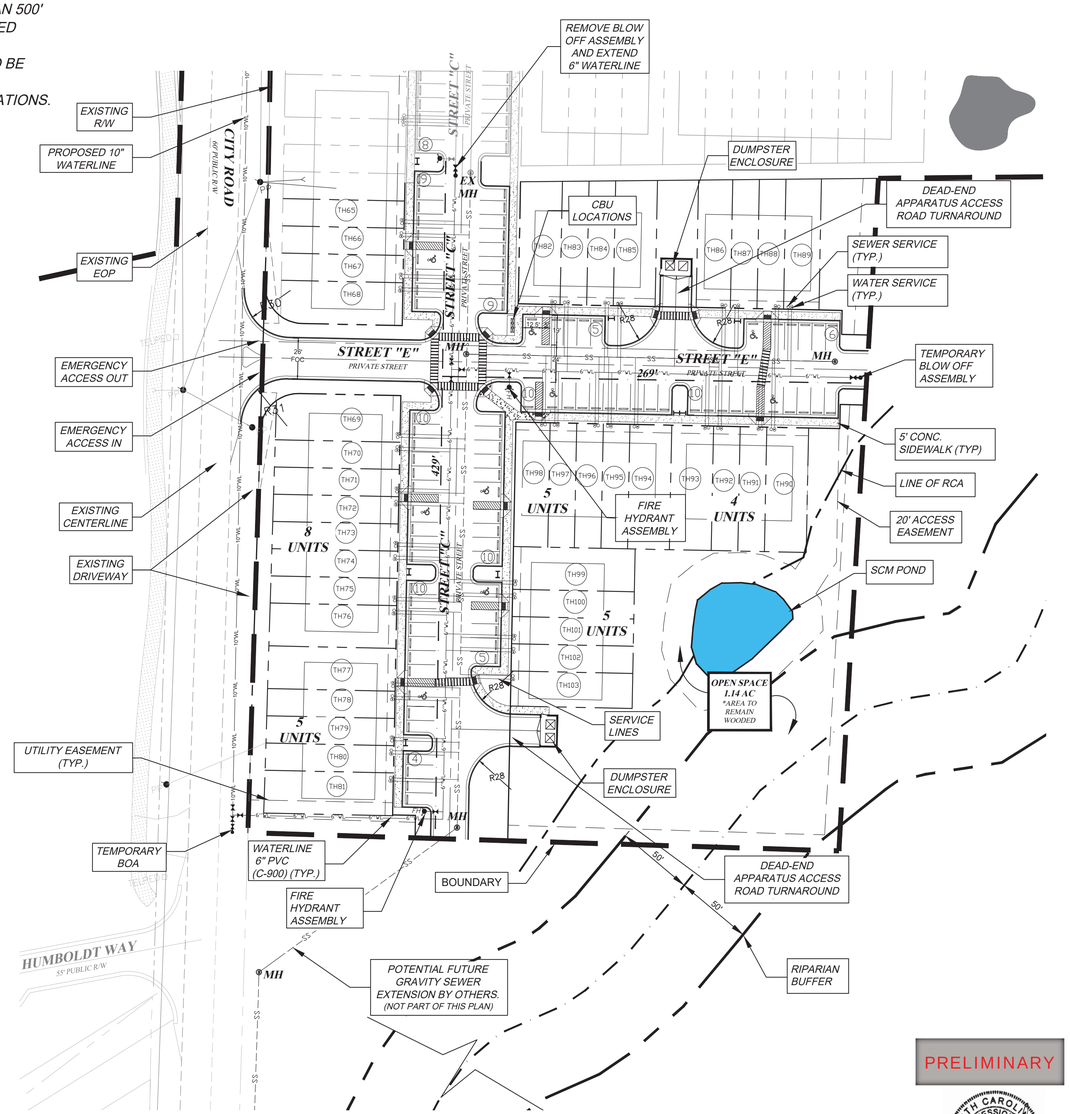
NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

WASTE WATER FLOW:
(39) - 2 BDRM UNITS @ 120GPD/BDRM
9,360 GPD/UNIT



DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
ACCEPTABLE ALTERNATIVE TP 120' HAMMERHEAD

PER CHANGE IN THE NORTH CAROLINA GERNERAL STATUTES (NCGS 87-121(g)), UNDERGROUND UTILITIES ARE TO BE LOCATED BY ELECTRONIC MEANS. SIMILAR TO OTHER DETAILS, GRAVITY SEWER MAINS NOW REQUIRE A #12 AWG INSULATED (GREEN) SOLID COPPER WIRE TO BE PLACED WITH THE GRAVITY SEWER MAIN. IF THE SEWER MAIN DEPTH IS GREATER THAN 8 FT. FROM FINAL SURFACE ELEVATION, PLACE THE WIRE AT A DEPTH BETWEEN 7 AND 8 FT. BELOW FINAL SURFACE ELEVATION. THE TOWN IS PREPARING A DETAIL.



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15489 DONALD C. ADAMS, JR.

REVISED
4:16 pm, Aug 16, 2018

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

MAP BOOK

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dominic@adamsandhodge.com
(919) 553-1212
FIRM # C-4187

REVISIONS:
1) 07/26/18 PC COMMENTS
2) 08/16/18 PC COMMENTS

The Village @ Parkview
Phases 9-12
TOWN OF CLAYTON, NC 27520

PRELIMINARY UTILITY PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	AH-
SHEET	SP04

ALL DITCHES/SWALES ARE TO BE LINED USING NAG S150 OR SOD UNLESS UNLESS OTHERWISE SPECIFIED.

THE TOWN OF CLAYTON AND/OR JOHNSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

EROSION LEGEND:

- LIMITS OF DISTURBANCE
- SILT FENCE
- TD EXISTING TEMPORARY DIVERSION
- TD TEMPORARY DIVERSION
- CWD CLEAN WATER DIVERSION
- TREE PROTECTION BARRIER
- INTLET PROTECTION
- ARC INLET PROTECTION
- OUTLET PROTECTION
- CHECK DAM
- WATTLE
- CHECK DAM W/ WEIR & STORAGE
- WATTLE W/ STORAGE
- CONSTRUCTION ENTRANCE
- DITCH LINER – NAG C350 OR EQUAL

NOTE ALL DITCHES LINED W/ NAG S150 UNLESS OTHERWISE NOTED.

- SILT FENCE OUTLET
- 220 EXISTING CONTOUR
- 220 PROPOSED CONTOUR
- CONCRETE WASHOUT AREA
- SKIMMER BAFFLES

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25489 ENGINEER DONALD C. ADAMS, JR.

REVISED
5:54 pm, Jul 27, 2018

NAD 83

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

314 East Main Street
Clayton, NC 27520
dominic@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/30/18 NC COMMENTS

ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

PRILEMINARY
GRADING PLAN &
EROSION CONTROL

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	AH-
SHEET	SP05

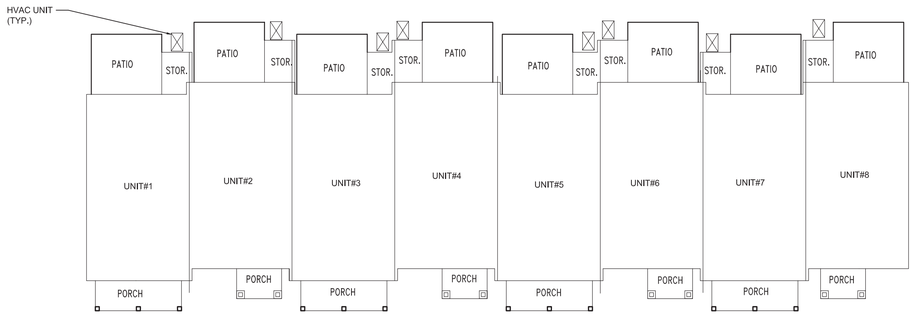
Plant List

PLANT LIST

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	WIDTH	ROOT
AROG	13	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"	10'-12' MIN.	-	B&B
QA	10	QUERCUS ACUTISSIMA	SAW TOOTH OAK	2.5"	10'-12' MIN.	-	B&B
TD	7	TAXODIUM DISTICHUM	BALD CYPRESS	2.5"	10'-12' MIN.	-	B&B
TCG	9	TILIA CORDATUM 'GREENSPIRE'	LINDEN	2.5"	10'-12' MIN.	-	B&B
IAF	14	ILEX ATTENUATA FOSTERII	FOSTER HOLLY	2"	6'-8' MIN.	-	B&B/15 GAL
INS	8	ILEX 'NELLIE R. STEVENS'	NELLIE STEVENS HOLLY	2"	6'-8' MIN.	-	B&B/15 GAL
LIN	26	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CREPE MYRTLE	2"	6'-8' MIN.	-	B&B/15 GAL
PCP	9	PRUNUS CERASIFERA 'PURPLE PONY'	PURPLE LEAF PLUM	2"	6'-8' MIN.	-	B&B/15 GAL
CJ	18	CAMELLIA JAPONICA	CAMELLIA	-	24"-30" MIN	-	7GAL
CP	21	CHAMAECYPARIS PISIFERA 'GOLD MOPS'	GOLD MOPS CYPRESS	-	24"-30" MIN	-	7GAL
IC	9	ILEX CORNUTA 'BURFORDII'		-	24"-30" MIN	-	7GAL
LJ	16	LIGUSTRUM JAPONICA	GLOSSY PRIVIT	-	24"-30" MIN	-	7GAL
LC	27	LOROPETALUM CHINESE RUBRUM 'ZHUZHOU'	ZHUZHOU LORPETALUM	-	24"-30" MIN	-	7GAL
BT	26	BERBERIS THUMBERGIATROPURPUREA 'CRIMSON PIGMY'	BAR BERRY		15"-18" MIN	-	3GAL

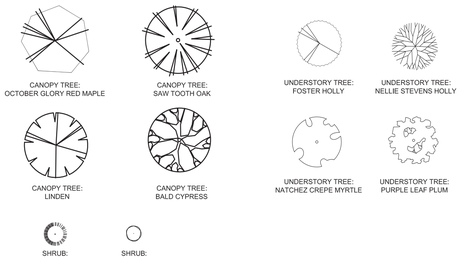
1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY
2. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT QUANTITIES AND IS TO NOTIFY THE CONTRACTOR ASAP OF ANY DISCREPANCIES BETWEEN THE PLANT LIST AND THE PLAN
3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY BUFFER PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

NOTES:
1. ALL ROOF, GROUND, AND WALL MOUNTED MECHANICAL EQUIPMENT SHALL BE COMPLETELY SCREENED FORM VIEW. 155.402(G)(2).
2. THE DUMPSTER ENCLOSURE SHALL MATCH THE MATERIALS OF THE PRIMARY STRUCTURE. 155.(G)(2) SEE DETAIL ON SHEET SP09.
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, (IF IRRIGATION WILL NOT BE UTILIZED, DROUGH-TOLERANT SPECIES MUST BE USED).
4. ALL LANDSCAPED AREA SHALL BE MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED IN A TIMELY FASHION.



TYPICAL HVAC LOCATION

Plant Symbol Key



Landscape Data

LANDSCAPE REQUIREMENTS

STREET TREE PLANTINGS REQUIRED:	(2) AT 40' O.C. [4 PROVIDED]*
PARKING LOT TREES REQUIRED:	(15) [15 PROVIDED]
BUFFER PROVIDED:	PROPERTY LINES (750 L.F. OF BUFFER)
BUFFER TYPE:	CLASS "A" ATLERNATIVE 3 (10' WIDE) REQUIRED PLANTINGS PER 100 LIN FT OF "A" BUFFER: (2) CANOPY TREES [14 TOTAL] /15 PROVIDED (2) UNDERSTORY TREE [14 TOTAL] /22 PROVIDED (12) SHRUBS [90 TOTAL] /91 PROVIDED

LANDSCAPE CALCULATION*

TOTAL AREA OF LOT:	167,767 SQ.FT.		PLANT TYPE	REQUIRED**	PROPOSED
20% OF LOT AREA:	33,553.40 SQ.FT.		CANOPY TREE	34	34
REQUIRED LANDSCAPE AREA:	33,553.40 SQ.FT.		UNDERSTORY TREE	34	34
PROPOSED LANDSCAPE AREA:	±67,000 SQ.FT.***		SHRUBS	67	67

* AS PER SECTION 155 402 (D) OF THE UNIFIED DEVELOPMENT CODE
** PER 1,000 SQ.FT. OF REQUIRED LANDSCAPE AREA
*** INCLUDES THE OPEN SPACE FOR THIS PROJECT

STREET YARD TREES

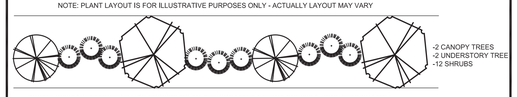
1. STREET YARD TREES SHALL BE REQUIRED ALONG ALL RIGHTS OF WAY AT THE RATE OF ONE CANOPY TREE FOR EVERY 40 LINEAR FT. (SPACE A MAXIMUM OF 50 FT. APART).

2. ALL STREET YARD TREES SHALL BE A MINIMUM OF TWO AND ONE-HALF CALIPER INCHES AT TIME OF PLANTING AND SHALL BE PLANTED IN THE TREE STRIP NO LESS THAN FIVE FT. OR MORE THAN 15 FT. FROM THE BACK OF THE SIDEWALK.

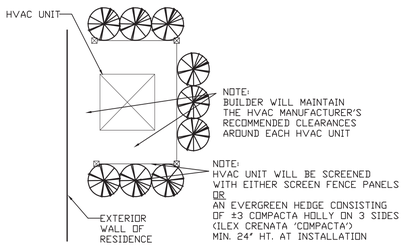
**REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.*
**PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.*
**ALL INTERIOR LANDSCAPE ISLANDS SHALL CONTAIN A MINIMUM OF ONE TREE W/ MINIMUM CALIPER OF 2.5".*

CLASS A BUFFER DETAIL

(PLANTS PER 100 LF) ALTERNATE 1, 10' WIDE BUFFER
NOTE: PLANT LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY - ACTUALLY LAYOUT MAY VARY

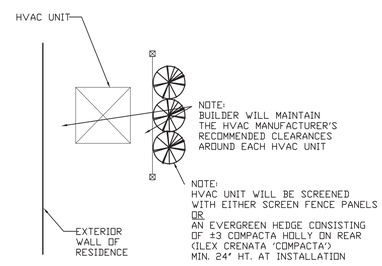


**NOTE* EXISTING TREES SHALL BE PRESERVED TO THE GREATEST EXTENT POSSIBLE (REQUIRED BY UDC.)*

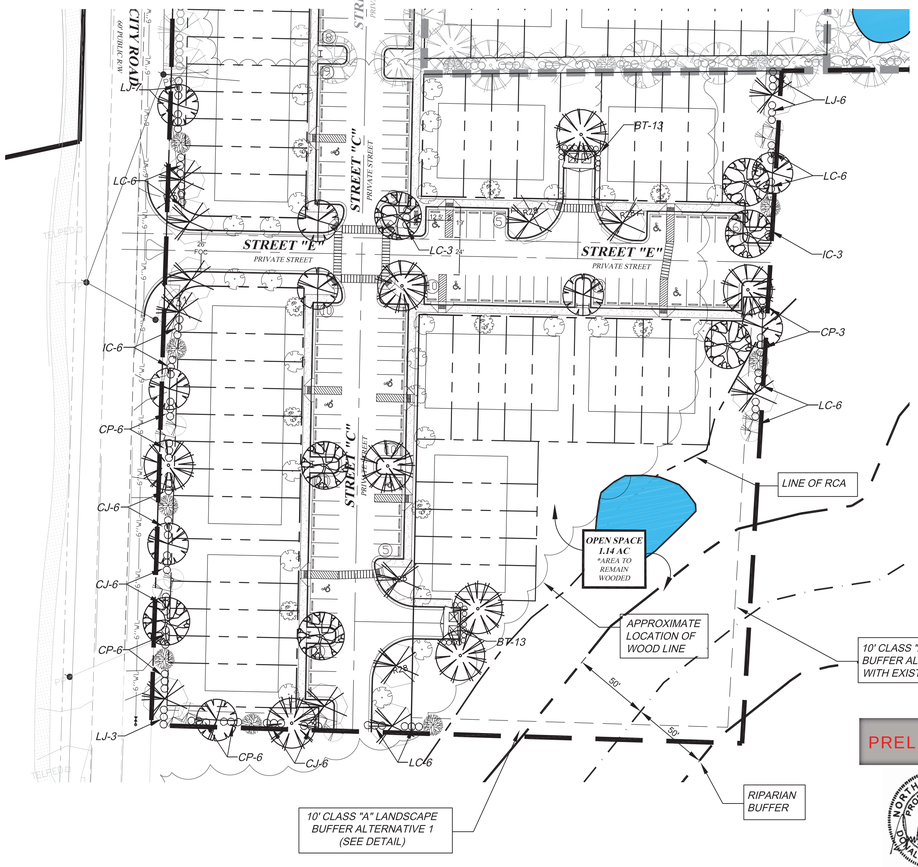


TYPICAL HVAC SCREENING
STREET SIDE

TYPICAL HVAC SCREENING
BUILDING SIDE



TYPICAL HVAC SCREENING
BUILDING REAR



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14685 DONALD C. ADAMS, JR.

REVISED
5:58 pm, Jul 27, 2018

NAD 83

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

314 East Main Street
Clayton, NC 27520
dennis@adamsandhodge.com
919-553-1173
FIRM # C-4187

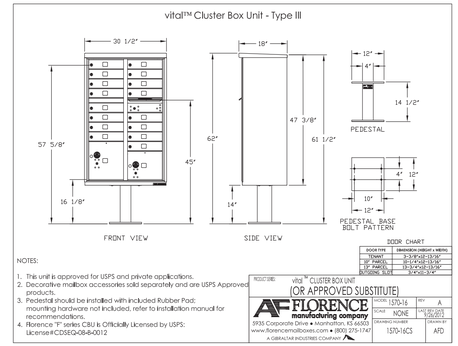
REVISIONS:
1) 07/26/18 INC COMMENTS

ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview
Phase 9-16
TOWN OF CLAYTON, NC 27520

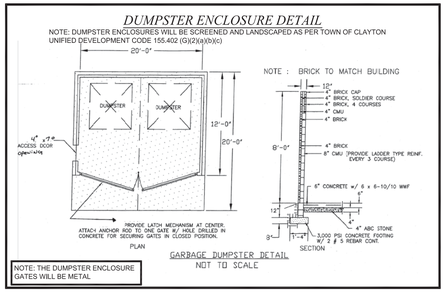
PRELIMINARY
LANDSCAPE PLAN

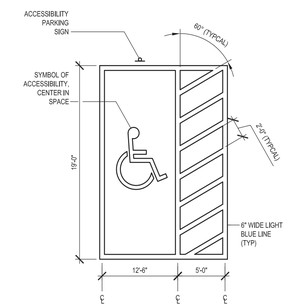
DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	-AH-
SHEET	SP06



CLUSTER MAILBOX UNIT

NOT TO SCALE





ACCESSIBLE PARKING DETAIL
AS PER 155.401(C)(3)(b) OF THE
TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

REVISED
6:14 pm, Jul 27, 2018

REVISIONS:
1) 07/26/18 TRC COMMENTS

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

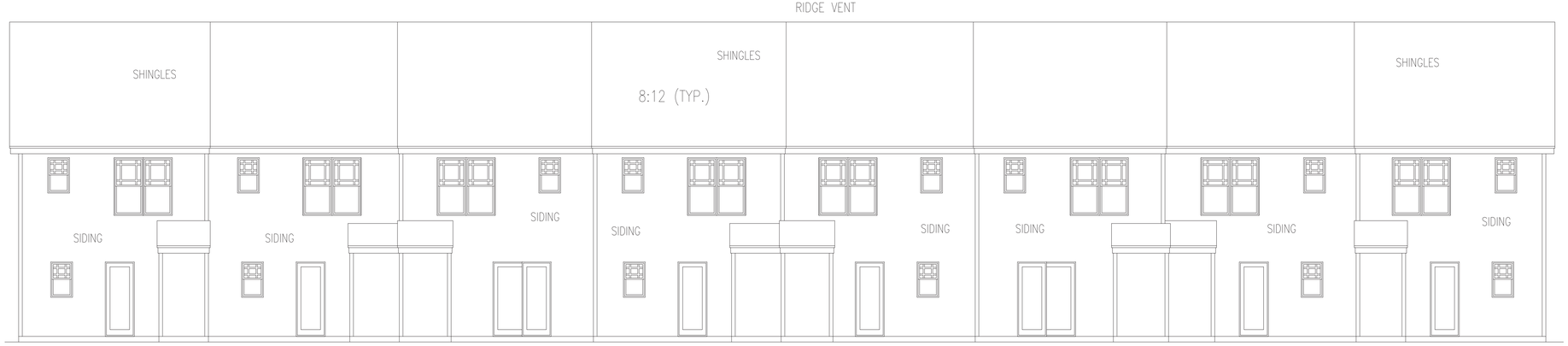
The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

REGULATORY STANDARDS

DESIGN DCA/ADS
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 07/02/2018
JOB NO. AH–
SHEET SP07

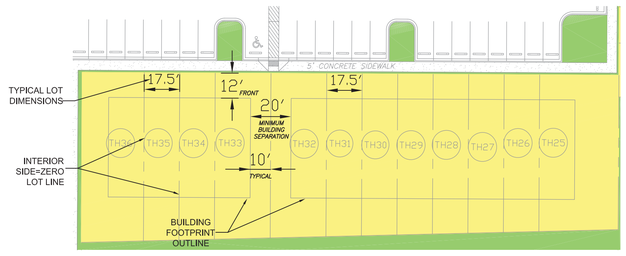
FRONT ELEVATION (8 UNITS)

NOT TO SCALE
**ALL UNITS ARE 2 BEDROOMS/ 2 BATHS*
EXTERIOR MATERIALS: VINYL SIDING, STONE, AND ASPHALT SHINGLES



REAR ELEVATION

TO BE FACING CITY ROAD

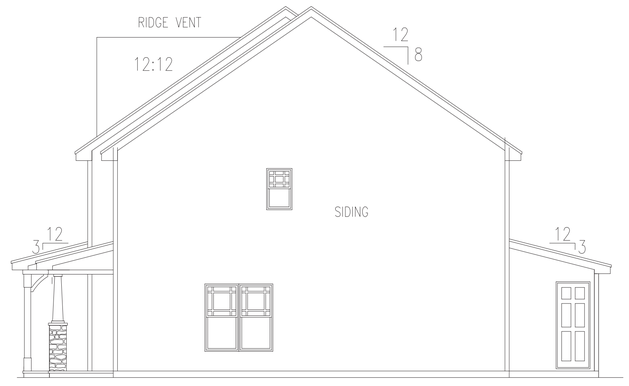


1. SETBACKS AS SHOWN ARE TYPICAL
2. MAXIMUM BUILDING HEIGHT = 35'
3. MAXIMUM IMPERVIOUS ARE PER LOT = 75%
4. MAXIMUM LOT COVERAGE = 50%
5. MINIMUM LOT SIZE = 1250 SF

DIMENSIONAL INFORMATION

NOTE:
MINIMUM LOT WIDTH = 17.5'
MINIMUM LOT DEPTH = 75'

MINIMUM BUILDING SETBACKS
FRONT = 12'
SIDE = 5'
INTERIOR SIDE = ZERO LOT LINE
REAR = 10'
STREET SIDE = 5'
BUILDING SEPARATION = 20'



SIDES

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamshodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 10/30/18 PRC COMMENTS

The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

REGULATORY STANDARDS

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP08

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

SUBDIVISION: MAJOR SUBDIVISION (Preliminary Subdivision Plat)

Pursuant to Article 7, §155.706 of the Unified Development Code (UDC), an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town of Clayton to approve a subdivision of land. Please complete all fields in this application and submit to the Planning Department with all required materials.

Application Fees: **Major Preliminary Subdivision Plat Fee: $400.00 + $5.00 per lot**
Advertisement Fee: $100.00
Modifications to Approved Plans Fee:
Major Modification: $400.00 + $5.00 per lot modified
Minor Modification: $200.00 + $5.00 per lot modified

See §155.706(F) of the UDC for a definition of Major vs. Minor Subdivisions.
See §155.706(I) for Preliminary Plat approval (major subdivision) process/approval information.
See§155.203(F), (G), and (H) for information on Conventional vs. Open Space Subdivisions.
See §155.706(N) for information on minor and major modifications.
See UDC Article 6 for Subdivision Standards.

SITE INFORMATION

☐ New Major Subdivision
Conventional: _____ *Open Space:* _____

☐ New Subdivision Master Plan

☒ Modification to Approved Preliminary Plat
Major: 2017-171-SD *Minor:* _____

7.00 ACS Previous Submittal

Name of Project: The Village at Parkview Ph 9-16 **Acreage of Property:** 3.85 ACS

Tag #: 05H02199C & 05H02198 **NC PIN:** 166909-06-1495 & 166909-06-1265

Location: 352 City Road, Clayton, NC 27520

Number of Lots (existing): 2 **(Proposed)** 39 total **Min Lot Size:** 1250 SF

Zoning District: R-10 **Electric Provider:** Town of Clayton

Wastewater: ☐ Septic ☒ Sewer (check one) **Water:** ☐ Well ☒ Public/Private Water (check one)

Recreation/Open Space Requirement: ☒ Fee in lieu ☐ Land Dedication – Acreage: _____

FOR OFFICE USE ONLY

Date Received: RECEIVED JUL 30 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: _____ File Number: _____

PROPERTY OWNER INFORMATION

Name: Sam's Branch LLC/Delila R B Thompson Living Trust

Mailing Address: 114 Main Street, Clayton, NC 27520 / 8013 Old Stage Rd., Raleigh, NC 27603

Phone Number: 919-422-6815 **Fax:** N/A

Email Address: reid@one27homes.com

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

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

Phone Number: 919-763-7278 **Fax:** N/A

Contact Person: Donnie Adams

Email Address: donnie@adamsandhodge.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany the application:

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application meeting was held with Town Staff. Date: 05/16/2018	✓				
2. Completed Application	✓				
3. Review Fee and Advertisement Fee	✓				
4. Findings of Fact, signed *Not required for minor modifications. Form is included in this packet.*	✓				
5. Owner's Consent Form *Required if applicant is not the property owner. Included in this packet*	✓				
6. Preliminary Plat Subdivision Requirements Checklist form, completed and signed *Checklist is included in this packet*	✓				
7. Plat sheet(s) meeting requirements of the Requirements Checklist	✓				
8. If subdivision waivers are requested, applicant must attach a separate typed document requesting the waivers. The document must specifically list the waivers requested, including Code references, and must address the 4 considerations outlined in §155.706(I)(7).		✓			
9. Adjacent Property Owners List	✓				
10. Road Name Application *Included in this packet*	✓				
11. Wastewater allocation request OR verification of wastewater allocation *Letter format, to the attention of the Town Manager.*	✓				

12. A signed and sealed Traffic Impact Analysis *(required for projects which generate at least 100 vehicle trips at peak hour. See §155.708 of the UDC)*		✓	
13. Neighborhood Meeting Notice Letter* (1 copy) *See sample letter and meeting requirement, included in this packet.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*	✓		
14. Neighborhood Meeting summary form* *Included in this packet – NOT submitted with application.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*			Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.
15. Stamped, addressed, empty envelopes with no return address, using the adjacent property owner list. **Not required for minor modifications* *This for a public notice of the public hearing mailed by the Town – thus, neighbors will receive both a neighborhood meeting letter from the applicant, and a notice of the hearing from the Town.*	✓		

EXPLANATION OF PROJECT

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

This project is a 39 townhome unit extension of the adjacent approved subdivision/special use (2017-171-SD)

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Planning Board of the Town of Clayton to approve the subject 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.

ADAMS T HODGE — *Print Name*

Signature of Applicant

6/29/2018 — *Date*

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) That the subdivision meets all required specifications of the town Subdivision Regulations and conforms to the town Unified Development Code.

See attached sheets

(2) That 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 attached sheets

(3) 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.

See attached sheets

(4) That the subdivision will not adversely affect the general plans for the orderly growth and development of the town and is consistent with the planning policies adopted by the Town Council.

See attached sheets

Project Name: The Village at Parkview Phases 9-16

ADAMS & HODGE
Print Name

Signature of Applicant

07/27/18
Date

General Note: The Town of Clayton in February 2018 approved a townhome subdivision, on 7 ac. that is generally shown as Phase 1-8 (68 units) on the master plan. Since the time of that approval an additional 3.85 ac of land has been acquired and now the Town has been petitioned to amended the previously approved plan to include an additional 35 townhomes. This addition constitutes a major change to the approved plan, thus necessitating this resubmission.

Item No.1 That the subdivision meets all required specifications of the Town Subdivision Regulations and conforms to the town Unified Development Codes.

The subdivision meets or exceeds all applicable development standards that are established in the Subdivision Regulations and the Unified Development Code. 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 so as the manage the volume of storm water as well as the quality of the storm water discharged for the site. Erosion control has been incorporated into the design of the physical improvements during construction so as to minimize off site discharge of sediments. Passive and active recreation opportunities have been provided through open space, resource conservation areas (RCA) or indirectly through recreational assessment fees. By incorporating buffers, resource conservation areas, open space and landscaping the aesthetic quality of the development and well as adjacent properties is maintained.

Item No. 2 That 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.

Since Phases 1-8 of the townhome subdivision were previously approved by the Town, the additional 35 units in Phases 9-16 will be no more than a continuation of the existing development with the same orderly development concepts and architectural styles. To the west across City Road there already exists a townhome subdivision as well as a single-family subdivision (Parkview) that incorporates a similar development/architectural style. By having similar development concepts and architectural style the proposed townhome subdivision will further enhance the area in developing a neighborhood identity. To the north lies Sams Branch and Legend Park which afford the townhome subdivision a great public recreational opportunity, by providing both active and passive recreation. Combine the municipal recreational opportunities with the resource conservation areas and the open space proposed for the townhome subdivision and the development of a neighborhood concept will be further enhanced. To the east and to the south of the proposed townhome subdivision the land is very steep and is protected by riparian buffers associated with and existing stream and/or pond, thus only further enhancing the aesthetic quality of developing a neighborhood concept and identity with the proposed development. In order to facilitate expansion of the neighborhood concept into adjacent properties the proposed townhome subdivision provides street and utility terminations so as to facility potential future development on adjacent properties.

Item No. 3 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 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 associated with the townhome subdivision has been addressed through a traffic impact analysis which states that Phases 1-8 could be adequately served by the extension of Street A to access the property and making the intersection of Street A and City Road a full movement intersection. In order to facilitate the additional development of 35 townhome units a second access point (right in and right out only) was located to the south on City Road. To further address future expansion of the road system, Street A was stubbed out to facilitate expansion of the road system serving Legend Park. In a similar manner Streets C and E have been stubbed out to the property line in order to facilitate future development on adjacent tracts of land. Utilities have been so terminated in such a manner as to facilitate future extensions associated with Streets A, C and E with minimal impact to other site improvements. Care has been exercised in the townhome subdivision to protect the environment by prudent use of buffers, resource conservation areas and landscaping. The public's safety and health have been addressed by providing public water and sewer that meet 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 the water but also the quantity of water. Streets 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 on site as well as offsite via municipal recreation facilities.

Item No. 4 That the subdivision will not adversely affect the general plans for the orderly growth and development of the town and is consistent with the planning policies adopted by the Town Council.

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 Downtown Residential (DR) land use. The DR land use encourages higher density residential development by using multifamily developments (apartments and townhomes) that have high density ratios (12 to 20 units/ac). The proposed development has a total acreage of 10.85 ac with 2.47 ac of resource conservation area or 8.38 ac of developable land. When the density is calculated at build out using 103 units the density ration is 12.29 units per acre of developable land. The proposed townhome development will go a long way in addressing the multifamily residential component envisioned in the Comprehensive Plan 2040 and will complement the existing townhome/single family development that already existing in Parkview Subdivision.

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

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 Village at Parkview Ph 9-16 **Address or PIN #:** 300 City Road, Clayton 05H02198

AGENT/APPLICANT INFORMATION:

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

314 E. 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*):

Rezoning — Final Plats
Major Subdivision — Construction Plans

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: Delilah B Thompson

Carol Boyette, Trustee Living Trust
(Name - type, print clearly)

8011 Old Stage Rd
(Address)

Carol J. Boyette, Trustee
(Owner's Signature)

Raleigh NC 27603
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Wake

Sworn and subscribed before me Marguerite Sawicki, a Notary Public for the above State and County, this the 17 day of May, 2018.

SEAL

MARGUERITE SAWICKI NOTARY PUBLIC LEE COUNTY, NC

Marguerite Sawicki
Notary Public

My Commission Expires: 11-1-2022

October 2013

919-772-8432 p.1
Clyde and Carol Boyette May 17 18,04:31p

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 Village at Parkview Phase 9-14 **Address or PIN #:** 166909-06-1495

AGENT/APPLICANT INFORMATION:

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

314 E. 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)*:

REZONING — FINAL PLATS
MAJOR SUBDIVISION — CONSTRUCTION PLANS

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:

SAMS BRANCH LLC
(Name - type, print clearly)

114 W. Main St
(Address)

(Owner's Signature)

CLAYTON, NC 27520
(City, State, Zip)

STATE OF North Carolina
COUNTY OF Johnston

Sworn and subscribed before me Polly A. Mudd, a Notary Public for the above State and County, this the 31st day of May, 2018.

POLLY A. MUDD NOTARY PUBLIC JOHNSTON CO., NC

SEAL

Notary Public

My Commission Expires: June 18, 2020

January 2018

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Major Subdivision - The Village at Parkview 9-16

Date of Mailing: August 3, 2018

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:

Printed Name: Holland Adams Signature: Holland Adams

Date of Meeting: August 16, 2018 Time of Meeting: 7:00 pm

Location of Meeting: 114 W. Main St. Clayton NC 27520

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.*

Donnie Adams had all materials ready for presentation for The Village at Parkview 9-16 at 7:00 pm, however after waiting until 7:20pm, noone shawed up.

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

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: The Village at Parkview 9-16

Application: Major Subdivision

Location/Date: 114 W. Main St. Clayton, NC 7:00pm

	NAME	ADDRESS
1	Donnie Adams	314 E. Main St. Clayton, NC 27520
2	Holland Adams	" "
3		
4		
5		
6		
7		
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9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

ADAMS & HODGE
ENGINEERING, PC

August 3, 2018

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: **Thursday, August 16, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **114 W. Main Street**
Clayton, NC 27520

Type of Application: **Major Subdivision Plan**

Project/proposal property address: **352 City Rd, Clayton, NC 27520 (East side of City Road.)**

Description of project/proposal: **The proposed project is a residential subdivision which will be serviced by public water and sewer.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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*.

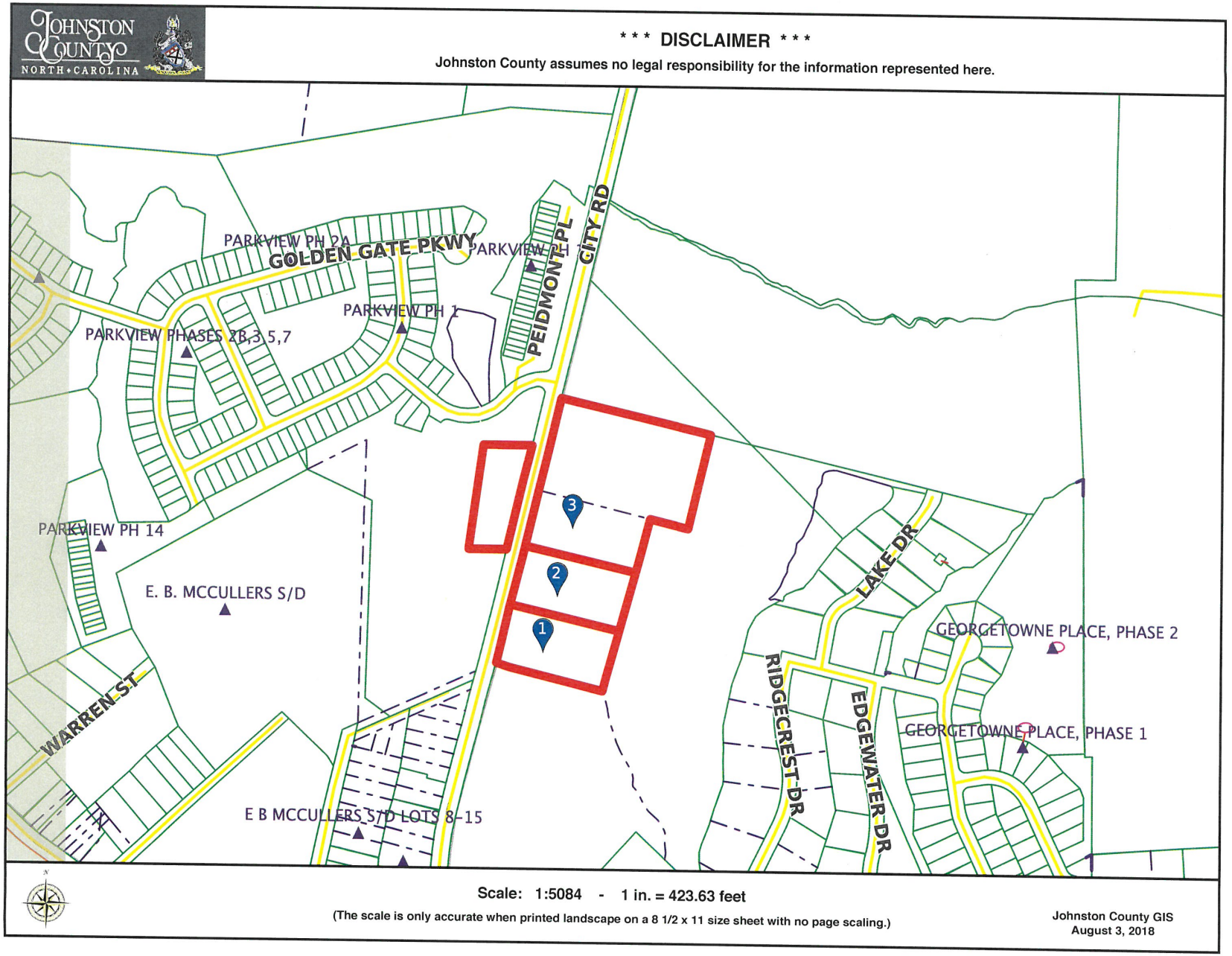
You may also contact the Planning Department at 919-553-5002.

Sincerely,

Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25499 ENGINEER DONALD C. ADAMS, JR.

Cc: Town of Clayton Planning Dept.


JOHNSTON COUNTY
NORTH CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
PARKVIEW PH 2A
GOLDEN GATE PKWY
PARKVIEW PH
PEIDMONT PL
CITY RD
PARKVIEW PH 1
PARKVIEW PHASES 2B,3 5,7
PARKVIEW PH 14
E. B. MCCULLERS S/D
WARREN ST
E B MCCULLERS S/D LOTS 8-15
LAKE DR
RIDGECREST DR
EDGEWATER DR
GEORGETOWNE PLACE, PHASE 2
GEORGETOWNE PLACE, PHASE 1
1
2
3
Scale: 1:5084 - 1 in. = 423.63 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, 2018

ADJACENT PROPERTY OWNERS LIST

Project Name: THe Village at Parkview Phases 9-16

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

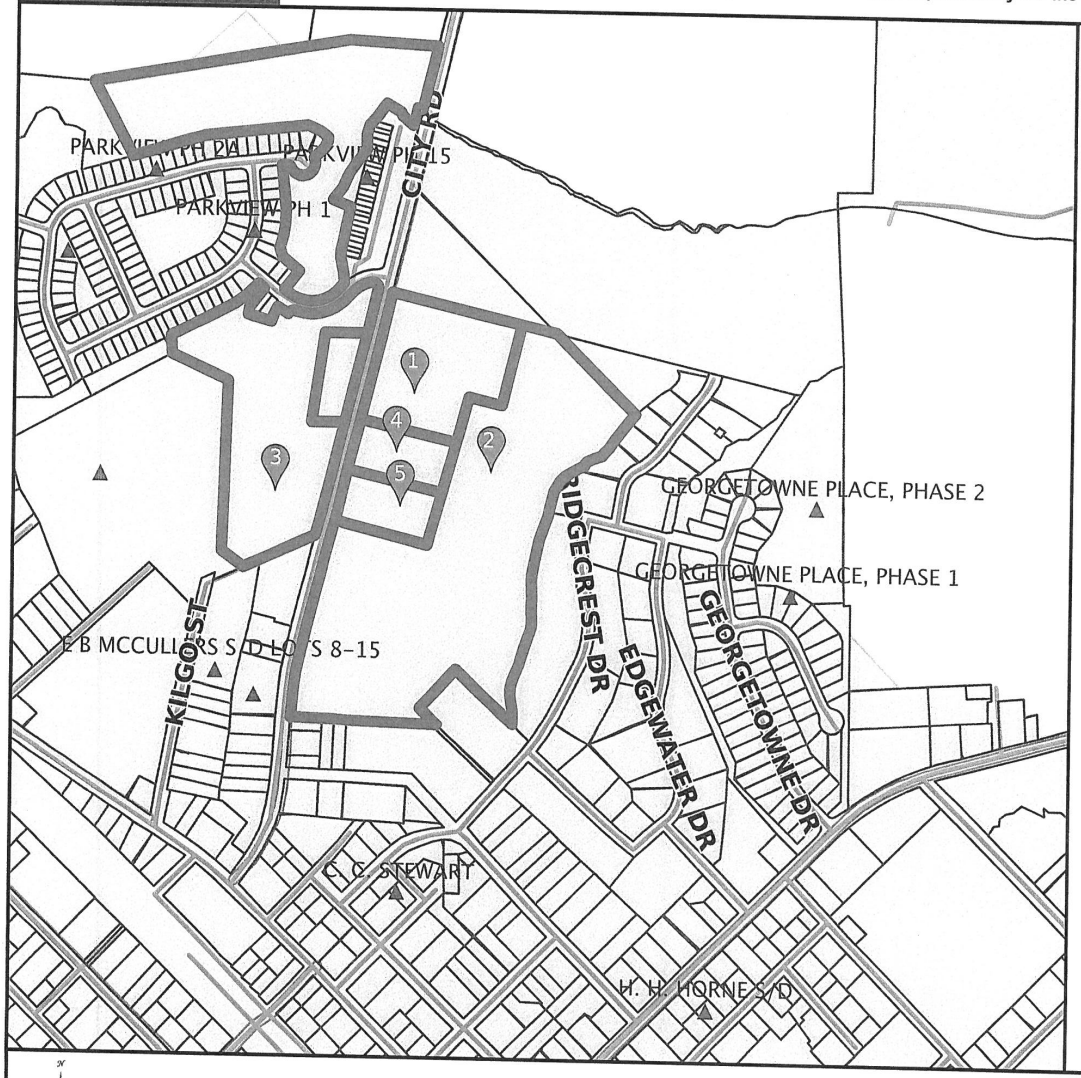
It is the responsibility of the applicant to correctly identify the current owner, based upon records in the Johnston County GIS Office, for all property owners of land within the required public notice radius.

PARCEL NUMBER	NAME	ADDRESS
	See attached	

JOHNSTON COUNTY
NORTH CAROLINA

*** DISCLAIMER ***

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



Result 1

id:	05H02020
Tag:	05H02020
NCPin:	166909-06-4838
Mapsheet No:	166909
Owner Name 1:	SAM'S BRANCH, LLC
Owner Name 2:	
Mail Address 1:	114 W MAIN ST STE 102
Mail Address 2:	
Mail Address 3:	CLAYTON, NC 27520-2397
Site Address 1:	
Site Address 2:	
Book:	05111
Page:	0199
Market Value:	66680
Assessed Acreage:	7
Calc. Acreage:	6.98
Sales Price:	3000
Sale Date:	2018-03-06

Scale: 1:7876 - 1 in. = 656.32 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 31, 2018

JOHNSTON COUNTY NORTH CAROLINA

*** DISCLAIMER ***

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

Result 2

id: 05029021
Tag: 05029021
NCPin: 166909-06-6358
Mapsheet No: 166909
Owner Name 1: GORDON, HARVEY B
Owner Name 2: GORDON, MILDRED S
Mail Address 1: 133 PLANTATION CIR S
Mail Address 2:
Mail Address 3: PONTE VEDRA BEACH, FL 32082-0000
Site Address 1:
Site Address 2:
Book:
Page:
Market Value: 119210
Assessed Acreage: 22.43
Calc. Acreage: 22.429
Sales Price: 0
Sale Date:

Result 3

id: 05030069
Tag: 05030069
NCPin: 165908-97-7935
Mapsheet No: 165908
Owner Name 1: CITY ROAD LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2321
Site Address 1:
Site Address 2:
Book: 04557
Page: 0814
Market Value: 112350
Assessed Acreage: 22.35
Calc. Acreage: 22.4
Sales Price: 425000
Sale Date: 2015-02-13

Result 4

id: 05H02199C
Tag: 05H02199C
NCPin: 166909-06-1495
Mapsheet No: 166909
Owner Name 1: SAM'S BRANCH, LLC
Owner Name 2:
Mail Address 1: 114 W MAIN ST STE 102
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2397
Site Address 1: 352 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 05130
Page: 0112
Market Value: 94030
Assessed Acreage: 1.85
Calc. Acreage: 1.848
Sales Price: 152500
Sale Date: 2018-04-10

Result 5

id: 05H02198
Tag: 05H02198
NCPin: 166909-06-1265
Mapsheet No: 166909
Owner Name 1: DELILA R B THOMPSON LIVING TRUST
Owner Name 2:
Mail Address 1: 8013 OLD STAGE ROAD
Mail Address 2:
Mail Address 3: RALEIGH, NC 27603-0000
Site Address 1: 300 CITY RD
Site Address 2: CLAYTON, NC 27520-
Book: 03003
Page: 0637
Market Value: 90710
Assessed Acreage: 1.99
Calc. Acreage: 1.855
Sales Price: 0
Sale Date: 2005-10-26

MAJOR MODIFICATION SUBDIVISION PLAN

(MAJOR MODIFICATION TO 2017-171-SD)

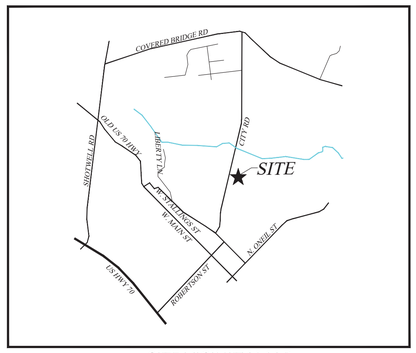
Received by Town of Clayton
8/20/2018

THE VILLAGE at PARKVIEW

PHASES 9-16

IN

TOWN OF CLAYTON



SITE VICINITY MAP
NOT TO SCALE

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 15469 ENGINEER DONALD C. ADAMS, JR.

REVISED
4:11 pm, Aug 16, 2018

DEVELOPER/APPLICANT:
SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

SHEET INDEX

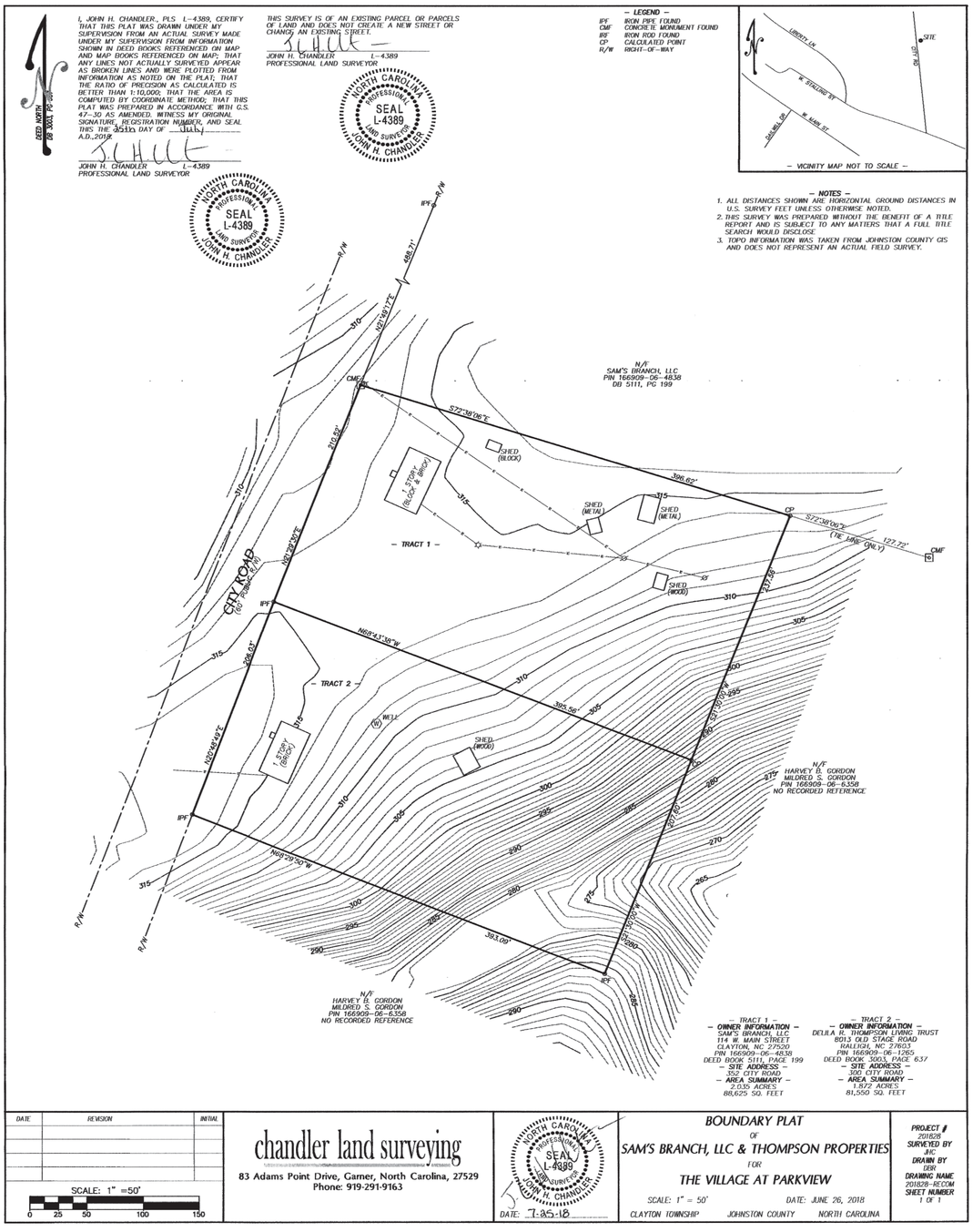
SHEET TITLE	SHEET No.
SEALED BOUNDARY	BM1
MASTER PLAN	MP1
EXISTING CONDITIONS	SP01
SITE PLAN	SP02
PHASE PLAN	SP03
UTILITY PLAN	SP04
GRADING PLAN	SP05
LANDSCAPE PLAN	SP06
REGULATORY STANDARDS	SP07 & SP08

ADAMS & HODGE ENGINEERING, PC
335 ATHLETIC CLUB BLVD
CLAYTON, NC 27527
919-243-1332 donnie@adamsandhodge.com
FIRM # C-4187

The Village at Parkview
Phases 9-16
TOWN OF CLAYTON, JOHNSTON COUNTY, NORTH CAROLINA

JULY 2, 2018
JULY 26, 2018 - TRC COMMENTS
**AUGUST 16, 2018 - TRC COMMENTS*

MAJOR MODIFICATION TO 2017-171-SD / 2018-122-SD



BM1	SHEET	07/02/2018	DATE	SEE GRAPHIC SCALE	SCALE	DCA	DESIGNED
	JOB NO.	N/A	APPROVED	SEE PROJECT NOTES	PROJECT	AJS	DRAWN
							DESIGN

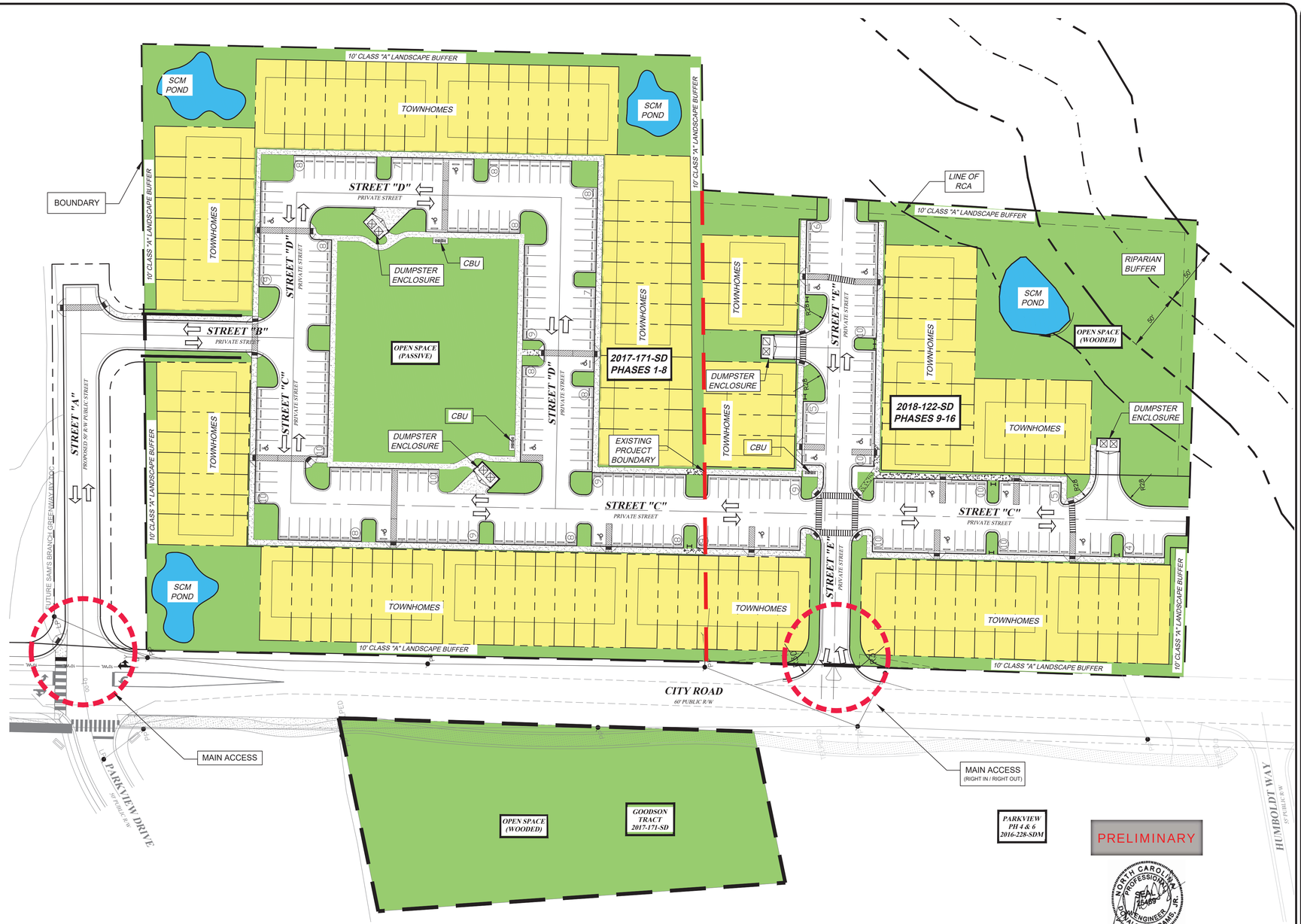
SEALED BOUNDARY SURVEY

The Villag @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

ADAMS & HODGE ENGINEERING, PC

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/26/18 TRC COMMENTS



PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

REVISED
4:11 pm, Aug 16, 2018

NAD 83

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

THE VILLAGE AT PARKVIEW DEVELOPMENT CHART									
PHASE	AREA OF PHASE	% OF OVERALL SITE	# OF LOTS	RIGHTS-OF-WAY	RESOURCE CONSERVATION AREAS	OPEN SPACE	IMPERVIOUS AREA	PERVIOUS AREA	STATUS OF PHASE
1-8	7.00 AC	65%	64	2.15 AC	0 AC	2.99 AC	3.04 AC (43%)	3.96 AC (57%)	APPROVED
9-16	3.85 AC	35%	39	1.06 AC	2.47 AC	1.14 AC	1.52 AC (39%)	2.33 AC (61%)	SUBMITTED FOR APPROVAL
Totals	10.85 AC	100.00%	103	3.21 AC	2.47 AC	4.13 AC	4.57 AC (42%)	6.29 AC (58%)	

REVISIONS:
1) 07/26/18 TRC COMMENTS
2) 08/16/18 TRC COMMENTS

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

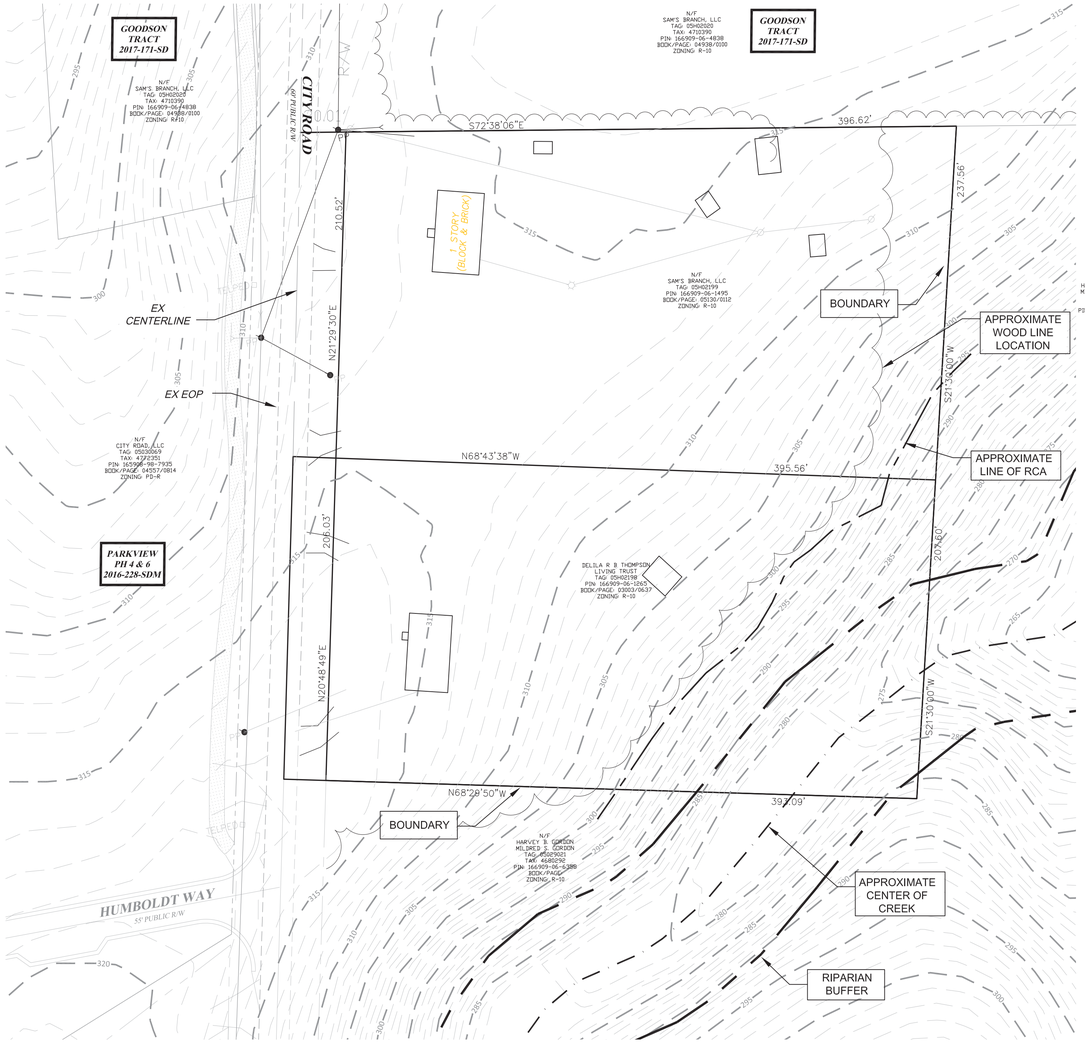
ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview

TOWN OF CLAYTON, NC 27520

MASTER PLAN

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: MP1



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15489 DONALD C. ADAMS, JR.

REVISED
3:43 pm, Aug 16, 2018

NOTE:
TOPO INFORMATION WAS TAKEN FROM JOHNSTON COUNTY GIS AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

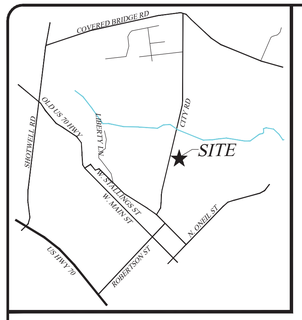
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamsandhodge.com
919-243-1333
FIRM # C-4187

REVISIONS:
1) 06/19/18 INC COMMENTS
2) 08/16/18 INC COMMENTS

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

EXISTING CONDITIONS

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP01



VICINITY MAP
(NO SCALE)

NOTE:
THIS SUBDIVISION TO BE ADDED TO THE PREVIOUSLY APPROVED 2017-171-SD GOODSON TRACT PRELIMINARY PLAT.

DEVELOPER/APPLICANT:

SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

THE VILLAGE AT PARKVIEW DEVELOPMENT CHART

PHASE	AREA OF PHASE	% OF OVERALL SITE	# OF LOTS	RIGHTS-OF-WAY	RESOURCE CONSERVATION AREAS	OPEN SPACE	IMPERVIOUS AREA	PERVIOUS AREA	STATUS OF PHASE
1-8	7.00 AC	65%	64	2.15 AC	0 AC	2.99 AC	3.04 AC (43%)	3.96 AC (57%)	APPROVED
9-16	3.85 AC	35%	39	1.06 AC	2.47 AC	1.14 AC	1.52 AC (39%)	2.33 AC (61%)	SUBMITTED FOR APPROVAL
Totals	10.85 AC	100.00%	103	3.21 AC	2.47 AC	4.13 AC	4.57 AC (42%)	6.29 AC (58%)	

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

REVISED
4:08 pm, Aug 16, 2018

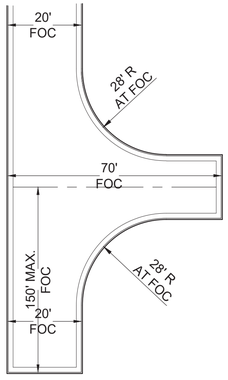
THE VILLAGE AT PARKVIEW PH 9-16 SITE DATA CHART

PARCEL OWNER	SAM'S BRANCH, LLC	DELILA R B THOMPSON LIVING TRUST
PARCEL OWNER ADDRESS	114 W. MAIN ST, SUITE 102 CLAYTON, NC 27520	8013 OLD STAGE RD RALEIGH, NC 27603
PARCEL IDENTIFICATION	166909-06-1495	166909-06-1265
PROPERTY SIZE (SF)	2.00 ACS / 87,120 SF	1.85 ACS / 80,586 SF
PROPERTY SIZE (SF) TOTAL	3.85 ACS / 167,706 SF	
PROPERTY LOCATION	TOWN OF CLAYTON/CLAYTON TOWNSHIP	
EXISTING/PROPOSED ZONING	R-10/R-10	
EXISTING USE	SINGLE FAMILY - RESIDENTIAL	
PROPOSED USE	SINGLE FAMILY TOWNHOME UNITS	
PROPOSED INTENSITY (GROSS FLOOR AREA IN SF)	40,053SF/ 0.92ACS (1027SF/UNIT)	
PROPOSED NUMBER OF LOTS	39 LOTS	
PROPOSED DENSITY	PHASE 9-16 - 39 UNITS/3.85 ACS = 10.13 UNITS/AC (OVERALL TOTAL SITE 103 UNITS/ 10.85 ACS = 9.49 UNITS/AC)	
PROPOSED IMPERVIOUS AREA (% OF TOTAL SITE)	50%	
PROPOSED IMPERVIOUS AREA PER LOT	65%	
TOTAL RESOURCE CONSERVATION AREA	107,593 SF / 2.47 AC	
PRPOPOSED BUILDING HEIGHT (NUMBER OF STORIES & FEET)	2 STORIES/ 29'-8"	
ELECTRIC PROVIDER	TOWN OF CLAYTON	
WATER PROVIDER	TOWN OF CLAYTON	
SEWER PROVIDER	TOWN OF CLAYTON	

*NO FLOOD PLAIN EXISTS AS PER FEMA FIRM PANEL 3720165900J & 3720166900J DATE 12/02/2015.
*REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.
*PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.

THE VILLAGE AT PARKVIEW SUBDIVISION STANDARDS

ZONING	UNIT TYPE	LOT STANDARDS: Min. Site Area (acres)	Min. Lot Area (sq.ft.)	Min. Lot Width (LF)	Max. Lot Coverage (%)	Max. Impervious Surface (%)	Density (dwelling units/ acre)	MINIMUM SETBACKS (FT.): Front	Side Interior	Side Street	Rear	Building Separation	BUILDING STANDARDS: Max. Height (ft.)	Min. Dwelling Unit Size (sq.ft.)
R-10	TOWNHOUSE (2 UNITS)	-	1,250	17.5'	55	65	10	12	0	5	10	20	35	N/A

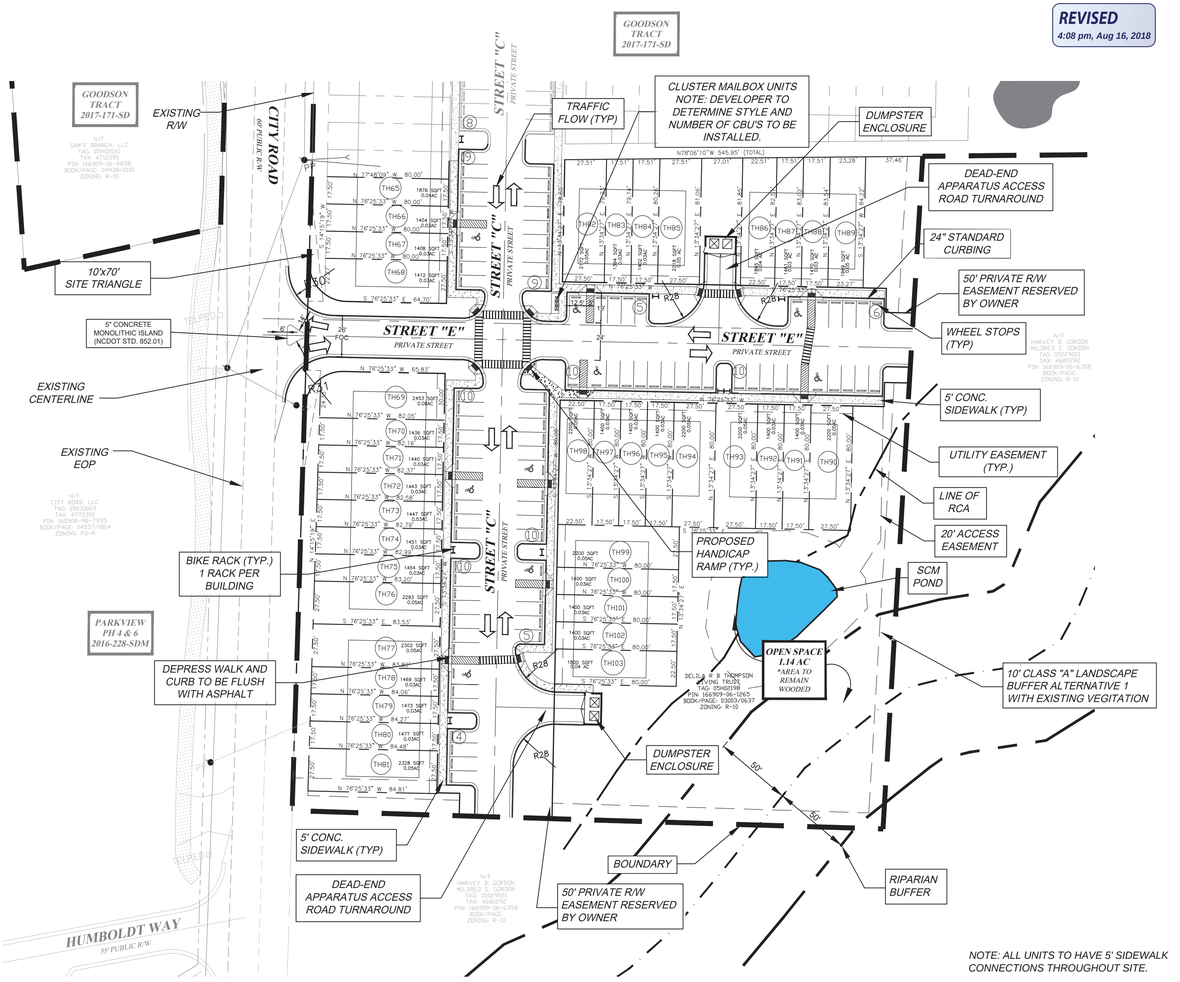


DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
ACCEPTABLE ALTERNATIVE TP 120' HAMMERHEAD

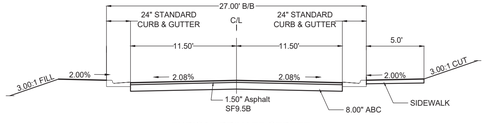
PARKING CALCULATIONS

	NUMBER OF UNITS	PARKING SPACE REQUIREMENTS	TOTAL NUMBER OF SPACES
PHASES 1-8 (2 BDRM UNITS)	64	2 SPACES/ 2 BDRM UNIT	128
GUEST PARKING PHASES 1-8		1 SPACE/4 UNITS	16
REQUIRED ADA PARKING SPACES PHASES 1-8		1 SPACE/25 SPACES	6
TOTAL REQUIRED SPACES (INCLUDING ADA)			144
TOTAL PROPOSED SPACES PHASES 1-8			160
REQUIRED BICYCLE PARKING PHASES 1-8	8 BLDGS	1 RACK PER BLDG	8 BIKE RACKS
PHASES 9-16 (2 BDRM UNITS)	39	2 SPACES/ 2 BDRM UNIT	78
GREENWAYS***			
GUEST PARKING PHASES 9-16		1 SPACE/4 UNITS	10
REQUIRED ADA PARKING SPACES PHASES 9-16		1 SPACE/25 SPACES	4
TOTAL REQUIRED SPACES (INCLUDING ADA)			88
TOTAL PROPOSED SPACES PHASES 9-16			88
REQUIRED BICYCLE PARKING PHASES 9-16	8 BLDGS	1 RACK PER BLDG	8 BIKE RACKS
ALL PHASES TOTAL REQUIRED SPACES			**232**
ALL PHASES TOTAL PROPOSED SPACES			248
ALL PHASES REQUIRED BICYCLE PARKING	16 BLDGS	1 RACK PER BLDG	16 BIKE RACKS

* NOTE: PARKING CALCULATIONS ARE BASED ON SECTION 155.401, TABLE 4-2 OF THE TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE



NOTE: ALL UNITS TO HAVE 5' SIDEWALK CONNECTIONS THROUGHOUT SITE.



TYPICAL PRIVATE STREET
(STREET "C" & "E")
45' RIGHT-OF-WAY W/ SIDEWALK
NO SCALE

NOTE:
ROADS TO BE DESIGNED FOR FIRE TRUCK LOADING.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NAD 83

REVISIONS:
1) 09/17/18 INC COMMENTS
2) 08/16/18 INC COMMENTS

ADAMS & HODGE ENGINEERING, PC
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919-243-1332
FIRM # C-4187

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

PRELIMINARY SITE PLAN

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP02

REVISIONS:
1) 07/28/18 TRC COMMENTS

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

PHASE PLAN

DESIGN DCA/ADS
DRAWN ADS
CHECKED DCA
HORIZONTAL SCALE SEE GRAPHIC SCALE
VERTICAL SCALE N/A
DATE 07/02/2018
JOB NO. AH–
SHEET SP03

WATER SYSTEM PROJECT SUMMARY:

1. THERE ARE 39 SINGLE FAMILY TOWNHOME LOTS SERVED BY THIS WATER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF WATER MAIN EXTENSIONS ARE AS FOLLOWS:
   ±668 LF OF 6" PVC MAIN

SEWER SYSTEM PROJECT SUMMARY:

1. THERE ARE 39 SINGLE FAMILY TOWNHOME LOTS SERVED BY THIS GRAVITY SEWER SYSTEM EXTENSION.
2. THE LENGTHS AND SIZES OF SEWER MAIN EXTENSIONS ARE AS FOLLOWS:
   ± 665 LF OF 8" PVC MAIN

STREET SUMMARY:

1. THE TOTAL LINEAR OF PRIVATE STREETS:
   ±935 LF

LEGEND

PROPOSED

- FIRE HOSE
- WATERLINE — 6"W —
- BLOWOFF
- HYDRANT
- VALVE
- REDUCER
- METER
- SEWERLINE — SS —
- MANHOLE
- CLEANOUT
- STORM DRAINAGE
- CATCH BASIN
- DROP INLET/YARD INLET

NOTE:

1. SEE SHEET SP05 FOR STORM WATER MANAGEMENT.
2. FIRE HYDRANTS ARE SPACED LESS THAN 500' APART. FIRE HOSE LAY WILL NOT EXCEED 500' MAX.
3. EXISTING WELLS AND SEPTIC TANKS TO BE ABANDONED IN A MANNER THAT IS CONSISTENT WITH APPLICABLE REGULATIONS.

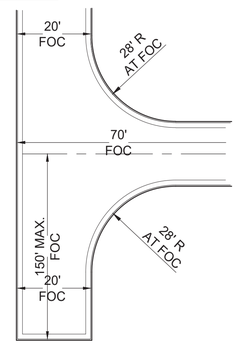
NOTES:

1. ALL PUBLIC WATER AND SEWER UTILITY MATERIALS AND METHODS OF INSTALLATION TO BE IN ACCORDANCE WITH TOWN OF CLAYTON STANDARDS AND SPECIFICATIONS AND MEET APPLICABLE NC PLUMBING CODES.
2. CONTRACTOR SHALL CALL NC CALL ONE AT 1-800-632-4949 TO VERIFY LOCATION OF EXISTING SERVICES BEFORE BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED TO THEIR ORIGINAL CONDITIONS. THIS INCLUDES ANY EXISTING UTILITY DAMAGE AND REPAIR OF ANY PAVEMENT, WALKWAYS, OR STRUCTURAL ITEMS. INCLUDING BUT NOT LIMITED TO: WATER, SEWER, ELECTRIC, GAS, IRRIGATION, CATV, FIBER OPTIC, TELEPHONE, LANDSCAPING, PAVEMENT, SIDEWALKS AND CURB & GUTTER.
4. INTERNAL SIDEWALKS TO BE INSTALLED BY BUILDER
5. ALL ACCESS TO OUTFALL WATER AND SEWER EASEMENTS SHALL HAVE A MAXIMUM SLOPE OF 4:1(H:V) AND A MAXIMUM CROSS SLOPE OF 4%.
6. OWNERSHIP AND MAINTENANCE FOR PERMANENT STORM WATER FACILITIES TO BE IN ACCORDANCE WITH JOHNSTON COUNTY AND TOWN OF CLAYTON REQUIREMENTS +
7. ALL 5' DIAMETER MANHOLES SHOWN IN PLANS SHALL REQUIRE AN EXTENDED BASE SECTION.
8. ALL 4" SANITARY SEWER SERVICES EQUAL TO OR GREATER THAN 12' DEEP SHALL BE 4" 401 LINED DIP.
9. ALL CONCRETE THROUGH LIMITS OF KIOSK AREA SHALL BE A MINIMUM OF 6" THICK.
10. EXISTING WELLS AND SEPTIC TANKS TO BE ABANDONED PER JOHNSTON COUNTY HEALTH DEPARTMENT.

THE TOWN OF CLAYTON AND/OR JOHNSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

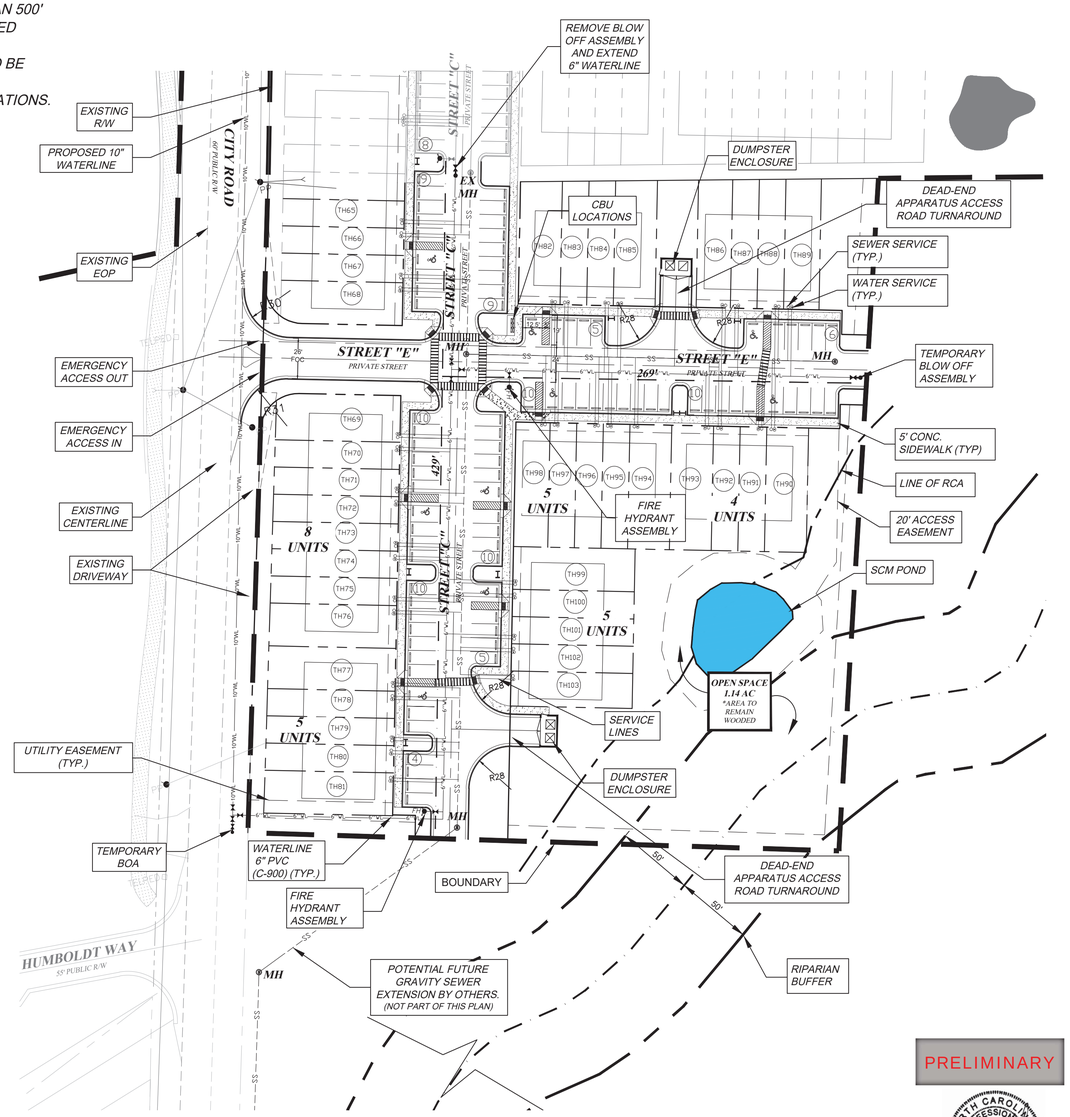
NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

WASTE WATER FLOW:
(39) - 2 BDRM UNITS @ 120GPD/BDRM
9,360 GPD/UNIT



DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
ACCEPTABLE ALTERNATIVE TP 120' HAMMERHEAD

PER CHANGE IN THE NORTH CAROLINA GERNERAL STATUTES (NCGS 87-121(g)), UNDERGROUND UTILITIES ARE TO BE LOCATED BY ELECTRONIC MEANS. SIMILAR TO OTHER DETAILS, GRAVITY SEWER MAINS NOW REQUIRE A #12 AWG INSULATED (GREEN) SOLID COPPER WIRE TO BE PLACED WITH THE GRAVITY SEWER MAIN. IF THE SEWER MAIN DEPTH IS GREATER THAN 8 FT. FROM FINAL SURFACE ELEVATION, PLACE THE WIRE AT A DEPTH BETWEEN 7 AND 8 FT. BELOW FINAL SURFACE ELEVATION. THE TOWN IS PREPARING A DETAIL.



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15489 DONALD C. ADAMS, JR.

REVISED
4:16 pm, Aug 16, 2018

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

MAD R/S

314 East Main Street
Clayton, NC 27520
dominic@adamsandhodge.com
919-553-1212
FIRM # C-4187

REVISIONS:
1) 07/26/18 RE: COMMENTS
2) 08/16/18 RE: COMMENTS

ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview
Phases 9-12
TOWN OF CLAYTON, NC 27520

PRELIMINARY UTILITY PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	AH-
SHEET	SP04

ALL DITCHES/SWALES ARE TO BE LINED USING NAG S150 OR SOD UNLESS UNLESS OTHERWISE SPECIFIED.

THE TOWN OF CLAYTON AND/OR JOHNSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

EROSION LEGEND:

- LIMITS OF DISTURBANCE
- SILT FENCE
- TD EXISTING TEMPORARY DIVERSION
- TD TEMPORARY DIVERSION
- CWD CLEAN WATER DIVERSION
- TREE PROTECTION BARRIER
- INTLET PROTECTION
- ARC INLET PROTECTION
- OUTLET PROTECTION
- CHECK DAM
- WATTLE
- CHECK DAM W/ WEIR & STORAGE
- WATTLE W/ STORAGE
- CONSTRUCTION ENTRANCE
- DITCH LINER – NAG C350 OR EQUAL

NOTE ALL DITCHES LINED W/ NAG S150 UNLESS OTHERWISE NOTED.

- SILT FENCE OUTLET
- 220 EXISTING CONTOUR
- 220 PROPOSED CONTOUR
- CONCRETE WASHOUT AREA
- SKIMMER BAFFLES

PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25489 DONALD C. ADAMS, JR.

REVISED
5:54 pm, Jul 27, 2018

NAD 83

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dominic@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 07/30/18 NC COMMENTS

The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

PRELIMINARY
GRADING PLAN &
EROSION CONTROL

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	AH-
SHEET	SP05

Plant List

PLANT LIST

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	WIDTH	ROOT
AROG	13	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"	10'-12' MIN.	-	B&B
QA	10	QUERCUS ACUTISSIMA	SAW TOOTH OAK	2.5"	10'-12' MIN.	-	B&B
TD	7	TAXODIUM DISTICHUM	BALD CYPRESS	2.5"	10'-12' MIN.	-	B&B
TCG	9	TILIA CORDATUM 'GREENSPIRE'	LINDEN	2.5"	10'-12' MIN.	-	B&B
IAF	14	ILEX ATTENUATA FOSTERII	FOSTER HOLLY	2"	6'-8' MIN.	-	B&B/15 GAL
INS	8	ILEX 'NELLIE R. STEVENS'	NELLIE STEVENS HOLLY	2"	6'-8' MIN.	-	B&B/15 GAL
LIN	26	LAGERSTROEMIA INDICA 'NATCHEZ'	NATCHEZ CREPE MYRTLE	2"	6'-8' MIN.	-	B&B/15 GAL
PCP	9	PRUNUS CERASIFERA 'PURPLE PONY'	PURPLE LEAF PLUM	2"	6'-8' MIN.	-	B&B/15 GAL
CJ	18	CAMELLIA JAPONICA	CAMELLIA	-	24"-30" MIN	-	7GAL
CP	21	CHAMAECYPARIS PISIFERA 'GOLD MOPS'	GOLD MOPS CYPRESS	-	24"-30" MIN	-	7GAL
IC	9	ILEX CORNUTA 'BURFORDII'		-	24"-30" MIN	-	7GAL
LJ	16	LIGUSTRUM JAPONICA	GLOSSY PRIVIT	-	24"-30" MIN	-	7GAL
LC	27	LOROPETALUM CHINESE RUBRUM 'ZHUZHOU'	ZHUZHOU LORPETALUM	-	24"-30" MIN	-	7GAL
BT	26	BERBERIS THUMBERGIATROPURPUREA 'CRIMSON PIGMY'	BAR BERRY		15"-18" MIN	-	3GAL

1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY
2. 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
3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY BUFFER PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

NOTES:
1. ALL ROOF, GROUND, AND WALL MOUNTED MECHANICAL EQUIPMENT SHALL BE COMPLETELY SCREENED FORM VIEW. 155.402(G)(2).
2. THE DUMPSTER ENCLOSURE SHALL MATCH THE MATERIALS OF THE PRIMARY STRUCTURE. 155.(G)(2) SEE DETAIL ON SHEET SP09.
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, (IF IRRIGATION WILL NOT BE UTILIZED, DROUGH-TOLERANT SPECIES MUST BE USED).
4. ALL LANDSCAPED AREA SHALL BE MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED IN A TIMELY FASHION.

Plant Symbol Key

CANOPY TREE: OCTOBER GLORY RED MAPLE

CANOPY TREE: SAW TOOTH OAK

UNDERSTORY TREE: FOSTER HOLLY

UNDERSTORY TREE: NELLIE STEVENS HOLLY

CANOPY TREE: LINDEN

CANOPY TREE: BALD CYPRESS

UNDERSTORY TREE: NATCHEZ CREPE MYRTLE

UNDERSTORY TREE: PURPLE LEAF PLUM

SHRUB:

SHRUB:

Landscape Data

LANDSCAPE REQUIREMENTS

STREET TREE PLANTINGS REQUIRED:	(2) AT 40' O.C. [4 PROVIDED]*
PARKING LOT TREES REQUIRED:	(15) [15 PROVIDED]
BUFFER PROVIDED:	PROPERTY LINES (750 L.F. OF BUFFER)
BUFFER TYPE:	CLASS "A" ATLERNATIVE 3 (10' WIDE) REQUIRED PLANTINGS PER 100 LIN FT OF "A" BUFFER: (2) CANOPY TREES [14 TOTAL] /15 PROVIDED (2) UNDERSTORY TREE [14 TOTAL] /22 PROVIDED (12) SHRUBS [90 TOTAL] /91 PROVIDED

LANDSCAPE CALCULATION*

TOTAL AREA OF LOT:	167,767 SQ.FT.		PLANT TYPE	REQUIRED**	PROPOSED
20% OF LOT AREA:	33,553.40 SQ.FT.		CANOPY TREE	34	34
REQUIRED LANDSCAPE AREA:	33,553.40 SQ.FT.		UNDERSTORY TREE	34	34
PROPOSED LANDSCAPE AREA:	±67,000 SQ.FT.***		SHRUBS	67	67

* AS PER SECTION 155 402 (D) OF THE UNIFIED DEVELOPMENT CODE
** PER 1,000 SQ.FT. OF REQUIRED LANDSCAPE AREA
*** INCLUDES THE OPEN SPACE FOR THIS PROJECT

STREET YARD TREES

1. STREET YARD TREES SHALL BE REQUIRED ALONG ALL RIGHTS OF WAY AT THE RATE OF 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 IN THE TREE STRIP NO LESS THAN FIVE FT. OR MORE THAN 15 FT. FROM THE BACK OF THE SIDEWALK.

**REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.*
**PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.*
**ALL INTERIOR LANDSCAPE ISLANDS SHALL CONTAIN A MINIMUM OF ONE TREE W/ MINIMUM CALIPER OF 2.5".*

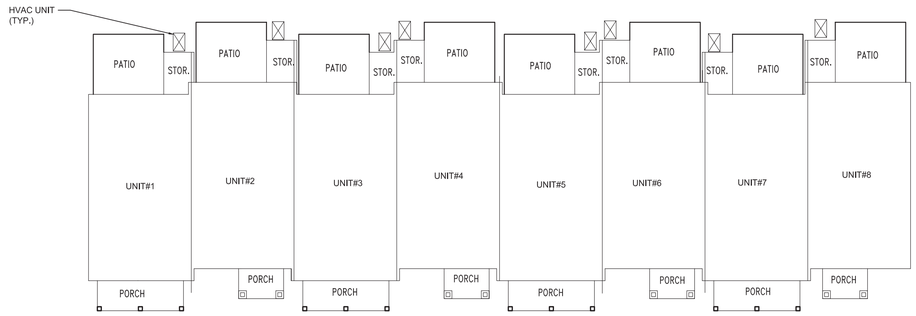
CLASS A BUFFER DETAIL

(PLANTS PER 100 LF) ALTERNATE 1, 10' WIDE BUFFER

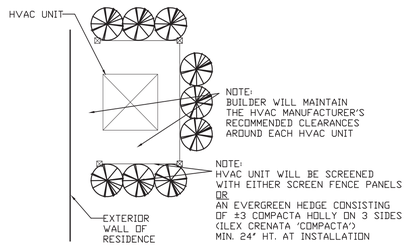
NOTE: PLANT LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY - ACTUALLY LAYOUT MAY VARY

-2 CANOPY TREES
-2 UNDERSTORY TREE
-12 SHRUBS

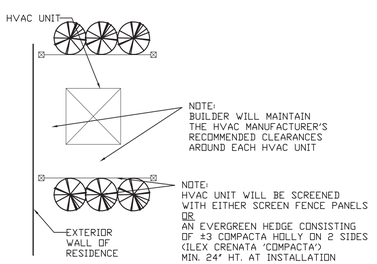
**NOTE* EXISTING TREES SHALL BE PRESERVED TO THE GREATEST EXTENT POSSIBLE (REQUIRED BY UDC.)*



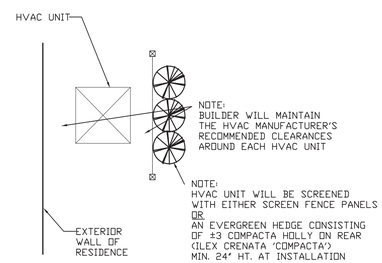
TYPICAL HVAC LOCATION



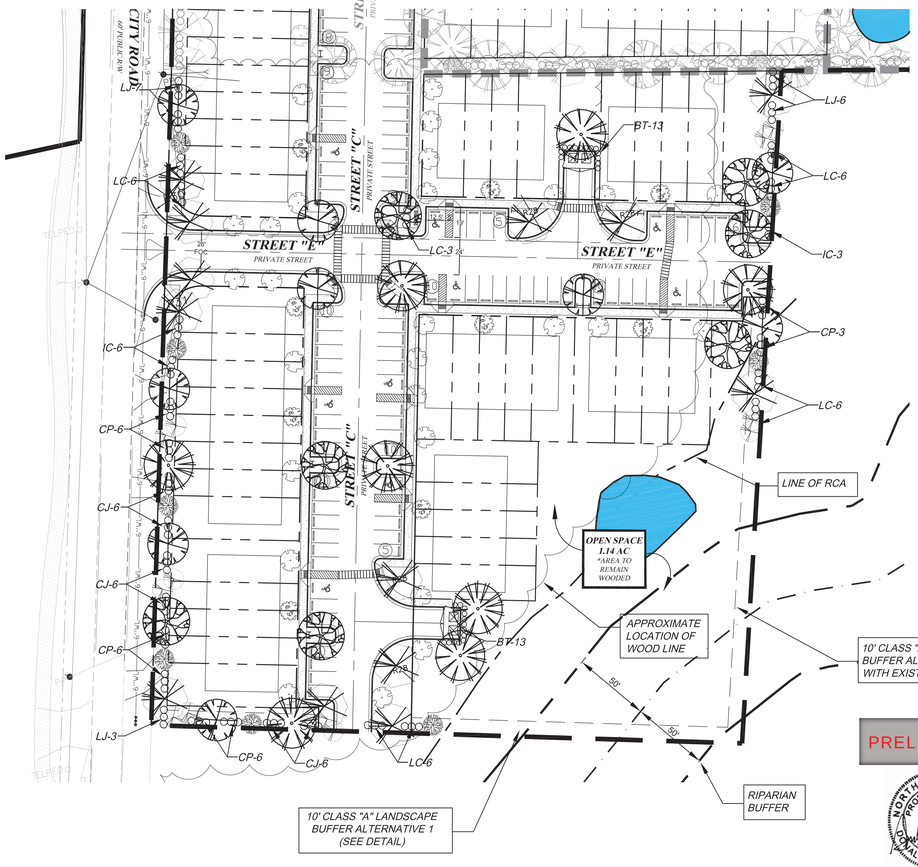
TYPICAL HVAC SCREENING
STREET SIDE



TYPICAL HVAC SCREENING
BUILDING SIDE



TYPICAL HVAC SCREENING
BUILDING REAR



PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043487 DONALD C. ADAMS, JR.

REVISED
5:58 pm, Jul 27, 2018

NAD 83

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

314 East Main Street
Clayton, NC 27520
dennis@adamsandhodge.com
919-553-1173
FIRM # C-4187

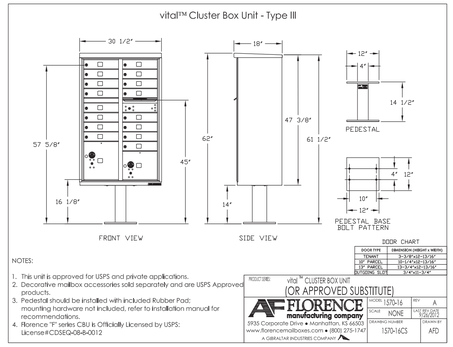
REVISIONS:
1) 07/26/18 INC COMMENTS

ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview
Phase 9-16
TOWN OF CLAYTON, NC 27520

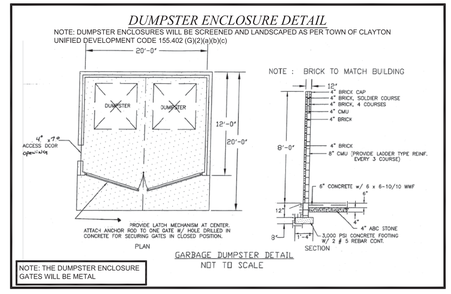
PRELIMINARY
LANDSCAPE PLAN

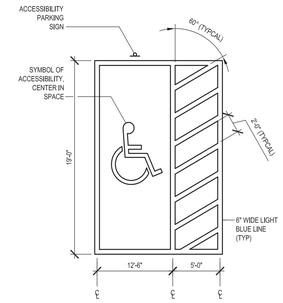
DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/02/2018
JOB NO.	-AH-
SHEET	SP06



CLUSTER MAILBOX UNIT

NOT TO SCALE





ACCESSIBLE PARKING DETAIL

AS PER 155.401(C)(3)(b) OF THE
TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25403 ENGINEER DONALD C. ADAMS, JR.

REVISED
6:14 pm, Jul 27, 2018

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamshodge.com
919-343-1332
FIRM # C-4187

REVISIONS:
1) 07/26/18 TRC COMMENTS

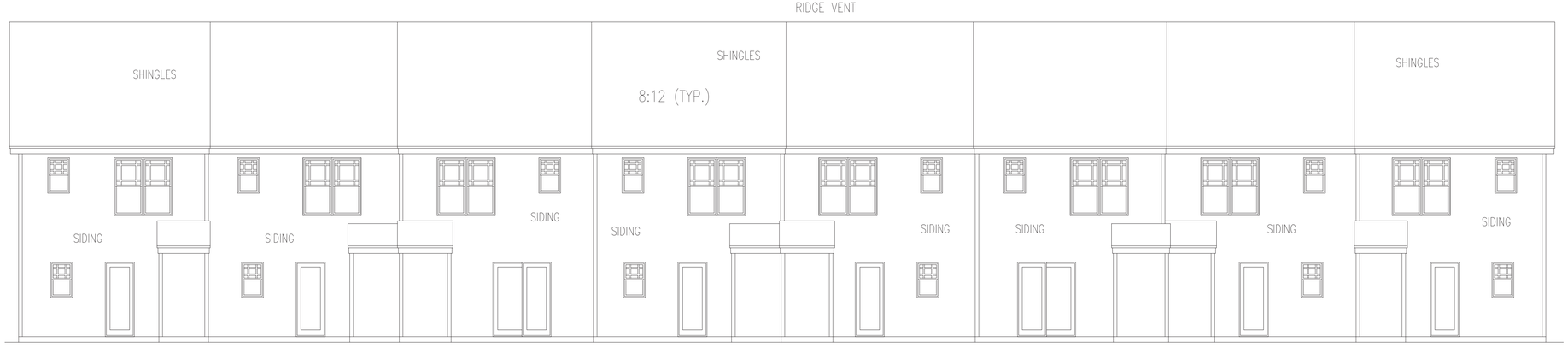
The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

REGULATORY STANDARDS

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP07

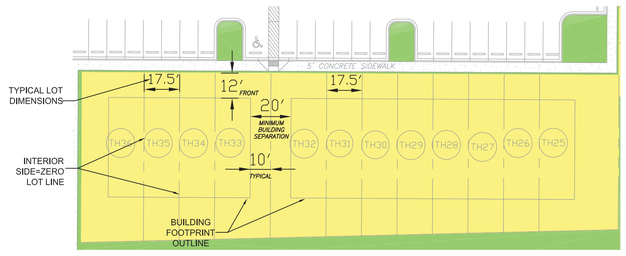
FRONT ELEVATION (8 UNITS)

NOT TO SCALE
**ALL UNITS ARE 2 BEDROOMS/ 2 BATHS*
EXTERIOR MATERIALS: VINYL SIDING, STONE, AND ASPHALT SHINGLES



REAR ELEVATION

TO BE FACING CITY ROAD

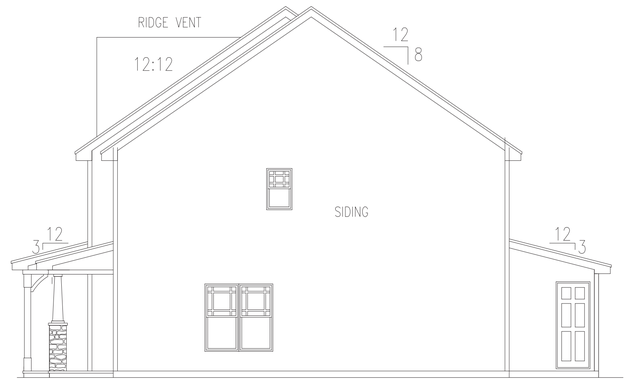


1. SETBACKS AS SHOWN ARE TYPICAL
2. MAXIMUM BUILDING HEIGHT = 35'
3. MAXIMUM IMPERVIOUS ARE PER LOT = 75%
4. MAXIMUM LOT COVERAGE = 50%
5. MINIMUM LOT SIZE = 1250 SF

DIMENSIONAL INFORMATION

NOTE:
MINIMUM LOT WIDTH = 17.5'
MINIMUM LOT DEPTH = 75'

MINIMUM BUILDING SETBACKS
FRONT = 12'
SIDE = 5'
INTERIOR SIDE = ZERO LOT LINE
REAR = 10'
STREET SIDE = 5'
BUILDING SEPARATION = 20'



SIDES

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
dennis@adamshodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1) 10/30/18 PRC COMMENTS

The Village @ Parkview
Phases 9–16
TOWN OF CLAYTON, NC 27520

REGULATORY STANDARDS

DESIGN: DCA/ADS
DRAWN: ADS
CHECKED: DCA
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/02/2018
JOB NO.: AH-
SHEET: SP08

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-122-SD
Project Name: The Villages at Parkview Major Modification (Preliminary Plat)

NC PIN / Tag #:	166909-06-4838 / 05H02020, 166909-06-1495 / 05H02199C, 166909-06-1265 / 05H02198
Town Limits/ETJ:	Town Limits
Applicant:	Adams & Hodge Engineering
Owner:	Sam's Branch LLC, Delila R B Thompson Living Trust
Location:	City Road, south of Legend Park and east of Parkview Subdivision

Public Noticing:

- Neighborhood meeting held on August 16, 2018
- Sign posted prior to August 17, 2018
- Letters mailed October 2, 2018
- Newspaper published October 5, 2018 and October 12, 2018

REQUEST: The applicant is requesting a major modification to the previously approved preliminary plat (2017-171-SD) to add additional land to develop 34 additional townhome units. The subdivision was previously approved to have 68 units. This request is running concurrently with a major modification Special Use Permit request (2018-121-SUP).

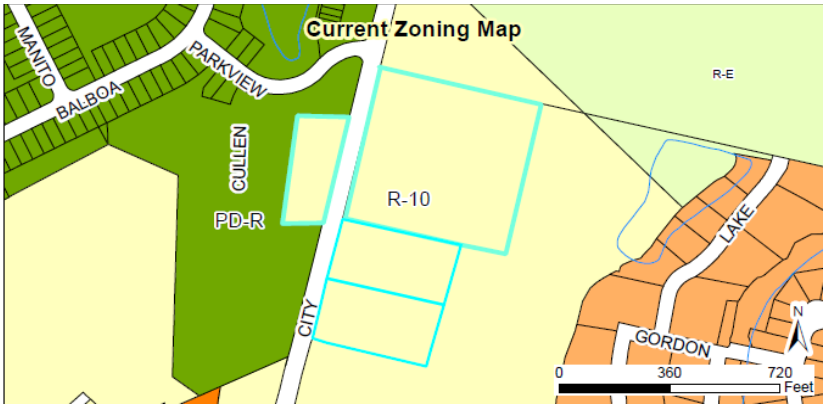
SITE DATA:

Acreage: 3.85 additional acres (7 acres were included in the original development)

Existing Use: Vacant/Single-family residential

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-10	Legend Park
South	Residential-10	Single-Family Residential
East	Residential-10	Vacant
West	Planned Development-Residential (PD-R)	Single-Family Residential (Parkview)



DEVELOPMENT DATA:

Proposed Uses:	Townhomes (35 additional units, 68 previously approved= 103 total units)
Buildings:	8 new buildings, with each unit on its own lot; 16 total buildings including previously approved
Density/Intensity:	9.49 units/acre (10 units/acre maximum permitted by UDC)
Impervious Surface:	maximum 65% per lot
Required Parking:	232 spaces (2 spaces per unit + 1 space per 4 units for guest parking)
Proposed Parking:	248 spaces
Access/Streets:	The portion included in the original development application had one access point off Street “A”, which is shared with Legend Park. The new phases included within this application will be access through the originally approved portion to the north, and will have a right-in/right-out off City Road.

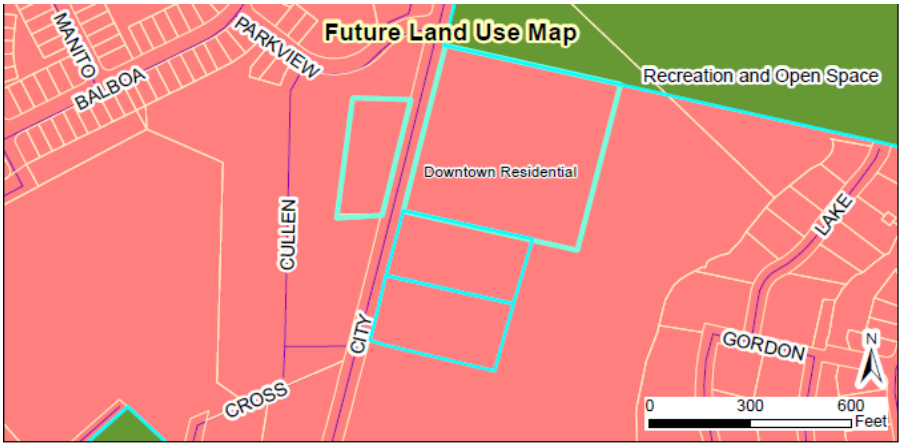
STAFF ANALYSIS:

Overview
The applicant is requesting a major modification to a previously approved preliminary plat (2017-171-SD) to add more land and townhome units to the previously approved development. In 2018, Phases 1-8 of this development were approved for 68 townhome units (known then as the Goodson Tract). The applicant has since acquired additional land to the south and is now requesting a major modification to the original application to add 3.85 acres and develop 35 additional units as Phases 9-16. The subject property is zoned Residential-10 (R-10).

The additional units within this application are located just south of the previously approved portion of the development. The new units will be located within 8 buildings, and will be accessed via a right-in/right-out driveway off City Road or through the remainder of the development to the north. Two stub-outs are also proposed, one to the south and one to the east for future connectivity when the adjacent parcels are someday developed.

Consistency with Adopted Plans

- **Comprehensive Plan 2040**
  The future land use map designates this property as "Downtown Residential". This request is consistent with this designation, which calls for higher-density developments of up to 12 units/acre.



- **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 and is compatible with the surrounding land uses, which consist of single-family residential including a higher density development (Parkview) to the west.

Landscaping and Buffering
Based on the zoning district, no landscape buffer is required along adjacent properties since they are all zoned R-10 as well. However, the applicant is required to provide a Class "A" landscape buffer along City Road, in order to meet the street buffer requirements of the Unified Development Code. This buffer will not be located on the individual lots, and will be maintained by the HOA. Staff does have concerns regarding the use of crepe myrtles within this landscape buffer, due to past experiences with crepe myrtles being trimmed drastically and ultimately defeating the purpose of the landscape buffer while the tree grows back. As such, staff is recommending a condition of approval be placed upon the application requiring an alternative tree type to be utilized within the Class "A" landscape buffer along City Road.

Access/Streets
The new units included within this application will be accessed via a right-in/right-out off City Road, connecting into Street "E" of the development. These units will also connect to the north to the previously approved Phases 1-8, which ultimately connect to a shared full directional access off City Road that is shared with Legend Park. To prepare for future connectivity to adjacent developments, the applicant is also proposing a stub-out to the east and south.

Traffic
Based upon the peak hour trip generation, a full traffic study was not required. The applicant has provided a traffic letter (included as an attachment to this staff report).

Multi-Modal Access
Interior sidewalks are located throughout the development. The new phases included within this application will connect internally to Phases 1-8, which ultimately connect to the future Sam's Branch Greenway that will be located along Street "A". Greenway is located directly across City Road, along the frontage of the Parkview subdivision.

Garbage / Recycling
Additional dumpsters will be provided to serve the new units included within this application. One dumpster will be located off Street "E", and another will be located off Street "C". Two dumpster units will remain as previously approved within Phases 1-8. All enclosures will meet the UDC's minimum screening requirement, and will match the materials of the primary structures.

Architecture/Design
The applicant is proposing 8 additional buildings, which will have a minimum 20' building separation. These buildings will consist of vinyl siding, and will contain 2 bedroom/2 bathroom units. The proposed units will match the previously approved units within this development.

CONSIDERATIONS:

- This plan is subject to final approval by Town Council.
- This approval is subject to approval of 2018-121-SUP.

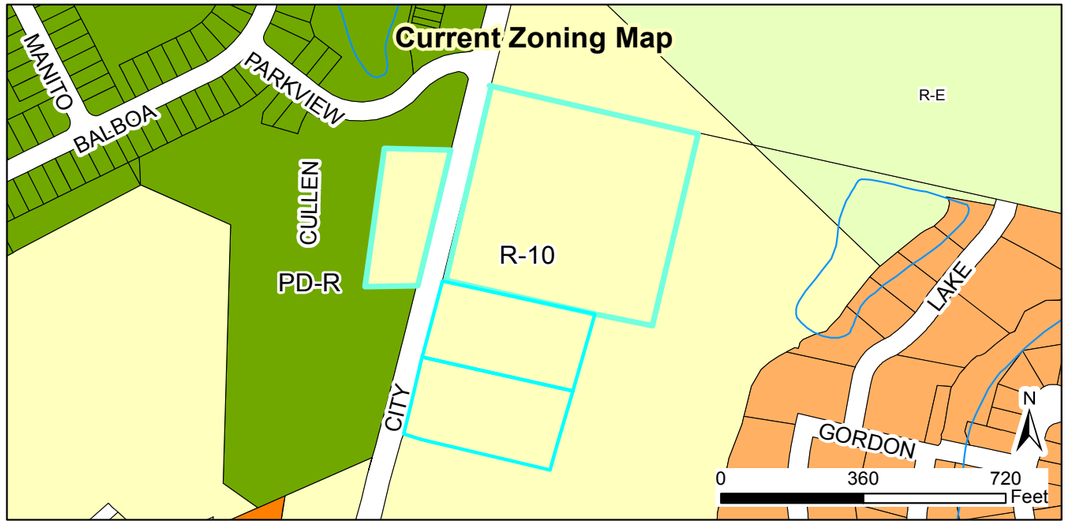
FINDINGS:
The applicant has addressed the Major Subdivision Approval Criteria outlined in UDC Section 155.706. The applicant's Findings of Fact are incorporated into the record as an attachment to the Staff Report.

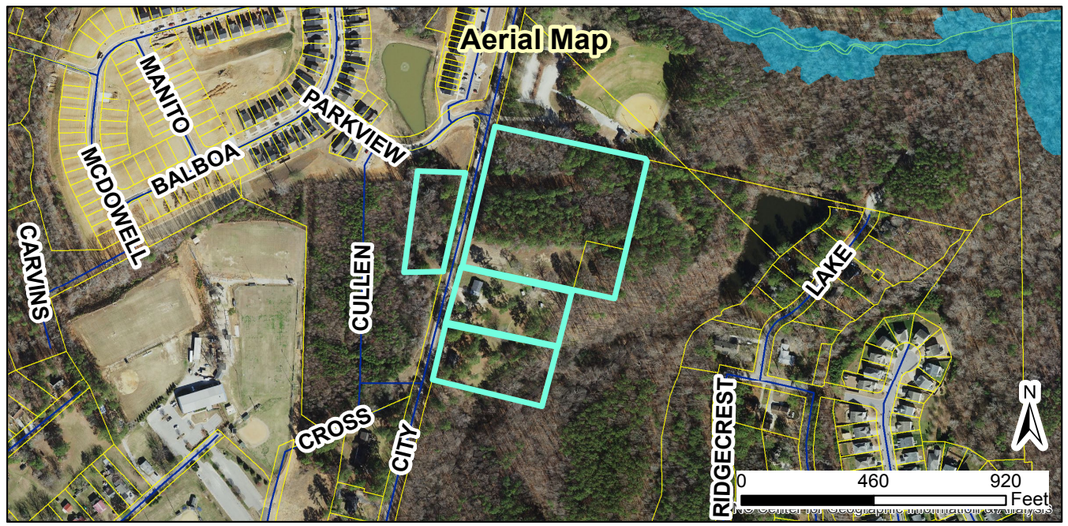
CONDITIONS:

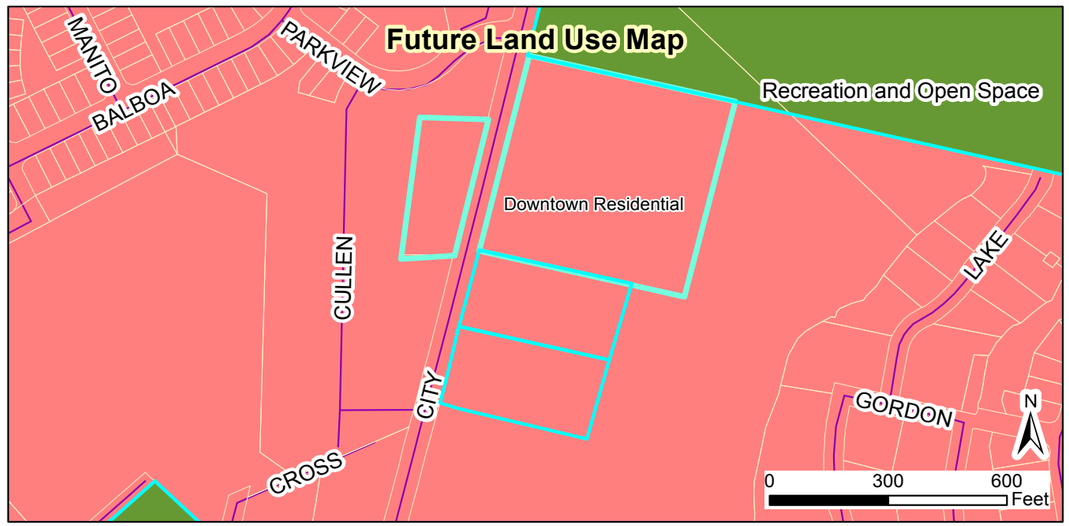
If approved, staff recommends the following conditions be applied to the approval of the preliminary subdivision:

1. The previous conditions of approval for 2017-171-SD (Goodson Tract Townhomes) shall be struck and replaced with the conditions contained herein.
2. Following board approvals, three copies of the final preliminary subdivision plan meeting the Conditions of Approval shall be submitted to the Planning Department for final approval. The conditions of approval shall be recorded on the plans before final approval is granted.
3. All off-site roadway improvements shall be installed prior to the issuance of the first certificate of occupancy.
4. Crepe myrtles shall not be permitted within the required Class "A" landscape buffer along City Road. The applicant shall propose an alternative tree type (of the same height and caliper) to be approved by staff on the final three sets of the preliminary plat.
5. The required stub-outs connecting to the east and south (including sidewalks) shall be constructed and maintained to the property line, prior to issuance of a Certificate of Occupancy for the phase associated with the stub-out connection.
6. All dead underbrush and debris within designated open space shall be removed and these areas maintained by the Homeowner's Association.
7. The Class "A" landscape buffer along City Road shall be installed prior to issuance of the first Certificate of Occupancy for the associated phase.
8. All interior landscape islands shall contain a minimum of one tree with a minimum caliper of 2.5", as required within 155.402(D)(2)(b)(1).
9. 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.

ATTACHMENTS:
1.) Staff Report Maps
2.) Application
3.) Neighborhood Meeting Materials
4.) Site Plan
5.) Traffic Letter
6.) Stormwater Statement







2018-121-SUP The Villages at Parkview Special Use Permit (major modification)
2018-122-SD The Villages at Parkview Preliminary Plat (major modification)
Requests: Modify original SUP and SD to add land and units

Applicant: Adams & Hodge Engineering, LLC
Property Owners: Sam's Branch LLC, Delila R B Thompson Living Trust
Parcel ID: 166909-06-4838, 166909-06-1495, 166909-06-1265
Tag #: 05H02020, 05H02199C, 05H02198

Staff Report Map

08/20/18
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
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site

Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2018\2018-122-SD The Village at Parkview Ph. 9-16\Maps\Staff Report Maps 2018-122-SD and 2018-121-SUP.mxd

ADAMS & HODGE ENGINEERING, PC

May 30, 2018

Chandra Farmer, PE
Johnston County Department of Public Utilities
PO Box 2263
Smithfield, NC 27577

Subject: Stormwater Statement
Village at Parkview Ph 9-16
Clayton Township, Johnston County

Dear Mrs. Farmer,

Please find enclosed the Stormwater Statement and one copy of the preliminary subdivision plat for the above referenced Subdivision.

If you have any questions or comments, please give me a call at 919-369-1938 or email andrew@adamsandhodge.com

NORTH CAROLINA PROFESSIONAL SEAL 21094 ENGINEER ANDREW W. HODGE

Sincerely,

Andrew Hodge, PE

05/30/18

RECEIVED JUL 02 2018 TOWN OF CLAYTON PLANNING DEPARTMENT

ADAMS & HODGE ENGINEERING, PC

STORMWATER MANAGEMENT STATEMENT

For

Village at Parkview Ph 9-16

Location: The property is located on the east side of City Rd (SR1709) in the city limits of Clayton and approximately 1,700lf north of W Stalling St, in the Clayton Township. This site is not within the Environmentally Sensitive Overlay District.

Developer:
Sam's Branch Development, LLC
114 W. Main Street, Suite 102
Clayton, NC 27520
919-763-7278

Consultant:
Adams & Hodge Engineering, PC
314 E. Main Street
Clayton, NC 27520
Phone # 919-243-1332

ADAMS & HODGE ENGINEERING, PC

General Information

This proposed addition to the Village at Parkview includes 3.85acs of new property and 39 additional lots. This property is currently approximately 70% open and 30% wooded. No portion of this property lies in the 100yr flood plain. There is a Neuse Buffer Subject Feature on this phase, although there is no planned disturbance.

Impervious Area

Proposed to limit the impervious area to 75% of each lot

Total Nitrogen Export Estimate

TN Export = 1.90 lb/ac/yr (See attached worksheet)

Existing Drainageways

This site drains south to an unnamed tributary then to Sam's Branch

Downstream and upstream drainage structures

This phase contributes +/-3.8ac of the total +/-31.5ac watershed. There will be a stormwater pond on the south side of the site to capture and release the projects flow at a pre-development rate.

Stormwater Plan - VILLAGE at PARKVIEW PHASE 9-16

The proposed development is a single family residential subdivision consisting of 3.85 total acres. There are 39 lots in these phases. This property is located in the Town of Clayton. The site is mostly non-wooded. This project is not in the 100yr flood plain

Total Nitrogen Export Estimate - METHOD 2

Type of Land Cover	Area (acs)	TN Export Coeff (lb/ac/yr)	TN Export (lbs/yr)	
Permanently protected, undisturbed open space (forest, unmown meadow, etc)	0.590	0.6	0.4	
Permanently protected, managed open space (lawn, grass, landscaping, etc)	1.430	1.2	1.7	*(All remaining area that isn't impervious)*
Impervious surfaces (roads, parking lots, driveways, roofs, paved or graveled storage areas, gravel roads, etc.)	1.830	21.2	38.8	*(Total Design Impervious)*
Totals	3.850		40.9	

TOTAL NITROGEN EXPORT 10.6 lbs/year/acre

EXISTING IMPERVIOUS

Impervious surfaces (roads, parking lots, driveways, roofs, paved or graveled storage areas, gravel roads, etc.)	0.410	21.2	8.7	*(Existing Impervious - HOUSES, BUILDINGS & DRIVES)*

Total proposed nitrogen export	10.6
Reduction due to existing nitrogen export	8.7
TOTAL NITROGEN EXPORT AFTER REDUCTION	1.9

The proposed N-Export is LESS THAN 3.6 lb/ac/yr
Therefore, a Nitrogen Fee and/or BMP Treatment WILL NOT BE required.

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone: 919-872-5115
www.rameykemp.com

July 23, 2018

Haley Hogg
Planning and Development Department
Town of Clayton
111 East Second Street | PO Box 879 | Clayton, NC 27528
hhogg@townofclaytonnc.org

Subject: **Trip Generation Letter**
The Village at ParkView
Clayton, North Carolina

Dear Ms. Hogg:

This letter provides an estimate of the trip generation for the proposed residential development located along City Road in Clayton, North Carolina.

The proposed development is anticipated to consist of 39 townhomes and access will be provided off of Parkview Drive, which aligns with Legend Park driveway to the east. The trip generation letter provides an estimate of trips generated by the site by itself and the site with the adjacent development, Goodson Tract (64 townhomes). It should be noted that Parkview Drive and the Legend Park driveway (Street "A") will each have an exclusive left-turn lane along City Road.

According to the ordinance, the Town of Clayton (Town) requires a traffic study if a proposed development is expected to generate 100 or more vehicular trips during the weekday AM or PM peak hours.

Trip Generation

Average weekday AM and PM peak hour trips for the proposed development and the proposed development plus the adjacent 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 based on the LUC 220 (Multifamily Housing (Low-Rise)) rates.

Table 1: Site Trip Generation Based on LUC 220

Land Use (ITE Code)	Intensity	Daily Trips (veh.)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220) – Village at ParkView	39 units	250	4	15	16	10
Multifamily Housing (Low-Rise) (220) – Village at ParkView with Goodson Tract	103 units	740	11	38	38	23

As shown in Table 1, based on the ITE *Trip Generation Manual*, 10th Edition, it is estimated that the proposed site by itself is expected to generate 250 daily trips; with 19 trips (4 entering and 15 exiting) during the weekday AM peak hour and 26 total trips (16 entering and 10 exiting) expected to occur during the weekday PM peak hour. Also shown in the table, it is estimated that the proposed site plus the adjacent site (103 units) is expected to generate 740 daily trips; with 49 trips (11 entering and 38 exiting) during the weekday AM peak hour and 61 trips (38 entering and 23 exiting) expected to occur during the weekday PM peak hour.

Findings and Summary

The calculations provided in this letter are estimations of the trip generation potential for the site and adjacent site based on ITE *Trip Generation Manual*, 10th Edition data. Based on the trip generation results, it is expected that the proposed Village at ParkView residential development will have minimal impact on the surrounding roadway network and is expected to be below the traffic study threshold, as identified in the Town's ordinance.

If you should have any questions, please feel free to contact me at (919) 872-5115.

Sincerely,
RAMEY KEMP & ASSOCIATES, INC.

Joshua Reinke, P.E.
Transportation Manager
NC Corporate License # C-0910

cc: Donnie Adams (Adams & Hodge Engineering, PC)

Attachments: Proposed Site Plan

VICINITY MAP
(NO SCALE)

DEVELOPER/APPLICANT:

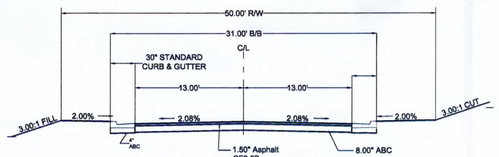
SAM'S BRANCH, LLC
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

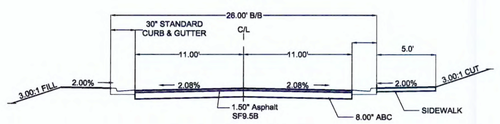
SITE PLAN INFORMATION:

OWNER:	SAM'S BRANCH, LLC, 114 W. MAIN STREET, SUITE 102, CLAYTON, NC 27520
PARCEL IDENTIFICATION NUMBER:	05H02020
NCPIN NUMBER:	166909-06-4838
TAX NUMBER:	4710390
PROPERTY SIZE (SF):	304,814 SF/7.00 ACS
TOTAL OPEN SPACE (SF):	129,378.66 SF/2.99 ACS
PROPERTY LOCATION:	INSIDE TOWN LIMITS
EXISTING/PROPOSED ZONING:	R-10/R-10
EXISTING USE:	VACANT
PROPOSED USE:	RESIDENTIAL SINGLE-FAMILY TOWNHOME UNITS
PROPOSED UNITS/LOTS:	64
PROPOSED DENSITY:	9.14 UNITS PER ACRE
EXISTING INTENSITY:	N/A
MINIMUM LOT SIZE	1250 SF
FRONT SETBACK	12'
SIDE SETBACK	5'
INTERIOR SIDE SETBACK	ZERO LOT LINE
REAR SETBACK	10'
STREET SIDE SETBACK	5'
BUILDING SEPARATION	20'
PROPOSED INTENSITY (GROSS FLOOR AREA (SF):	53,760 SF (6,720 SF/FLOOR)
BUILDING COVERAGE (AS % OF TOTAL SITE):	30%
MAXIMUM IMPERVIOUS AREA:	60%
PROPOSED IMPERVIOUS AREA PER LOT:	75%
BUILDING HEIGHT (NUMBER OF STORIES & FEET):	2 STORY BLDGS / ~35'-0"
REQUIRED/PROPOSED PARKING:	144 SPACES/160 SPACES (2 SPACES PER UNIT, 1 GUEST SPACE PER 4 UNITS)
REQUIRED/PROPOSED ACCESSIBLE PARKING:	6 / 8 ACCESSIBLE SPACES
ELECTRIC PROVIDER:	TOWN OF CLAYTON
WATER PROVIDER:	TOWN OF CLAYTON
SEWER PROVIDER:	TOWN OF CLAYTON
ANTICIPATED DAILY WASTEWATER FLOW:	64 UNITS @ 250 GPD/UNIT = 16,000 GPD (SUBJECT TO TOC APPROVAL)

*THE DEVELOPER WILL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY DAMAGED TREES WITHIN AND LAND USE BUFFER.
*NO RESOURCE CONSERVATION AREA.
*NO FLOOD PLAIN EXISTS AS PER FEMA FIRM PANEL 3720165900J & 3720166900J DATE 12/02/2015.
*REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.
*PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.



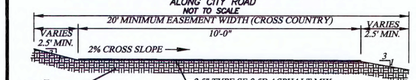
TYPICAL LOCAL RESIDENTIAL PUBLIC STREET
(STREET "A")
NO SCALE



TYPICAL PRIVATE STREET
(STREET "B")
45' RIGHT-OF-WAY W/ SIDEWALK
NO SCALE

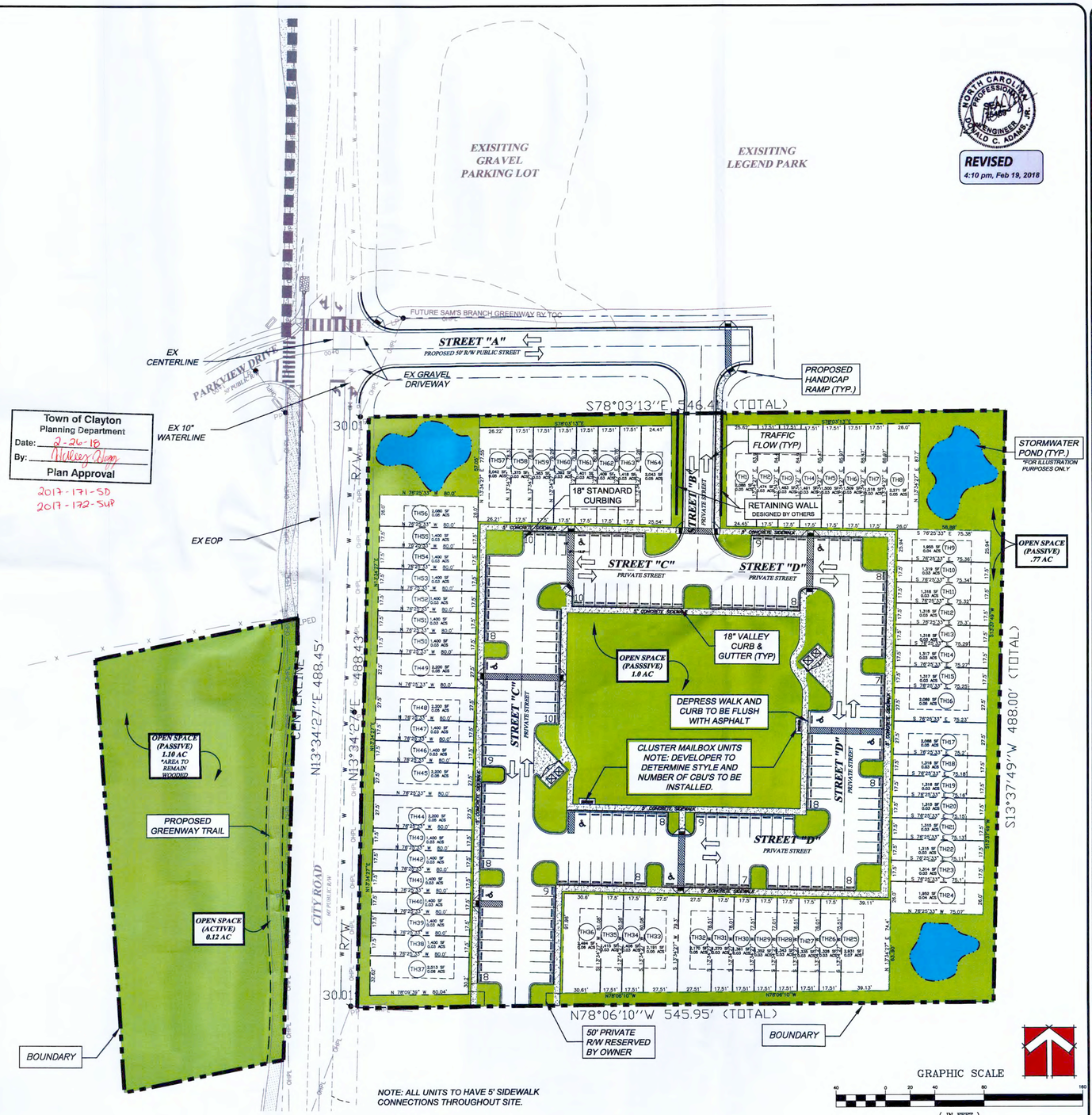
TYPICAL GREENWAY PAVEMENT SECTION

ALONG CITY ROAD
NOT TO SCALE



1. SUBGRADE MUST PASS LOADED TANDEM TRUCK PROOF ROLL.
2. SOFT/YIELDING AREAS WILL BE UNDERCUT AND REPLACED WITH COMPACTED ABC AS NEEDED.

NOTE:
1. TOWN OF CLAYTON GREENWAY TRAIL ALONG SAMS BRANCH AND CITY ROAD TO BE CONSTRUCTED TO TOWN OF CLAYTON TYPICAL HKUWAYGREENWAY PAVEMENT SECTION STANDARDS REFER TO DETAIL 401.03 FOR SPECIFICS.
2. HOA GREENWAY TRAIL SPECIFICATIONS MAY VARY FROM TOWN OF CLAYTON STANDARDS.



Town of Clayton
Planning Department
Date: 2-26-18
By: Michelle Alsup
Plan Approval
2017-171-SD
2017-172-SUP

NOTE: ALL UNITS TO HAVE 5' SIDEWALK CONNECTIONS THROUGHOUT SITE.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NORTH CAROLINA PROFESSIONAL SEAL 15489 ENGINEER DONALD C. ADAMS, JR.

REVISED
4:10 pm, Feb 19, 2018

REVISIONS:
1) 12/04/17 REVISED PER TOC
2) 01/17/18 REVISED PER TOC
3) 02/19/18 REVISED PER TOC

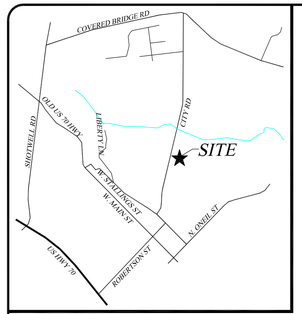
335 ATHLETIC CLUB BLVD
CLAYTON, NC 27527
(919) 553-3132
donnie@adamsandhodge.com
NC FIRM # C-1187

ADAMS & HODGE ENGINEERING, PC

GOODSON TRACT
TOWN OF CLAYTON, NC 27520

SITE PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	10/31/2017
JOB NO.	-H-
SHEET	SP03



VICINITY MAP
(NO SCALE)

DEVELOPER/APPLICANT:

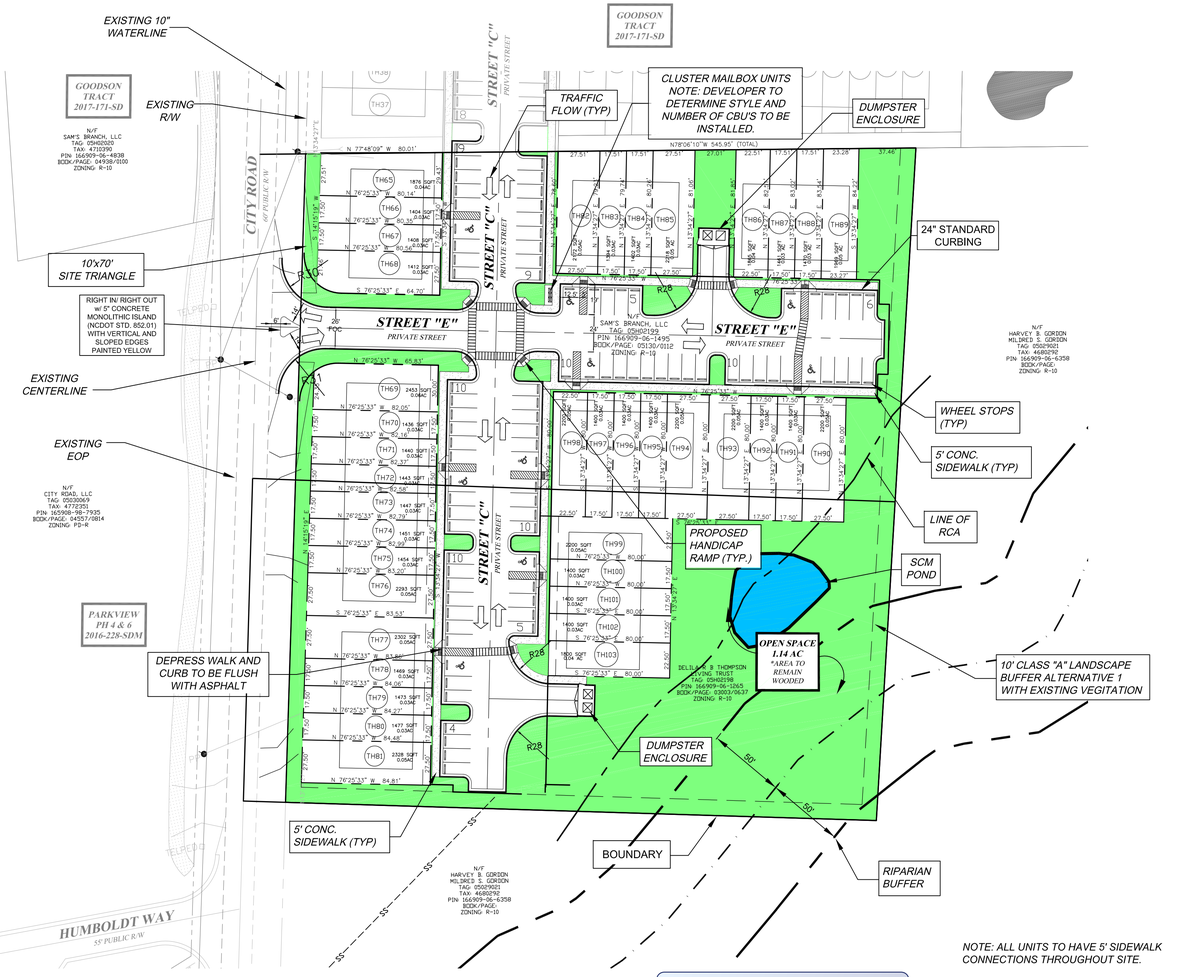
SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

SITE DATA CHART		
PARCEL OWNER	SAM'S BRANCH, LLC	DELILA R B THOMPSON LIVING TRUST
PARCEL OWNER ADDRESS	114 W. MAIN ST, SUITE 102 CLAYTON, NC 27520	8013 OLD STAGE RD RALEIGH, NC 27603
PARCEL IDENTIFICATION	166909-06-1495	166909-06-1265
PROPERTY SIZE (SF) TOTAL	TOTAL = 167,767 SF/3.85 ACS	
PROPERTY LOCATION	TOWN OF CLAYTON/CLAYTON TOWNSHIP	
EXISTING/PROPOSED ZONING	R-10/R-10	
EXISTING USE	VACANT	
PROPOSED USE	SINGLE FAMILY TOWNHOME UNITS	
PROPOSED INTENSITY (GROSS FLOOR AREA IN SF)	40,053 SF/ 0.92 ACS (1027 SF/UNIT)	
PROPOSED NUMBER OF LOTS	39 LOTS	
PROPOSED DENSITY	39 UNITS/3.85 ACS = 10.13 UNITS/AC	
MINIMUM LOT SIZE	1250 SF/ 0.03 AC	
MAX. LOT COVERAGE (AS % OF TOTAL SITE)	30%	
MAX. IMPERVIOUS AREA FOR TOTAL SITE	60%	
MAX. IMPERVIOUS AREA PER LOT	75%	
MAX LOT COVERAGE PER LOT	50%	
AREA OF RCA	21,920.86 SF/.50	
BUILDING HEIGHT (NUMBER OF STORIES & FEET)	2 STORIES/ 35'	
ELECTRIC PROVIDER	TOWN OF CLAYTON	
WATER PROVIDER	TOWN OF CLAYTON	
SEWER PROVIDER	TOWN OF CLAYTON	
BUILDING SEPARATION	20'	
REQUIRED FRONT BUILDING SETBACKS	12'	
REQUIRED SIDE BUILDING SETBACKS	5'	
REQUIRED INTERIOR SIDE SETBACKS	ZERO LOT LINE	
REQUIRED SIDE STREET BUILDING SETBACKS	5'	
REQUIRED REAR SETBACKS	10'	

*THE DEVELOPER WILL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY DAMAGED TREES WITHIN AND LAND USE BUFFER.
*NO FLOOD PLAIN EXISTS AS PER FEMA FIRM PANEL 3720165900J & 3720166900J DATE 12/02/2015.
*REQUIRED LANDSCAPE BUFFERS TO BE MAINTAINED BY HOA.
*PROPOSED OPEN SPACE TO BE DEDICATED TO HOA.

REQUIRED PARKING CALCULATIONS:
39 2BDRM UNITS x 2 SPACES/UNIT = 78 SPACES
4 UNITS/1 GUEST SPACE = 10 SPACES
78 SPACES + 10 SPACES = 88 TOTAL SPACES REQUIRED
1 ADA SPACE/25 SPACES FOR ADA
88 SPACES/25 SPACES = 3.52 ADA SPACES (4 ADA SPACES REQUIRED)
88 SPACES PROPOSED (INCLUDING 9 ADA SPACES)



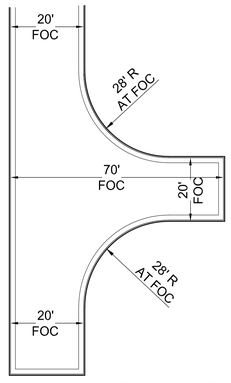
NOTE: ALL UNITS TO HAVE 5' SIDEWALK CONNECTIONS THROUGHOUT SITE.

PRELIMINARY RESULTS

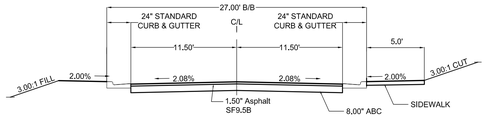
NOT RELEASED FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24445 DONALD C. ADAMS, JR.

REVISED
7:03 pm, May 30, 2018



DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
ACCEPTABLE ALTERNATIVE TP 120' HAMMERHEAD



TYPICAL PRIVATE STREET
(STREET "C" & "E")
45' RIGHT-OF-WAY W/ SIDEWALK
NO SCALE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NAD 83

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

REVISIONS:
1)

ADAMS & HODGE ENGINEERING, PC

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

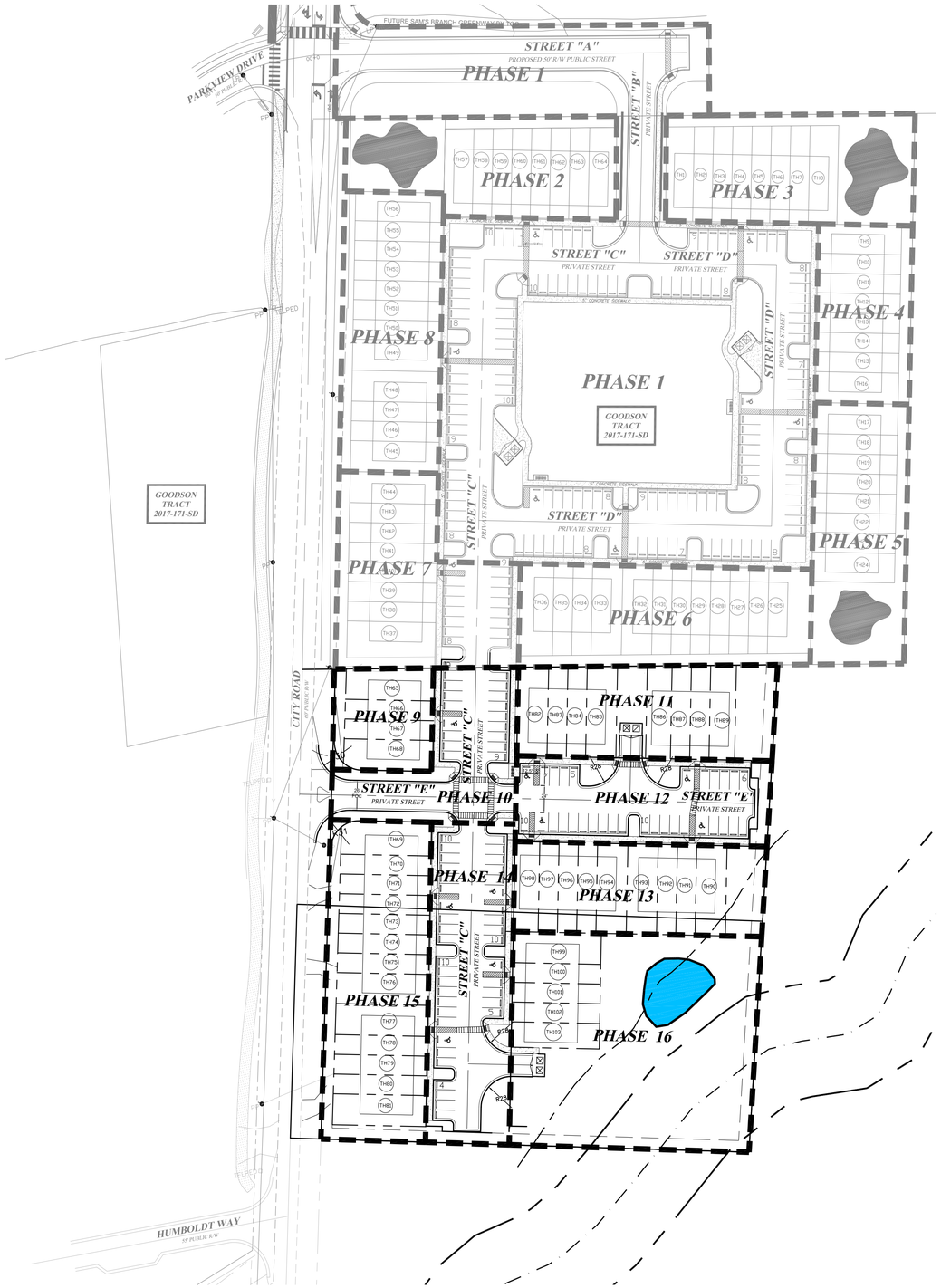
PRELIMINARY SITE PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	06/01/2018
JOB NO.	AH-
SHEET	SP02

DEVELOPER/APPLICANT:

SAM'S BRANCH DEVELOPMENT
114 W. MAIN ST
CLAYTON, NC 27520

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278



PRELIMINARY RESULTS

NOT RELEASED FOR CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 25409 ENGINEER DONALD C. ADAMS, JR.

REVISED
7:02 pm, May 30, 2018

NAD 83

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-243-1332
FIRM # C-4187

revisions:
1)

The Village @ Parkview
Phases 9-16
TOWN OF CLAYTON, NC 27520

PHASE PLAN

DESIGN	DCA/ADS
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	06/01/2018
JOB NO.	AH-
SHEET	SP03

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

SUBDIVISION: MAJOR SUBDIVISION (Preliminary Subdivision Plat)

Pursuant to Article 7, §155.706 of the Unified Development Code (UDC), an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Town of Clayton to approve a subdivision of land. Please complete all fields in this application and submit to the Planning Department with all required materials.

Application Fees: **Major Preliminary Subdivision Plat Fee: $400.00 + $5.00 per lot**
Advertisement Fee: $100.00
Modifications to Approved Plans Fee:
Major Modification: $400.00 + $5.00 per lot modified
Minor Modification: $200.00 + $5.00 per lot modified

See §155.706(F) of the UDC for a definition of Major vs. Minor Subdivisions.
See §155.706(I) for Preliminary Plat approval (major subdivision) process/approval information.
See§155.203(F), (G), and (H) for information on Conventional vs. Open Space Subdivisions.
See §155.706(N) for information on minor and major modifications.
See UDC Article 6 for Subdivision Standards.

SITE INFORMATION

☑ New Major Subdivision
Conventional: _____ *Open Space:* _____
☐ New Subdivision Master Plan

☐ Modification to Approved Preliminary Plat
Major: _____ *Minor:* _____

Name of Project: Kyli Knolls **Acreage of Property:** 18.561
Tag #: 05G03009A **NC PIN:** 165803-23-2656
Location: Amelia Church Rd.
Number of Lots (existing): 1 **(Proposed)** 22 **Min Lot Size:** 0.498
Zoning District: R-E **Electric Provider:** _____
Wastewater: ☑ Septic ☐ Sewer (check one) **Water:** ☐ Well ☑ Public/Private Water (check one)
Recreation/Open Space Requirement: ☐ Fee in lieu ■ Land Dedication – Acreage: _____

FOR OFFICE USE ONLY

RECEIVED
APR 02 2018
TOWN OF CLAYTON
PLANNING DEPARTMENT

Date Received: _____ **Amount Paid:** $610.00 **File Number:** 2018.62-SD

PROPERTY OWNER INFORMATION

Name: Full Spectrum Custom Homes

Mailing Address: 865 Sands Rd., Benson, NC 27504

Phone Number: 919-422-3325 **Fax:**

Email Address:

APPLICANT INFORMATION

Applicant: True Line Surveying

Mailing Address: 205 W. Main St., Clayton, NC 27520

Phone Number: 919-359-0427 **Fax:** 919-359-0428

Contact Person: Curk Lane

Email Address: curk@truelinesurveying.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany the application:

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application meeting was held with Town Staff. Date: March 2018	☑				
2. Completed Application	☑				
3. Review Fee and Advertisement Fee	☑				
4. Findings of Fact, signed *Not required for minor modifications. Form is included in this packet.*	☑	☐			
5. Owner's Consent Form *Required if applicant is not the property owner. Included in this packet*	☑	☐			
6. Preliminary Plat Subdivision Requirements Checklist form, completed and signed *Checklist is included in this packet*	☑				
7. Plat sheet(s) meeting requirements of the Requirements Checklist	☑	☐			
8. If subdivision waivers are requested, applicant must attach a separate typed document requesting the waivers. The document must specifically list the waivers requested, including Code references, and must address the 4 considerations outlined in §155.706(I)(7).	☐	☑			
9. Adjacent Property Owners List	☑	☐			
10. Road Name Application *Included in this packet*	☑	☐			
11. Wastewater allocation request OR verification of wastewater allocation *Letter format, to the attention of the Town Manager.*	☐	☑			

12. A signed and sealed Traffic Impact Analysis *(required for projects which generate at least 100 vehicle trips at peak hour. See §155.708 of the UDC)*	☐	☑			
13. Neighborhood Meeting Notice Letter* (1 copy) *See sample letter and meeting requirement, included in this packet.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*	☑	☐			
14. Neighborhood Meeting summary form* *Included in this packet – NOT submitted with application.* **Not required for minor modifications or subdivisions* **Not required for subdivisions that are part of an approved planned development*		☑	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.		
15. Stamped, addressed, empty envelopes with no return address, using the adjacent property owner list. **Not required for minor modifications* *This for a public notice of the public hearing mailed by the Town – thus, neighbors will receive both a neighborhood meeting letter from the applicant, and a notice of the hearing from the Town.*	☑				

EXPLANATION OF PROJECT

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

We would like to develop a single family residential subdivision on Amelia Church Rd in accordance with the current UDO.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Planning Board of the Town of Clayton to approve the subject 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.

Curk Lane		4/2/2018
Print Name	***Signature of Applicant***	***Date***

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) That the subdivision meets all required specifications of the town Subdivision Regulations and conforms to the town Unified Development Code.

The proposed subdivision plan meets all required specifications of the town Subdivsion Regulations and conforms to the town UDO.

(2) That 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 subdivision will not be detrimental to the use or orderly development of other properties in the surrounding area. The subdivision will match existing character of nearby residential subdivisions.

(3) 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.

The subdivision design connects to Ameila Church in the only location where the subject property has road frontage also providing a road stub to the north for future connections.

(4) That the subdivision will not adversely affect the general plans for the orderly growth and development of the town and is consistent with the planning policies adopted by the Town Council.

The subdivision matches current zoning (RE) for a residential subdivision as adopted by the Town Council.

Project Name: Kyli Knolls

Curk Lane
Print Name

Signature of Applicant

4/2/2018
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

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: Kyli Knolls **Address or PIN #:** 165803-23-2656

AGENT/APPLICANT INFORMATION:

True Line Surveying
(Name - type, print clearly)

205 W. 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 Subdivision
Final

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:

Sean Strickland
(Name - type, print clearly)

(Owner's Signature)

865 Sanders Rd.
(Address)
Benson NC 27504
(City, State, Zip)

STATE OF NC
COUNTY OF Johnston

Sworn and subscribed before me Kristin D. London, a Notary Public for the above State and County, this the 31st day of May, 2017.

SEAL

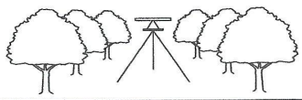
KRISTIN D LONDON NOTARY PUBLIC JOHNSTON COUNTY, N.C. My Comm. Exp. 07-16-2018

Kristin D. London
Notary Public

My Commission Expires: 7-16-18

October 2013

TRUE LINE SURVEYING, P.C.



September 5, 2018

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 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, September 17, 2018
Location: True Line Surveying, 205 W. Main St., Clayton, NC 27520
Time: 6:00pm
Type of Application: Major Subdivision
Description of project/proposal: Purpose of this application is to develop a single family residential subdivision.
Upcoming public meetings: Planning Board Meeting, September 24, 2018

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 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 development proposal.

If you have any questions prior to or after this meeting, you may contact us at (919)359-0427. You may also contact the Planning Department at 919-553-5002

Sincerely,

Curk T. Lane
True Line Surveying

Cc: Clayton Planning Dept.

205 W. Main Street, Clayton, NC 27520
(919) 359-0427 • Fax: (919) 359-0428

ADJACENT PROPERTY OWNERS LIST

Project Name: Kyli Knolls

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
165803-13-5547	BUTLER, JOSEPH F	P O BOX 488 GARNER, NC 27529
165803-13-1039	HENDERSON, KIMBERLY DAUGHTRY	105 LUCAS LN, HUBERT, NC 28539-4227
165803-24-3257	PARRISH, FRANCES B	377 SHORT JOHNSON ROAD CLAYTON, NC 27520-0000
165801-35-0357	PARRISH, FRANCES B	377 SHORT JOHNSON ROAD CLAYTON, NC 27520-0000
165803-23-9834	SPENCE, AVA C	4579 C BARBER MILL ROAD CLAYTON, NC 27520-0000
165803-33-0847	SPENCE, AVA C	4579 C BARBER MILL ROAD CLAYTON, NC 27520-0000
165803-33-0656	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-33-0525	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-23-9378	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-23-6366	BALL, RICHARD SCOTT	2425 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-23-1192	HOLMES, JIMMIE L	2431 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-23-5049	BARBOUR, LISA M	2555 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-13-6099	TART, WADE J	2430 AMELIA CHURCH RD CLAYTON, NC 27520-0000

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Kyli Knolls

Application: Major Subdivision

Location/Date: True Line Surveying, 205 W. Main St., Clayton NC 27520

	NAME	ADDRESS
1	Joseph F. Butler	2321 Amelia Church Rd., Clayton, NC 27520
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Major Date of Mailing: 9/05/18

Date of Meeting: 9/17/18 Time of Meeting: 6pm

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 September 17, 2018, 6pm at True Line Surveying.
A list of attendees is included as part of these minutes. Curk Lane conducted the meeting.
Mr. Butler asked how much is lane widening going to effect my lot? Curk responded with none, all of the lane widening will happen inside existing R/W.
Meeting ended at 6:30pm.

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

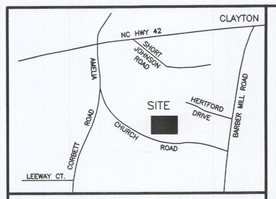
ADJACENT PROPERTY OWNERS LIST

Project Name: Kyli Knolls

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
165803-13-5547	BUTLER, JOSEPH F	P O BOX 488 GARNER, NC 27529
165803-13-1039	HENDERSON, KIMBERLY DAUGHTRY	105 LUCAS LN, HUBERT, NC 28539-4227
165803-24-3257	PARRISH, FRANCES B	377 SHORT JOHNSON ROAD CLAYTON, NC 27520-0000
165801-35-0357	PARRISH, FRANCES B	377 SHORT JOHNSON ROAD CLAYTON, NC 27520-0000
165803-23-9834	SPENCE, AVA C	4579 C BARBER MILL ROAD CLAYTON, NC 27520-0000
165803-33-0847	SPENCE, AVA C	4579 C BARBER MILL ROAD CLAYTON, NC 27520-0000
165803-33-0656	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-33-0525	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-23-9378	WHITLEY, SHARON S	317 HEREFORD DR CLAYTON, NC 27520-0000
165803-23-6366	BALL, RICHARD SCOTT	2425 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-23-1192	HOLMES, JIMMIE L	2431 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-23-5049	BARBOUR, LISA M	2555 AMELIA CHURCH RD CLAYTON, NC 27520-0000
165803-13-6099	TART, WADE J	2430 AMELIA CHURCH RD CLAYTON, NC 27520-0000



VICINITY MAP (NOT TO SCALE)

PRELIMINARY SUBDIVISION PLAN

FOR

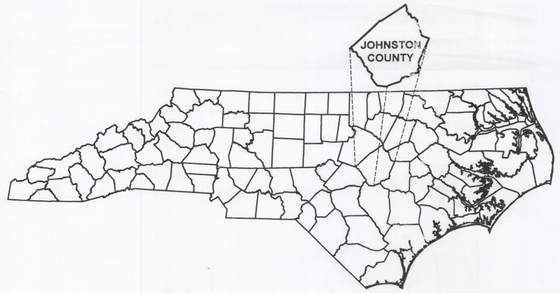
KYLI KNOLLS SUBDIVISION

CLAYTON, NORTH CAROLINA

TOWN OF CLAYTON PROJECT NO. 2017-98-SD

SHEET INDEX

SHEET TITLE	SHEET No.
EXISTING CONDITIONS	2
SUBDIVISION PLAN	3
CBU SITE PLAN & DETAILS	4
LANDSCAPING PLAN	5
UTILITY PLAN	6
BOUNDARY	7
PLAN AND PROFILE - STREETS "A", "B" & "C" (ENGINEERING)	8
GRADING AND STORMWATER (ENGINEERING)	9
WATER DETAIL SHEET (ENGINEERING)	10
ROADWAY WIDENING (ENGINEERING)	11



RECEIVED
AUG 20 2018
TOWN OF CLAYTON
PLANNING DEPARTMENT

DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

LAND SURVEYOR

TRUE LINE SURVEYING, P.C.
205 WEST MAIN STREET
CLAYTON, NORTH CAROLINA, 27520
TELEPHONE: 919-359-0427
FAX: 919-359-0428

ENGINEER

DALTON ENGINNERING & ASSOCIATES, P.A.
446 EAST MAIN STREET
CLAYTON, NORTH CAROLINA, 27520
TELEPHONE: 919-550-4740
FAX: 919-550-4741

SHEET 1: COVER SHEET

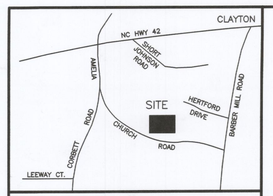
NORTH CAROLINA PROFESSIONAL SEAL L-3660 LAND SURVEYOR CURRY T. LANE

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	COVER SHEET
SURVEY DATE:	
JOB NO.	430.090

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



VICINITY MAP (NOT TO SCALE)

DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

LINE	BEARING	DISTANCE
L1	N88°24'13"W	74.22'
L2	N88°28'00"W	40.23'
L3	N88°28'00"W	57.50'
L4	N00°25'50"E	35.89'
L5	N00°25'50"E	71.35'
L6	S56°48'32"E	68.36'

N/F
FRANCES B. PARRISH
DB 2998 PG 915
PN 05G03009B
ZONING: R-E
CURRENT USE: VACANT

N/F
FRANCES B. PARRISH
DB 2998 PG 912
PN 05G03015
ZONING: R-E
CURRENT USE: VACANT

N/F
KIMBERLY HENDERSON
PIN 165803-13-1039
PN 05G03069
ZONING: R-E
CURRENT USE: VACANT

N/F
JOSEPH F. BUTLER
DB 1795 PG 890
PN 05G03071L
ZONING: R-E
CURRENT USE: RESIDENTIAL

SUBJECT PROPERTY
N/F
FULL SPECTRUM CUSTOM HOMES, INC.
PORTION OF DB 4911 PG 845
PN 05G03009A
797762 SF
18.314 AC
ZONING: R-E
CURRENT USE: VACANT

S&W RANCHES SUBDIVISION
PB 35 PG 31

N/F
RICHARD SCOTT BALL
DB 4413 PG 768
PN 05G03009J
ZONING: R-E
CURRENT USE: RESIDENTIAL

N/F
FULL SPECTRUM CUSTOM HOMES
PORTION OF DB 4911 PG 845
PN 05G03009A
ZONING: R-E
CURRENT USE: VACANT

N/F
WADE TART
DB 1658 PG 591
PN 05G03059
ZONING: R-E
CURRENT USE: RESIDENTIAL

N/F
JIMMIE L. HOLMES
DB 791 PG 16
PN 05G03061
ZONING: R-E
CURRENT USE: RESIDENTIAL

N/F
LISA M. BARBOUR
DB 3114 PG 436
PN 05G03058D
ZONING: R-E
CURRENT USE: RESIDENTIAL

EXISTING 12" PVC WATER MAIN
EXISTING HYDRANT
30' ACCESS EASEMENT PB 60 PG 363 DB 4413 PG 768
N88°24'13"W 659.24'
S84°29'50"W 496.41'
N00°30'54"E 428.85'
S00°34'56"W 499.53'
S56°48'32"E 204.54'
N00°25'50"E 163.62'
S57°41'59"E 185.81'
S89°10'38"E 720.24'

0 100 200 300
SCALE: 1" = 100'

SITE INFORMATION

OWNER: FULL SPECTRUM CUSTOM HOMES, INC.
865 SANDERS ROAD
BENSON, N.C. 27504
PARCEL NO. 05G03009A
NC PIN NO. 165803-23-2656
PARENT TRACT DEED: DB 4911 PG 845

THERE ARE NO INSTANCES OF 100 YEAR FEMA FLOOD ON SITE. FEMA FLOOD PANEL 3720165800 J

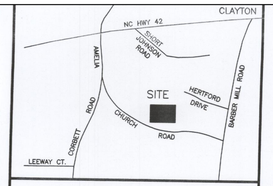
TAX UNIQUE ID: 4759574
TOWNSHIP: CLAYTON
ETJ: CLAYTON
TOWN ZONING: R-E
CURRENT USE: VACANT
TOTAL ACREAGE: 18.561

NORTH CAROLINA PROFESSIONAL L-3990 LAND SURVEYOR CURK T. LINE

SHEET 2: EXISTING CONDITIONS

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	EXISTING.DWG
SURVEY DATE:	
JOB NO.	430.090

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



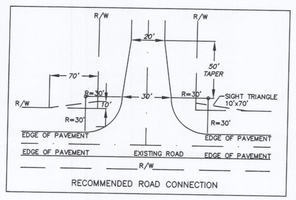
VICINITY MAP (NOT TO SCALE)

LINE	BEARING	DISTANCE
L1	S56°48'32"E	48.18'
L2	S89°10'38"E	50.00'
L3	S89°10'38"E	97.76'
L4	S89°10'38"E	124.91'
L5	S89°10'38"E	112.00'
L6	S89°10'38"E	86.44'
L7	N89°10'38"W	60.03'
L8	N89°10'38"W	100.00'
L9	N89°10'38"W	100.00'
L10	N89°10'38"W	100.00'
L11	N89°10'38"W	100.00'
L12	N89°10'38"W	61.08'
L13	S36°03'34"W	20.49'
L14	S53°56'26"E	126.52'
L15	N88°24'13"W	74.22'
L16	N88°28'00"W	96.86'
L17	N88°28'00"W	47.94'
L18	N00°25'50"E	34.99'
L19	N00°25'50"E	72.82'
L20	N54°59'09"W	89.88'
L21	N00°30'54"E	30.37'
L22	N88°24'13"W	80.72'
L23	N49°35'12"W	36.98'
L24	N00°49'22"E	44.11'
L25	N23°11'22"E	35.00'

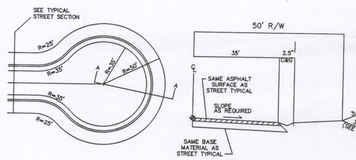
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	25.00'	36.02'	34.46'	N79°37'31"E
C2	230.00'	40.20'	40.14'	N31°03'10"E
C3	230.00'	23.55'	23.54'	N23°06'45"E
C4	255.00'	67.52'	67.33'	N27°45'53"E
C5	255.00'	79.82'	79.50'	N44°19'06"E
C6	255.00'	85.28'	84.88'	N62°51'58"E
C7	255.00'	81.79'	81.44'	N81°38'05"E
C8	25.00'	39.27'	35.36'	N45°49'22"E
C9	25.00'	39.27'	35.36'	S44°10'38"E
C10	25.00'	8.83'	8.78'	N80°42'34"E
C11	25.00'	12.20'	12.08'	N56°36'53"E
C12	50.00'	61.57'	57.75'	N77°54'41"E
C13	50.00'	49.00'	47.06'	S38°44'17"E
C14	50.00'	49.00'	47.06'	S17°24'25"W
C15	50.00'	55.78'	52.93'	S77°26'25"W
C16	50.00'	25.84'	25.55'	N55°47'36"W
C17	25.00'	21.03'	20.41'	N65°04'56"W
C18	208.00'	144.49'	141.51'	S70°37'53"W
C19	205.00'	102.17'	101.12'	S36°09'44"W
C20	205.00'	6.10'	6.10'	S21°01'54"W
C21	280.00'	77.61'	77.36'	S28°07'09"W
C22	25.00'	40.52'	36.23'	S10°22'29"E

DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504



RECOMMENDED ROAD CONNECTION



NCDOT TYPICAL SYMMETRICAL CULDESAC

NO SCALE

NOTES: 1. STEEPER SIDESLOPES OF 1.5:1 MAY BE USED IN STEEP OR HILLY TERRAIN.
2. USE ROADSIDE FILL DITCH (SEE SEPARATE DETAIL) WHEN NECESSARY TO CONTINUE DRAINAGE AROUND CUL-DE-SAC IN FILL SECTIONS.
3. CONTRACTOR SHALL PROVIDE SUBGRADE, BASE, AND PAVEMENT TESTING ON ALL STREETS IN ACCORDANCE WITH NCDOT STANDARDS.
4. THIS DETAIL IS INTENDED TO MEET OR EXCEED THE TYPICAL NCDOT CUL-DE-SAC CRITERIA (REF: NCDOT SUBDIVISION ROADS MIN. CONSTRUCTION STANDARDS 2000 VERSION).

SITE INFORMATION

OWNER: FULL SPECTRUM CUSTOM HOMES, INC.
865 SANDERS ROAD
BENSON, N.C. 27504
PARCEL NO. 05G03009A
NC PIN NO. 165803-23-2656
PARENT TRACT DEED: DB 4911 PG 845

NO. LOTS PROPOSED: 22

THERE ARE NO INSTANCES OF 100 YEAR FEMA FLOOD ON SITE. FEMA FLOOD PANEL 3720165800 J

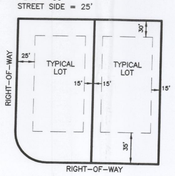
TAX UNIQUE ID: 4759574
TOWNSHIP: CLAYTON
ETJ: CLAYTON
TOWN ZONING: R-E
TOTAL ACREAGE: 18.341
CURRENT USE: VACANT
PROPOSED USE: SUBDIVISION/RESIDENTIAL
EXISTING DENSITY: 0
PROPOSED DENSITY: 1 LOT PER 0.834 ACRES
REQUIRED PARKING: 2 SPACES PER LOT
PROPOSED PARKING: 2 SPACES PER LOT
ELECTRICAL PROVIDER: DUKE ENERGY PROGRESS
WATER PROVIDER: JOHNSTON COUNTY
LOTS TO BE SERVED BY PUBLIC WATER AND ON-SITE SEPTIC

NOTE: LOTS L1-L2 WERE CREATED TO SATISFY THE TOWN OF CLAYTON LANDSCAPING RULES. THOSE LOTS WILL BE DEDICATED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

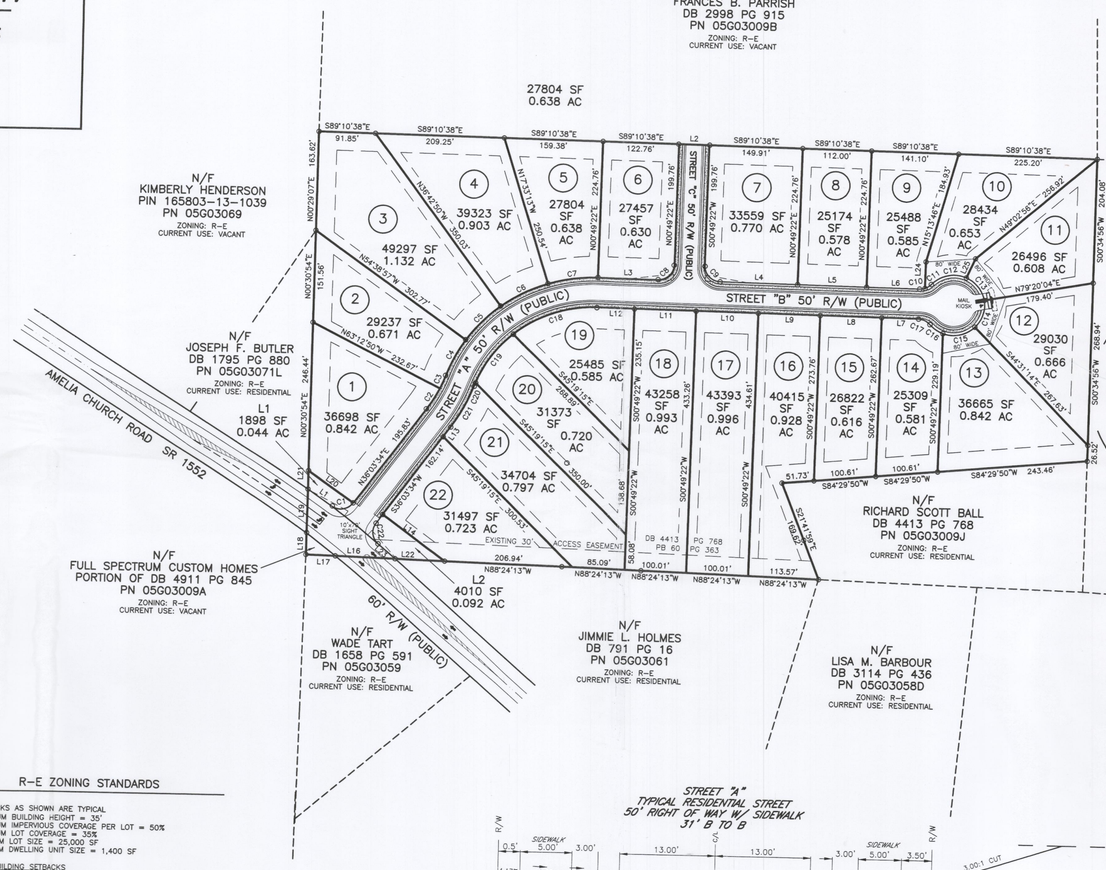
R-E ZONING STANDARDS

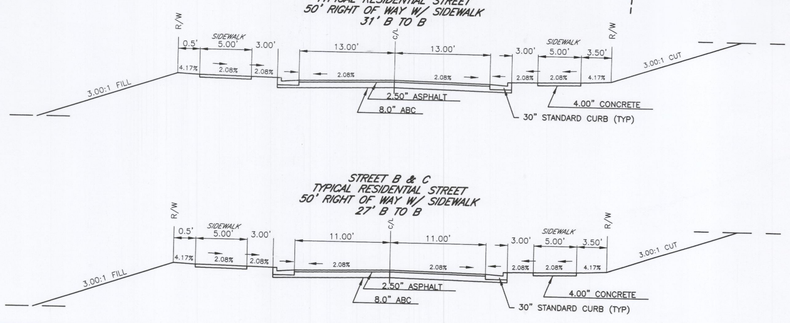
1. SETBACKS AS SHOWN ARE TYPICAL
2. MAXIMUM BUILDING HEIGHT = 35'
3. MAXIMUM IMPERVIOUS COVERAGE PER LOT = 50%
4. MAXIMUM LOT COVERAGE = 35%
5. MINIMUM LOT SIZE = 25,000 SF
6. MINIMUM DWELLING UNIT SIZE = 1,400 SF

MINIMUM BUILDING SETBACKS
FRONT = 35'
SIDE = 15'
REAR = 30'
STREET SIDE = 25'



NOTE:
MINIMUM LOT WIDTH=80'
MINIMUM LOT DEPTH=150'



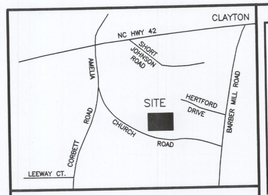


0 100 200 300
SCALE: 1" = 100'

SHEET 3: SUBDIVISION

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	SUBDIVISION.DWG
SURVEY DATE:	
JOB NO.	430.090

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



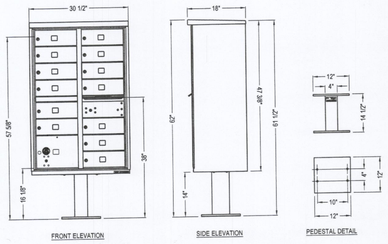
VICINITY MAP (NOT TO SCALE)

DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

FLORENCE CORPORATION

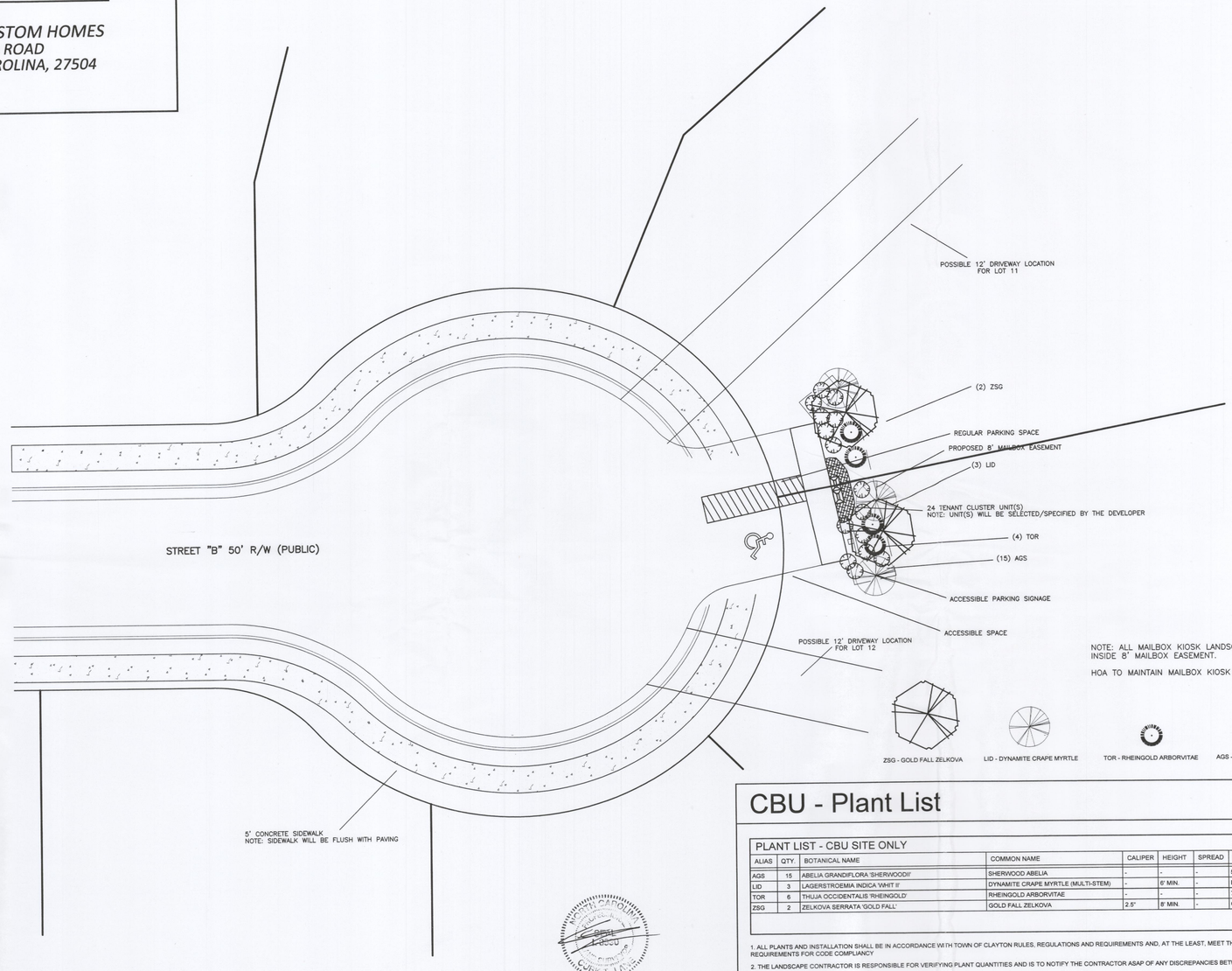
FLORENCE CORPORATION
5935 CORPORATE DRIVE
MANHATTAN, KS 66503
TOLL FREE: 1-800-275-1747
PHONE: (785) 323-4400
FAX: (800) 275-5081
www.florencemailboxes.com



MANUFACTURER NOTES:
1. THIS UNIT IS APPROVED FOR USPS AND PRIVATE APPLICATIONS.
2. DECORATIVE MAILBOX ACCESSORIES SOLD SEPARATELY AND ARE USPS APPROVED PRODUCTS.
3. PEDESTAL SHOULD BE INSTALLED WITH INCLUDED RUBBER PAD; MOUNTING HARDWARE NOT INCLUDED, REFER TO INSTALLATION MANUAL FOR RECOMMENDATIONS.
4. FLORENCE "F" SERIES CBU IS OFFICIALLY LICENSED BY USPS: LICENSE #CDSEQ-08-B-0012.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER: mailbox plan

VITAL™ 1570 CLUSTER BOX UNIT
MODEL 1570-13



NOTE: ALL MAILBOX KIOSK LANDSCAPING TO BE CONTAINED INSIDE 8' MAILBOX EASEMENT.

HOA TO MAINTAIN MAILBOX KIOSK LANDSCAPING.

ZSG - GOLD FALL ZELKOVA

LID - DYNAMITE CRAPE MYRTLE

TOR - RHEINGOLD ARBORVITAE

AGS - SHERWOOD ABELIA

CBU - Plant List

PLANT LIST - CBU SITE ONLY

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS
AGS	15	ABELIA GRANDIFLORA 'SHERWOODII'	SHERWOOD ABELIA	-	-	-	5 GAL.	CBU PLANTINGS
LID	3	LAGERSTROEMIA INDICA 'VHIT II'	DYNAMITE CRAPE MYRTLE (MULTI-STEM)	-	6' MIN.	-	B & B	CBU PLANTINGS
TOR	6	THUJA OCCIDENTALIS 'RHEINGOLD'	RHEINGOLD ARBORVITAE	-	-	-	7 GAL.	CBU PLANTINGS
ZSG	2	ZELKOVA SERRATA 'GOLD FALL'	GOLD FALL ZELKOVA	2.5"	8' MIN.	-	CONT/B&B	CBU PLANTINGS

1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY

2. 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

3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY SCREEN PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

CLUSTER MAIN BOX UNIT – ENLARGED SITE PLAN

NOTE: AS PER A.D.A. STANDARDS, THE PARKING AREA AND SURROUNDING SIDEWALK WILL MAINTAIN A 2% CROSS SLOPE AND A 2% RUNNING SLOPE

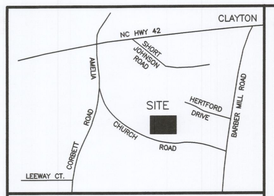
0 10 20 30
SCALE: 1" = 10'

SHEET 4: CBU SITE PLAN

SURVEYED BY:
DRAWN BY: MIKE
CHECKED BY: CURK
DRAWING NAME: MAILBOX PLAN
SURVEY DATE:
JOB NO.: 430.090

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

SHEET 4: CBU SITE PLAN



VICINITY MAP (NOT TO SCALE)

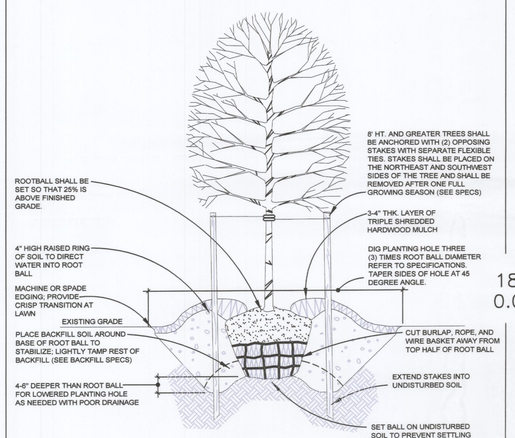
DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

DISTANCE STANDARDS.

NOTES

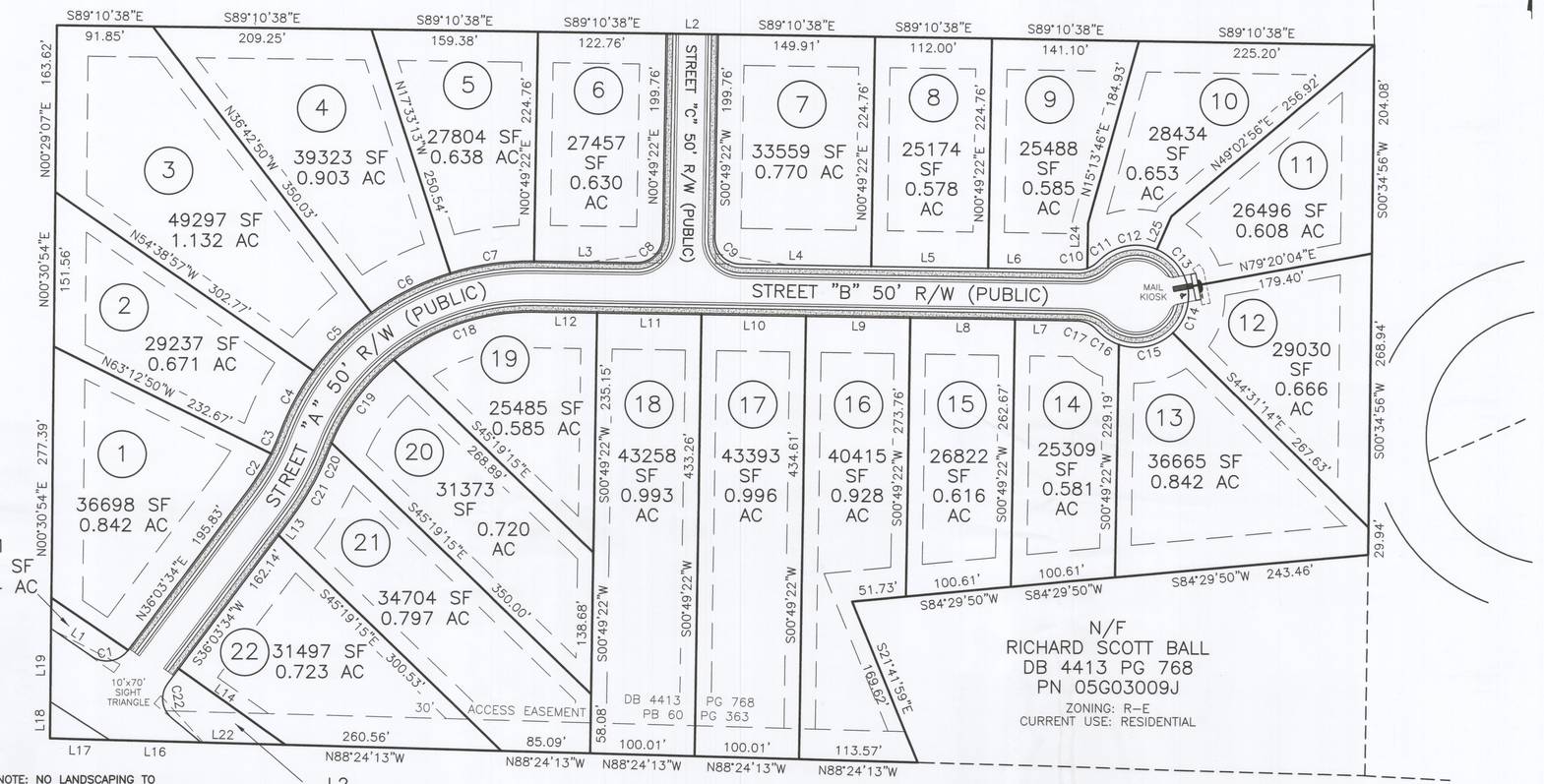
1. THE PLANTING PROCES IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
2. FOR SINGLE STEM TREES, DO NOT SUPPLY TREES WITH MULTIPLE LEADERS, ONLY PROVIDE TREES WITH A SINGLE LEADER. DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS AND TO INSURE COMPLIANCE WITH SIGHT
3. MARK THE NORTH SIDE OF THE TREE AT THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.
4. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4" TO 8" OVER THE ENTIRE BED AREA.
5. FOR CONTAINER-GROWN TREES, SET THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
6. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
7. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER, BREAKING DOWN THE SIDES WITH A SHOVEL TO ELIMINATE GLAZING AND CREATE THE SLOPING SIDE PROFILE SHOWN ON THE DETAIL.



*FOR BOTH CANOPY OR UNDERSTORY STREES

* TYPICAL TREE INSTALLATION	1
SCALE: NTS	

NOTE: 1 (ONE) TREE SHALL BE PROVIDED PER LOT.



NOTE: NO LANDSCAPING TO BE LOCATED WITHIN THE 10'x70' SIGHT TRIANGLE OR THE EXISTING 30' ACCESS EASEMENT

NOTE: LOTS L1–L2 WERE CREATED TO SATISFY THE TOWN OF CLAYTON LANDSCAPING RULES. THOSE LOTS WILL BE DEDICATED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

0 60 120 180
SCALE: 1" = 60'

CLASS "A" BUFFER - Plant List

PLANT LIST - CLASS "A" BUFFER ONLY

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS
CANOPY TREES (CANOPY TREES = 93, INCLUDES TREES USED FOR SCREENING/BUFFERS)								
ARO	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"	8' MIN.	-	B & B	BUFFER PLANTINGS
QS	4	QUERCUS SHUMARDII	SHUMARD OAK	2.5"	8' MIN.	-	B & B	BUFFER PLANTINGS
UNDERSTORY TREES (UNDERSTORY TREES = 77, INCLUDES TREES USED FOR SCREENING/BUFFERS)								
CCF	6	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY REDBUD	2"	6' MIN.	-	CONT/B&B	BUFFER PLANTINGS
						-		

1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY
2. 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
3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY SCREEN PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

QS-SHUMARD OAK ARO-OCTOBER GLORY RED MAPLE FOREST PANSY REDBUD

Landscape Notes

GENERAL LANDSCAPE NOTES

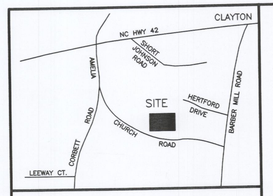
1. ALL PLANT MATERIALS AND PLANTING BEDS SHALL BE LOCATED BY SCALED DIMENSIONS FROM BUILDINGS, CURBS, PAVEMENTS, ETC. LOCATION OF ALL PLANTS SHALL BE REVIEWED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE FOR REVIEW.
2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR PLANTING AND SHALL BE RESPONSIBLE FOR THEIR REPAIR OR PAY FOR ALL DAMAGES MADE TO UNDERGROUND UTILITIES.
3. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES.
4. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY PROPOSED PLANT SUBSTITUTIONS BY THE LANDSCAPE CONTRACTOR. NO SUBSTITUTIONS SHALL BE MADE UNDER ANY CIRCUMSTANCES WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT.
5. ALL DISTURBED AREAS NOT IDENTIFIED TO EITHER BE SEEDED OR SODDED SHALL BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS.
6. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. ALL PLANTING BEDS, SAUCERS, AND AREAS DESIGNATED TO BE MULCHED SHALL BE MULCHED WITH A MINIMUM OF 3-4 INCHES OF TRIPLE SHREDDED HARDWOOD MULCH.
8. PLANTING BEDS AND SAUCERS SHALL BE EDGED TO PROVIDE A 2" TO 3" DEEP "V" CUT ALONG ITS BORDER WITH SODDED OR SEEDED AREAS.
9. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.
10. GUYING SHALL BE REMOVED AFTER ONE FULL GROWING SEASON.
11. THE LANDSCAPE CONTRACTOR SHALL INSTALL ALL LANDSCAPING IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS SHOWN AND ENUMERATED ON THIS SHEET UNLESS ALTERNATIVE METHODS OR PRACTICES ARE REVIEWED AND ACCEPTED BY THE LANDSCAPE ARCHITECT.
12. AT INSTALLATION AND CONTINUOUSLY DURING THE MAINTENANCE CONTRACT, ALL PROPOSED SHRUBS THAT ARE SQUARE IN SHAPE AND ARRANGED IN ROWS SHOULD BE PRUNED INTO BOXED AND CLIPPED HEDGEROWS.
13. 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
14. 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.
15. ALL HVAC AND MECHANICAL EQUIPMENT WILL BE SCREENED WITH LANDSCAPING OR DECORATIVE FENCING

NORTH CAROLINA PROFESSIONAL SEAL L-3653 LAND SURVEYOR CHRIS T. LANE

SHEET 5: LANDSCAPING PLAN

SURVEYED BY:	
DRAWN BY:	MAC
CHECKED BY:	CHRIS
DRAWING NAME:	BUFFER.DWG
SURVEY DATE:	
JOB NO.	430.000

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



VICINITY MAP (NOT TO SCALE)

DEVELOPER/APPLICANT:

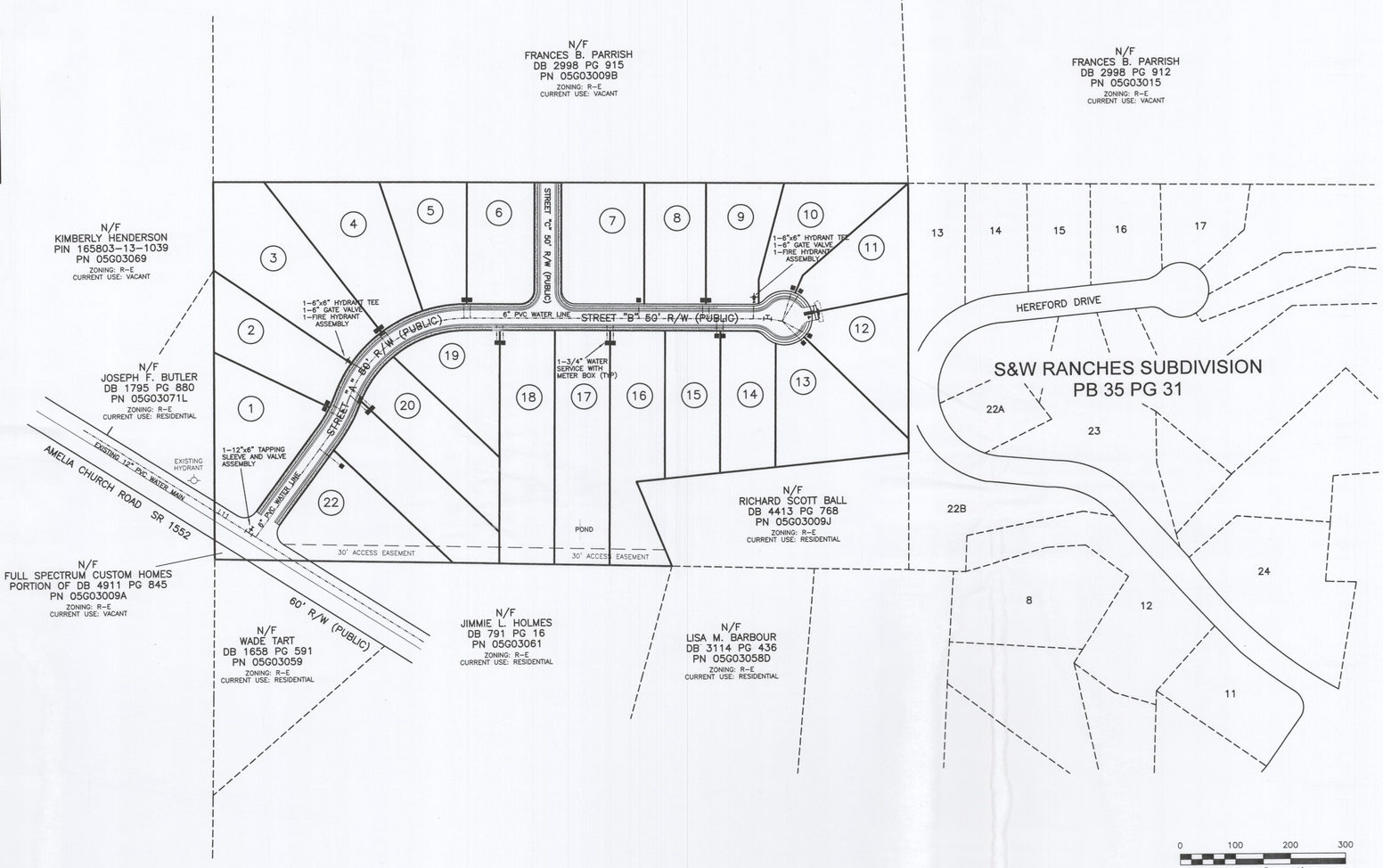
FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

NOTE:
A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR WATER, SEWER, EROSION CONTROL, GRADING AND STREET EXTENSION TO BE SUBMITTED TO AND APPROVED BY TOWN'S ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

THE TOWN OF CLAYTON AND/OR JOHSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

LEGEND

EXISTING		PROPOSED
6"WL	WATERLINE	6"WL
	BLOWOFF	
	HYDRANT	
	VALVE	
	REDUCER	
	METER	
	SEWERLINE	
	MANHOLE	
	CLEANOUT	
	STORM DRAINAGE	
	CATCH BASIN	
	DROP INLET/YARD INLET	
	PROPOSED DITCH FLOW	



SITE INFORMATION

OWNER: FULL SPECTRUM CUSTOM HOMES, INC.
865 SANDERS ROAD
BENSON, N.C. 27504
PARCEL NO. 05G03009A
NC PIN NO. 165803-23-2656
PARENT TRACT DEED: DB 4911 PG 845

THERE ARE NO INSTANCES OF 100 YEAR FEMA FLOOD ON SITE. FEMA FLOOD PANEL 3720165800 J

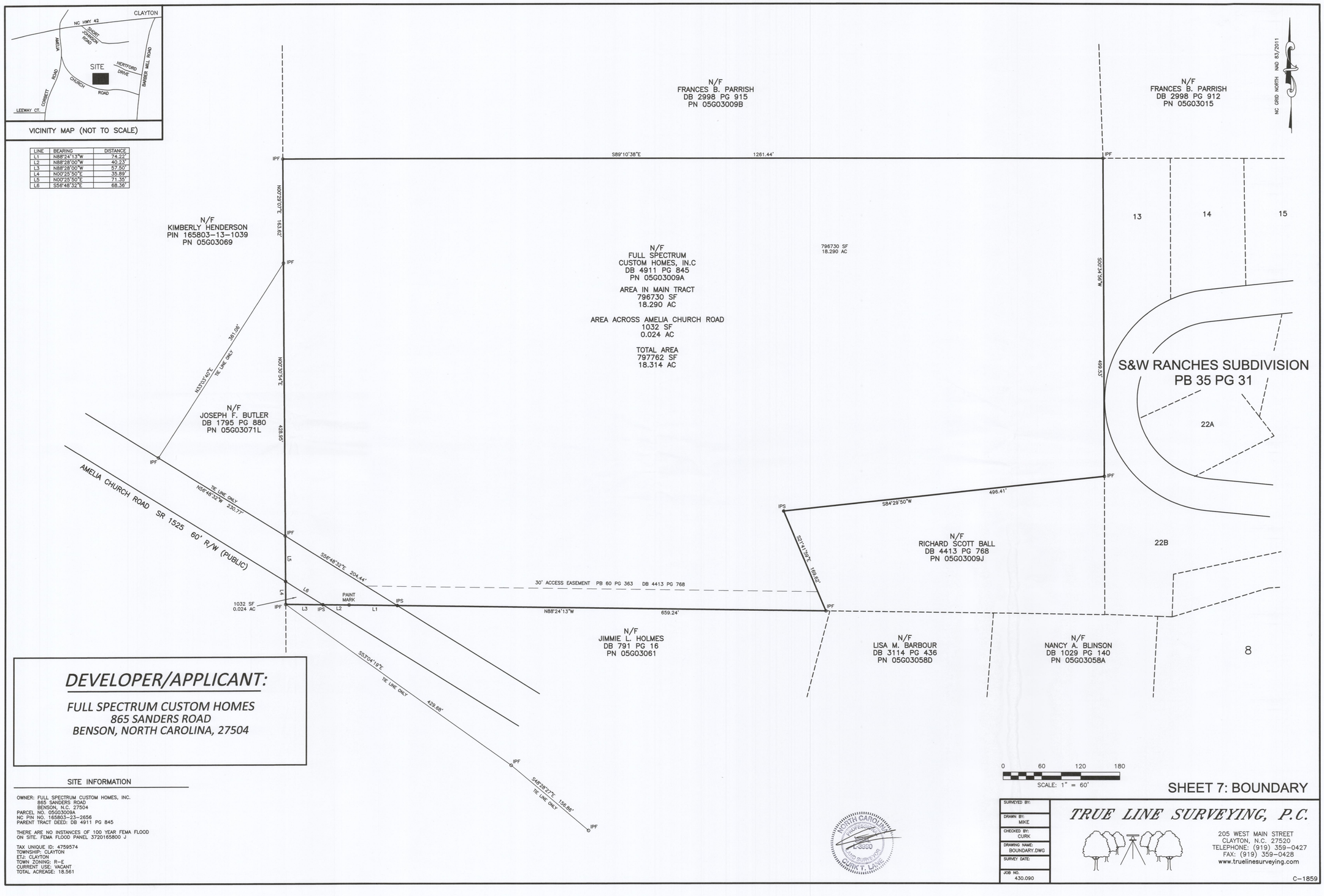
TAX UNIQUE ID: 4759574
TOWNSHIP: CLAYTON
ETJ: CLAYTON
TOWN ZONING: R-E
CURRENT USE: VACANT
TOTAL ACREAGE: 18.561

SHEET 6: UTILITY PLAN

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	UTILITY.DWG
SURVEY DATE:	
JOB NO.	430.090

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



LINE	BEARING	DISTANCE
L1	N88°24'13"W	74.22'
L2	N88°28'00"W	40.23'
L3	N88°28'00"W	57.50'
L4	N00°25'50"E	35.89'
L5	N00°25'50"E	71.35'
L6	S56°48'32"E	68.36'

DEVELOPER/APPLICANT:

FULL SPECTRUM CUSTOM HOMES
865 SANDERS ROAD
BENSON, NORTH CAROLINA, 27504

SITE INFORMATION

OWNER: FULL SPECTRUM CUSTOM HOMES, INC.
865 SANDERS ROAD
BENSON, N.C. 27504
PARCEL NO. 05G03009A
NC PIN NO. 165803-23-2656
PARENT TRACT DEED: DB 4911 PG 845

THERE ARE NO INSTANCES OF 100 YEAR FEMA FLOOD ON SITE. FEMA FLOOD PANEL 3720165800 J

TAX UNIQUE ID: 4759574
TOWNSHIP: CLAYTON
ETJ: CLAYTON
TOWN ZONING: R-E
CURRENT USE: VACANT
TOTAL ACREAGE: 18.561

NORTH CAROLINA PROFESSIONAL L-3990 LAND SURVEYOR CURK T. LANE

SHEET 7: BOUNDARY

SURVEYED BY:	
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	BOUNDARY.DWG
SURVEY DATE:	
JOB NO.	430.090

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

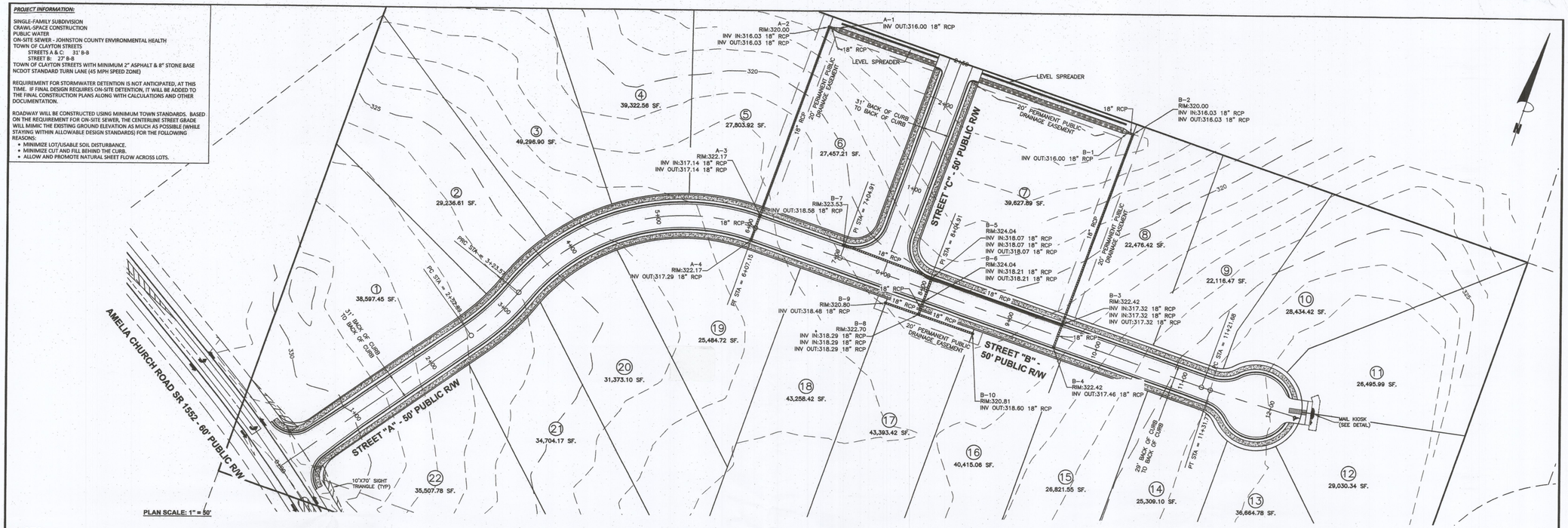
PROJECT INFORMATION:

SINGLE-FAMILY SUBDIVISION
CRAWL-SPACE CONSTRUCTION
PUBLIC WATER
ON-SITE SEWER - JOHNSTON COUNTY ENVIRONMENTAL HEALTH
TOWN OF CLAYTON STREETS
STREETS A & C: 31' B-B
STREET B: 27' B-B
TOWN OF CLAYTON STREETS WITH MINIMUM 2" ASPHALT & 8" STONE BASE
NCDOT STANDARD TURN LANE (45 MPH SPEED ZONE)

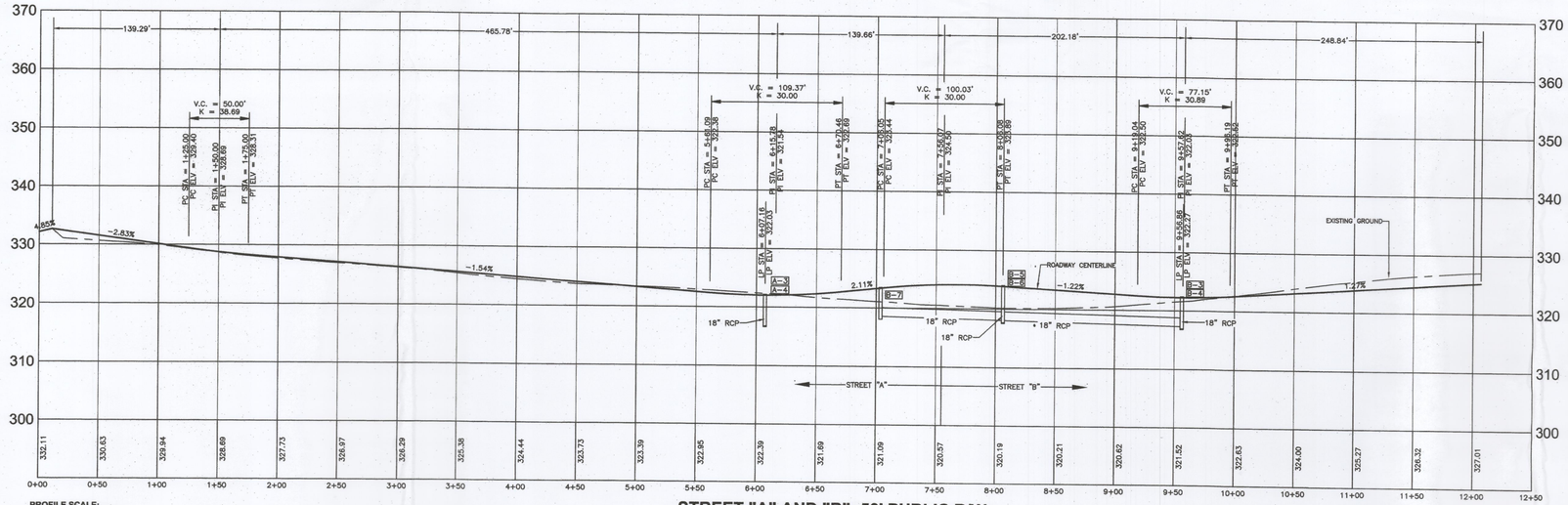
REQUIREMENT FOR STORMWATER DETENTION IS NOT ANTICIPATED, AT THIS TIME. IF FINAL DESIGN REQUIRES ON-SITE DETENTION, IT WILL BE ADDED TO THE FINAL CONSTRUCTION PLANS ALONG WITH CALCULATIONS AND OTHER DOCUMENTATION.

ROADWAY WILL BE CONSTRUCTED USING MINIMUM TOWN STANDARDS. BASED ON THE REQUIREMENT FOR ON-SITE SEWER, THE CENTERLINE STREET GRADE WILL MIMIC THE EXISTING GROUND ELEVATION AS MUCH AS POSSIBLE (WHILE STAYING WITHIN ALLOWABLE DESIGN STANDARDS) FOR THE FOLLOWING REASONS:

- MINIMIZE LOT/USABLE SOIL DISTURBANCE.
- MINIMIZE CUT AND FILL BEHIND THE CURB.
- ALLOW AND PROMOTE NATURAL SHEET FLOW ACROSS LOTS.

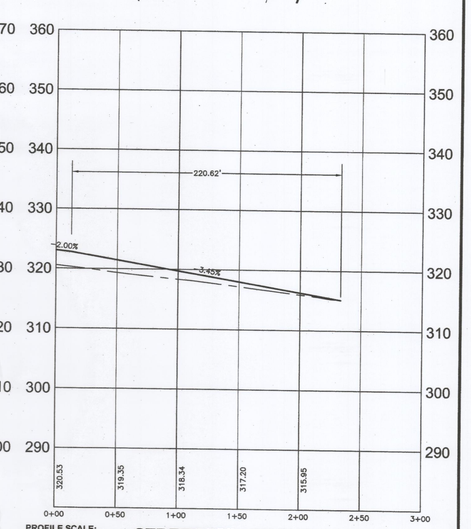


PLAN SCALE: 1" = 50'



PROFILE SCALE:
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

STREET "A" AND "B"- 50' PUBLIC R/W



PROFILE SCALE:
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

STREET "C" - 50' PUBLIC R/W

PLAN AND PROFILE
STREETS "A","B" AND "C"
FOR
KYLI KNOLLS SUBDIVISION
TOWN OF CLAYTON - JOHNSTON COUNTY, N.C.

REVISION 002: ADDRESS TOWN OF CLAYTON COMMENTS – 8/20/18
REVISION 001: ADDRESS TOWN OF CLAYTON COMMENTS – 8/15/18

CALL BEFORE YOU DIG!
NORTH CAROLINA LAW REQUIRES NOTIFICATION OF THE UNDERGROUND FACILITY OWNER NOT LESS THAN TWO (2) BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO EXCAVATION OR DEMOLITION
North Carolina One-Call Center, Inc.
www.ncocc.org
1-800-632-4949

NORTH CAROLINA PROFESSIONAL SEAL 16282 ENGINEER TERRY T. DALTON

Dalton Engineering and Associates, P. A.
446 East Main Street
P.O. Box 426
Clayton, NC 27520
(919)550-4740
Fax (919) 550-4741

Job: 17016	**Date:** 6/20/18	**Revision:** 002
File: 17016–MASTER	**Drawn:** RVM	**Sheet:** SHEET 8

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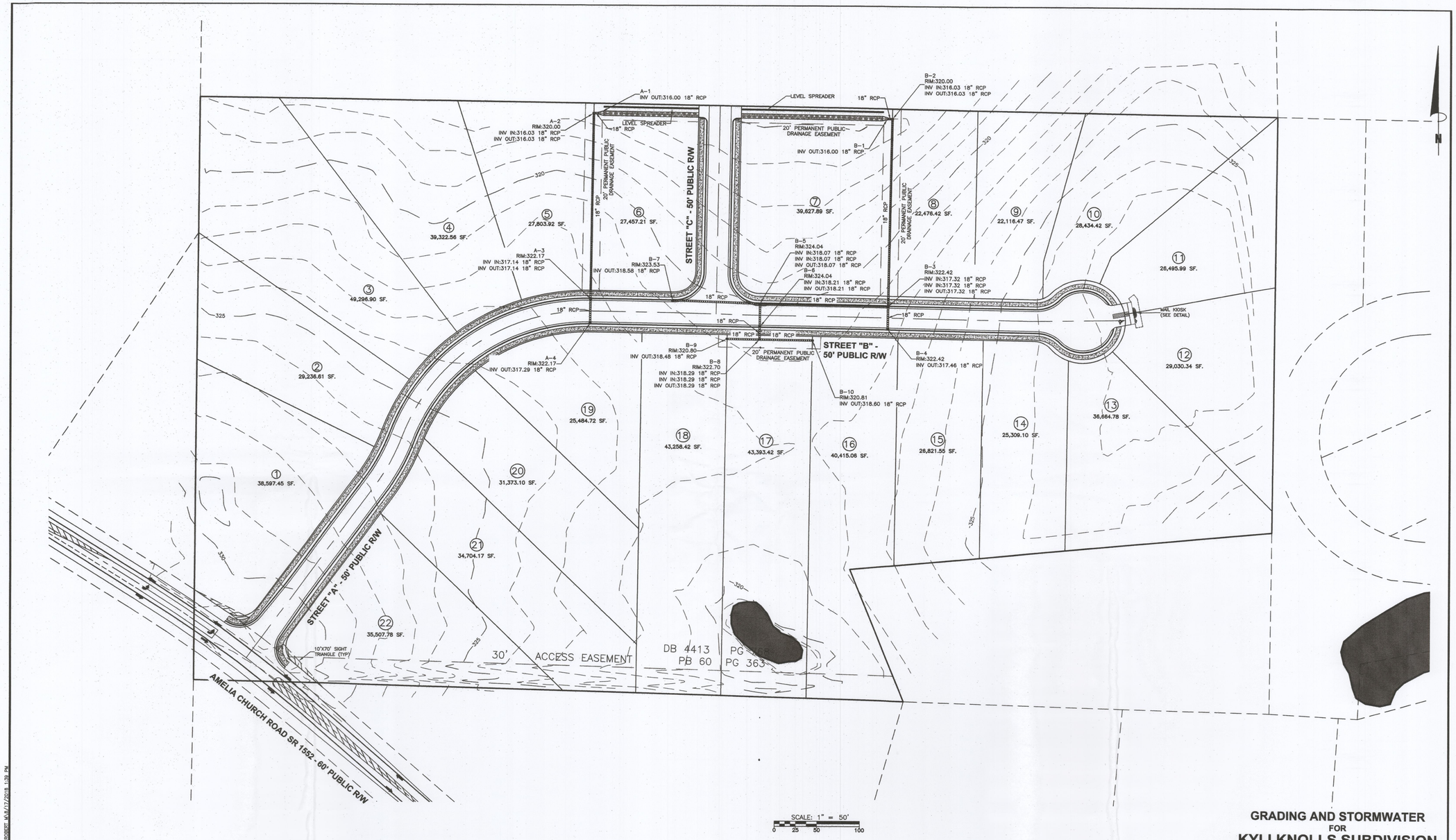

GRADING AND STORMWATER
FOR
KYLI KNOLLS SUBDIVISION
TOWN OF CLAYTON - JOHNSTON COUNTY, N.C.

CALL BEFORE YOU DIG!
NORTH CAROLINA LAW REQUIRES NOTIFICATION OF THE UNDERGROUND FACILITY OWNER NOT LESS THAN TWO (2) BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO EXCAVATION OR DEMOLITION
North Carolina One-Call Center, Inc.
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REVISION 002: ADDRESS TOWN OF CLAYTON COMMENTS – 8/20/18
REVISION 001: ADDRESS TOWN OF CLAYTON COMMENTS – 8/15/18

NORTH CAROLINA PROFESSIONAL SEAL 16282 ENGINEER JERRY T. DALTON 8/20/18

Dalton Engineering and Associates, P. A.
446 East Main Street
P.O. Box 426
Clayton, NC 27520
(919)550-4740
Fax (919) 550-4741

Job: 17016	Date: 6/20/18	Revision: 002
File: 17016-MASTER	Drawn: RVM	Sheet: SHEET 9

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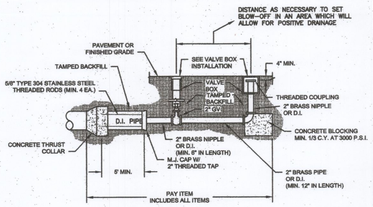


PERMANENT BLOW-OFF ASSEMBLY

NOT TO SCALE

NOTES:
1) THE TOP OF THE BLOW–OFF STANDPIPE SHALL BE NO MORE THAN 4–6" BELOW GRADE.
2) BLOW–OFFS SHALL BE LOCATED IN AREAS WHICH WILL ALLOW FOR POSITIVE DRAINAGE WHEN UTILIZED.
3) ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.

Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

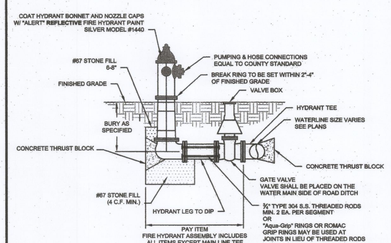
Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Permanent Blow Off Assembly

PAGE **2**

NOTE:
1. MIN. OF 4 CU. FT. STONE (MORE IF REQ'D).
2. CONC. THRUST BLOCK TO HAVE MIN. OF 6 SQ. FT. BEARING ON SOLID BANK (MORE IF REQ'D.).
3. DRAIN HOLES AND FLANGES SHALL BE CLEAR OF CONC.
4. FIRE HYDRANT BARREL SHALL BE PLUMB.
5. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.



FIRE HYDRANT ASSEMBLY

NOT TO SCALE

****FIRE HYDRANTS INSTALLED ON EXISTING 6" WATER MAINS, MUST BE INSTALLED USING A 6"x6" TEE CUT INTO THE EXISTING WATER MAIN. FIRE HYDRANTS INSTALLED ON EXISTING WATER MAINS LARGER THAN 6", CAN BE INSTALLED USING A TAPPING SLEEVE AND VALVE ON THE EXISTING WATER MAIN.**

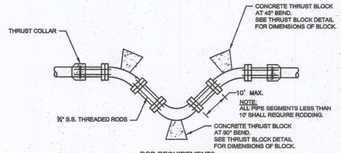
Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Fire Hydrant Assembly

PAGE **4**



ROD REQUIREMENTS

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	6
20"	48,091	8
24"	69,252	10

GENERAL NOTES
1. RODS AND NUTS SHALL BE OF TYPE 304 OR TYPE 316 STAINLESS STEEL.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

VERTICAL BEND RODDING AND BLOCKING DETAIL

NOT TO SCALE

Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

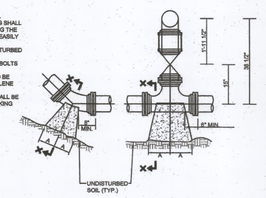
Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Critical Bend Rodding and Blocking Details

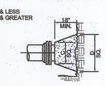
PAGE **7**

NOTES:
1. CONCRETE SHALL BE 3,000 PSI MIN.
2. CONCRETE FOR THRUST BLOCKING SHALL BE KEPT FAIRLY DRY, THUS MAKING THE CONCRETE WEDGE SHAPE MORE EASILY FORMED WITH THE WIDEST PART (BLOCKING AREA) AGAINST UNDISTURBED SOIL.
3. NO CONCRETE SHALL COVER ANY BOLTS OR GLANDS.
4. ALL FITTING AND ACCESSORIES TO BE ENCASED WITH 10 MIL POLYETHYLENE PRIOR TO POURING BLOCKING.
5. VOLUME OF THRUST BLOCKING SHALL BE AS SHOWN ON THE THRUST BLOCKING SCHEDULE.



PLAN BENDS

PLAN TEES



SECTION X-X BENDS & TEES

PLAN & ELEV. PLUGS

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE			PLUG	
	A	B	A	B	A	B	A	B	A	B	C	A	B
4"	8"	12"	8"	8"	8"	8"	8"	8"	8"	8"	8"	10"	16"
6"	10"	12"	8"	10"	8"	8"	8"	8"	10"	10"	10"	12"	18"
8"	10"	12"	10"	10"	8"	8"	8"	8"	10"	10"	10"	14"	20"
10"	10"	14"	10"	12"	8"	10"	8"	8"	10"	10"	10"	16"	22"
12"	20"	16"	12"	14"	8"	10"	8"	8"	12"	14"	10"	18"	24"
14"	22"	18"	14"	16"	10"	12"	8"	8"	14"	16"	12"	20"	26"
16"	24"	20"	14"	18"	12"	14"	10"	10"	16"	18"	12"	22"	28"
20"	36"	28"	24"	24"	16"	16"	12"	12"	20"	20"	16"	26"	32"
24"	48"	32"	32"	32"	18"	18"	12"	12"	24"	24"	16"	30"	36"

THRUST BLOCK DETAIL

NOT TO SCALE

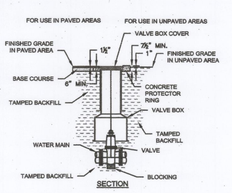
Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Thrust Block

PAGE **8**



SECTION

NOTES:
1. D.I.P. MAY BE USED FOR VALVE BOX EXTENSIONS.
2. VALVE BOX SHOULD NOT CONTACT WATER MAIN OR VALVE.
3. CONCRETE PROTECTOR RING SHALL BE USED IN ALL UNPAVED AREAS.
4. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.

VALVE AND VALVE BOX INSTALLATION

NOT TO SCALE

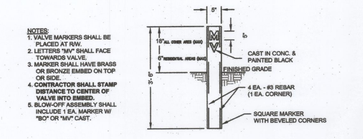
Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Valve and Valve Box Installation

PAGE **13**



VALVE MARKER DETAIL

NOT TO SCALE

Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

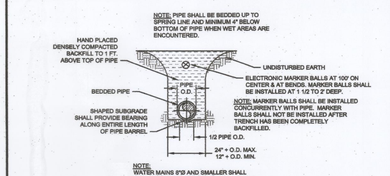
Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Valve Marker

PAGE **15**

NOTE: PIPE SHALL BE BEDDED UP TO SPRING LINE AND MINIMUM 4" BELOW BOTTOM OF PIPE WHEN WET AREAS ARE ENCOUNTERED.



NOTE: WATER MAINS 8"Ø AND SMALLER SHALL HAVE MINIMUM OF 3' COVER. WATER MAINS LARGER THAN 8"Ø SHALL HAVE A MINIMUM OF 3'-6" COVER.

PIPE LAYING CONDITION

NOT TO SCALE

Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

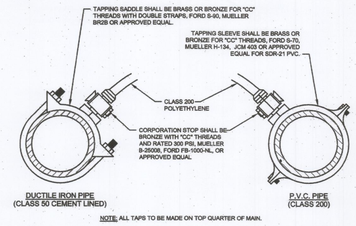
Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Pipe Laying Condition

PAGE **17**

NOTE:
1. ALL TAPS 2" AND SMALLER SHALL BE MADE WITH TAPPING SADDLE. ALL TAPS LARGER THAN 2" SHALL BE MADE WITH TAPPING SLEEVE AND VALVE. NO DIRECT TAPS SHALL BE MADE.
2. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.



NOTE: ALL TAPS TO BE MADE ON TOP QUARTER OF MAIN.

STANDARD WATER TAP DETAIL

NOT TO SCALE

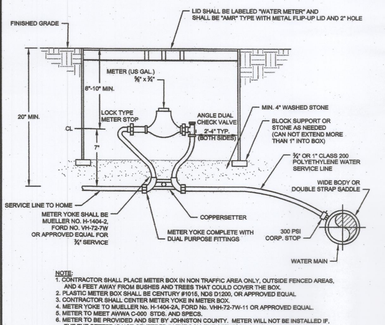
Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

WATER STANDARD DETAIL Standard Water Tap

PAGE **20**



NOTE:
1. CONTRACTOR SHALL PLACE METER BOX IN NON TRAFFIC AREA ONLY, OUTSIDE FENCED AREAS, AND 4 FEET AWAY FROM BUSHES AND TREES THAT COULD COVER THE BOX.
2. PLASTIC METER BOX SHALL BE CENTURY #101E, NDS D-20, OR APPROVED EQUAL.
3. CONTRACTOR SHALL CENTER METER YOKE IN METER BOX.
4. METER YOKE TO MUELLER No. H-1404-2A, FORD No. VH#-72-7W-11 OR APPROVED EQUAL.
5. METER TO MEET AWWA C-700 STDS. AND SPECS.
6. METER TO BE PROVIDED AND SET BY JOHNSTON COUNTY. METER WILL NOT BE INSTALLED IF, THE THE SETTER IS NOT CENTERED IN THE BOX, THE SETTER HAS BEEN PULLED UP ON ONE END, THE SETTER IS LAYING ON IT'S SIDE, THE SETTER IS TO CLOSE TO THE BOX LID, THE BOX IS BELOW GRADE OR BROKEN, THE CUSTOMERS SERVICE LINE IS NOT HOOKED TO THE UNION NUT, THE 3/4 GATE VALVE HAS NOT BEEN INSTALLED WITHIN 12 INCHES OF THE METER BOX.
7. ALL MATERIALS USED IN THE POTABLE WATER SYSTEM MUST BE NSF61 AND NSF372 CERTIFIED AND MEET THE LATEST FEDERAL SAFE DRINKING WATER ACT REQUIREMENTS.
8. SERVICE LINE TO HOME MUST PASS PLUMBING INSPECTION PRIOR TO SETTING METER.

3/4" & 1" WATER METER SERVICE DETAIL

NOT TO SCALE

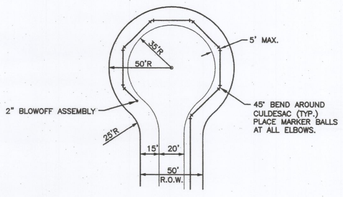
Drawn By:	Name	Date
Checked By:		
Approved By:		
Scale: 1		

Rev.	Description	Date	Init.

JOHNSTON COUNTY
Department of Public Utilities
P.O. Box 2283
Smithfield, NC 27577

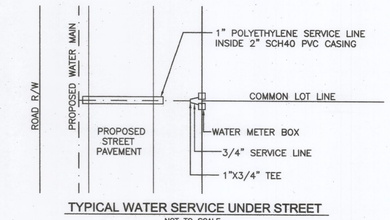
WATER STANDARD DETAIL ¾" and 1" Water Meter Service

PAGE **21**



TYPICAL WATER LINE INSTALLATION AT CULDESAC

NOT TO SCALE



TYPICAL WATER SERVICE UNDER STREET

NOT TO SCALE

WATER DETAIL SHEET
FOR
KYLI KNOLLS SUBDIVISION
TOWN OF CLAYTON - JOHNSTON COUNTY, N.C.

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION 001: ADDRESS TOWN OF CLAYTON COMMENTS – 8/15/18

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16282 JEREMY T. DALTON 8/15/18

Dalton Engineering and Associates, P. A.
446 East Main Street
P.O. Box 426
Clayton, NC 27520
(919)550-4740
Fax (919) 550-4741

Job: 17016	**Date:** 6/20/18	**Revision:** 001
File: 17016–MASTER	**Drawn:** RVM	**Sheet:** SHEET 10

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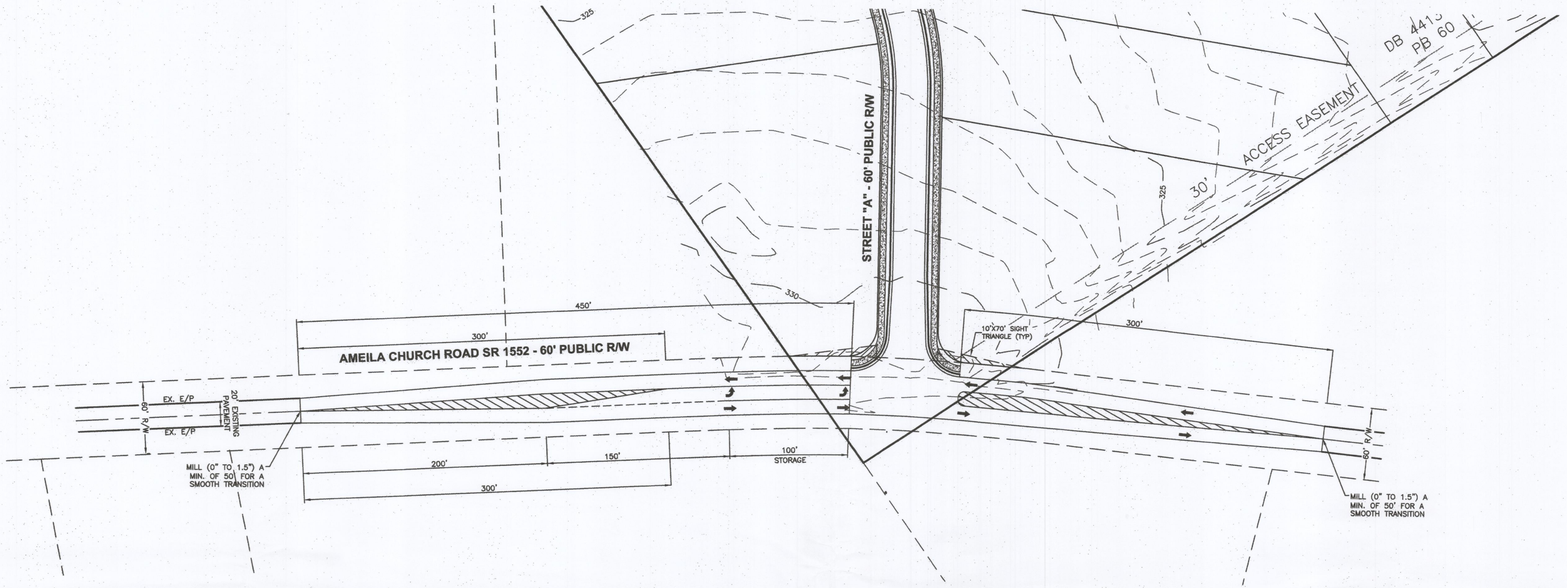


SCALE: 1" = 50'
0 25 50 100

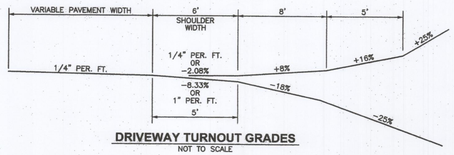
NOTES TO CONTRACTOR:

1. THIS CONSTRUCTION SHALL CONSIST OF THE ROADWAY WIDENING OF SR 1552 REQUIRED FOR THE LEFT TURN LANE AND SYMMETRICAL WIDENING FOR KYLI KNOLLS SUBDIVISION, AS SHOWN ON THIS PLAN. THE CONSTRUCTION SHALL ALSO INCLUDE THERMAL STRIPING, INSTALLATION OF PAVEMENT MARKERS, AND THE PLACEMENT OF THE FINAL PAVEMENT OVERLAY.

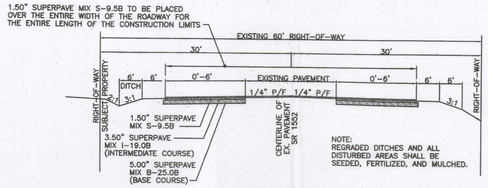
2. THE CONSTRUCTION SHALL CONFORM TO N.C. DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS STANDARD SPECIFICATIONS.

3. THERMOPLASTIC PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE INSTALLED WITHIN THE TURN LANE CONSTRUCTION LIMITS IN ACCORDANCE WITH N. C. DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

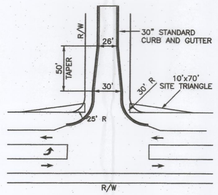
4. TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY MEANS OF FLAGGERS.



DRIVEWAY TURNOUT GRADES
NOT TO SCALE



TYPICAL SECTION A-A
ROADWAY WIDENING OF SR 1552
NOT TO SCALE



ROAD CONNECTION AT SR 1552
NOT TO SCALE

CALL BEFORE YOU DIG!
NORTH CAROLINA LAW REQUIRES NOTIFICATION OF THE UNDERGROUND FACILITY OWNER NOT LESS THAN TWO (2) BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO EXCAVATION OR DEMOLITION
North Carolina One-Call Center, Inc.
www.ncocc.org
1-800-632-4949

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION 001: ADDRESS TOWN OF CLAYTON COMMENTS – 8/15/18

ROAD WIDENING
FOR
KYLI KNOLLS SUBDIVISION
TOWN OF CLAYTON - JOHNSTON COUNTY, N.C.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16282 HARRY T. DALTON 8/15/18

Dalton Engineering and Associates, P. A.
446 East Main Street
P.O. Box 426
Clayton, NC 27520
(919)550-4740
Fax (919) 550-4741

Job: 17016	**Date:** 6/20/18	**Revision:** 001
File: 17016-MASTER	**Drawn:** RVM	**Sheet:** SHEET 11

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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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-62-SD
Project Name: Kyli Knolls Preliminary Plat (Major Subdivision)

NC PIN / Tag #:	165803-23-2656 / 05G03009A
Town Limits/ETJ:	ETJ
Overlay:	None
Applicant:	True Line Surveying
Owner:	Full Spectrum Custom Homes
Location:	Amelia Church Road

Public Noticing:

- Neighborhood meeting September 17, 2018
- Sign posted prior to August 17, 2018
- Letters mailed October 2, 2018
- Newspaper ad published October 5, 2018 and October 12, 2018

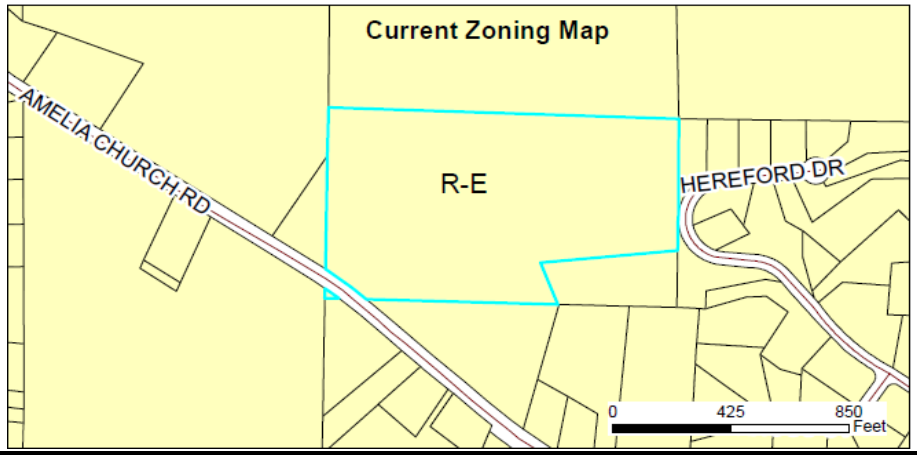
REQUEST: To develop 22 single-family residential lots on 18.56 acres of land zoned Residential-Estate (R-E).

SITE DATA:

Acreage: 18.56
Existing Use: Vacant

ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Residential-Estate (R-E)	Vacant
South	Residential-Estate (R-E)	Single-family residential
East	Residential-Estate (R-E)	Single-family residential
West	Residential-Estate (R-E)	Single-family residential



DEVELOPMENT DATA:

Proposed Uses: Single-Family Homes

Buildings: 22 dwelling units

Density/Intensity: 1 unit per .83 acres

Required Parking: 2 spaces per unit

Access/Streets: One access off Amelia Church Road and one stub-out to the property to the north

STAFF ANALYSIS:

Overview

The proposed development is located on the north side of Amelia Church Road, approximately 3,000 feet southeast of the intersection of Amelia Church Road and NC HWY 42 West. The applicant is requesting a conventional single-family residential subdivision on 18.56 acres of land zoned Residential-Estate (R-E). The proposed subdivision includes 22 single-family lots with a minimum lot size of 25,000 square feet. The lots will be

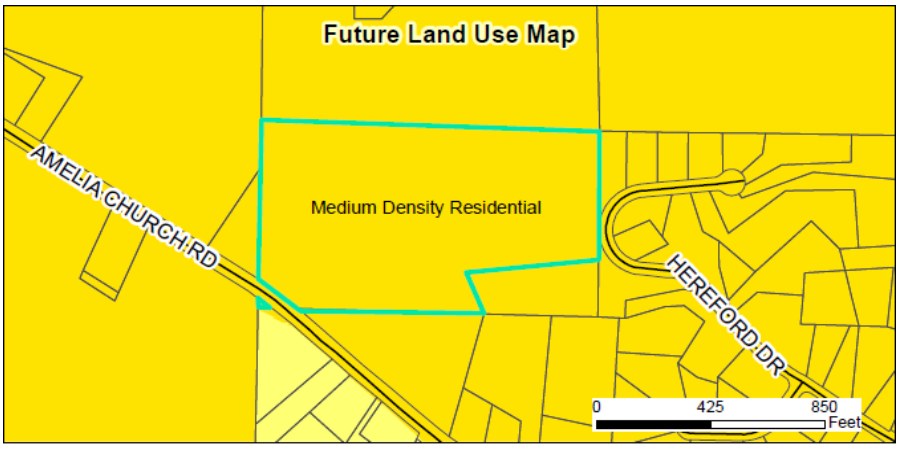
served by public water (Johnston County) and septic. Curb-and-gutter is proposed throughout the development, as well as sidewalks. The property is located within the Town's ETJ, and the applicant is not requesting annexation into the Town of Clayton.

An application was submitted in 2017 for this development that was ultimately denied by the Town Council (2017-98-SD). The original application consisted of 20 single-family lots, and did not include any roadway improvements. The Town Council found that the layout proposed at that time would materially endanger the environment, public health, safety, or the general welfare. This was outlined in the resolution to be determined by the three separate connections proposed on Amelia Church Road, congestion caused by traffic entering and exiting the development, and a general lack of traffic congestion mitigation.

As the development is currently submitted, a left-turn lane into the development off Amelia Church Road will be required by NCDOT and is shown on the preliminary plat. Staff does still have concerns regarding the proposed separation between the existing access easement to the Richard Scott Ball property and the main entrance into the development. The proposed connection results in the convergence of three separate vehicular connections at one point along Amelia Church Road, which results in a safety concern. Staff recommends relocating the 30' access easement to alleviate these safety concerns **(see Condition of Approval).**

Consistency with Adopted Plans

- **2040 Comprehensive Plan**
  The Future Land Use for this area is envisioned as Medium Density Residential, which typically consists of three to five dwelling units per acre. This development is not consistent with the future land use map, as it only proposes 1.18 dwelling units an acre. This area of town is designated for Medium Density Residential due to the ability of the property to be serviced by both water and sewer. Extending sewer service to the property would allow smaller lot sizes and a density more consistent with the Comprehensive Plan designation.



Compatibility with Surrounding Land Uses
There is a single-family residential subdivision located to the east of the subject property. All other surrounding land uses are single-family residential or vacant properties, zoned Residential-Estate (R-E), making the proposed residential development compatible with the surrounding land uses.

Landscaping and Buffering
The applicant is proposing to provide one street tree per lot, as required by the Town of Clayton's Unified Development Code. A Class "A" landscaping buffer will also be provided along Amelia Church Road, which is consistent with the UDC requirements. This buffer will be located separate from the adjacent single-family parcels, in order to ensure the proper maintenance of the landscaping by the HOA.

Mail Kiosk
The applicant is proposing to add a mail kiosk at the end of the Street "B" cul-de-sac. This kiosk will have two designated parking spaces. One of these spaces will be handicap accessible. Additionally, the applicant is proposing landscaping around the location of the mail kiosk. Final design and layout of the mail kiosk is subject to review and approval by the Inspections department (see recommended Condition of Approval).

Access/Streets
Access to the development is proposed to be located off Amelia Church Road. At this time, this will be the only entrance/exit into the development. A stub-out to the property to the north (Parrish Property) is proposed as a part of this subdivision to provide future cross access and to meet the access requirements of the UDC.

CONSIDERATIONS:

- The applicant is requesting Preliminary Subdivision Plat approval for a 22 lot single-family residential subdivision.
- Planning Board shall make a recommendation to Town Council.
- This plan is subject to final approval by Town Council.

FINDINGS:
The applicant has addressed the Major Subdivision Approval Criteria outlined in UDC Section 155.706.

CONDITIONS OF APPROVAL:

If approved, staff recommends the following conditions be applied to the approval of the preliminary subdivision plan for the Kyli Knolls Subdivision (2018-62-SD):

1. The conflict between the 30' access easement, the proposed site entrance and Amelia Church Road shall be resolved prior to final subdivision approval / platting of the property.

2. The final design of the mail kiosk shall be reviewed and approved by the Inspections department, prior to final plat recordation.

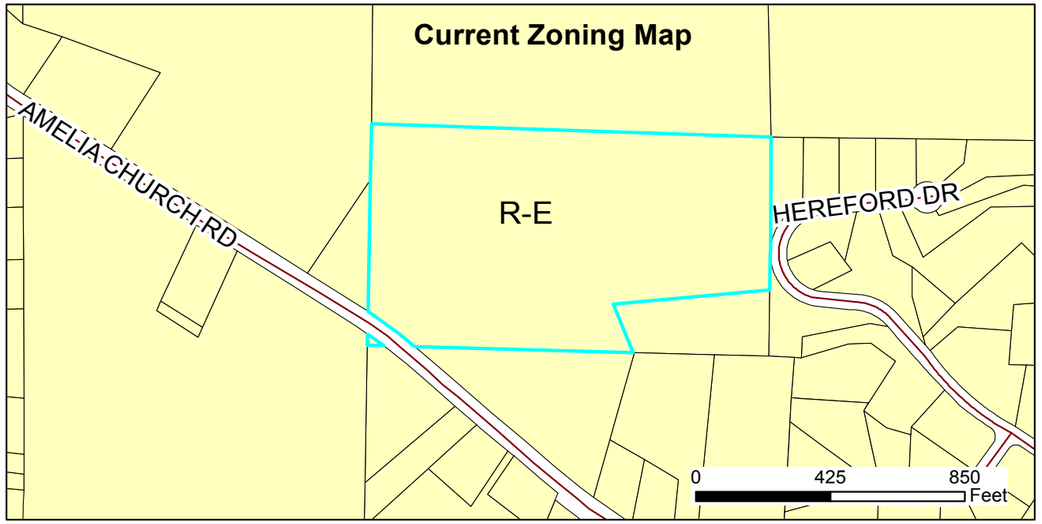
3. A left-turn lane into the development shall be constructed on Amelia Church Road prior to issuance of the first Certificate of Occupancy.

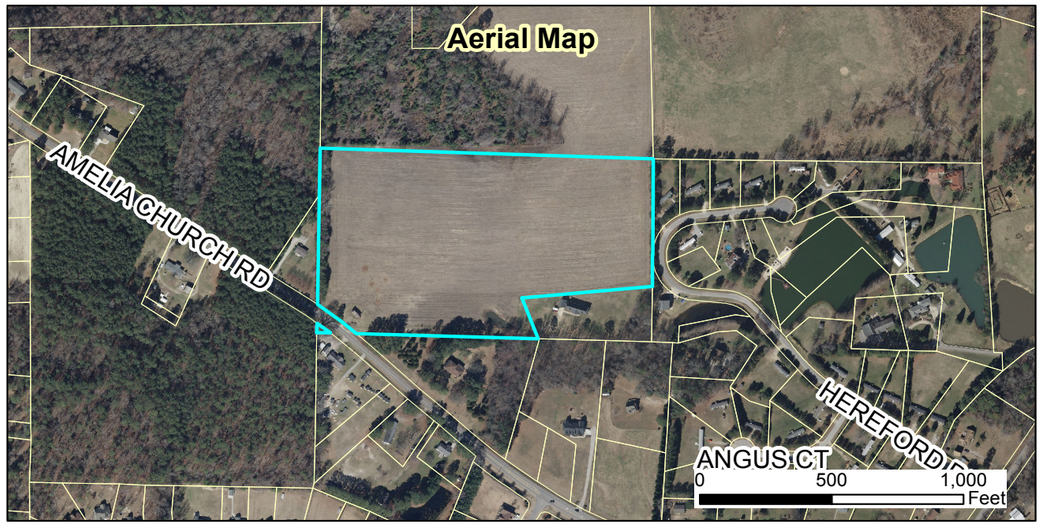
4. The Class “A” landscape buffer along Amelia Church Road shall not encroach into safe sight triangles or the adjacent existing 30’ access easement.

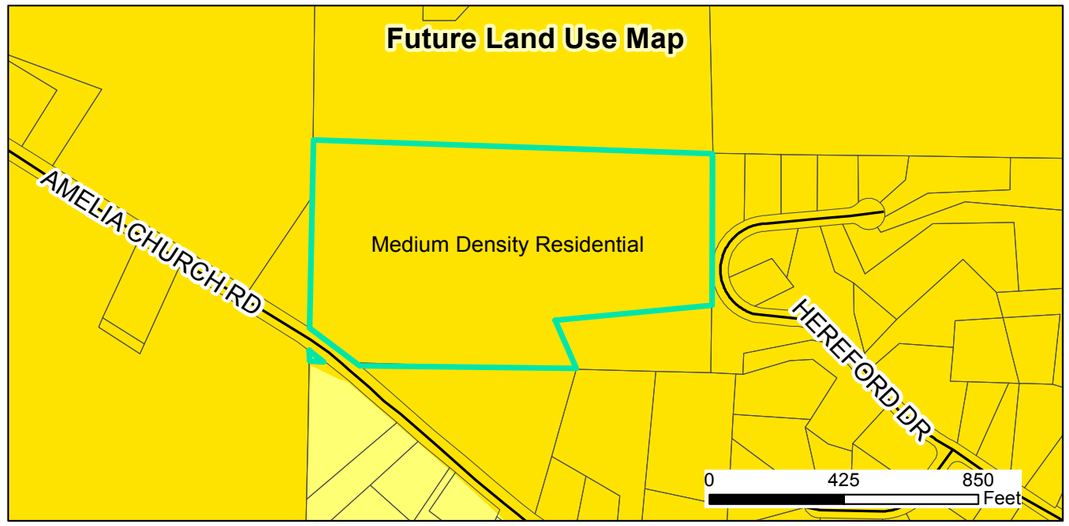
5. The Class “A” landscape buffer along Amelia Church Road shall be installed prior to issuance of the first Certificate of Occupancy.

ATTACHMENTS:

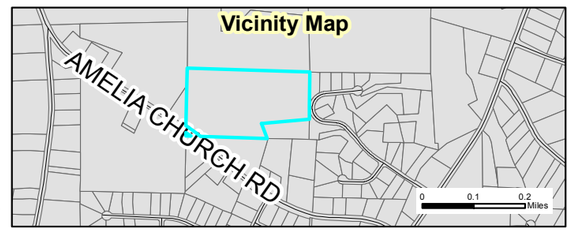
1.) Staff report
2.) Maps
3.) Application
4.) Neighborhood Meeting Materials
5.) Site Plan







2018-62-SD Kyli Knolls Major Subdivision
Request: To develop 22 single-family residential lots
Applicant: True Line Surveying
Property Owners: Full Spectrum Custom Homes
Parcel ID: 165803-23-2656
Tag #: 05G03009A



08/16/18
Produced by: TOC Planning
Disclaimer: Town of Clayton assumes no legal responsibility for the information represented here.
Document Path: O:\PLANNING\SUBDIVISIONS\MAJOR SUBDIVISIONS\2018\2018-62-SD Kyli Knolls Subdivision\Maps\StaffReportMap- 2018-62-SD Kyli Knolls.mxd

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 SITE PLAN APPLICATION

Pursuant to Article 7, Section 155.707 of the Unified Development Code, an owner of land within the jurisdiction of the Town (or a duly authorized agent) may petition the Planning Board to approve a Major Site Plan application. Please complete all fields in this application and submit to the Planning Department with all required materials.

Application fee: $500.00 + $5.00 per acre. *All fees are due when the application is submitted.*

SITE INFORMATION

☒ New Major Site Plan ☐ Major Modification to an approved site plan
Project Modified: _____

Name of Project: Stephenson Mixed-Use Building **Acreage of Property:** 0.19 AC

County Tag #: 05011043 **NC PIN:** 166917-21-0311

Address/Location: West corner of Main Street and Smith Street

Existing Use: Vacant **Proposed Use:** Mixed Use Building

Zoning District: B-1

Is project within a Planned Development? ☒ No ☐ Yes (list): _____

Is project within an Overlay District? ☒ No ☐ Yes (list): _____

FOR OFFICE USE ONLY

Date Received: RECEIVED AUG 01 2018 TOWN OF CLAYTON PLANNING DEPARTMENT Amount Paid: $505 File Number: 2018-160-SP

PROPERTY OWNER INFORMATION

Name: Gene Carlton Stephenson, Jr. & Anna Toler Stephenson

Mailing Address: 1950 Sanders Rd, Willow Springs, NC 27592

Phone Number: 919-901-3632 **Fax:** N/A

Email Address: sandy@stephensoninsuranceagency.com

APPLICANT INFORMATION

Applicant: Adams & Hodge Engineering, PC

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

Phone Number: 919-763-7278 **Fax:**

Contact Person: Donnie Adams

Email Address: donnie@adamsamdhodge.com

REQUIRED INFORMATION (*to be submitted with the application*)

The following items must accompany a Major Site Plan application.

To be completed by the applicant:			To be completed by staff:		
Submit 9 copies of all materials unless otherwise noted or directed by staff	Yes	N/A	Yes	No	N/A
1. A pre-application conference was held with Town of Clayton staff. Date: _____	☑	☐			
2. I have referenced the *Plan Requirements Checklist* and used this as a guide	☑				
3. Site Plan Review Fee ($500 + $5/acre)	☑				
4. Completed application	☑				
5. Owner's Consent Form	☑	☐			
6. Plan sets meeting the requirements listed in the *Plan Requirements Checklist*	◉	☐			
7. Copy of plan sets in .PDF on USB flash drive	◉	☐			
8. Adjacent property owners list	◉	☐			
9. Wastewater allocation request OR verification of wastewater allocation	☑	◉			
10. Signed and sealed traffic impact analysis (2 copies) *(required for projects which generate at least 100 vehicle trips at peak hour. See §155.708 of the UDC)*	☐	◉			
11. Neighborhood meeting notice letter (1 copy)* *See sample letter and meeting requirements included in this packet* **Not required for subdivisions that are part of an approved planned development*	☐	☐			
12. Neighborhood meeting summary form (1 copy) * *Included in this packet* **Not required for subdivisions that are part of an approved planned development*	Must be submitted after neighborhood meeting is held and at least 10 days prior to Planning Board meeting.				

EXPLANATION OF PROJECT

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

The owner desires to construct a mixed use Building consisting of ground floor office space with upper floors that would be comprised as (3) residential units. Both on-streeet and off-street parking for this site exceed the required parking.

APPLICANT AFFIDAVIT

I/We, the undersigned, do hereby make application and petition to the Planning Board of the Town of Clayton to approve the subject Major Site Plan. 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.

ADAMS & HODGE
Print Name

Signature of Applicant

08/01/18
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

PLAN REQUIREMENTS

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

The following items include general and project information. This information is required to be present on all plans, except where otherwise noted.

Provided			
Yes	**No**	**N/A**	
✓			Consultant Logo Box (name, address, phone number, fax, and e-mail, if applicable)
•			Project/Application Name
•			Type of Plan (site plan, landscape plan, elevations, etc.)
•			Signature and Professional Seal (landscape plans, architectural elevations, engineering plans, surveys)
✓			Revision Date
✓			Sheet Number
✓			Location Map (site plan only)
✓			North Arrow
✓			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	**No**	**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.
✓			The existing topographical conditions of the property with a two-foot contour interval.
	✓		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.
		✓	The existing trees identified by caliper and species (if required by the Planning Department).

SITE PLAN

Provided			
Yes	**No**	**N/A**	
•			Site data table
•			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)
•			Existing use
•			Proposed use
		•	Number of seats/students/fueling positions (as applicable).
•			Number of housing units proposed, per housing unit type.
	•		Existing density (number of units per acre)
•			Proposed density (number of units per acre)
		•	Existing intensity (gross floor area)
•			Proposed intensity (gross floor area)
	•		Floor area ratio

Provided			
Yes	No	N/A	
•			Building coverage (as percentage of total site)
•			Pervious surface area (square feet and 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
		•	Required loading space(s)
•			Provide name of Electric Provider.
•			Provide name of Water Provider.
•			Provide name of Sewer Provider.

The items listed below are required to be delineated (in a tabular format) on the site plan:

Other site plan elements:

Provided			
Yes	No	N/A	
•			Identify adjacent property owners, their parcel ID number, current zoning and present use.
		•	Identify the affected area for amendments to previously approved projects
	•		Overlay (if applicable)
•			Existing use
•			Proposed use
		•	Number of seats/students/fueling positions (as applicable).
			Identify existing easements.
•			Identify proposed easements.
		•	Identify Open Space/Common Areas.
•			Identify clear sight triangle at project ingress/egress points.
	•		Identify driveways, curb and gutter, cross section with ROW.
		•	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.
•			Provide the location and details of refuse collection areas.
		•	Provide the location, size and orientation of freestanding signs.
		•	Identify the location and nature of all recreational facilities and common areas.
•			Identify alternative modes of transportation including school stops pedestrian connections, bicycle paths and associated racks.
		•	Identify proposed phasing (phasing lines) of construction.
		•	Cul-de-sacs must be dimensioned.
		•	Identify cluster mailbox unit (CBU) locations and details.

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 Public Works Engineering Division.

Provided			
Yes	**No**	**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 access 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.
✓			Identify the proposed sanitary sewer collection system (including size) and point of connection. 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.
		✓	Identify proposed grease traps.
✓			Identify backflow prevention.
		✓	If a pool is present, show how it will connect to storm water.
✓			Identify the Utility Plan.
✓			Identify soil erosion control measures including impoundment structures.
		✓	Indicate method of slope stabilization measures for all 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.

Fire Rescue (information to be shown on conceptual engineering plans)

Provided			
Yes	**No**	**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.

LANDSCAPE PLAN

Provided			
Yes	No	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 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	No	N/A	
		✓	Conceptual Lighting Plan
		✓	Identify the light source and provide a detail of the fixture.
			Identify the proposed height of fixtures.

ARCHITECTURAL ELEVATIONS AND FLOORPLAN

Provided			
Yes	No	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.
✓			Indicate the height and number of stories for each structure.
✓			Indicate the location and screening method for all roof mounted structures or equipment.

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: Stephenson Mixed-Use Building **Address or PIN #:** 166917-12-0311

AGENT/APPLICANT INFORMATION:

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

314 E. Main Street
(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 below)***:

Major Site Plan Submittal
Construction Plans
Stephenson Amendments
Final Plats

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:

Gene C. Stephenson, Jr.
(Name - type, print clearly)

(Owner's Signature)

1950 Sanders Road
(Address)

Willow Spring, NC 27592
(City, State, Zip)

STATE OF NC
COUNTY OF Johnston

Sworn and subscribed before me Lesley House, a Notary Public for the above State and County, this the 30th day of July, 2015.

SEAL

LESLEY HOUSE NOTARY PUBLIC JOHNSTON COUNTY, NC

Lesley House
Notary Public
My Commission Expires: 6/7/23

October 2017

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: Major Site Plan Application Date of Mailing: August 23, 2018
Date of Meeting: September 6, 2018 Time of Meeting: 7:00 pm
Location of Meeting: 314 E. 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: Holland Adams Signature: Holland Adams

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.*

Meeting began at 7:15pm. See attendance roster for people who were present. Donnie Adams began the meeting by explaining the Stephenson Building plan. He had maps to show where the building was located and plans of what the building will look like. Sandy Stephenson spoke and explained that there were just a couple of changes from a couple of years ago when he originally submitted this application. 1) The bottom first floor has more glass on the front (due to Clayton overlay) 2) The apartments up top will now be loft apartments. Linda Littman asked: How much parking will you have? Donnie answered by showing on the site plan - 18 total Wayne Littman made...

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

NEIGHBORHOOD MEETING SUMMARY FORM

FILL OUT THE FOLLOWING:

Application: _____ Date of Mailing: _____

Date of Meeting: _____ Time of Meeting: _____

Location of Meeting: _____

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: 2nd pg - Cont'd Signature: _____

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.*

a comment that it looks like they have utilized all of their space nicely on the plan. Wayne Lithman asked what the dimensions of the building were. Sandy and Donnie answered by showing the site plan. Everyone at meeting agreed this would be a nice addition to Downtown Clayton. Donnie Adams asked if anyone had any more questions. There were none. The meeting was adjourned at 7:45 pm.

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

NEIGHBORHOOD MEETING ATTENDANCE ROSTER

Project: Sandy Stephenson Building

Application: Major Site Plan Application

Location/Date: 314 E. Main St. Clayton - Sept. 6 @ 7:00pm

	NAME	ADDRESS
1	Linda Littmann	407 Stonebrook Drive Clayton, NC 27520
2	Wayne Littmann	407 Stonbrook DR, Clayton NC
3	GENE C "SANDY" STEPHENSON	1950 SANDERS RD WILLOW SPRING NC 27592
4	DENNIS ADAMS	404 SWANN TRAIL, CLAYTON
5	Holland Adams	404 Swann Tr. Clayton.
6		
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18		
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20		

ADAMS & HODGE
ENGINEERING, PC

August 23, 2018

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: **Thursday, September 6, 2018**

Meeting Time: **7:00 p.m.**

Meeting Location: **314 E. Main Street**
Clayton, NC 27520

Type of Application: **Major Site Plan Application**

Project/proposal property location: **West Corner of Main Street and Smith Street**

Description of project/proposal: **The proposed project is a mixed-use building.**

At a minimum, the following will be available for your inspection at the Neighborhood Meeting:

1. A copy of the project application.
2. A map, drawing, or other depiction of the proposed land use change or development proposal.
3. A map at a scale that is appropriate to the project and shows neighboring properties and roads.

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***.

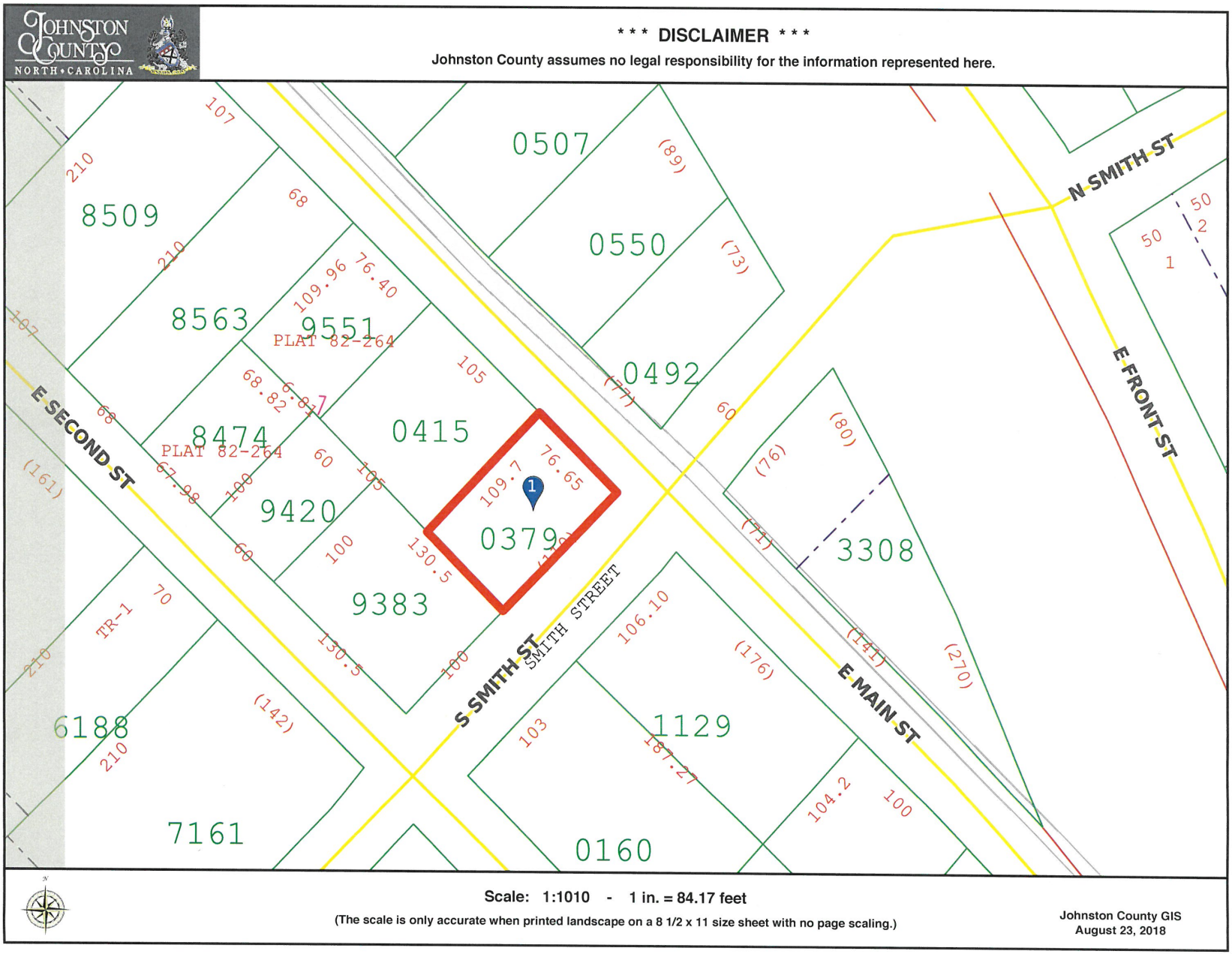
You may also contact the Planning Department at 919-553-5002.

Sincerely,

Donald C. Adams, Jr., PE

NORTH CAROLINA PROFESSIONAL SEAL 25469 ENGINEER DONALD C. ADAMS, JR.

Cc: Town of Clayton Planning Dept.


JOHNSTON COUNTY
NORTH CAROLINA
*** DISCLAIMER ***
Johnston County assumes no legal responsibility for the information represented here.
N SMITH ST
E FRONT ST
E SECOND ST
S SMITH ST
SMITH STREET
E MAIN ST
8509
8563
9551
PLAT 82-264
8474
PLAT 82-264
9420
9383
0507
0550
0492
0415
0379
3308
1129
0160
7161
6188
TR-1
Scale: 1:1010 - 1 in. = 84.17 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 23, 2018

JOHNSTON COUNTY NORTH • CAROLINA

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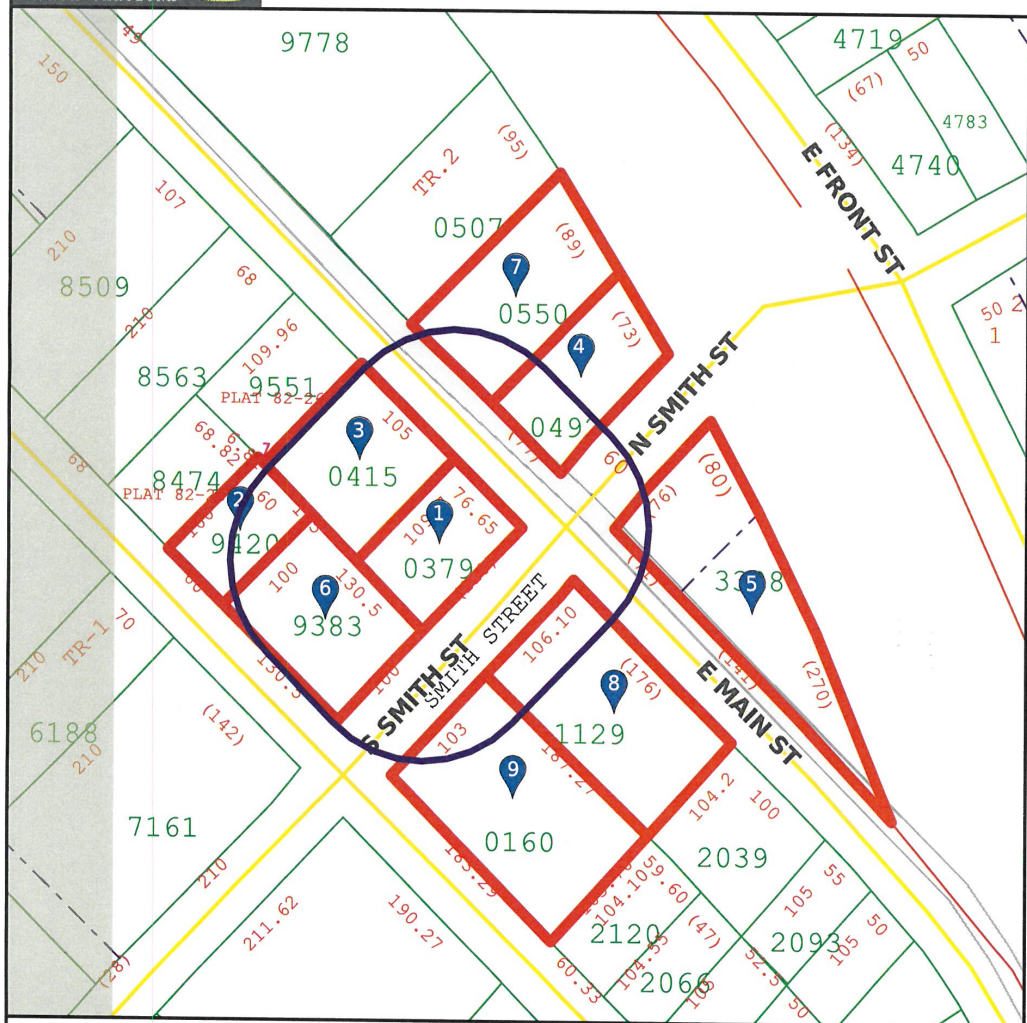

Result 1

id: 05011043
Tag: 05011043
Owner Name 1: STEPHENSON, GENE CARLTON JR
Owner Name 2: STEPHENSON, ANNA TOLER
Mail Address 1: 1950 SANDERS RD
Mail Address 2:
Mail Address 3: WILLOW SPRING, NC 27592-9190
Book: 04468
Page: 0719

Result 2

id: 05011026
Tag: 05011026
Owner Name 1: GORMAN, PAUL
Owner Name 2: GORMAN, ABRIAL M.
Mail Address 1:
Mail Address 2: PO BOX 538
Mail Address 3: CLAYTON, NC 27528-0538
Book: 04848
Page: 0017

Scale: 1:1485 - 1 in. = 123.74 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 23, 2018

JOHNSTON COUNTY NORTH • CAROLINA

*** DISCLAIMER ***

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Result 3

id: 05011027
Tag: 05011027
Owner Name 1: NGUYEN, PHU
Owner Name 2: NGUYEN, DIEM TRINH
Mail Address 1: 473 EAST MAIN STREET
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 02663
Page: 0349

Result 4

id: 05011029A
Tag: 05011029A
Owner Name 1: PRICE KORNEGAY LLC
Owner Name 2:
Mail Address 1: 482 E MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2529
Book: 02395
Page: 0318

Result 5

id: 05037016
Tag: 05037016
Owner Name 1: LITTMANN, RANDALL W
Owner Name 2: LITTMANN, LINDA H
Mail Address 1: 407 STONEBROOK DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 03057
Page: 0593

Result 6

id: 05011028
Tag: 05011028
Owner Name 1: BOLL WEEVIL LLC
Owner Name 2:
Mail Address 1: 472 E SECOND ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 03743
Page: 0737

Result 7

id: 05011031B
Tag: 05011031B
Owner Name 1: DALTON, JERRY T
Owner Name 2: DALTON, BETTY JO
Mail Address 1: 400 LEE RD
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0426
Book: 01578
Page: 0641

Result 8

id: 05009001
Tag: 05009001
Owner Name 1: HOWARD, EMORY F
Owner Name 2: HOWARD, JOSEPHINE G
Mail Address 1: 205 HOLLY CIRCLE
Mail Address 2:
Mail Address 3: CLAYTON, NC 27527-0000
Book: 03675
Page: 0398

Result 9

id: 05009014
Tag: 05009014
Owner Name 1: COBLE, THOMAS
Owner Name 2:
Mail Address 1: 502 E 2ND ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2632
Book: 05038
Page: 0558

JOHNSTON COUNTY NORTH • CAROLINA

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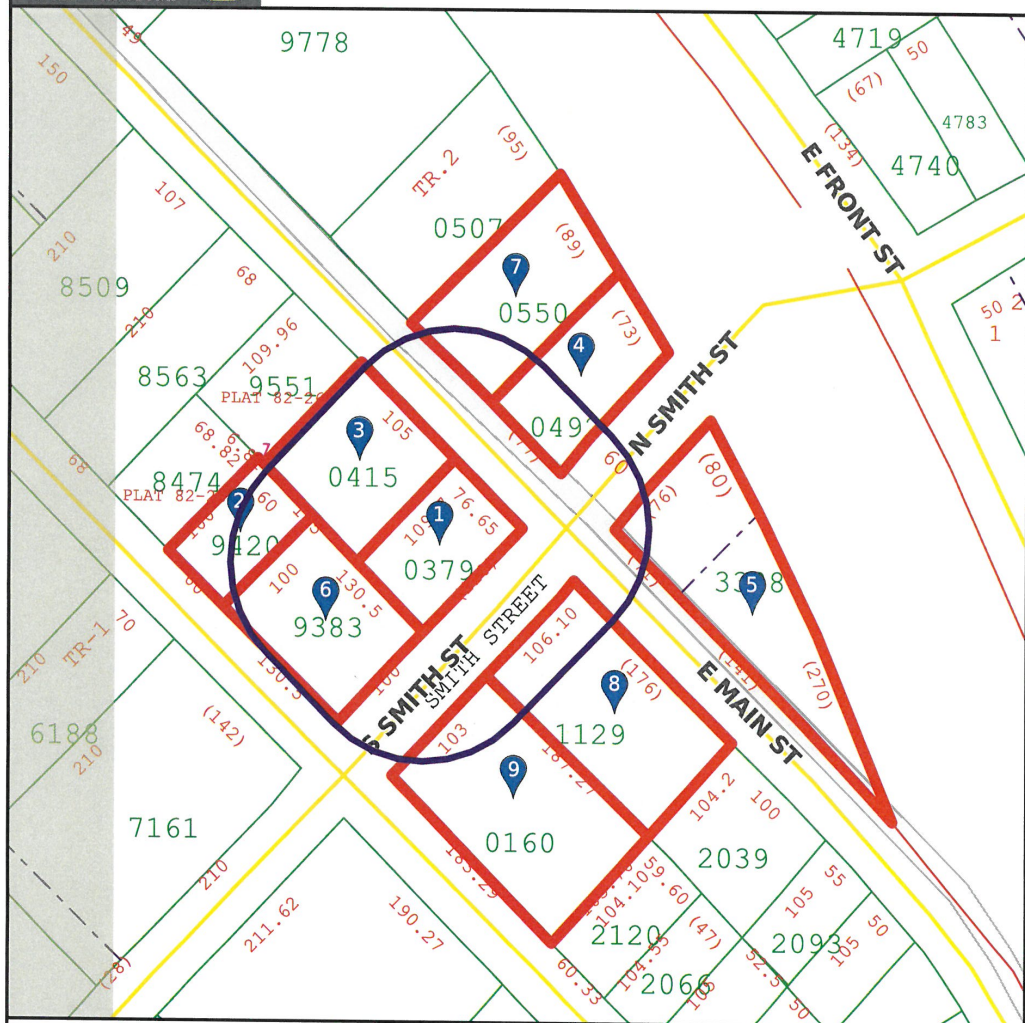

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Owner Name 2: GORMAN, ABRIAL M.
Mail Address 1:
Mail Address 2: PO BOX 538
Mail Address 3: CLAYTON, NC 27528-0538
Book: 04848
Page: 0017

Scale: 1:1485 - 1 in. = 123.74 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 23, 2018

JOHNSTON COUNTY NORTH•CAROLINA

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Mail Address 3: CLAYTON, NC 27520-0000
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Tag: 05011029A
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Owner Name 2:
Mail Address 1: 482 E MAIN ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2529
Book: 02395
Page: 0318

Result 5

id: 05037016
Tag: 05037016
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Owner Name 2: LITTMANN, LINDA H
Mail Address 1: 407 STONEBROOK DR
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 03057
Page: 0593

Result 6

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Tag: 05011028
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Owner Name 2:
Mail Address 1: 472 E SECOND ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0000
Book: 03743
Page: 0737

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Tag: 05011031B
Owner Name 1: DALTON, JERRY T
Owner Name 2: DALTON, BETTY JO
Mail Address 1: 400 LEE RD
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-0426
Book: 01578
Page: 0641

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Owner Name 1: HOWARD, EMORY F
Owner Name 2: HOWARD, JOSEPHINE G
Mail Address 1: 205 HOLLY CIRCLE
Mail Address 2:
Mail Address 3: CLAYTON, NC 27527-0000
Book: 03675
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Result 9

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Tag: 05009014
Owner Name 1: COBLE, THOMAS
Owner Name 2:
Mail Address 1: 502 E 2ND ST
Mail Address 2:
Mail Address 3: CLAYTON, NC 27520-2632
Book: 05038
Page: 0558

MAJOR SITE PLAN SUBMITTAL

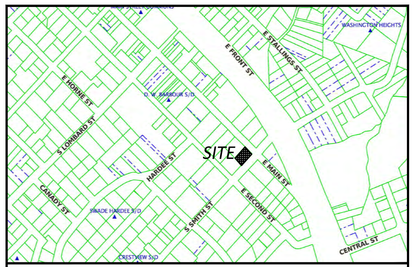
FOR

STEPHENSON
MIXED USE BUILDING
OFFICE/RESIDENTIAL

IN

CLAYTON, NORTH CAROLINA

Received by Town of Clayton
9/5/2018



SITE VICINITY MAP
NOT TO SCALE

PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15405 DONALD C. ADAMS, JR.

REVISED
8:59 am, Sep 04, 2018

SHEET INDEX

SHEET TITLE	SHEET No.
BOUNDARY SURVEY	BM1
EXISTING CONDITIONS	SP1
SITE PLAN	SP2
UTILITY PLAN	SP3
GRADING PLAN	SP4
LANDSCAPE PLAN	SP5
REGULATORY STANDARDS	SP6
ARCHITECTURAL DRAWINGS	A1-A6

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592

CONTACT/AGENT: DONNIE C. ADAMS, PE
919 763-7278

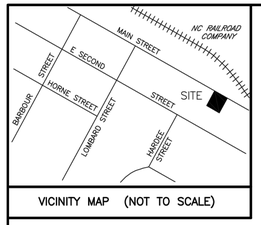
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
919-763-7278 donnie@adamsandhodge.com
FIRM # C-4187

STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

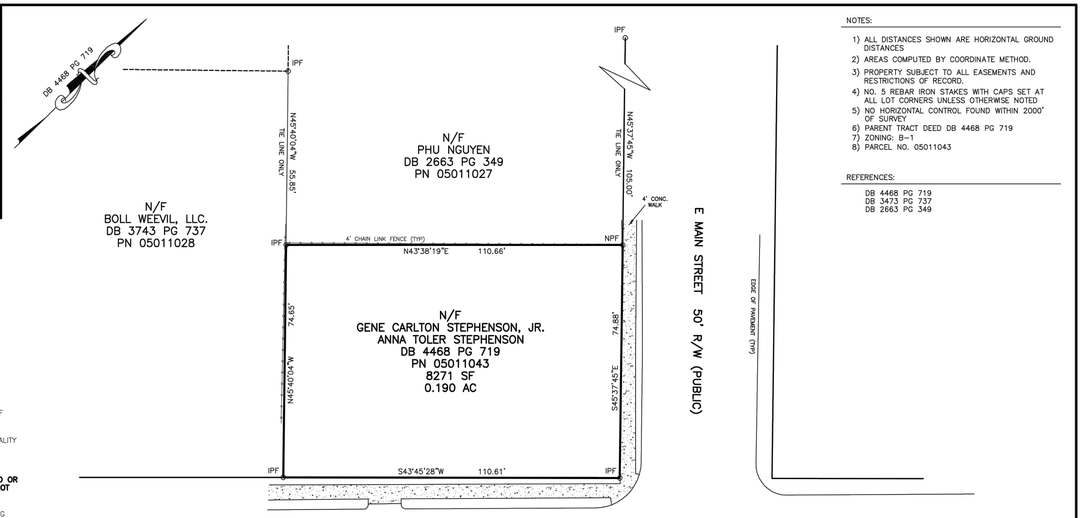
August 1, 2018
**SEPTEMBER 4, 2018 PER TOWN COMMENTS*

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

T.O.C. PROJECT: 2018- 160-SP



VICINITY MAP (NOT TO SCALE)



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) PARENT TRACT DEED DB 4468 PG 719
7) ZONING: B-1
8) PARCEL NO. 05011043

REFERENCES:

DB 4468 PG 719
DB 3473 PG 737
DB 2663 PG 349

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 4468, PAGE 719 ETC.); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK 4468, PAGE 719; 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 31ST DAY OF JULY, A.D., 2018

NORTH CAROLINA PROFESSIONAL SEAL L-3990 LAND SURVEYOR CURK T. LANE

SURVEYOR

L - 3990
LICENSE NUMBER

0 20 40 60
SCALE: 1" = 20'

PROPERTY SHOWN HEREON IS XXXX IS NOT LOCATED IN A FEMA DESIGNATED FLOOD ZONE.
FEMA FLOOD HAZARD PANEL NO. 3720166900 K
EFFECTIVE DATE: APRIL 30, 2014

OWNER: GENE CARLTON STEPHENSON, JR.
ANNA TOLER STEPHENSON
1950 SANDERS ROAD
WILLOW SPRING, N.C. 27592

LEGEND

○	IPF	IRON PIPE FOUND
●	IPS	IRON PIPE SET
□	CMF	CONCRETE MONUMENT FOUND
◇	PKNF	PARKER-KALON NAIL FOUND
●	PNKS	PARKER-KALON NAIL SET
○	RRS	RAILROAD SPIKE
○	CSF	COTTON SPIKE FOUND
●	CSS	COTTON SPIKE SET
○	CC	CONTROL CORNER
△	CP	COMPUTED POINT
	P/P	POWER POLE
	OPW	OVERHEAD POWER LINE
	R/W	RIGHT OF WAY
	S.F.	SQUARE FEET
	AC	ACRES
	DB	DEED BOOK
	PB	PLAT BOOK
	BOM	BOOK OF MAPS
	PG	PAGE
	LF	LINEAR FEET
	15S	LOT HAS OFFSITE SEWER
	15RL	LOT HAS RECREATION LOT
	15R	RECREATION LOT
	100	STREET ADDRESS
	-------	LINES NOT SURVEYED

BOUNDARY SURVEY
FOR

GENE CARLTON STEPHENSON, JR.
AND
ANNA TOLER STEPHENSON

CLAYTON TOWNSHIP, JOHNSTON COUNTY
NORTH CAROLINA
JULY 31, 2018

SURVEYED BY:	TLS
DRAWN BY:	MIKE
CHECKED BY:	CURK
DRAWING NAME:	BOUNDARY.DWG
SURVEY DATE:	6-15-18
JOB NO.	2359.001

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
dennis@adamsandhodge.com
919-763-7278
FIRM # C-4187

REVISIONS:

SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

BOUNDARY SURVEY

DESIGN
DRAWN: ADS
CHECKED: DOI
HORIZONTAL SCALE: SEE GRAPHIC SCALE
VERTICAL SCALE: N/A
DATE: 07/27/2018
JOB NO.: AH-
SHEET: BM1

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS, PE
919 763-7278

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 15405 ENGINEER DONALD C. ADAMS, JR.

REVISED
9:06 am, Aug 31, 2018

N/F JAMES H. COBLE/DORIS A. COBLE
ID: 05009014
TAX ID: 4222732
PIN: 166917-21-0160
ZONING: O&I
BOOK: 03857/PAGE: 0784

N/F BOLL WEEVIL, LLC
ID: 05011028
TAX ID: 4152670
PIN: 166917-11-9215
ZONING: B-1
BOOK: 03743/PAGE: 0737

SMITH STREET

SUBJECT PROPERTY LINE

EXISTING CHAIN LINK FENCE (TYP)

EXISTING DRIVEWAY CUT

EXISTING SIDEWALK

R/W LINE

N/F
GENE CARLTON STEPHENSON, JR/
ANNA TOLER STEPHENSON
TAX ID: 4304724
PIN: 166917-21-0311
BOOK/PAGE: 04468/0719
ZONING: B-1
AREA: 0.19 AC
CURRENT USE: VACANT

N/F PHU NGUYEN/DIEM TRINH NGUYEN
ID: 05011027
TAX ID: 4189008
PIN: 166917-11-9348
ZONING: B-1
BOOK: 02663/PAGE: 0349

N/F EMORY F. HOWARD/ JOSPHINE G. HOWARD
ID: 05009001
TAX ID: 4222712
PIN: 166917-21-1129
ZONING: B-1
BOOK: 03675/ PAGE: 0398

R/W LINE

EXISTING SIDEWALK

SIGN

POWER POLE W/ GUY

POWER POLE W/ GUY

EX. SSMH
TOP=333.65
INV IN=320.65
INV OUT=320.50

EX. MH

EX. SAN. SEWER LINE

MAIN STREET

EX. MH

EX. WATER LINE

EX. WV

EX. FH

N/F RANDALL W. LITTMAN/ LINDA H. LITTMAN
ID: 05037016
TAX ID: 4223966
PIN: 166917-21-3308
ZONING: O&I
BOOK: 03057/PAGE: 0593

N/F PRICE KORNEGAY, LLC
ID: 05011029A
TAX ID: 4215892
PIN: 166917-21-0492
ZONING: B-1
BOOK: 02395/PAGE: 0318

NAD83

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

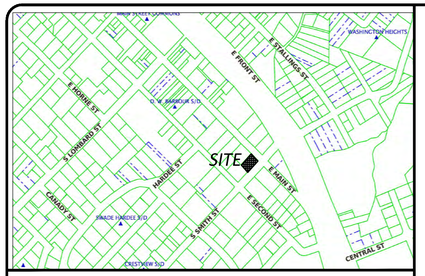
ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-763-7278
FIRM # C-4187

REVISIONS:
1. 08/09/18 PER TOWN COMMENTS

SANDY STEPHENSON MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

EXISTING CONDITIONS

DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/27/2018
JOB NO.	AH--
SHEET	SP1



SITE VICINITY MAP

NOT TO SCALE

STEPHENSON MIXED-USE BUILDING SITE DATA CHART	
PARCEL OWNER	GENE CARLTON STEPHENSON, JR. & ANNA TOLER STEPHENSON
PARCEL OWNER ADDRESS	1950 SANDERS ROAD, WILLOW SPRING, NC 27593
PARCEL IDENTIFICATION	166917-21-0311
PROPERTY SIZE (SF)	0.19 ACS / 8,276.4 SF
PROPERTY LOCATION	TOWN LIMITS
EXISTING/PROPOSED ZONING	B-1 / B-1
EXISTING USE	VACANT
PROPOSED USE	MU-COMMERCIAL/RESIDENTIAL
RESIDENTIAL HOUSING UNITS	3 UNITS
PROPOSED INTENSITY (GROSS FLOOR AREA IN SF)	6,206.4 SF/ 0.14 ACS (2070 SF)
FLOOR AREA RATIO	1ST FLOOR=2070 SF, 2ND FLOOR= 1419 SF, 3RD FLOOR=581 SF
PROPOSED DENSITY	TOTAL 1 UNITS/10.85 ACS = 9.49 UNITS/AC
BUILDING COVERAGE (AS % OF TOTAL SITE)	25%
PERVIOUS AREA (AS % OF TOTAL SITE)	706.4 SF / 9%
PROPOSED IMPERVIOUS AREA	7,570 SF / 91%
BUILDING HEIGHT (NUMBER OF STORIES & FEET)	3 STORIES / 37'
ELECTRIC PROVIDER	TOWN OF CLAYTON
WATER PROVIDER	TOWN OF CLAYTON
SEWER PROVIDER	TOWN OF CLAYTON

NO FLOOD PLAIN EXISTS AS PER FEMA FIRM PANEL 3720166900K DATE 06/20/2018

NOTE:
1. *THE BUILDING WILL INCLUDE A SPRINKLER SYSTEM WITH A RISER ROOM*
2. *A F.D.C. WILL BE PROVIDED ON THE BUILDING*

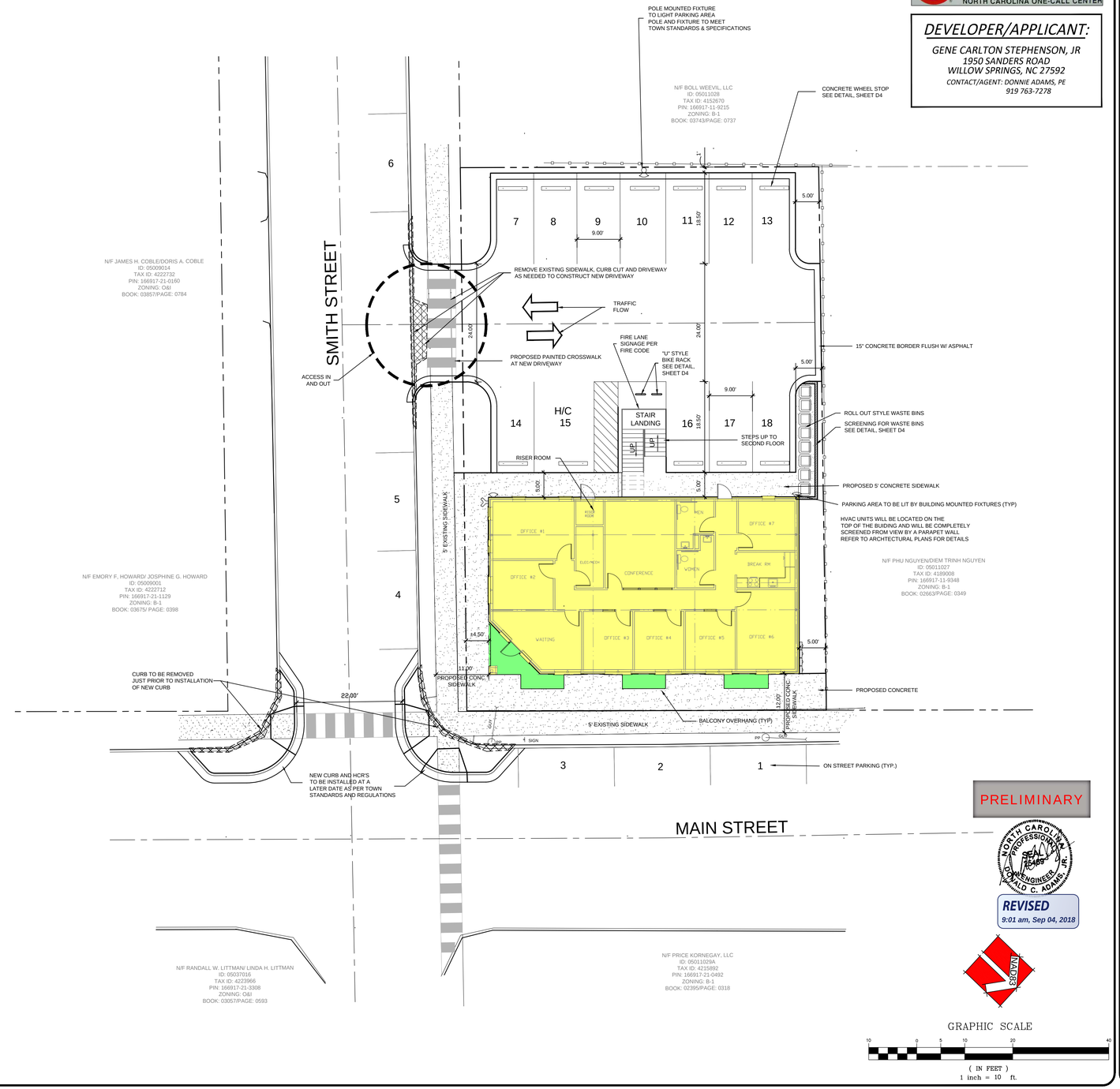
PARKING REQUIREMENTS

REQUIRED PARKING FOR OFFICE: 1 SPACES / 300 SF (AS PER 155.401(C)(2) TABLE 4-2) 2070 SF/ 300 = 7 SPACES INCLUDING 1 ACCESSIBLE PARKING SPACE AS PER ADA PARKING REQUIREMENTS.

REQUIRED PARKING FOR RESIDENTIAL UNITS: 1 SPACES / UNIT (AS PER 155.401(C)(2) TABLE 4-2) = 3 SPACES

TOTAL REQUIRED PARKING SPACES = 10 SPACES INCLUDING 1 ACCESSIBLE PARKING SPACE.

PROPOSED # OF PARKING SPACES: 18 (INCLUDES 1 ACCESSIBLE PARKING SPACE AS PER ADA PARKING REQUIREMENTS)



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS, PE
919 763-7278

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 21409 ENGINEER DONALD C. ADAMS, JR.

REVISED
9:01 am, Sep 04, 2018

REVISIONS:
1. *PER TOWN COMMENTS*

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-763-7278
FIRM # C-4187

SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

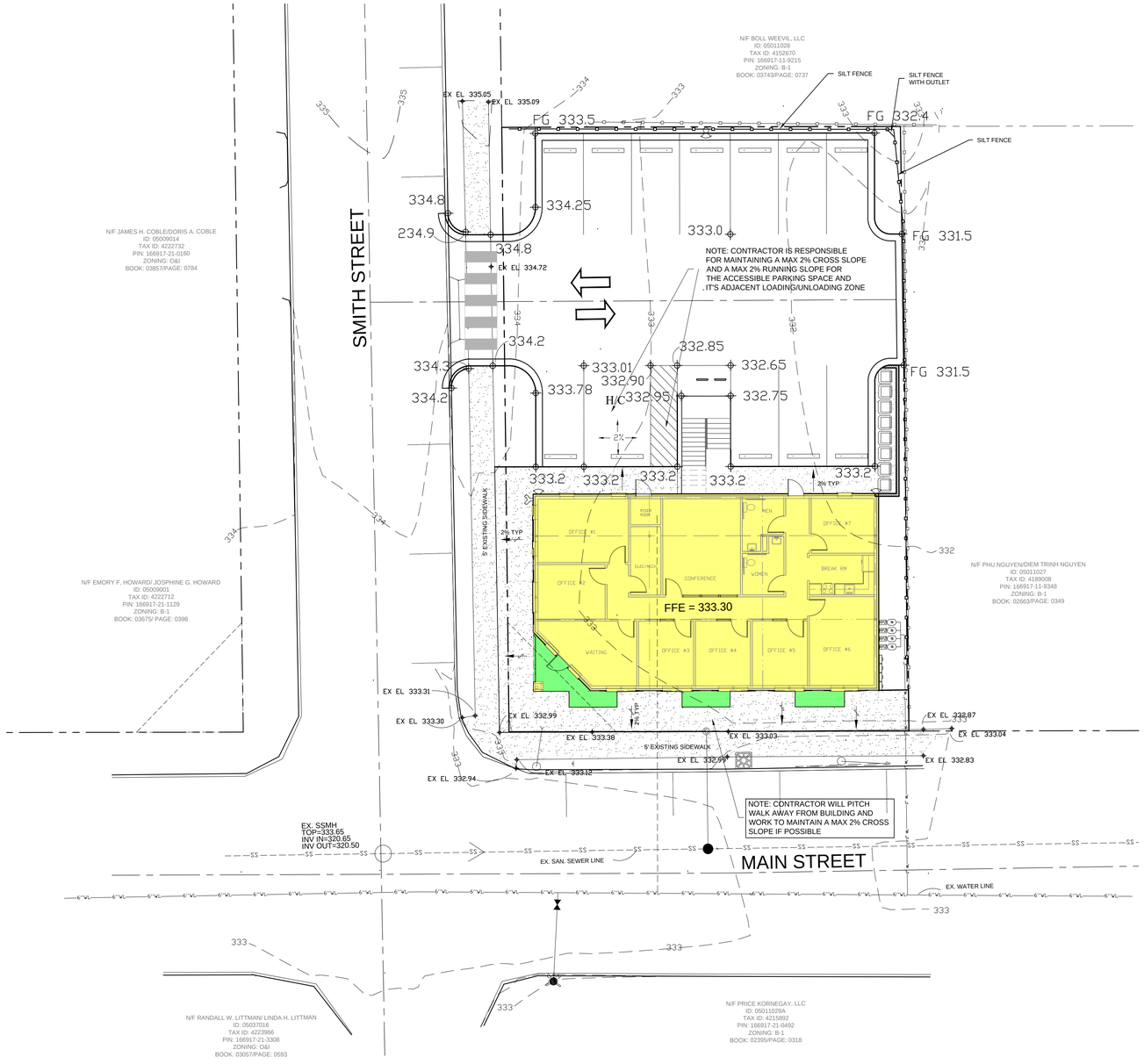
SITE PLAN

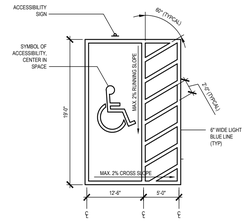
DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/27/2018
JOB NO.	AH~
SHEET	SP2

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS, PE
919 763-7278





ACCESSIBLE PARKING DETAIL
AS PER 155.401(C)(3)(b) OF THE
TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE

NOTE: THE GRADING/PAVING CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A MAXIMUM 2% CROSS SLOPE AND A MAXIMUM 2% RUNNING SLOPE FOR THE ACCESSIBLE PARKING SPACE AND IT'S ACCOMPANYING LOADING/UNLOADING ZONE.

THE TOWN OF CLAYTON AND/OR JOHNSTON COUNTY RESERVE THE RIGHT TO MODIFY THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE EXISTING PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.

PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 25489 ENGINEER DONALD C. ADAMS, JR.

REVISED
1:10 pm, Sep 04, 2018

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-763-7278
FIRM # C-4187

REVISIONS:

SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

GRADING PLAN

DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/27/2018
JOB NO.	AH--
SHEET	SP3

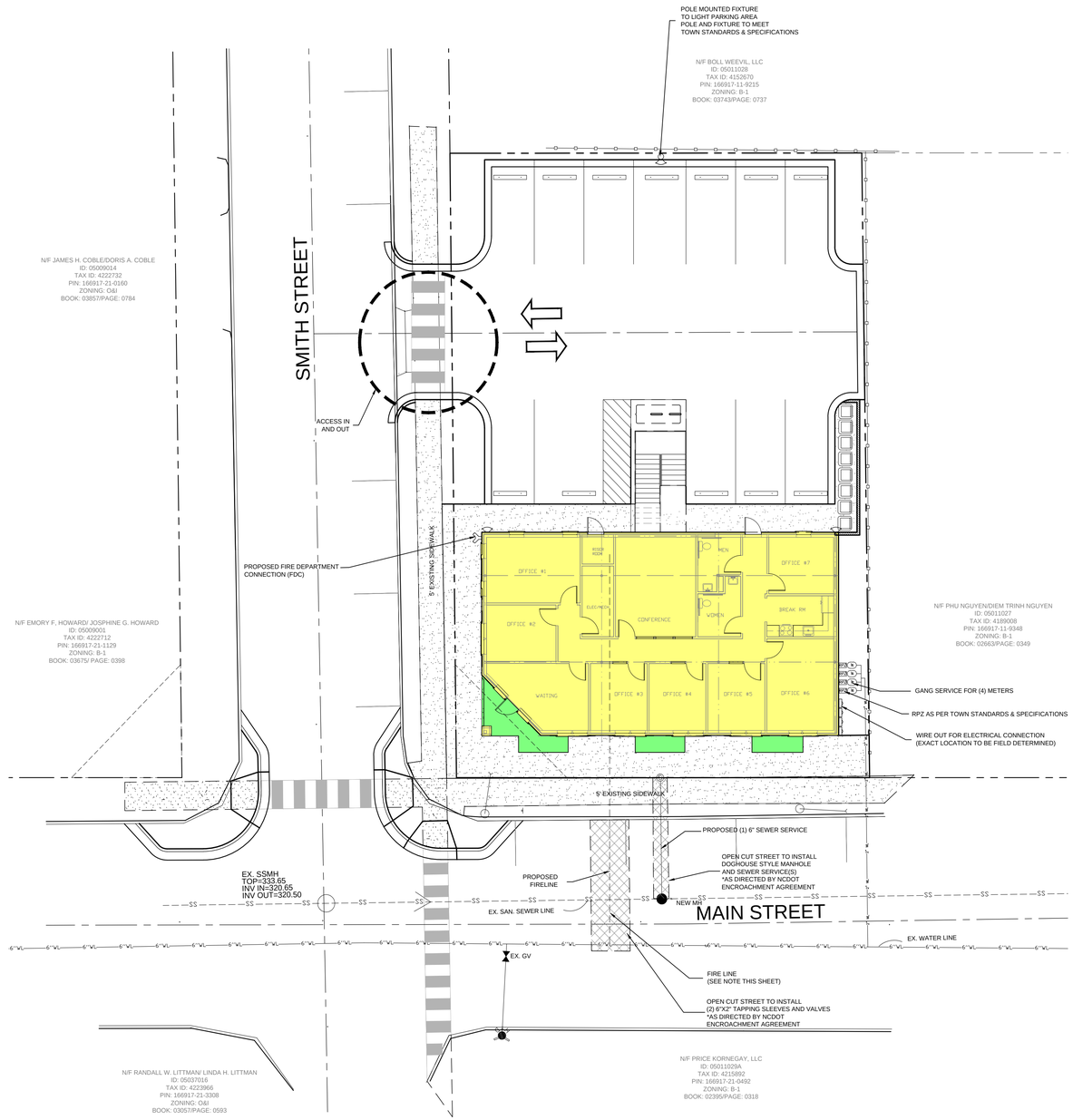
CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS, PE
919 763-7278

FIRE LINE NOTE

TYPE "K" COPPER IS TO BE USED BETWEEN WATER MAIN TAP & THE WATER SETTER



PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 15409 ENGINEER DONALD C. ADAMS, JR.

REVISED
1:11 pm, Sep 04, 2018

GRAPHIC SCALE

10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

ADAMS & HODGE ENGINEERING, PC
314 East Main Street
Clayton, NC 27520
919-763-7278
donnie@adamsandhodge.com
FIRM # C-4187

REVISIONS:

SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

UTILITY PLAN & PROFILE

DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	1"=4'
DATE	07/27/2018
JOB NO.	AH--
SHEET	SP4

Plant List

PLANT LIST

ALIAS	QTY.	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS
QS	2	QUERCUS SHUMARDII	SHUMARD OAK	2.5"	8' MIN.	-	B & B	
CCF	1	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY REDBUD	2"	6'	-	B & B	
LCR	9	LOROPETALUM CHINENSE 'RUBY'	RUBY LOROPETALUM	-	30" MIN.	-	CONT	
AGLR	9	ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD ABELIA	-	12" MIN.	-	CONT	
LAWN AREAS: SEEDED WITH TARHEEL II TALL FESCUE (NOTE: OWNER MAY SUBSTITUTE BERMUDA, CENTIPEDE OR ZOYSIA SOD AS DESIRED)								

1. ALL PLANTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH TOWN OF CLAYTON RULES, REGULATIONS AND REQUIREMENTS AND, AT THE LEAST, MEET THE TOWN'S MINIMUM REQUIREMENTS FOR CODE COMPLIANCY

2. 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

3. THE LANDSCAPE CONTRACTOR SHALL ADJUST ANY SCREEN PLANTING AS NEEDED TO MAINTAIN REQUIRED CLEARANCES AROUND TRANSFORMERS, GENERATORS AND OTHER UTILITIES THAT REQUIRE CLEARANCES FOR ACCESS

4. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DESIGN-BUILD IRRIGATION PLAN FOR THIS PROJECT TO THE OWNER FOR REVIEW AND ACCEPTANCE. REFER TO SHEET LS2.00 FOR IRRIGATION DIRECTIVES

NOTES:

1. THE PLANTING PROCES IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.

2. FOR SINGLE STEM TREES, DO NOT SUPPLY TREES WITH MULTIPLE LEADERS, ONLY PROVIDE TREES WITH A SINGLE LEADER. DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS AND TO INSURE COMPLIANCE WITH SIGHT DISTANCE STANDARDS.

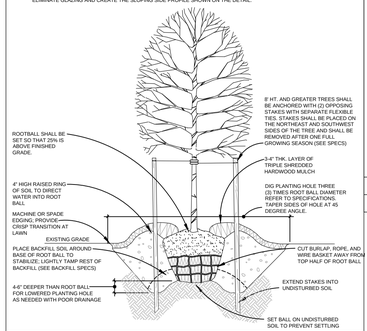
3. MARK THE NORTH SIDE OF THE TREE AT THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.

4. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4" TO 6" OVER THE ENTIRE BED AREA.

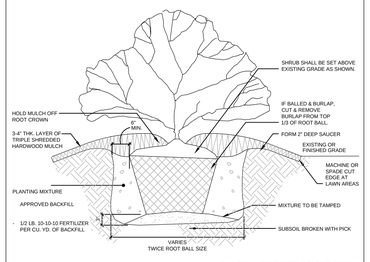
5. FOR CONTAINER-GROWN TREES, SET THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.

6. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.

7. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER, BREAKING DOWN THE SIDES WITH A SHOVEL TO ELIMINATE GLAZING AND CREATE THE SLOPING SIDE PROFILE SHOWN ON THE DETAIL.

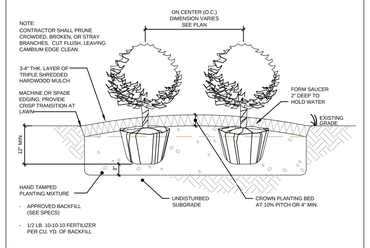


TYPICAL TREE INSTALLATION — SCALE: NTS — 4

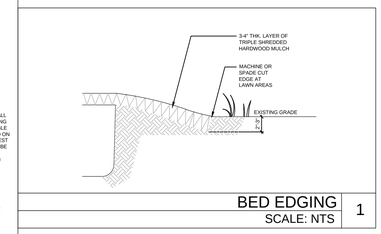


*FOR BOTH CONTAINER OR B&B SHRUBS

*TYPICAL SHRUB INSTALLATION — SCALE: NTS — 3

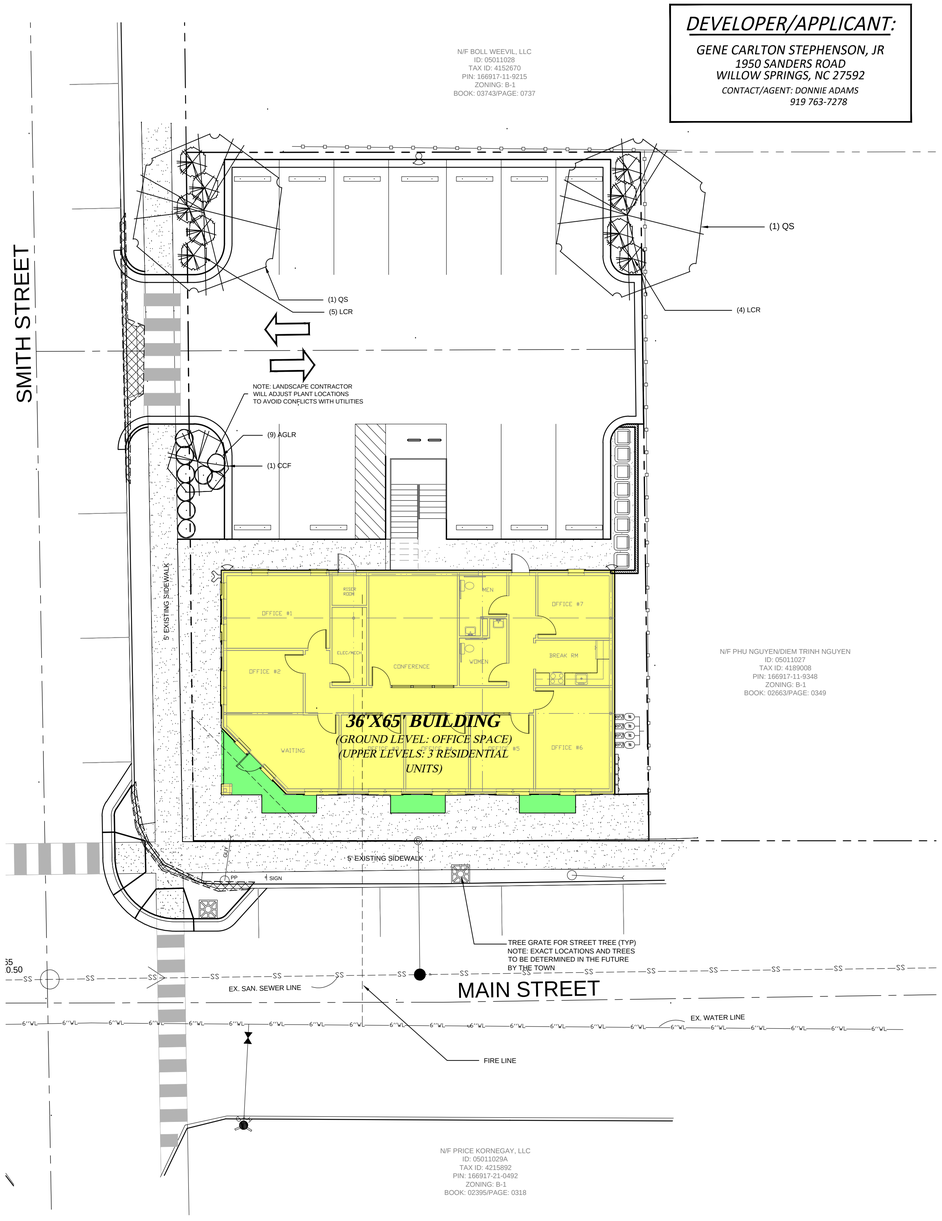


MASSING PLANT INSTALLATION — SCALE: NTS — 2



BED EDGING — SCALE: NTS — 1

NOTES:
1. ALL ROOF, GROUND, AND WALL MOUNTED MECHANICAL EQUIPMENT SHALL BE COMPLETELY SCREENED FORM VIEW. 155.402(G)(2).
2. THE DUMPSTER ENCLOSURE SHALL MATCH THE MATERIALS OF THE PRIMARY STRUCTURE. 155.(G)(2) SEE DETAIL ON SHEET SP09.
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. (IF IRRIGATION WILL NOT BE UTILIZED, DROUGH-TOLERANT SPECIES MUST BE USED).
4. ALL LANDSCAPED AREA SHALL BE MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED IN A TIMELY FASHION.



CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:
GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS
919 763-7278

Landscape Notes

GENERAL LANDSCAPE NOTES

1. ALL PLANT MATERIALS AND PLANTING BEDS SHALL BE LOCATED BY SCALED DIMENSIONS FROM BUILDINGS, CURBS, PAVEMENTS, ETC. LOCATION OF ALL PLANTS SHALL BE REVIEWED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE FOR REVIEW.

2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR PLANTING AND SHALL BE RESPONSIBLE FOR THEIR REPAIR OR PAY FOR ALL DAMAGES MADE TO UNDERGROUND UTILITIES.

3. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES.

4. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY PROPOSED PLANT SUBSTITUTIONS BY THE LANDSCAPE CONTRACTOR. NO SUBSTITUTIONS SHALL BE MADE UNDER ANY CIRCUMSTANCES WITHOUT PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT.

5. ALL DISTURBED AREAS NOT IDENTIFIED TO EITHER BE SEEDED OR SODDED SHALL BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS.

6. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. ALL PLANTING BEDS, SAUCERS, AND AREAS DESIGNATED TO BE MULCHED SHALL BE MULCHED WITH A MINIMUM OF 3-4 INCHES OF TRIPLE SHREDDED HARDWOOD MULCH.

8. PLANTING BEDS AND SAUCERS SHALL BE EDGED TO PROVIDE A 2" TO 3" DEEP "V" CUT ALONG ITS BORDER WITH SODDED OR SEEDED AREAS.

9. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.

10. GUYING SHALL BE REMOVED AFTER ONE FULL GROWING SEASON.

11. THE LANDSCAPE CONTRACTOR SHALL INSTALL ALL LANDSCAPING IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS SHOWN AND ENUMERATED ON THIS SHEET UNLESS ALTERNATIVE METHODS OR PRACTICES ARE REVIEWED AND ACCEPTED BY THE LANDSCAPE ARCHITECT.

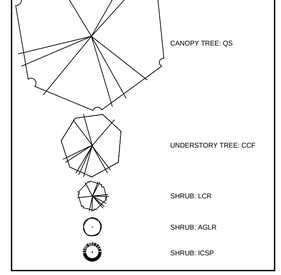
12. AT INSTALLATION AND CONTINUOUSLY DURING THE MAINTENANCE CONTRACT, ALL PROPOSED SHRUBS THAT ARE SQUARE IN SHAPE AND ARRANGED IN ROWS SHOULD BE PRUNED INTO BOXED AND CLIPPED HEDGEROWS.

13. 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

14. 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.

15. ALL HVAC AND MECHANICAL EQUIPMENT WILL BE SCREENED WITH LANDSCAPING OR DECORATIVE FENCING

Plant Symbol Key



PRELIMINARY

NORTH CAROLINA PROFESSIONAL SEAL 16489 ENGINEER DONALD C. ADAMS, JR.

REVISED
1:12 pm, Sep 04, 2018

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-763-7278
FIRM # C-4187

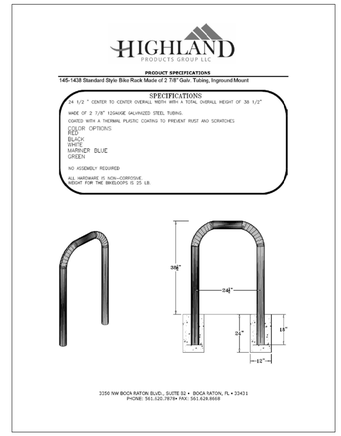
REVISIONS:

ADAMS & HODGE ENGINEERING, PC

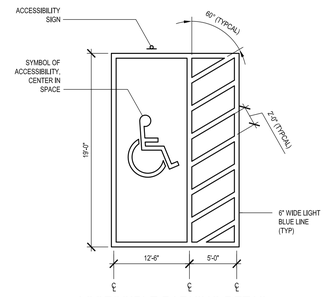
SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

LANDSCAPE PLAN

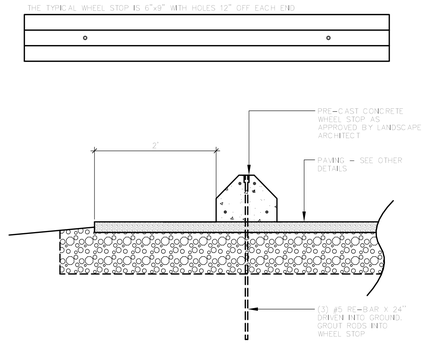
DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/27/2018
JOB NO.	AH--
SHEET	SP5



"U" STYLE BIKE RACK



ACCESSIBLE PARKING DETAIL
AS PER 155.401(C)(3)(b) OF THE
TOWN OF CLAYTON UNIFIED DEVELOPMENT CODE



CONCRETE WHEEL STOP

CALL 48 HOURS BEFORE YOU DIG
1-800-632-4949
NORTH CAROLINA ONE-CALL CENTER

DEVELOPER/APPLICANT:

GENE CARLTON STEPHENSON, JR
1950 SANDERS ROAD
WILLOW SPRINGS, NC 27592
CONTACT/AGENT: DONNIE ADAMS
919 763-7278

PRELIMINARY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25469 DONALD C. ADAMS, JR.

REVISED
11:11 am, Aug 01, 2018

REVISIONS:

314 East Main Street
Clayton, NC 27520
donnie@adamsandhodge.com
919-763-7278
FIRM # C-4187

ADAMS & HODGE ENGINEERING, PC

SANDY STEPHENSON
MIXED USE BUILDING
CLAYTON, NORTH CAROLINA

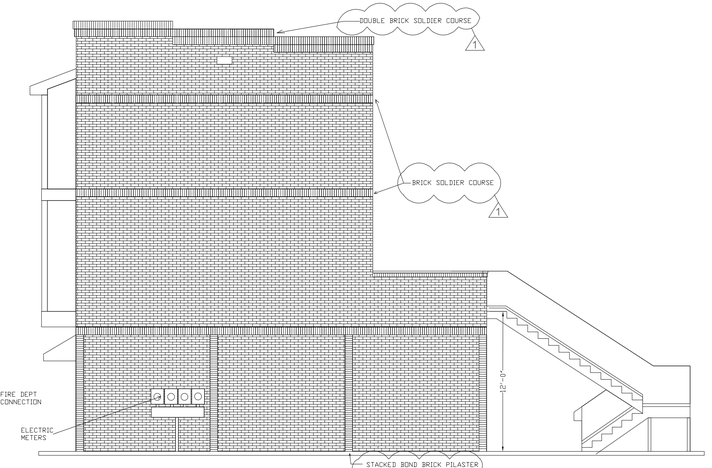
REGULATORY STANDARDS

DESIGN	DCA
DRAWN	ADS
CHECKED	DCA
HORIZONTAL SCALE	SEE GRAPHIC SCALE
VERTICAL SCALE	N/A
DATE	07/27/2018
JOB NO.	AH-
SHEET	SP6

EAST ELEVATION 3/16"=1'-0"

NORTH ELEVATION 3/16"=1'-0"

SOUTH ELEVATION 3/16"=1'-0"



WEST ELEVATION 3/16"=1'-0"

1 ELEVATIONS
3/16" = 1-0'

REVISIONS

09-04-18	1

STEPHENSON BUILDING
EAST MAIN STREET
CLAYTON, NC

TONY JOHNSON ARCHITECT
919.550.7717
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

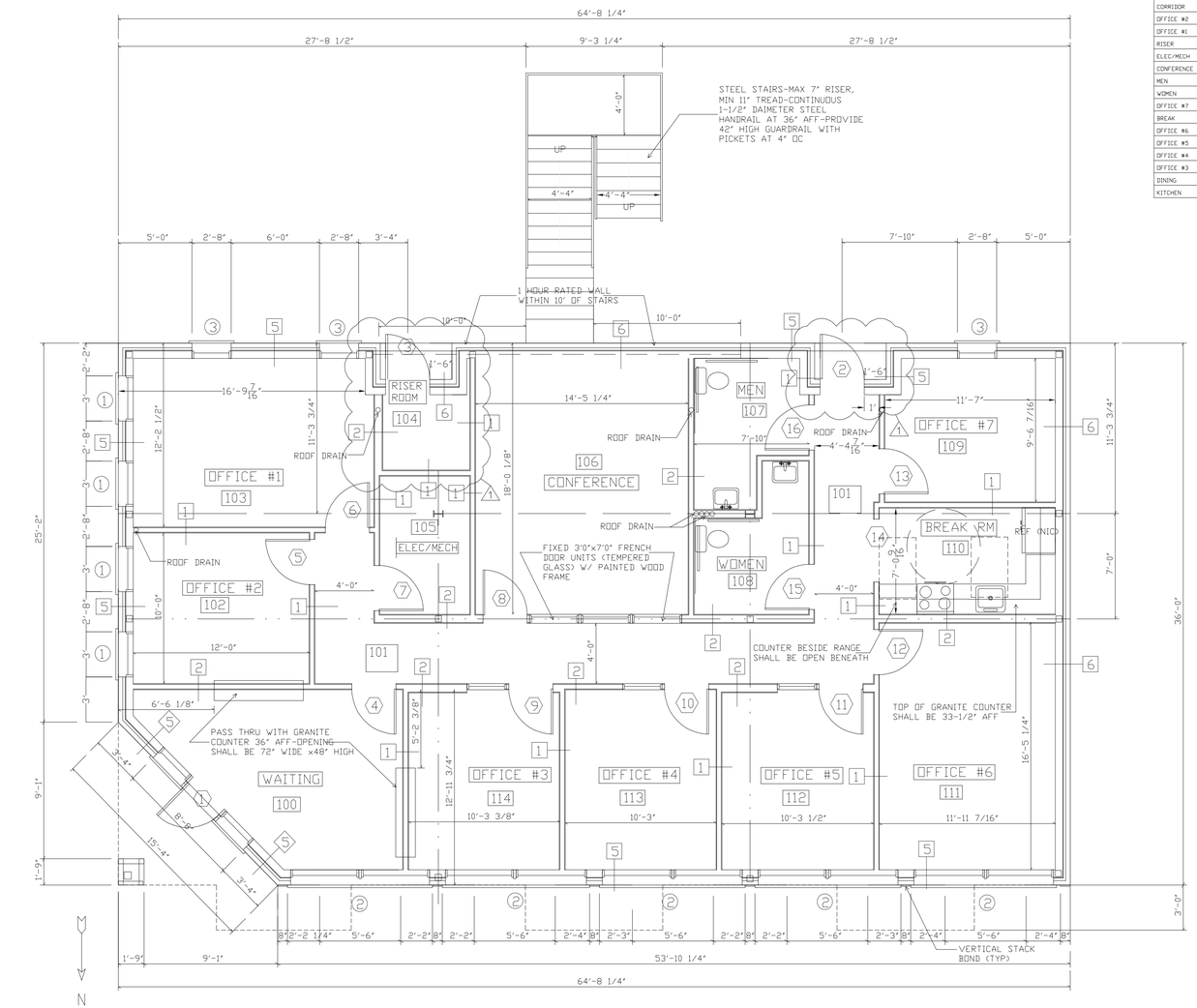
DATE 07-25-18

SHEET A-1

TONY JOHNSON ARCHITECT 31220 CLAYTON, NC

TONY LEE JOHNSON REGISTERED ARCHITECT 4296 NORTH CAROLINA CLAYTON, NC

PRELIMINARY



N
PROJECT NORTH

GROUND FLOOR PLAN 1/4"=1'-0"

GROUND FLOOR 2,070 SF (50.8%)
SECOND FLOOR 1,419 SF (34.8%)
LOFT 581 SF (14.3%)

1 GROUND FLOOR
1/4" = 1-0'

FINISH SCHEDULE

ROOM	NUMBER	BASE	FLOOR	WALLS	CEILING	NOTES
WAITING	100	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	CHAIR RAIL (STYLE BY OWNER)
CORRIDOR	101	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	CHAIR RAIL (STYLE BY OWNER)
OFFICE #2	102	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #1	103	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
RISER	104	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
ELEC/MECH	105	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
CONFERENCE	106	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	CHAIR RAIL (STYLE BY OWNER)
MEN	107	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
WOMEN	108	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #7	109	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
BREAK	110	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #6	111	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #5	112	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #4	113	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
OFFICE #3	114	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	2x2 LAY-IN (STYLE BY OWNER)	
DINING	201, 206, 209	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	PAINT	
KITCHEN	202, 204, 208	WOOD (STYLE BY OWNER)	SELECTION BY OWNER	PAINT	PAINT	

WINDOW SCHEDULE

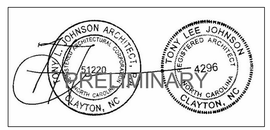
NUMBER	SIZE	TYPE	RATING	NOTES
1	3'0"x7'6"	SOLID VINYL	NONE	DOUBLE HUNG
2	9'11"x7'6"	STOREFRONT	NONE	FIXED
3	2'8"x5'6"	SOLID VINYL	NONE	DOUBLE HUNG
4	2'0"x3'2"	SOLID VINYL	NONE	DOUBLE HUNG
5	2'8"x2'8"	SOLID VINYL	NONE	FIXED
6	2'8"x5'6" TWIN	SOLID VINYL	NONE	DOUBLE HUNG
7	2'8"x3'2"	SOLID VINYL	NONE	DOUBLE HUNG
8	2'8"x4'8" TWIN	SOLID VINYL	NONE	DOUBLE HUNG
9	2'8"x4'6"	SOLID VINYL	NONE	DOUBLE HUNG
10	2'8"x4'8"	SOLID VINYL	NONE	DOUBLE HUNG

DOOR SCHEDULE

DOOR	SIZE	TYPE	RATING	FRAME	LOCKSET	CLOSER	NOTES
1	3'0"x7'0"	STOREFRONT	NONE	ALUM	MANUFACTURERS STANDARD W/ DEADBOLT	YES	(2) 32"x80" SIDELIGHTS
2	3'0"x7'0"	INSULATED METAL (STYLE BY OWNER)	NONE	STEEL	LEVER ENTRANCE W/ DEADBOLT (STYLE BY OWNER)	YES	
3	3'0"x7'0"	INSULATED METAL (STYLE BY OWNER)	60 MIN	STEEL	LEVER ENTRANCE (STYLE BY OWNER)	YES	
4	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	STEEL	LEVER PASSAGE (STYLE BY OWNER)	NO	
5	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	
6	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	
7	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER STORAGE (STYLE BY OWNER)	NO	
8	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER PASSAGE (STYLE BY OWNER)	NO	FRENCH DOOR
9	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	32" SIDELIGHT
10	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	32" SIDELIGHT
11	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	32" SIDELIGHT
12	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	
13	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER OFFICE (STYLE BY OWNER)	NO	
14	3'0"x7'0"	CASED OPENING	N/A	WOOD	N/A	N/A	
15	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER PRIVACY (STYLE BY OWNER)	NO	
16	3'0"x7'0"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	LEVER PRIVACY (STYLE BY OWNER)	NO	
17	3'0"x6'8"	INSULATED METAL (STYLE BY OWNER)	NONE	STEEL	ENTRANCE W/ DEADBOLT (STYLE BY OWNER)	NO	
18	3'0"x6'8"	INSULATED METAL (STYLE BY OWNER)	NONE	STEEL	ENTRANCE W/ DEADBOLT (STYLE BY OWNER)	NO	
19	3'0"x6'8"	INSULATED METAL (STYLE BY OWNER)	NONE	STEEL	ENTRANCE W/ DEADBOLT (STYLE BY OWNER)	NO	
20	2'4"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
21	2'4"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
22	2'4"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
23	5'4"x6'8"	ALUMINUM	NONE	WOOD	MANUFACTURERS STANDARD	N/A	SLIDING FRENCH
24	5'4"x6'8"	ALUMINUM	NONE	WOOD	MANUFACTURERS STANDARD	N/A	SLIDING FRENCH
25	5'4"x6'8"	ALUMINUM	NONE	WOOD	MANUFACTURERS STANDARD	N/A	SLIDING FRENCH
26	2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
27	2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
28	2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	PRIVACY (STYLE BY OWNER)	NO	
29	(2)2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	CLOSET (STYLE BY OWNER)	NO	
30	(2)2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	CLOSET (STYLE BY OWNER)	NO	
31	(2)2'0"x6'8"	SOLID CORE WOOD (STYLE BY OWNER)	NONE	WOOD	CLOSET (STYLE BY OWNER)	NO	

WALL SCHEDULE

NUMBER	SIZE
1	3-5/8", 25 GAUGE METAL STUD WITH 5/8" FIRE RATED GYPSUM BOARD EACH SIDE EXTEND TO ABOVE LAY-IN CEILING-BRACE TO OVERHEAD STRUCTURE - PROVIDE W/ SOUND BATT INSULATION
2	3-5/8", 25 GAUGE METAL STUD WITH 5/8" FIRE RATED GYPSUM BOARD EACH SIDE EXTEND TO ABOVE LAY-IN CEILING-BRACE TO OVERHEAD STRUCTURE - PROVIDE W/ SOUND BATT INSULATION
3	2 HOUR RATED TENANT SEPARATION WALL - UL#336 SEE UL ASSEMBLY - PROVIDE W/ R-13 BATT INSULATION
4	2 HOUR RATED BRICK VENEER BEARING WALL - UL#424 SEE UL ASSEMBLY - PROVIDE W/ R-19 BATT INSULATION AND 2 LAYERS 5/4 FIRE RATED GYPSUM BOARD ON INTERIOR FACE - 5/8" DENSGLAS SHEATHING ON EXTERIOR FACE - SEE STRUCTURAL FOR STUD GAUGE AND SPACING
5	BRICK VENEER NON-RATED, NON-BEARING WALL - BRICK VENEER, 1-1/2" AIR SPACE, HOUSE WRAP, 5/8" DENSGLAS SHEATHING, 6" METAL STUD (SEE STRUCTURAL FOR GAUGE AND SPACING), R-19 BATT INSULATION, 5/8" FIRE RATED GYPSUM BOARD STRUCTURAL FOR STUD GAUGE AND SPACING
6	1 HOUR RATED BRICK VENEER NON-BEARING WALL - UL# U424 SEE UL ASSEMBLY- PROVIDE W/ R-19 BATT INSULATION AND 2 LAYERS 1/2" FIRE RATED GYPSUM BOARD ON INTERIOR FACE- 1 LAYER 5/8" DENSGLAS SHEATHING ON THE EXTERIOR FACE - SEE STRUCTURAL FOR STUD GAUGE AND SPACING
7	2 HOUR RATED SIDING VENEER BEARING WALL - UL# U425 SEE UL ASSEMBLY - PROVIDE W/ R-19 BATT INSULATION AND 1 LAYER 5/8" FIRE RATED GYPSUM BOARD ON INTERIOR FACE- 5/8" DENSGLAS SHEATHING ON THE EXTERIOR FACE - SEE STRUCTURAL FOR STUD GAUGE AND SPACING
8	SIDING VENEER NON-RATED, NON-BEARING WALL - CEMENT FIBER SIDING, HOUSE WRAP, 5/8" DENSGLAS SHEATHING, 6" METAL STUD (SEE STRUCTURAL FOR GAUGE AND SPACING), R-19 BATT INSULATION, 5/8" FIRE RATED GYPSUM BOARD
9	3-5/8", 25 GAUGE METAL STUD WITH 1/2" GYPSUM BOARD EACH SIDE, EXTEND TO CEILING-PROVIDE W/ SOUND BATT INSULATION
10	6", 25 GAUGE METAL STUD WITH 1/2" GYPSUM BOARD EACH SIDE, EXTEND TO CEILING-PROVIDE W/ SOUND BATT INSULATION



PRELIMINARY

07-26-18

REVISIONS

09-04-18	1

STEPHENSON BUILDING
EAST MAIN STREET
CLAYTON, NC

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919-550-7777
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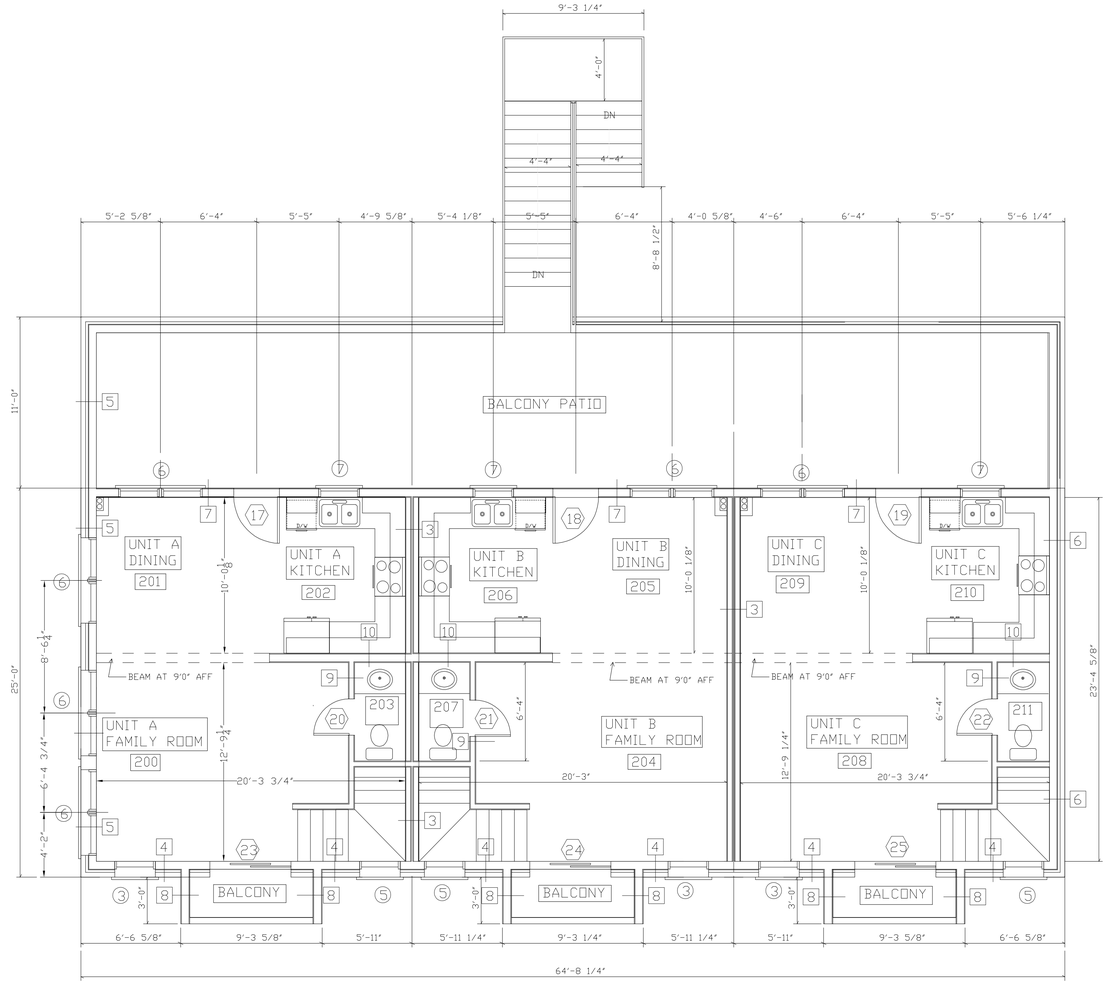
104 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

DATE
07-26-18

SHEET
A-2



SECOND FLOOR PLAN 1/4"=1'-0"

1 SECOND FLOOR PLAN
1/4" = 1-0'

REVISIONS

STEPHENSON BUILDING
EAST MAIN STREET
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TONY@TONYJOHNSONARCHITECT.COM
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TONYJOHNSONARCHITECT.COM

DATE 07-26-18

SHEET A-3

TONY L. JOHNSON ARCHITECT, CORPORATE ARCHITECTURAL CORPORATION, 51220, NORTH CAROLINA, CLAYTON, NC

TONY LEE JOHNSON, REGISTERED ARCHITECT, 4296, NORTH CAROLINA, CLAYTON, NC

PRELIMINARY

MEZZANINE PLAN 1/4"=1'-0"

1 THIRD FLOOR PLAN
1/4" = 1-0'

REVISIONS

STEPHENSON BUILDING
EAST MAIN STREET
CLAYTON, NC

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TONY LEE JOHNSON REGISTERED ARCHITECT 4296 NORTH CAROLINA CLAYTON, NC

TONY L. JOHNSON, ARCHITECT, P.A. 51220 NORTH CAROLINA CLAYTON, NC

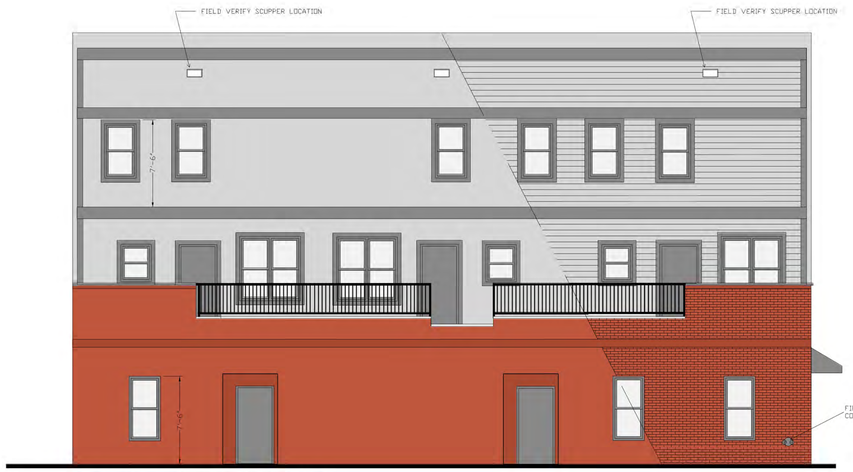
PRELIMINARY

DATE
07-26-18

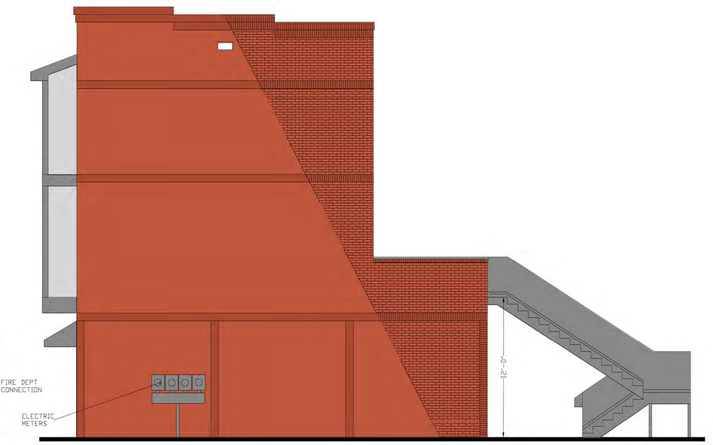
SHEET
A-4

EAST ELEVATION 3/16"=1'-0"

NORTH ELEVATION 3/16"=1'-0"



SOUTH ELEVATION 3/16"=1'-0"



WEST ELEVATION 3/16"=1'-0"

1 ELEVATIONS
3/16" = 1-0'

PRELIMINARY

REVISIONS

STEPHENSON BUILDING
EAST MAIN STREET
CLAYTON, NC

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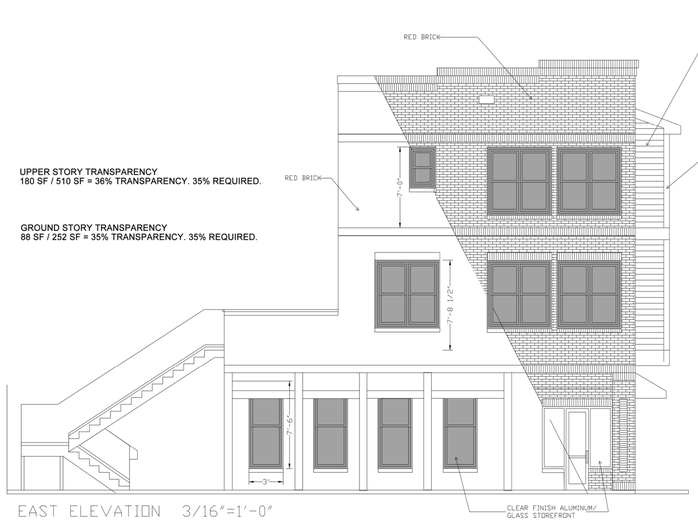
999-550-7737
TONY@TONYJOHNSONARCHITECT.COM
104 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

DATE 07-26-18

SHEET A-05



EAST ELEVATION 3/16"=1'-0"

UPPER STORY TRANSPARENCY
180 SF / 510 SF = 36% TRANSPARENCY. 35% REQUIRED.

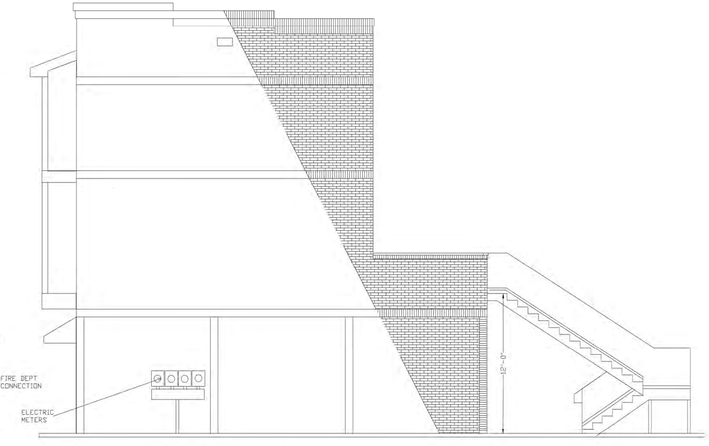
GROUND STORY TRANSPARENCY
88 SF / 252 SF = 35% TRANSPARENCY. 35% REQUIRED.

NORTH ELEVATION 3/16"=1'-0"

UPPER STORY TRANSPARENCY
400 SF / 1158 SF = 35% TRANSPARENCY. 35% REQUIRED.

GROUND STORY TRANSPARENCY
380 SF / 540 SF = 71% TRANSPARENCY. 70% REQUIRED.

SOUTH ELEVATION 3/16"=1'-0"



WEST ELEVATION 3/16"=1'-0"

1 ELEVATIONS
3/16" = 1-0'

TONY LEE JOHNSON ARCHITECT
REGISTERED ARCHITECT
61220
NORTH CAROLINA
CLAYTON, NC

TONY LEE JOHNSON
REGISTERED ARCHITECT
4296
SOUTH CAROLINA
CLAYTON, NC

PRELIMINARY

REVISIONS

STEPHENSON BUILDING
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124 N. LOMBARD ST.
CLAYTON, NC 27520
TONYJOHNSONARCHITECT.COM

DATE
07-26-18

SHEET
A-06

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

Planning Board
September 24, 2018

STAFF REPORT

Application Number: 2018-160-SP
Project Name: Stephenson Mixed Use Major Site Plan

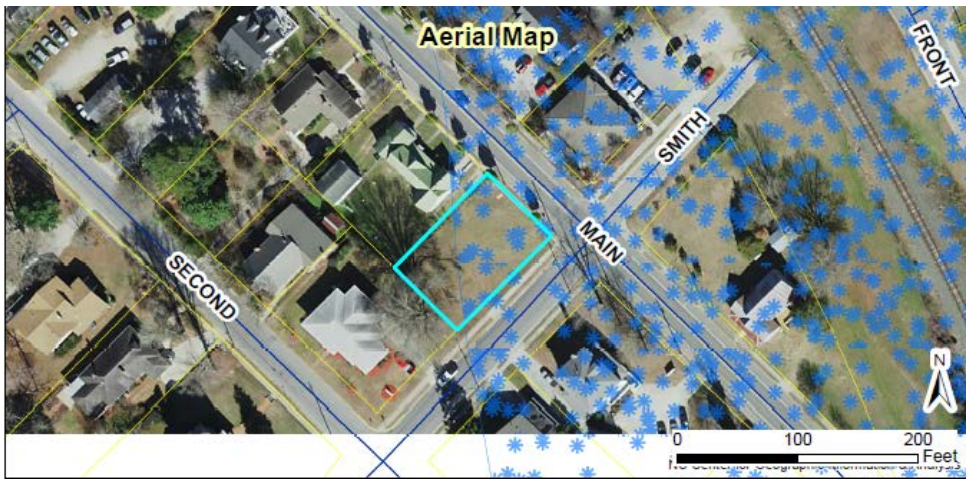
NC PIN / Tag #: 166917-21-0311 / 05011043
Applicant: Adams & Hodge Engineering, PC
Owner: Gene & Anna Stephenson
Location: Corner of Main Street and Smith Street

Public Noticing:

- Neighborhood meeting September 6, 2018
- Sign posted prior to September 14, 2018

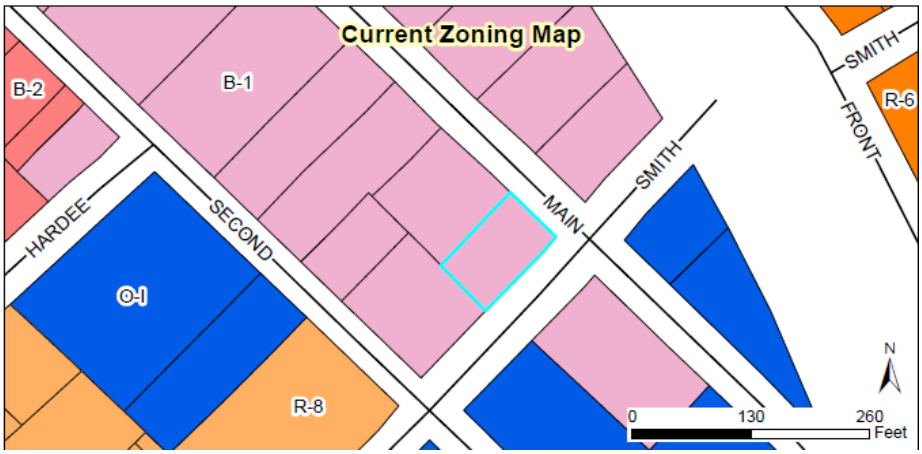
REQUEST: Request to develop a 3-story mixed use building off Main Street, with office and upper story residential uses.

SITE DATA:
Acreage: .19 Acres
Existing Use: Vacant
Zoning: Central Business (B-1)



ADJACENT ZONING AND LAND USES:

Direction	Zoning	Existing Use
North	Central Business (B-1)	Office
South	Central-Business (B-1) and Office-Institutional (O-I)	Office & Residential
East	Central Business (B-1) and Office-Institutional (O-I)	Office
West	Central-Business (B-1)	Office



DEVELOPMENT DATA:

Proposed Uses:	Office and upper story residential
Buildings:	One
Proposed Impervious:	91% (No maximum impervious limitation within B-1 district)
Proposed Parking:	18 spaces, including 1 on-site handicap
Required Parking:	10 spaces; 1 space per 300 SF of office = 7 spaces; 1 space per unit = 3 spaces
Access/Streets:	The office portion of the building will have pedestrian access at the corner of Main Street and Smith Street. Access to the parking lot and residential units will be located in the rear of the building, off Smith Street.

STAFF ANALYSIS:

Overview

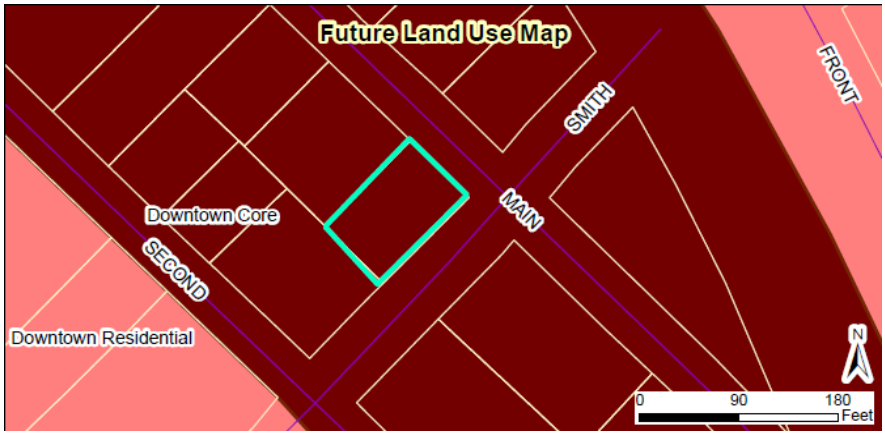
The applicant is requesting major site plan approval to develop a 3-story mixed-use building at the corner of Main Street and Smith Street. An application was submitted for this project and approved in 2016, but that approval has since expired. As such, the applicant has resubmitted the major site plan application for review. No changes are proposed from the original design.

This building will contain an office use on the first floor, with upper-story residential uses on the second and third floor. The overall building will be 6,206 square feet in size, with three residential units total. The building will be positioned along Main Street and Smith Street, and parking will be located in the rear of the building off Smith Street. The office will have pedestrian access at the corner of the building. The applicant is proposing 12' of additional sidewalk to be located along the building's frontages. The applicant is also proposing to install new bulb-outs on Main Street at a future date in order to match the Town's Streetscape plan. The applicant is proposing to add twelve parking spaces on-site in the rear of the building. Six additional spaces will be provided as on-street parking.

Consistency with Adopted Plans:

- **Comprehensive Plan 2040**
  The future land use map designates this property as Downtown Core. The proposed use of upper-story residential and office is consistent with this designation.

- **Unified Development Code**
  The proposed development is consistent with the Unified Development Code and all applicable requirements. It is also consistent with the UDC's Downtown Overlay section.



Landscaping and Buffering

The applicant has provided sufficient landscaping within the site. Per UDC requirements, properties located within the B-1 zoning district may have landscaping requirements reduced by 75%. Terminal island trees are provided within the rear parking lot, and street trees will be provided along Main Street in the future as a part of the Town's Streetscape plan. No landscaping buffer is required along the property lines due to all surrounding properties being zoned B-1 as well. The applicant has noted on the plans that all mechanical equipment shall be screened entirely from view, as required in the UDC.

Access/Streets

The on-site parking will be accessed off Smith Street, at the rear of the building. This is also where pedestrian access will be located for residents. Pedestrian access for the office use will be located off Main Street/Smith Street via a corner entrance.

Architecture/Design

The building frontages along Main Street and Smith Street will consist of a brick façade, with some fiber cement siding. The bottom floor along Main Street (north elevation) will consist of mostly windows, with a corner entrance as required by the Unified Development Code. The upper floors on this façade will primarily consist of brick with some fiber cement. Balconies will be located off this portion of the building for the residential uses on the second floor. The rear façade (south elevation) will consist of brick on the first floor, with fiber cement utilized on the second and third floors. These elevations have been reviewed by staff and determined to be compliant with the requirements of the Downtown Overlay District.

CONSIDERATIONS:

- The Planning Board shall make a final decision regarding Major Site Plans not associated with a Special Use Permit.

APPROVAL CRITERIA:

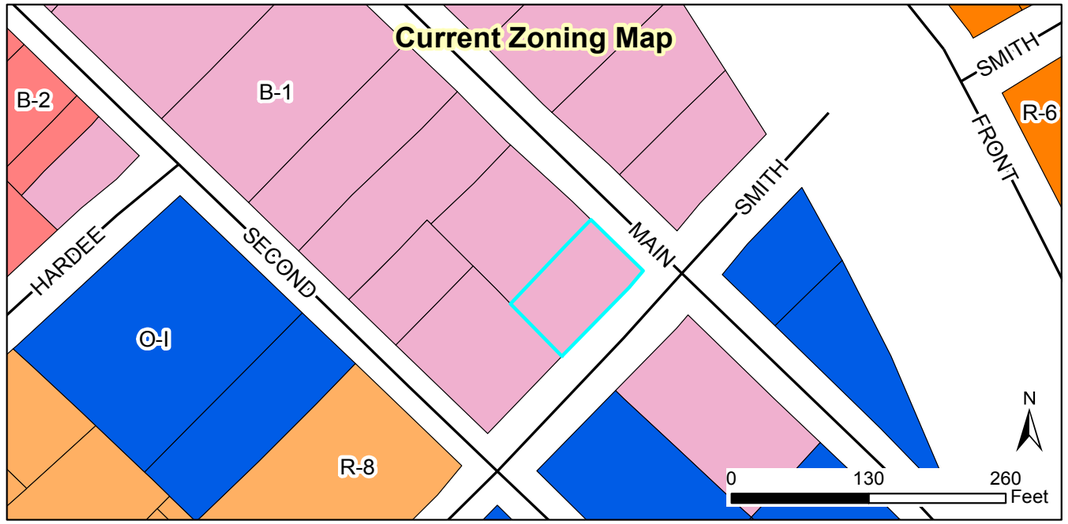
The applicant has addressed the Major Site Plan Approval Criteria outlined in the Unified Development Code. The applicant's responses are incorporated into the record as an attachment to the Staff Report.

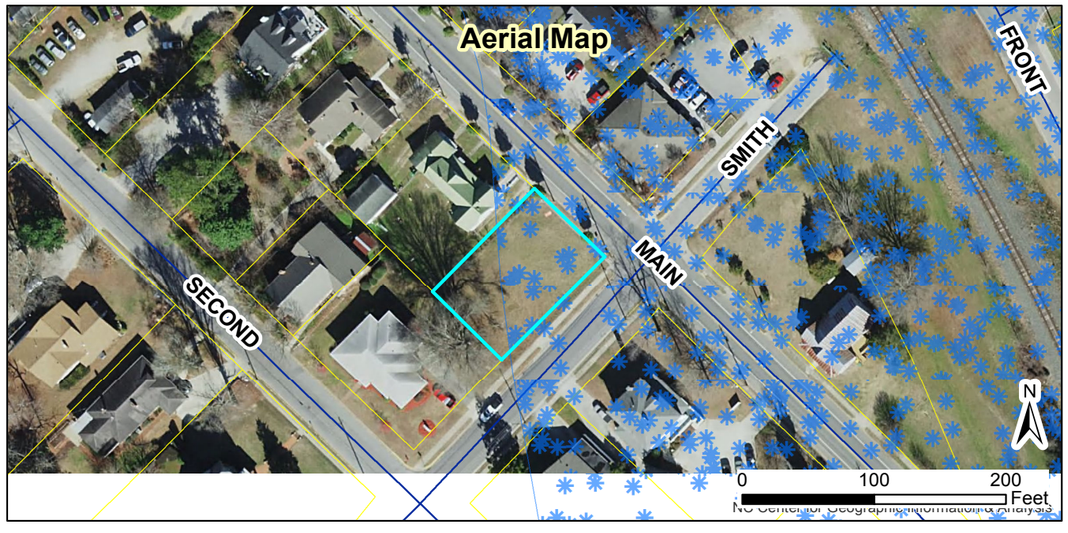
STAFF RECOMMENDATION:

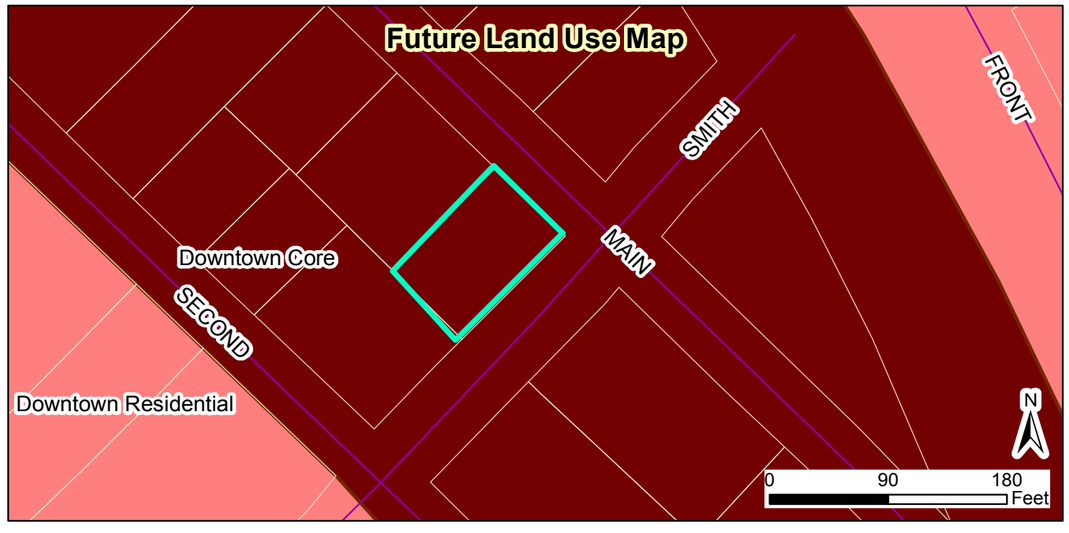
Staff is recommending approval of the above referenced major site plan application.

ATTACHMENTS:

1) Staff report maps
2) Application
3) Neighborhood Meeting Materials
4) Site Plan







2018-160-SP Stephenson Mixed Use Major Site Plan **Staff Report Map**

Request: develop a mixed use building with upper story residential

Applicant: Adams & Hodge Engineering, PC
Property Owners: Gene Carlton Stephenson, Jr. & Anna Toler Stephenson
Parcel ID: 166917-21-0311
Tag #: 05011043

09/17/18

Produced by: TOC Planning

Disclaimer: Town of Clayton assumes no legal responsibility for the quality fo the data represented here.

Document Path: O:\PLANNING\SITE PLANS\Major Site Plans\2018\2018-160-SP Stephenson Mixed-Use Building\Maps\2018-160-sp map.mxd

Legend

- 100-yr Flood Zone
- Thoroughfare Overlay
- Scenic Highway Overlay
- Watershed Protection Overlay
- Site